ASPECTUAL CLASSIFICATION OF VERBS

Also, for certain verbs the active participle form (AP) is understood as a present state (example 3), while for others it has a perfective, or resultative, reading (example 4):

(3) (ana) Saarif  peeh illi hašal
   (I) know(AP) what that it-happened
   "I know what happened."

(4) (ana) kaatib  ig-gawaab wi xalaas
   (I) write(AP) the-letter and finished
   "I've written the letter and that's that."

A number of previous analyses (Woidich 1975; al-Tonsi 1980) have pinpointed the area which can help explain the various, sometimes conflicting, meanings of the forms in examples 1-4 above: the lexical aspect of the verbs involved. These analyses set up two types of tests to classify verbs in CA. The first type is a morphological test, identifying the restrictions on the meaning of a verb in a particular form:

(I) a. bi-imperfect:
   i. as process or habit
   ii. as habit only

b. meaning of AP:
   i. resultative state (past event is strongly implied)
   ii. present state (no event implied or less strongly implied)

The second type, suggested by al-Tonsi, involves identifying the difference in possible meanings of APs when used with the adverbial lissa "now":

(II) lissa + AP: lissa = "just" = resultative
   "still" = present state

In this paper I will further the above analyses by explaining the peculiarities of CA verbs in terms of the interaction of formal aspect and lexical aspect, with the goal of setting up a preliminary aspectual classification system of verbs in CA, based on a modified version of
Dowty's (1979) aspeclual classification scheme for English. Unlike Dowty, however, who was forced to recognize aspeclual categories at the level of predicates and propositions to explain the distinction between certain classes of verbs (e.g., activities and accomplishments), I will focus on more basic lexical categories. These categories will be defined in terms of a limited number of features which, taken together, identify the core members of these verbal categories. These features will be limited to those that relate more closely to the 'internal temporal consistency' of the interval in which an event takes place: firstly, what kind of interval it is, related to whether or not a 'change of state' event took place in it or not (<> CHANGE>); secondly, what kind of state is brought about by the 'change of state' event (<> STATE>); and thirdly, what the length of the change of state interval is (<> INTERVAL>). The first of these features distinguishes statives from nonstatives, the second inchoatives from noninchoatives, and the third momentaneous verbs from interval ones. Furthermore, for each of the CA lexical verbal categories distinguished by these features there is a test which involves the restriction on the use and meaning of category members in a specific morphological form, which indicates the interaction of lexical and formal aspect. In order to represent this more clearly, CA verb forms themselves may be characterized in terms of similar aspectual features. These features will be detailed in the final section of this paper.

I will first examine the distinction between verbs based on whether or not there is a change of state event associated with the verb, i.e., whether they are non-change of state verbs (statives) or change of state verbs (nonstatives).

2.0 Nonchange-of-State Verbs: Statives

Stative verbs may be characterized in two different but related ways: according to whether or not a change of state event is entailed by the verb; and according to the kind of interval with which it may be associated, which is itself related to the presence or absence of a change of state within the interval. The former criterion is exemplified in CA by restrictions on the possible meanings of the AP when used with the adverb lissa "still" and restrictions on possible meanings of the perfect form, while the second is exemplified in restrictions on the meaning of the bi-imperfect form.

As regards the first criterion, for certain verbs the AP with lissa "now" has a reading of only "still" (as in 5a), while for others it has a reading of both "still" and "just" (as in 5b), and for some others it has a reading of only "just" (as in 5c):

(5) a. ana lissa ʕaayiz ʕaʃtayal mudarris
I now want-(AP) I-work teacher
"I still want to work as a teacher."
*"I have just now wanted to work as a teacher."

b. il-walad lissa naayim
the-child now sleeping-(AP)
"The child is still sleeping/has just fallen asleep."

c. ana lissa ʕaari riwaayah li-nagiib mahfuuz
I now read-(AP) novel of Naguib Mahfuz
"I have just read a novel by Naguib Mahfuz."
*"I am still reading a novel by Naguib Mahfuz."

The two possible readings for lissa ("just" and "still") when used with the AP form indicate the degree to which a change of state event may be associated with what is otherwise a purely stative form (viz. the AP): the adverbial lissa with a reading of "just" is associated with the implied event which signalled the entry into the state expressed by the AP, while lissa with a reading of "still" is associated with the state itself. Those verbs where lissa can be understood as "just" (whether or not there is an additional reading of "still") are change of state verbs, since there is a change-of-state event which is brought out by the adverb lissa; those verbs where lissa can have only a reading of "still" are stative verbs, since there is no change of state event for the adverb to be associated with.

In addition to the above test with APs, the perfect verb may also serve to indicate whether a verb entails a change in state event or not.
However, this test is admittedly weaker than the first, since it is based in large part on native speaker intuitions about the meaning of the verb and on non-use with the adverbial fii saaṢa in an hour", which is ordinarily a test for "elicity", or goal-oriented activity. Despite this, it is still valid (since verbs which are telic are necessarily change of state), although in the future a stronger alternative to this test might be developed.

As regards the second criterion, stative verbs are characterized as having only a habitual reading in the bi-imperfect form (as in 6), while other types of verbs may have both a habitual as well as a real present time reading:

(6) a. biykuun hina kull(i) yoom sabt
   he-is here every Saturday
   "He is here every Saturday"

   b. *biykuun hina dilwaʔi
      he-is here now
      "He is here now."

This is explained as follows: when used with non-specific time reference (= habitual reading), the bi-imperfect form, like the simple present in English, describes an event, which for the purposes of this argument is essentially an 'aspect-less' form. When used with specific time reference (= 'real' present time reference), however, the CA bi-imperfect, like the English progressive, describes a process. A process entails both a change of state as well as a time interval of some extent which is 'heterogeneous', i.e., the verb is not true with respect to every single point within the interval but is true only with respect to no less than two points within the interval. A stative verb, on the other hand, is characterized by the lack of a change of state event and, concomitantly, by the fact that the interval it describes is 'homogeneous', i.e., the verb is true with respect to every point within the interval.2

The lack of a processive reading for the bi-imperfect of stative predicates is, therefore, due to the contradictory aspctual natures of a processive form and a stative lexical item: a process entails a change in state, while a stative verb entails the absence of a change of state; and a processive interval is heterogeneous while a stative interval is 'homogeneous'.

In addition to a processive form (viz. the bi-imperfect), CA has a stative form which may be used as a further test for stativity, viz. the AP form. The APs of stative verbs (if there is an AP)3 have only a present state interpretation, not a resultative state interpretation as is possible with other verbs (example 7):

(7) a. ana Śaayiz Šarabiyyah ḫadd il-mugammaṭ
      I want car size the-Mugamma
      "I want a car the size of the Mugamma (central government offices)"

      wi-Šašaan kidd (ana) mihṭaag filuus kitiiṛ
      and-because this (I) need money lot
      and because of this, I need a lot of money."

In terms of the above analysis, this may be explained as follows. The AP form, in contrast to the processive bi-imperfect (with specific time reference), expresses a stative interval, one that is homogeneous or true with respect to all points within the interval. Stative lexical items may be appropriately represented in such a form since they, too, may be true at any and all points in a time interval, and thus give rise to APs which have an unambiguously present state interpretation.

In sum, then, these tests, involving both the AP and the bi-imperfect, indicate the degree of compatibility between the aspect of a form and the aspect of a lexical item. In the case of the AP test, a stative form (the AP) interacts with a stative lexical item to produce a fully stative lexical item, since both make reference to a homogeneous interval, one in which the verbal reference is true relative to every point within the interval. In the case of the bi-imperfect, the aspect of a processive form (the bi-imperfect with specific time reference) 'conflicts' with the aspect of the stative lexical item: one makes reference to a heterogeneous interval, while the other makes reference to a homogeneous one.
These tests for stativity are summarized as follows:

A. verb morphology:
   a. bi-imperfect has only habitual reading
      (i.e., it is used with non-specific time reference only)
   b. AP = present state (or no AP)
   c. perfect = not a change of state
B. use with adverbs:
   a. *lissa* + AP = "still" only, not "just"

Verbs which were distinguished as statives according to these tests are listed in Appendix A. This classification includes a subclassification according to whether they are non-agentive or agentive statives. Tentatively included in the subclass of agentive statives are verbs which are basically intransitive and 'inchoative' (i.e., indicate entry into a state), but which are transitivized by use with a preposition, which in turn makes it a 'quasi-activity' of some sort. However, because of the meaning of their verbal adjectives, both alone and with *lissa*, they are included here with statives.

2.1 Problems with these criteria

The tests as defined above do not define the category of statives in sufficient terms, since there are other types of verbs which fulfill one or another of these tests, although not all. For example, as regards the first morphological test (*bi*-imperfect = habit only), both statives as well as what I will term 'momentaneous' change of state verbs have only a habitual reading (i.e., can only be used with non-specific time reference) in the *bi*-imperfect. This has been noted by previous writers with regards to both CA and English. Woidich (1975), in noting this, used it to explain the use and function of the AP form in CA. In both English and CA, however, momentaneous verbs do not fulfill the other tests for stativity, and there are other tests as well to be reviewed in section 3.3 that distinguish these two classes of verbs.

As regards the second morphological test for stativity (AP = present), verbs which I will term 'inchoatives' (verbs indicating entry into a state) share this feature with stative verbs. As with the previous example, there are other tests, to be examined in the following section, which distinguish clearly between these two classes. Finally, as regards the adverbial test for change-of-state verbs (*lissa* AP = "still" only), there are a number of verbs (which I will term 'deadjectival') whose AP cannot be associated with an event, even though the verb (both in the perfect and imperfect) is definitely a change in state.

These stativity tests, therefore, do not provide us with a set of sufficient criteria for delimiting a class of stative verbs, but give us merely a quite varied set of necessary criteria all of which should be fulfilled by all pure statives, but some of which other verbs may also fulfill. Taken as a whole, however, they do provide a sufficient criterion for stativity. In other words, fulfilling ALL of these tests in the manner described would be a sufficient criterion for stativity.

2.2 Ambiguous stative/change of state verbs

In addition to the above problems with the stativity tests, which limit their power but do not invalidate them, there is an additional problem revealed by the third morphology test (perfect = state), related to the polysemous nature of certain verbs. This polysemy is reflected in the fact that there are different possible meanings of the perfect form, or that there are differences in the meaning of the perfect versus the *bi*-imperfect and AP forms. These differences generally involve a split between a stative and a nonstative (change of state) reading. Included among these verbs are some of the most common verbs cited in the literature on tense and aspect in Arabic, verbs like *sirif* "to know", *fihim* "to understand", *iftakar* "to think", among others. Usually the *bi*-imperfect of this class indicates a non-change of state (as in 8), while the perfect usually indicates a change in state (as in 9):

(8) a. *b-aṣraf* "I know" (not "I generally come to know").
    b. *b-a$f$han* "I understand" (something, not "at that
    moment").

(9) a. *sirif*-t "I came to know."
    b. *fihim*-t "I understood" (at that moment).
This characteristic has traditionally been interpreted as being due to the meaning of the perfect form: it is 'completative' or 'perfective' in some way. However, this solution ignores verbs of this type that can also have a stative (i.e., a non-change of state) interpretation in the perfect form along with a nonstative (or change of state) interpretation:

(10) a. habbeet inn-u...
    "I liked the fact that..."

b. habbit-ha ʔawwil-ma ʔuşt-aḥa
    "I loved (fell in love with) her the moment I saw her."

(11) iftakar-t inn-u...
    "I thought/remembered that he..."

This ambiguity even in the perfect form indicates that the change of state meaning should not be attributed to the perfect form but rather to the lexical root. The ambiguities exhibited by these verbs, therefore, are characteristic of these verbs as a class, and are not attributable to the perfect form alone.

There is also a class of verbs in English, noted by Dowty (1979:132), which exhibits an ambiguity between a stative and inchoative reading. Like the class of CA verbs under discussion here, they are verbs of perception and cognition such as see and hear. However, unlike the situation in CA, the unmarked reading in English for most of these verbs in the past tense is stative, while the marked reading is inchoative. In CA it is just the opposite: the unmarked reading for most of these is inchoative (as in the (a) sentences below), while the marked reading is stative (as in the (b) sentences):

(12) a. širif-t leeḥ
    you-know why
    "Have you come to know why/figured it out?"

b. širif-t il-ʔaswa w-il-hiʔd
    I-knew suffering and-hatred
    "I knew suffering and the malice of others".
    (Hinds & Badawi:572)

(13) a. habbit-ha ʔawwil-ma ʔuşt-aḥa
    I-loved-her first-that I-saw-her
    "I fell in love with her the moment I saw her."

b. habbee-t inn-u geh
    I-like that-he he-came
    "I liked the fact that he came."

(14) a. iftakar-t ism-u
    I-remembered his-name
    "I remembered his name."

b. iftakar-t-ak misaagfir
    I-thought-you travelling
    "I thought you were (away) on a trip."

This difference between English and CA (aside from the fact that the inventory of verbal meanings does not coincide exactly) may be explained as follows: in English there is no alternative form available to express a past state other than the simple past; therefore, it must do 'double-duty': express both a past state and a past change in state. In CA, on the other hand, there is an alternative form available for expressing a past state, namely, the AP (used in conjunction with the past tense of the verb "to be", klaan). Because of this fact, the meaning of the CA perfect for most of these verbs unmarkedly expresses a past change in state while the AP (with the past tense of klaan "to be") functions to express an explicitly past state.

The conflicting meanings of the perfect and bi-imperfect forms of these verbs indicate, therefore, that they are ambiguous between a stative and a change-of-state reading. For some of these verbs, the change-of-state reading is also an inchoative one; it indicates entry into a physical or mental state. For others the meaning is more distanced from the stative reading and is noninchoative; the change-of-
3.0 Change of State (Nonstative) Verbs vs. Stative Verbs

3.1 Subclassification of change of state verbs

Change of state verbs in CA may be classified in two ways: either according to the type of 'state' which is the result of the change, or according to the type of interval in which the change of state takes place. According to the latter manner of classification, there are two subclasses of change of state verbs: those which indicate a momentaneous change of state, and those which indicate a change of state which takes place over an interval. According to the former manner of classification, there are two subclasses of verbs: inchoative, or those that indicate entry into a state, and noninchoative, or those that do not. These methods of classification, furthermore, are not mutually exclusive: verbs can be classified in terms of both features simultaneously. Change of state verbs may be subclassified as momentaneous inchoatives and interval inchoatives as well as momentaneous noninchoatives and interval noninchoatives.

Central to the understanding of the class of inchoatives and to the class of change of state predicates as a whole is the notion of 'state' used in this paper, which differs to a certain extent from the way Dowty (1979) used it. I will clarify this notion by first examining the subclassification of verbs according to 'resulting state'; I will then examine the subclassification of verbs according to types of intervals.

3.2 Inchoative vs. noninchoative

3.2.1 Notion of 'state' in inchoative and change-of-state

Simply put, inchoative verbs are those that indicate the entry (of the subject of the proposition) into a state. In proposing a class of inchoative predicates in CA (defined as those that indicate entry into a state), I restrict the term 'state' in the phrase 'entry into a state' to refer to only an actual physical or mental state of an entity. Inchoative verbs in CA, therefore, are those verbs that indicate a change in an actual physical or mental state of an entity. On the other hand, I use the term 'state' in the phrase 'change of state' to mean an abstract 'state of affairs', as understood in Dowty's conception of the term. Change of state predicates, therefore, indicate a change in the abstract 'state of affairs' in which an entity is found; this may include entry into a physical/mental state but may also include other types of states of affairs.

3.2.2 Criteria for classification

The basic tests for inchoativity were suggested by Woidich and al-Tonsi, whose analyses were concerned primarily with this class of verbs. These tests involved noting the meaning and use of the AP form as it was used to express different kinds of verbal roots—e.g., noting whether the AP had a present or a past (resultative) connotation, and whether it had a particular reading when used with certain adverbials. What these tests do, essentially, is chart the interaction of the formal aspect of a verb form—viz. the AP—with the lexical aspect of the verbal root morpheme, noting the extent of compatibility between the form and the lexeme. This is similar to the tests for stativity mentioned above, where it was noted that the aspect of the bi-imperfect form (processive when used with specific time reference) conflicts in some way with the lexical aspect of the lexemes classed as stative.

There are two basic tests for inchoativity. The first is whether the AP is understood by native speakers as indicating a real 'present' state, as in example 15a (= inchoatives), or a resultative state, one strongly implying a past event, as in example 15b (= noninchoatives):

(15) a. ana saamif kalb biyoward
   I hear(AP) dog he-is-barking
   "I hear a dog barking."

       b. ana kaaqib-lu gawaab
       I write(AP)-to-him letter
       "I have written a letter to him."
The second test has to do with the reading of the adverbial *lissa* "now" with the AP. With inchoatives the phrase *lissa* + AP can have a reading of either "still" or "just" (as in 16a), whereas with noninchoatives it can have only a reading of "just" (as in 16b):

(16) a. *ana lissa 3ayf-u*
    I now see(AP)-him
    "I still see him/just saw him."

b. *Saadil lissa 3aari il-kitaab*
    Adel now read(AP) the-book
    "Adel has just read the book."

Both of these tests indicate the degree to which a 'real' state or a past event (or both) can be associated with a verb in the AP form. For example, in the first test, the present state reading of inchoatives indicates the priority that the real physical/mental state indicated by an inchoative has over the event which led into that state. With noninchoatives, on the other hand, it is the past event which takes precedence over the more abstract resulting state of these verbs, and leads to the perfective, resultative reading. This may be explained as follows: APs function aspectually to express states. The states indicated by inchoatives (viz. physical or cognitive ones) are more naturally or unmarkedly expressed in a stative form such as the AP, while the more abstract states of affairs expressed by noninchoatives are more marked in a stative form. For noninchoatives, this has the effect of making the state-initiating (past) event more strongly implied or expressed than the resulting state, to the extent that the implied past event takes precedence over the resulting state, thus giving rise to a past or perfective reading.

The second test, involving *lissa* + AP, shows that both inchoatives and noninchoatives are change in state, since both may be understood as "just having done something"; in this case the adverbial is associated with the event which indicated the entry into the state expressed by the AP. However, with inchoatives there is the possibility that the adverb *lissa* can also be associated with the real state, not only with the state-initiating event, hence the additional possibility for inchoatives of a "still" reading.

In summary, inchoatives as a lexical class indicate entry into a physical or mental state, while noninchoatives indicate a simple change in the abstract static condition of an entity, which is not physical or mental. The tests used to distinguish inchoatives from noninchoatives are summarized in A and B below, and verbs identified as 'core' inchoatives on the basis of these tests are listed in Appendixes A and C under subheading (a).

A. verb morphology:
   AP = present state : inchoative
   AP = past/perfective state : noninchoative

B. entailments with adverbal:
   *lissa* + AP = "just/still" : inchoative
   *lissa* + AP = "just" only : noninchoative

3.2.3 Polysemous verbs: volitional/non-volitional, transitive/intransitive

There are a number of verbs included in Appendix C which are polysemous, with one meaning being inchoative and the other noninchoative. For certain of these verbs, usually those involving physical perception, there is a split between a nonvolitional reading, which is inchoative, and a volitional reading, which is noninchoative:

<table>
<thead>
<tr>
<th>NONVOLITIONAL (inchoative)</th>
<th>VOLITIONAL (noninchoative)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>$amm</em> &quot;smell&quot;</td>
<td><em>$amm</em> &quot;sniff&quot;</td>
</tr>
<tr>
<td><em>simiS</em> &quot;hear&quot;</td>
<td><em>simiS</em> &quot;listen&quot;</td>
</tr>
<tr>
<td><em>$aam</em> &quot;float&quot;</td>
<td><em>$aam</em> &quot;swim&quot;</td>
</tr>
</tbody>
</table>

For other polysemous verbs, there is a split between transitive and intransitive uses, which correlates with an inchoative/noninchoative distinction. The transitive use, with human subjects, patterns like a noninchoative, while the intransitive counterpart, generally with inanimate subjects, patterns like an inchoative and is similar in nature to 'middle voice' verbs:
TRANSITIVE (noninchoative)

wallaf  "(turn on) light"

INTRANSITIVE (inchoative)

tafa  "extinguish"

wallaf  "be lit, on fire"

watta  "turn down"

fatah  "open"

watta  "bend over"

rafal  "close"

fatah  "open"

rafal  "close"

3.2.4 Problems with inchoativity tests

There are a number of problematic exceptions to these tests, which indicate interesting features of the semantics of CA verbal roots and of the classes themselves. There are three types of exceptions, based on the varied readings given to the APs in this group when used with and without lissa. These represent a conflict between inchoativity test A (AP = present) and inchoativity test B (lissa + AP = both "still" and "just").

The AP in exceptions of the first type has a present state connotation, while the perfect verb indicates a change in state, patternning like an inchoative (17a); but lissa + AP only has a "still" reading, as if it were a pure stative (17b). These are discussed under 'dejectival' verbs below.

(17) a. yaa salaam il-waad da tixin  rawi

oh goodness the-guy that got-fat  very

"Holy cow! That guy has really gotten fat."

b. huwwa lissa tixiin

he  now fat

"Is he still fat?"

"*Has he just become fat?"

The AP in exceptions of the second type, according to native speakers (sometimes with varying judgments), has a present perfect or past connotation (18a); a past event is strongly associated with it, making it similar to some noninchoatives. But with lissa (18b) it has both a "still" and a "just" reading like an inchoative. These are discussed under 'borderline' inchoatives below.

(18) a. ana mfaqgar sa?ra  gdida f tan?a

I  rent(AP) apartment new in Tanta

"I have rented a new apartment in Tanta."

b. ana lissa mfaqgar is-ya?ra  di

I  now rent(AP) the-apartment this

"I have just (begun) renting this apartment."

or: "I am still renting this apartment."

The AP in exceptions of the third type has some present connotation to it, sometimes with a present perfect connotation (as in 19a), and sometimes without any past connotation whatsoever, thus patternning like an inchoative (19b). But with lissa + AP these verbs have a reading only of "just", thus patternning like a noninchoative (19c):


he give(AP)-to-you thousand pounds for lessons private

"Has he given you a thousand pounds for private tutorials?"

b. ana raayih il-kazinu  d?la?ti

I  go(AP) the-open-air-club now

"I am going to the kazinu now."

c. huwwa lissa raayih il-madrasa

he  still go(AP) the-school

"He has just gone to school."/* "He is still going to school"

3.2.4.1 Problem verbs: Dejectival inchoative verbs

These verbs pattern like inchoatives according to inchoativity test A (AP = present) because their perfect verb denotes a change-of-state, but they pattern like statives according to inchoativity test B (lissa + AP = "still" only, not both "just" and "still"). They, therefore, present a problem to this latter test, which was taken to be the strongest test for inchoativity. There are three types of verbs in this category, depending on the type of verbal adjective form which functions as the AP or 'quasi-AP':
The lack of a “just” reading with lissa + AP indicates that a verbal event cannot be associated with the AP/quasi-AP even though there is a change of state event associated with the verb. This indicates further that the verbal adjective may not be directly derived from the verb, as part of a productive synchronic process, but rather that the verbal adjective form is first and foremost a nominal form, perhaps only diachronically related to its associated verb form. The differences in the reading of lissa with these verbal adjectives, therefore, indicate the relative ‘verbal-ness’ of these different verbal adjective forms: those which cannot have any reading of “just” are independent nominal forms (faṣīl type and the faṣīl type), while those which may or may not have a “just” reading (faļaan type) are more closely derived from the verb in a productive manner, but only partially so.

A word must be said about the faṣīl pattern APs here. The faṣīl pattern is obviously the productive AP pattern, yet the forms under consideration here are not products of that productive synchronic process; rather they are independent nominal forms. This is supported by the fact that a large number of the verbs in this category (of deadjectival inchoatives) have both a faṣīl and a faļaan AP form (example 20), with the faṣīl form felt to be a nonverbal nominal/adjectival form (oftentimes traced back to, or borrowed from, a Literary Arabic source), while the faļaan pattern seems to be the productive CA verbal adjective pattern.4

(20)  

<table>
<thead>
<tr>
<th>Type</th>
<th>Test B: lissa + AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>faṣīl faṣīl faṣīl faṣīl</td>
<td>&quot;still&quot; only</td>
</tr>
<tr>
<td>faṣīl</td>
<td>&quot;still&quot; only</td>
</tr>
<tr>
<td>faļaan</td>
<td>&quot;still&quot; only for most</td>
</tr>
<tr>
<td>faļaan</td>
<td>&quot;still/just&quot; for some</td>
</tr>
</tbody>
</table>

g. ḍirī "bec. aware"  ḍarī "aware"  ḍarī "aware"  ḍarī "aware"
h. ?? | "bec. idle"  ḍarī "jobless"  ḍarī "out of service"
i. ḍīlī "bec. void"  ḍīlī "falsehood"  ḍīlī "invalid"  ḍīlī "invalid"  ḍīlī "invalid"
j. ?? | "wanderer"  ḍarī "wanderer"  ḍarī "wanderer"  ḍarī "wanderer"  ḍarī "wanderer"
k. ?? | "bec. full"  ḍarī "prosperous"  ḍarī "filled, populated"  ḍarī "filled, populated"  ḍarī "filled, populated"
l. ḍīlī "wilt?"  ḍīlī "withered"  ḍīlī "withered"  ḍīlī "withered"  ḍīlī "withered"
m. ?? | "fade"  ḍīlī "faded"  ḍīlī "faded"  ḍīlī "faded"  ḍīlī "faded"  ḍīlī "faded"

Additionally, the quasi-independence of these latter faṣīl adjectives from the verbal derivational system is further evidenced by there being a secondary derivation of a verb from these adjectives, based on the denominal verbal pattern faṣīl, used primarily to denote weather conditions:

(21)  

<table>
<thead>
<tr>
<th>Verb</th>
<th>&quot;weather&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>ḍārīd &quot;cold&quot;</td>
<td>→ ḍarrad &quot;get cold&quot;</td>
</tr>
<tr>
<td>ḍarī &quot;warm&quot;</td>
<td>→ ḍarī &quot;get warm&quot;</td>
</tr>
<tr>
<td>ḍārī &quot;cold&quot;</td>
<td>→ ḍarī &quot;get cold&quot;</td>
</tr>
<tr>
<td>ḍarrar &quot;hot&quot;</td>
<td>→ ḍarrar &quot;get hot&quot;</td>
</tr>
</tbody>
</table>

In sum, the existence of these examples has two results. Firstly, it results in a modification in the subclassification of inchoative verbs, adding a subtype of inchoative verb which, for lack of a better term, I will call deadjectival; with these verbs the verbal adjective seems to take precedence in some way over the verb as if the verb is somehow derived from the adjective rather than the adjective from the verb. This characterization, however, is not intended as an actual claim that this is the way the derivation proceeds synchronically or diachronically; it is meant only as a convenient first-attempt at a label for these verbs. Secondly, these examples restrict the power or applicability of inchoativity test B (entailments of lissa + AP): it was taken at first as the most decisive test for inchoativity, a necessary and sufficient test. However, it is now only a necessary condition for an inchoative to have a "still" reading with lissa + AP, and it is a sufficient condition for inchoativity if a verb has both a "still" and "just" reading with lissa + AP. Verbs identified as deadjectival by these tests are given in Appendixes A and B under subheading (c).
3.2.4.2 Problem verbs: Borderline inchoatives and noninchoatives

The second and third types of exceptional verbs present a problem for inchoativity test A (meaning of AP): informants often described the state expressed by these APs as present perfect, involving both a real present state as well as a strong implication of a past event.

(22) a. *huda mʔaggara šaʔa gdiida*  
Huda rent(AP) apartment new  
"Huda has rented a new apartment."

b. *ana middii-lu makaan aho*  
I give(AP)-to-him place here  
"I have given him a place right here."

This type of AP is in a sense a cross between the other two APs. Even though there is a past event strongly associated with the AP, it was nevertheless felt to be more 'present' than other resultative or perfective APs. According to inchoativity test B (lissa + AP), these verbs are grouped sometimes with inchoatives (those with present APs like 23a), and sometimes with noninchoatives (those with past or resultative APs like 23b), depending on the reading of lissa with their APs. The former type I will term 'borderline inchoatives' and the latter 'borderline noninchoatives'.

(23) a. *huda lissa mʔaggara šaʔa f darb il-ʔahmar*  
Huda now rent(AP) apartment in Darb al-Ahmar  
"Huda has just rented an apartment in Darb al-Ahmar."  
or:  "Huda is still renting an apartment in Darb al-Ahmar."

b. *ana lissa middii-lu makaan aho*  
I now give(AP)-to-him place here  
"I have just given him a place right here."  
*"I am still giving him a place right here."

For borderline inchoatives the problem lies in the stronger connotation of perfect or pastness that these AP forms elicited despite the fact that their AP still had both a "still" and "just" reading with lissa. For borderline noninchoatives, on the other hand, the problem lies in the lack of a "still" reading with the AP despite the fact that they had a connotation of 'present-ness' in their AP. In either case the problem lies in inchoativity test A, regarding the unmarked meaning of the AP. This problem may be due to the manner in which the test was presented and phrased; the distinction between present vs. present perfect vs. past APs may not have been that clear for some of my informants. This is reflected in the higher degree of disagreements and inconsistent responses regarding these types of verbs as compared to other types. I expect that the greatest revision of the classes presented in this paper will be in these examples.5

On the other hand, the results of the manner of questioning adopted here may have uncovered a more interesting fact about the semantics of the language, viz. that there is more of a continuum between inchoatives and noninchoatives, rather than a sharp dividing line. This suggests that what constitutes a physical/cognitive state of an entity is not always clear-cut, and perhaps may vary from speaker to speaker. A quick examination of these verbs, listed under subheading (b) in Appendixes A-D, reveals a continuum in the nature of the state to which they refer. For some of the borderline inchoative verbs, it is clear that they involve a physical/cognitive state of the subject, as do core inchoatives like hafaz “memorize”, laaḥiẓ “notice”, sīḥi “wake up”. For others, even though the state involved is perhaps not a ‘real’ physical or cognitive state of the subject, its effects are nevertheless real or present enough for it to be considered similar to a physical or cognitive state (e.g., xaasim “quarrel with”, xaṭāb “become engaged”, sallif “loan”). Some of the verbs classified as borderline noninchoatives are similar in nature to the borderline inchoative verbs first mentioned; they involve personal transactions of some sort, dealing with money or social affairs such as getting, giving, or requesting something. Other borderline noninchoatives, however, are not; they involve more abstract states, such as changing the outward appearance of something (other than the subject), eating, and movement.
In sum, these examples indicate that there is a probable continuum between inchoatives and noninchoatives, which needs to be examined further to determine if it is real or if it is the result of the manner of questioning. Also, the test for which these examples were problematic (inchoativity test A) in its present form is not a necessary or sufficient condition for inchoativity. As the second type of these verbs (the noninchoative) and the following examples (pseudo-inchoatives') show, this test (viz. AP = present) taken individually cannot be a sufficient condition for inchoativity. However, in a modified form it can function at least as a necessary condition for inchoativity: the AP must have some connotation of 'present-ness', whether or not it also has some connotation of 'perfect-ness'. This necessary condition, taken together with the other (modified) inchoativity tests (which individually are also only necessary but not sufficient conditions), forms a sufficient condition for inchoativity. Verbs identified as borderline inchoative are listed in Appendixes A and C under subheading (b), while those identified as borderline noninchoative are listed in Appendixes B and D under subheading (b).

3.2.4.3 Problem verbs: Pseudo-inchoatives

The third class of problematic examples are those whose APs were identified as being unambiguously present (like inchoatives), but when used with lissa have only a "just" reading (like noninchoatives). All of these verbs involve motion or 'translocation', i.e., movement between two points.\(^6\)

These verbs present a more vexing problem for the criteria being proposed than do the previous verbs examined above: not only do they have clear and unambiguously contradictory readings with both inchoativity tests, but they also have the distinction of being used with virtually any time reference, without any additional emphasis or restriction. They can be used in sentences with past, present, and future time reference; and their APs are variously identified as being past, present and future, depending on the context and the explicit and implicit adverbials present. However, it is only the use of their AP as a present state that presents a problem for this analysis.\(^7\)

In main clauses with unambiguous present time reference (no explicit past or future time adverbial present), these APs are interpreted as being present:

(24) ana raayih il-madrasa
     I go (AP) the-school
     "I am going to school."

In addition to these main clause contexts, the APs of these verbs can function in a context which is also undeniably present or simultaneous, namely, in haal or 'circumstantial' clauses:

(25) sufi-u w-ana raayih il-bank
     I-saw-him and-I go(AP) the-bank
     "I saw him as I was going to the bank."

However, unlike other verbs whose APs are felt to be present (inchoatives and statives), the APs of these verbs cannot have a reading of "still" with lissa.

(26) a. huwwa lissa raayih
     "He has just gone."
     *"He is still going."

b. huwwa lissa mwrrwaah
     "He has just gone home."
     *"He is still going home."

I have taken this—the failure of their AP to produce a "still" reading with lissa—as evidence for not including them in the class of inchoatives. Yet the very strong feeling that their APs have a present connotation must be explained in some way, given the failure of the lissa test. The most obvious way to explain these facts is to attribute them to the complex ways in which place, person and time deixis interact with a very basic feature of the meaning of these verbs, namely, that they are translocative involving motion between two
points or events: a source and a goal. This is represented in Fig. 1, and is explained as follows.

Fig. 1 Translocative AP: 'pseudo-present state'

(a) 'source' (E₁) 'goal' (E₂) implied event(s)
(b) [AP ——— AP] AP (state)
(c) R S R null-predicate
time reference (present)

Firstly, in line (a), the two points representing the source and goal of the movement may be identified with the beginning and end points (E₁ and E₂) of a temporal and spatial interval represented in line (b). When lissa is used with these APs (test B), it can only be associated with these beginning or end points of the interval, not with the interval itself. Whether it is the beginning or end point which is picked out depends on the speech context and on the direction of movement in that context. When the movement is toward the speaker (hither-deixis), the adverbial is associated with the end point (E₂) of the interval, as in 27a; when the movement is away from the speaker (thither-deixis), the adverbial is associated with the beginning point (E₁) of the interval, as in 27b:

(27) a. ḥuwwa lissa gayy
   he still come
   "He has just come."

   b. ḥuwwa lissa raayith
   he still go(AP)
   "He has just gone."

The fact that the adverbial cannot be associated with the interval itself is a strong indication that this interval is a 'pseudo-state'. It is not part of the grammaticalized meaning of these forms that the time interval is understood as a present stative one; but rather it is a matter of pragmatics. This usage may be derived from the unmarked usage of these translocative APs with futurate meaning, expressing the intention or volition of the speaker to move from one location to another. Given that there are two points in time/space involved, at least one can be assumed to be in the future (the goal), whether or not the other (the source) is actually past. If the context, linguistic or non-linguistic, indicates that the source is definitely in the past, then the interval is understood as present, even though the AP is actually expressing the intention of the speaker to carry out an act, and does not itself express an actual physical or cognitive state. In terms of Fig. 1, this is represented in line (b), where the interval between the two time points is pragmatically associated with the AP form of these verbs, represented by a straight line, and in line (c) where this interval is understood as concurrent with the reference time of the utterance (R), which includes the speech time of the utterance (S).

In sum, then, I tentatively call these verbs pseudo-inchoatives, since they fail a necessary test for inchoativity (test B), having a reading of "still" with lissa even though they clearly and unambiguously fulfilled inchoativity test A, viz. their APs were identified as having something present or stative about them. These examples, furthermore, show that inchoativity test A (AP = present) taken by itself is not a sufficient condition for inchoativity (or stativity, for that matter) but is nevertheless a necessary condition. Verbs identified as pseudo-inchoative by the above measures are listed in Appendix D under (c).

3.3 Momentaneous vs. interval change of state verbs

In the previous section I examined the classification of change of state verbs according to the kind of state resulting from the change. In this section I turn to the classification of these verbs in terms of the type of interval, or the temporal extent of the change in state. These two methods of classification are not, as noted earlier, mutually exclusive: each of the categories to be described in this section, interval and momentaneous, may be subcategorized in terms of inchoativity and noninchoativity. This has important ramifications in
light of previous analyses of CA verb forms; these will be pointed out in the discussion that follows.

There are two primary classes of verbs distinguished on the basis of the temporal extent of the change of state: interval and momentaneous. Simply put, momentaneous verbs are those verbs which indicate a change in state at one point in time, while interval verbs are those verbs that indicate a change in state over a time interval. Defined informally on the basis of notions taken from Dowty's 'interval semantics', momentaneous verbs are true with respect to one and only one point in time, while interval verbs are true with respect to no less than two points in time.

The tests for momentaneous change of state verbs to be used here are based on Vendler's (1967) original tests for 'achievements' and Dowty's (1979) original tests for 'singulary change of state' verbs in English. As with previous tests and categories so far encountered, these tests rely on examining the ways that formal and lexical aspect interact. The first two of these tests exploit the interval nature of the processive form in CA, viz. the bi-imperfect with specific time reference, while the third notes the interaction between the CA perfect (past tense) form and interval time adverbials.

The first of these tests is a morphology test, testing for restrictions on the meaning of the bi-imperfect form: momentaneous verbs have only a habitual reading in the bi-imperfect (example 28a); they can be used in the bi-imperfect form only with nonspecific time reference, indicating only a non-process or event. Interval verbs in the bi-imperfect form, on the other hand, can be used with both specific and nonspecific time reference (example 28b), indicating both a process and a non-process or event.

\[
\begin{align*}
28a. & \quad \text{ana bantsa ism-u} \\
& \quad \text{I forget his-name} \\
& \quad \text{"I (always) forget his name."} \\
& \quad * \text{"I forget his name (now)."}
\end{align*}
\]

b. \text{ana baktib gawaab dilwa\text{\rlap/tikull(i) yoom}}
I write letter now/\text{every day}
"I am writing a letter now/I write a letter every day."

Simply put, the reason for this is that the CA bi-imperfect with specific time reference, being a processive form, necessarily takes place over an interval; this precludes its use with momentaneous verbs, which take place at a point in time.

The second of the tests to distinguish momentaneous verbs from interval verbs is related to the first test for 'momentousness' and involves examining the entailment relations between the perfect (past tense) form when used with \text{fi saa\text{\rlap/a}} "in an hour" and the past processive form (\text{kaan "was"+bi-imperfect}). The purpose is to see if the former collocation entails the latter: for momentaneous change of state verbs, the collocation perfect verb \text{+fi saa\text{\rlap/a}} "in an hour" does not entail \text{kaan +bi-imperfect}, while for interval change of state verbs it does entail \text{kaan+bi-imperfect}. Again, the reason for this behavior is the conflict between formal and lexical aspect. Processive forms like the CA bi-imperfect (with specific time reference) delimit an interval, while lexically momentaneous verbs describe an event that takes place at only a single point in time; hence, the latter cannot be used in the former manner.

The tests for length of change of state interval (momentaneous vs. interval) are summarized as follows:

A. verb morphology
\begin{align*}
\text{bi-imperfect} &= \text{habitual only} & \text{Momentaneous} \\
\text{bi-imperfect} &= \text{present or habitual} & \text{Interval}
\end{align*}

B. entailment relations with adverbials
\begin{align*}
\text{Does perfect +fi saa\text{\rlap/a} entail} & \quad \text{Momenteous: No} \\
\text{bi-imperfect during interval?} & \quad \text{Interval: Yes}
\end{align*}

(i.e., does 'x V-ed in y time' entail 'x was V-ing during y time?')
3.3.1 Momentaneous verbs

3.3.1.1 Inchoative momentaneous verbs

The first subclass of momentaneous predicates are those that are also inchoative, or indicate entry into a physical or mental state, based on the meaning of their AP. Alone the AP is understood as a present state; when used with *lissa* "now", it is understood as either "still" or "just". In fact, the overwhelming majority of the momentaneous verbs in this study turn out to be inchoative, which recalls Woidich’s (1975) claim that APs are used as the imperfective aspect of momentaneous verbs. It must be noted, however, that while this relationship between momentaneous verbs and inchoative verbs is significant (for this sample of verbs), there does not appear to be any necessary relation between these two classes of verbs. Being a momentaneous verb according to this test is neither a necessary nor a sufficient condition for inchoativity, since there are change of state verbs, to be presented in the next section, which are momentaneous but do not produce inchoative readings. Conversely, and more importantly as regards Woidich’s claim, being an inchoative verb is not a necessary or sufficient condition for being a momentaneous verb, since there are interval verbs which are inchoative. These will be examined in section 3.3.2.1.

Verbs identified as momentaneous inchoatives are listed in Appendix C. Also included in this class are some of those verbs which were identified in the previous section as borderline inchoatives, whose AP was identified as having a present perfect reading, and others which were identified as deadjectival inchoatives. The subgroup of this latter type, labelled (i) in Appendix C, represents those for which the AP does not have a reading of "just" with *lissa*, while that labelled (ii) represents those whose AP did have a reading, for some speakers, of "just" with *lissa*.

3.3.1.2 Momentaneous noninchoatives

The second subclass of momentaneous verbs are those which are noninchoative according to the tests for inchoativity. This class of verbs is important in two respects. Firstly, they are examples of momentaneous verbs which do not have APs functioning as imperfective aspects; this weakens Woidich’s claim that APs function as imperfective aspects of momentaneous verbs. Secondly, they contain the most troublesome of CA verbs (at least as regards this classification scheme), namely, motion or translocative verbs, the pseudo-inchoatives. As noted in the previous section, the APs of these verbs have a present reading, despite the fact that they fail a necessary test for inchoativity (viz. *lissa* + AP = "still/just"). The present reading of the AP was related to the semantic structure of these verbs (viz. the fact that they indicate two points in time), and to pragmatic features of their use (viz. the fact that they are more expressive of the volitionality of the speaker, which is understood as a futurate meaning). Also included in this class are verbs identified as borderline noninchoatives, or those whose APs were understood as present perfect in some way, but which did not fulfill the necessary tests for inchoativity: when used with *lissa* their AP had only a "just" reading, not both a "just" and "still" reading. These verbs are listed in Appendix D.

3.3.2 Interval verbs

The second major classification of change of state verbs in terms of the temporal extent of the change in state are those whose change of state takes place over an interval. The primary test for this class is that the *bi*-imperfect can be used with both specific time reference as well as nonspecific time reference (i.e., can have both habitual and continuous readings); this contrasts with momentaneous verbs, which can only be used with nonspecific time reference (i.e., can have only a habitual reading). Like momentaneous verbs, these verbs may be subclassified as either inchoative or noninchoative, according to the same tests for inchoativity: whether the AP indicates a present state, and whether the AP has a reading of both "still" and "just" with the adverb *lissa* "now".
3.3.2.1 Inchoative interval predicates

The verbs in this class have the following characteristics: firstly, their bi-imperfect forms have a present processive reading, indicating that they are interval predicates; secondly, their APs are understood with a present or a present perfect meaning, and their APs have a reading of both "just" and "still" when used with the adverb lissa "now", indicating that they are inchoative. These interval inchoative verbs are listed in Appendix E.

They indicate entry into a physical or cognitive state, based on the meaning of their AP. The APs of these verbs were identified as describing either present or present perfect states, the latter type being what I have termed borderline inchoative. For both of these types of verbs, the AP had a reading of either "still" or "just" with lissa, the basic test for inchoativity.

More interesting, given the fact that they are inchoative, however, is the fact that they are also interval predicates; the entry into a physical or cognitive state takes place over an interval, since their bi-imperfects were identified by native speakers as indicating a present process such as becoming, trying, or getting into a state. This is important since it illuminates a flaw in Woidich's (1975) argument. Strongly implied in Woidich's argument is the claim that APs which have a present state reading do so because their corresponding verbs are 'punctual' and 'ingressive'—terms corresponding to my momentaneous and inchoative. However, as these examples illustrate, the deciding factor in whether or not an AP has a present state reading is the kind of state which is the result of the change of state event, not the punctuality of the change of state interval. These verbs do not indicate an instantaneous change of state, yet their AP does express a real, present state; and, as noted above, there are momentaneous change of state verbs whose AP is not used to indicate imperfective aspect, viz. momentaneous noninchoatives.

Part of Woidich's argument still stands: the AP may function to indicate a resultative state, both for inchoatives and noninchoatives. However, it is not true that this is the function of the AP for all verbs, since there are some, the non-change of state verbs (i.e., statives).

which do not have a resultative reading at all. Woidich's observation can be limited and rephrased as follows. The AP in CA may function, for inchoative and noninchoative change of state verbs, as a resultative form; but for inchoatives, whether momentaneous or interval, its primary function is to express the physical or cognitive state entered into without any indication of the past entry into that state.

3.3.2.2 Noninchoative interval verbs and predicates

The verbs in this class have the following characteristics. Firstly, their bi-imperfect forms have a present processive reading, indicating that they are interval predicates. Secondly, their APs are understood with a past or a resultative meaning (i.e., a past event is strongly implied by the AP); and when used with the adverb lissa "now", their APs have a reading of "just" only, thus indicating that they are noninchoative.

The verbs distinguished by these tests are listed in Appendix F. The first grouping of verbs in this table includes those for which an AP form was less than acceptable, or was completely unacceptable, while the second of these groupings are those which were quite acceptable in the AP form. Also included in this class are a certain number of borderline inchoatives, or those verbs whose APs were understood by some informants as involving a present perfect sense in some way but which did not fulfill the second criterion for inchoativity: their APs did not have both a "just" and a "still" reading with lissa; they had only a "just" reading.

4.0 Interaction of Lexical and Formal Aspect in CA

In the preceding analysis three basic ways of categorizing verbs in CA have been developed on the basis of the presence or absence of a change of state event, the kind of state resulting from that change, and the length of the change of state (i.e., the length of interval over which that change of state event takes place). The first type distinguished statives from nonstatives; the second, inchoative from noninchoative verbs; and the third, interval from momentaneous verbs.
Each of these lexical aspectual categories and each of the different aspectual classes of morphological forms may be categorized in terms of the presence or absence of a feature, as follows:

A. Lexical categories:
1. Stative = \( \langle - \text{change} \rangle \) vs. non-statives = \( \langle + \text{change} \rangle \)
2. Inchoative = \( \langle + \text{state} \rangle \) vs. noninchoative = \( \langle - \text{state} \rangle \)
3. Interval = \( \langle + \text{interval} \rangle \) vs. momentaneous = \( \langle - \text{interval} \rangle \)

B. Morphological categories:

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Features</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event</td>
<td>([+/- \text{change}, +/- \text{interval}])</td>
<td>CA perfect, CA bi-imperfect with non-specific time reference</td>
</tr>
<tr>
<td>Process</td>
<td>([+ \text{change}, + \text{interval}])</td>
<td>CA bi-imperfect with specific time reference</td>
</tr>
<tr>
<td>State</td>
<td>([+ \text{state}, + \text{interval}])</td>
<td>CA active participle</td>
</tr>
</tbody>
</table>

Given these values, the interaction of formal and lexical aspect detailed in this paper may be paraphrased in terms of these features, and the problematic constructions mentioned at the beginning of the paper may be clearly represented as a conflict or a lack of 'congruity' between certain of these features in both the lexical class and the morphological form. This is represented in summary form in Table 2 below.

There were two areas of non-congruity, represented in Table 2 by (a) and (b). These involve the interaction of the bi-imperfect with certain kinds of verbs (the (a) cases), and the interaction of the AP with certain other kinds of verbs (the (b) cases). The former served as a test in distinguishing between a class of interval and non-interval predicates, while the latter was used as a test in distinguishing between inchoative and noninchoative verbs, and partly in distinguishing between statives and nonstatives.

### Table 2. Interaction of formal and lexical aspect

<table>
<thead>
<tr>
<th>Formal Aspect</th>
<th>Lexical Aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Event</strong></td>
<td><strong>Process</strong></td>
</tr>
<tr>
<td>perfect</td>
<td>bi-imperfect</td>
</tr>
<tr>
<td>( \pm \text{CHNGE} )</td>
<td>( \pm \text{CHNGE} )</td>
</tr>
<tr>
<td>( \pm \text{INTRV} )</td>
<td>( \pm \text{INTRV} )</td>
</tr>
</tbody>
</table>

Non-change of state:

- **Stative**
  - \( \langle - \text{CHNGE} \rangle \)
  - \( \langle - \text{INTRV} \rangle \)
  - \( \langle + \text{CHNGE} \rangle \)
  - \( \langle + \text{INTRV} \rangle \)
  - \( \langle - \text{STATE} \rangle \)
  - \( \langle - \text{INTRV} \rangle \)

Change of state:

- **Lexical**
  - \( \langle + \text{CHNGE} \rangle \)
  - \( \langle + \text{INTRV} \rangle \)
  - \( \langle + \text{CHNGE} \rangle \)
  - \( \langle + \text{INTRV} \rangle \)
  - \( \langle + \text{STATE} \rangle \)
  - \( \langle + \text{INTRV} \rangle \)

- **Aspect**
  - \( \langle + \text{CHNGE} \rangle \)
  - \( \langle + \text{INTRV} \rangle \)
  - \( \langle + \text{CHNGE} \rangle \)
  - \( \langle + \text{INTRV} \rangle \)

As regards the former incongruity (a), the bi-imperfect form with specific time reference has processive aspect, represented in terms of these features as \( \langle + \text{CHNGE}, + \text{INTRV} \rangle \). Lexical items that are inherently processive (e.g., Vendler's activities and accomplish-
ments) have features \(<+ \text{CHNGE}, + \text{INTERV}>\) which are congruent with the features of the processive form; therefore, when expressed through a processive form they produce a fully processive form. Lexical items that are inherently non-processive include statives, represented as \(<+ \text{CHNGE}, \text{>}_\text{MEM}>\), and momentaneous verbs, represented as \(<+ \text{CHNGE}, - \text{INTERV}>\); they do not produce a processive form since their lexical aspect conflicts with the formal aspect of the bi-imperfect form. For momentaneous verbs the conflict is due to the extent of the interval \(<- \text{INTERV}> \text{vs.} [ + \text{INTERV }]\), while for stative verbs the conflict is due to the kind of interval represented by these different aspectual types. Stative lexical items, if used in an interval form, denote a homogeneous interval \(<+ \text{CHNGE}>\), while processive forms denote a heterogeneous interval \(<+ \text{CHNGE} >\).

These conflicts or incongruities in aspect are made apparent in the restrictions on the meanings of these non-processive verbs when used in the bi-imperfect. While other types of verbs may have both a processive reading (used with specific time reference) and a non-processive reading (used with nonspecific time reference) in the bi-imperfect, statives and momentaneous verbs may only have a non-processive (or habitual) reading (used only with nonspecific time reference), and may not have a processive one.

As regards the (b) cases, involving interaction with the AP, there again is one major division: between inchoatives and non-inchoatives. The AP form has a stative aspect, represented as \([ + \text{STATE}, + \text{INTERV}]\). Lexical items whose aspect is congruent in some way with a stative form (namely, pure statives and inchoatives, with the feature \(<+ \text{STATE}>\)) produce a fully stative form, which is understood as present state. Lexical items whose aspect in some way conflicts with that of the AP (those that are both non-stative \(<+ \text{CHNGE}>\) and non-inchoative \(<+ \text{STATE}>\)) produce a form in which an event is as strongly implied as the state is asserted, leading to a resultative reading for APs of this type. The lack of congruity between the formal aspect and the lexical aspect here is not resolved by the non-acceptance of the AP form with these verbs, but rather by a restriction on the meaning of the form when used with the non-congruent lexical items: what is emphasized by the APs of these items is the change of state/entry into state event and not the actual state itself.

Inchoative change of state verbs may in certain contexts also give rise to a resultative reading; thus, the change of state event indicated by the verb \(<+ \text{CHNGE}>\) is emphasized more than the physical or mental state \(<+ \text{STATE}>\) indicated by the verb, due to use with certain adverbials or contextual factors.

5.0 Conclusion

In the preceding I have expanded on and clarified previous analyses of CA verbs and morphological forms as regards the interaction of their respective aspectual values. This was done within a framework based in part on Dowty (1979). Several different classes were defined based on the reformulations of Dowty's tests into CA, and on tests developed for CA by Woidich (1975) and al-Tonsi (1981). These tests noted the degree of interaction between formal aspect and lexical aspect, the co-occurrence restrictions on use with adverbials, and the entailment relations between morphological forms. The classes defined by these tests were not always clear-cut; there were some examples of borderline types (both inchoative and non-inchoative), and sometimes category distinctions were dependent in part on pragmatic factors (e.g., with pseudo-inchoatives). It was also noted that these test criteria, considered individually, function as necessary but not sufficient conditions for the category in question; but, if 'bundled' together, they could serve as a sufficient condition for each category. These aspectual classes were then represented in the form of features, as were the aspectual values of CA verb forms which figured in these tests. The behavior of these different classes was then explained as being due to the incongruity or conflict between different aspectual features of verb forms and lexical verbs.
APPENDIX A

Examples of stative verbs

NONAGENTIVE STATIVES

ابة "be able"  ناز "love"  (ناما) "mean"

ساز "want"  نياما "consider"  ليزيم "be necessary"

(عاز) "be possible"  ين "think"  يافاب "please"

تمع "need"  شكاب "be similar"  تيمايما ل "see to"

يمان "hope"  سا "be truthful"  واها "make s.o. longing"

كيز "be"  ييمكن "be possible"  فاك "prefer"

(يوي) "be into s.th."  

AGENTIVE STATIVES

سا "be"

ساث "be difficult with"  سا "be sad over"

ياك "remain"  ساب "be stingy with"  اينا "act like an idiot"

سراب "be loose"  سيرا "be hard on"  سا "be cruel to"

يسان "wait for"  سا ما "be truthful to"  ساب سا "be patient with"

كيرم "hate"  يكيرم سا "be generous with"

APPENDIX B

Examples of polysemous stative/change of state verbs

STATIVE/INCHOATIVE

با "be/become"

سير "know come to know"  سا "understand come to understand"

فاك "think/remember"  فاك "think/spend"

باب "love/fall in love"  با "feel come to feel"

نوا "intend decide"  نوا "intend/go to s.o"

يوا "be confused/become confused"

STATIVE/NONINCHOATIVE

فاك "think/remember"  با "think/spend"

نا "intend/go to s.o."  نا "be of use/do s.o. favor"

Appendix C

Momentaneous inchoative verbs

a. CORE INCHOATIVES (AP = present state)

نسي "forget"  سا "see"  شاك "doubt"

ساام "fast"  را "lie down"  شام "smell"

با "go bad"  سا "drive"  سا "best"

با "spend night"  سدا "believe"  سا "hear"

با "absent o.s."  دار "run"  سا "be c. lost (person)"

ليي "stick to"  إساريا "rest"  سا "be c. lost (thing)"

سراج "become known"  مديد "stretch out"  وناف "bec. lit. on fire"

سايير "go on trip"  كيما "get used to"  فاتا "open (intrans.)"

زاف "closed (intrans.)"

b. BORDERLINE INCHOATIVES (AP = present perfect state)

نياف "be transferred"  سا "quarrel with"

ساب (trans) "leave"  سا "look out for"

نافار "rent"  سا "loan"

ناي "fall"

c. DEADJECTIVAL INCHOATIVES

فا "get intense" فا "become reasonable"

ساد "get old(er)"  سا "become free"

فا "get long(er)"  سا "become satisfied with"

فا "get big(er)"  فا "fear"

فا "get clean"  فا "get annoyed"

فا "get lighter"

فاالن "get event associated with AP"

ناي "bec. greedy"  سا "get lazy"

فا "get cold"  سا "get jealous"

فا "get tired"  سا "regret"

فا "get shy"  سا "get generous"

فا "get mad"  سا "get sensitive"

فا "find out"  فا "get annoyed"  فا "make mistake"

فا "get hungry"  فا "get confused"

فا "get destroyed"  فا "get mad"  فا "get angry"
Appendix D

Momentaneous noninchoative verbs

a. CORE NONINCHOATIVES
(AP = "past connotation")

Ali? "wake at night" iktaśaf "discover" mayyiz "distinguish"
šāṭī "fail" infaqgar "explode" mišī "leave"
šaam kilom. "swim a kilom." lašī "find" wisil "arrive"
bēsīf "send" lamah "notice"

b. BORDERLINE NONINCHOATIVE
(AP = "present perfect", "lissa + AP" = "just" only)

waśfīd "make appointment" raggaś "bring something back"
wadda "lead s.o. somewhere" xaśś "go in"

b. BORDERLINE INCHOATIVES (AP = "present" state)

saḥāb "get friendly w." hafaq "memorize" saqīfīb "make up with"
sīlīs "go break" rīqīf "lift up" (ʔ) fīdī "bec. empty"
sīrī "wake up" xadām "invite" sahīf "melt"
sirī "boil" maqāf "forbid" xasīf "lose weight"
sīhīs "get ready" samāf "permit" kaqīf "examine"
šabād šatā "arrest" istalqīf "borrow" xuddīn tajaṭab "apply for s.th.
..."

xabāf "hide s.th." iṣānīfīf "borrow" xasaqīf "quarrel" nībāh li- "perceive"

yāṭīfīd "cover s.th." laqāfīfīf "notice" bīṭīfīf "stop (doing)
..."

xahāfīd "call on" waṭīfīd "cover" waʔafīf "stop s.o., s.th.
..."

c. DEADJECTIVAL INCHOATIVES

fašīfīd, etc.: type fašīfīsīd-type fašīfīlīsīd-type

bārīfīd "get closer" (i) birīfīd "get cold" hīdīfīd "get calm"
... bīṣīfīfīd "get distant" fitīsīfīd "choke/die" niṣīfīd "bec. deficient"
... iʃārīfīfīd "get poor(er)" sīmīrīfīd "be. inhabited" saqīfīfīd "be loose"
... fīlīfīd "lessen" sikīrīfīd "get drunk" xalīfīd "fall"
... fīlīfīfīd "get weaker" niṣīfīd "bec. sleepy" (ṭaʃīfīd) "go astray"
... sīyāfīfīd "get smaller" (ii) jafīfīd "run away" (ṣīfīd) "be forgetful"
... riʃīfīfīd "get thin(er)" hirīfīd "escape" trifikīfīd "be
d... sīmīnīfīfīd "get fat(er)" yirīfīd "crow" istaʃāfīfīd "get ready"
... kītīfīfīfīd "bec. numerous" xiʃīfīfīfīfīd "lose" iʃhazzīfīfīd "be sorry"
... iʃtīfīfīfīd "get full" ikīfīfīfīfīd "shaken"
## APPENDIX F
Noninchoative change of state interval verbs

(a) Core noninchoatives

(i) no AP, or AP in very limited use:

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>ikthallim ma3a</td>
<td>&quot;speak with&quot;</td>
</tr>
<tr>
<td>dahas</td>
<td>&quot;surprise&quot;</td>
</tr>
<tr>
<td>iddarag</td>
<td>&quot;roll&quot;</td>
</tr>
<tr>
<td>darab</td>
<td>&quot;approach&quot;</td>
</tr>
<tr>
<td>faqisi</td>
<td>&quot;surprise&quot;</td>
</tr>
<tr>
<td>iftaxar bi</td>
<td>&quot;boast of&quot;</td>
</tr>
<tr>
<td>hawwil</td>
<td>&quot;try to&quot;</td>
</tr>
<tr>
<td>faukkan fi</td>
<td>&quot;ponder&quot;</td>
</tr>
<tr>
<td>iftassah</td>
<td>&quot;promenade&quot;</td>
</tr>
<tr>
<td>barhan tha</td>
<td>&quot;indicate&quot;</td>
</tr>
<tr>
<td>gara</td>
<td>&quot;happen&quot;</td>
</tr>
<tr>
<td>imassha</td>
<td>&quot;walk&quot;</td>
</tr>
<tr>
<td>dall tha</td>
<td>&quot;indicate&quot;</td>
</tr>
<tr>
<td>giri</td>
<td>&quot;run&quot;</td>
</tr>
</tbody>
</table>

(ii) with AP

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>laal</td>
<td>&quot;say&quot;</td>
</tr>
<tr>
<td>Sayyat</td>
<td>&quot;cry&quot;</td>
</tr>
<tr>
<td>xad dars</td>
<td>&quot;take a lesson&quot;</td>
</tr>
<tr>
<td>laa3</td>
<td>&quot;cut&quot;</td>
</tr>
<tr>
<td>bayyad</td>
<td>&quot;paint&quot;</td>
</tr>
<tr>
<td>zaakir</td>
<td>&quot;study&quot;</td>
</tr>
<tr>
<td>laa3</td>
<td>&quot;read&quot;</td>
</tr>
<tr>
<td>defafiy</td>
<td>&quot;pay&quot;</td>
</tr>
<tr>
<td>istabbi</td>
<td>&quot;write&quot;</td>
</tr>
<tr>
<td>laa3</td>
<td>&quot;kill&quot;</td>
</tr>
<tr>
<td>dibik</td>
<td>&quot;laugh&quot;</td>
</tr>
<tr>
<td>kaddib</td>
<td>&quot;attract attention&quot;</td>
</tr>
<tr>
<td>darab</td>
<td>&quot;hit&quot;</td>
</tr>
<tr>
<td>katab</td>
<td>&quot;write&quot;</td>
</tr>
<tr>
<td>lafat nazah</td>
<td>&quot;anxiously&quot;</td>
</tr>
<tr>
<td>hasal</td>
<td>&quot;happen&quot;</td>
</tr>
<tr>
<td>kawa</td>
<td>&quot;iron&quot;</td>
</tr>
<tr>
<td>jawaal lisan</td>
<td>&quot;treat&quot;</td>
</tr>
<tr>
<td>hasasib</td>
<td>&quot;settle acc’t&quot;</td>
</tr>
<tr>
<td>ma’astar</td>
<td>&quot;rain&quot;</td>
</tr>
<tr>
<td>yalis sela</td>
<td>&quot;obnoxiously&quot;</td>
</tr>
<tr>
<td>hasab</td>
<td>&quot;count&quot;</td>
</tr>
<tr>
<td>masah</td>
<td>&quot;wipe&quot;</td>
</tr>
<tr>
<td>iftarrag sela</td>
<td>&quot;watch&quot;</td>
</tr>
<tr>
<td>sawwar</td>
<td>&quot;take photo&quot;</td>
</tr>
<tr>
<td>mawwiti</td>
<td>&quot;kill&quot;</td>
</tr>
<tr>
<td>dafa i bi sakaus</td>
<td>&quot;hammer&quot;</td>
</tr>
<tr>
<td>tabax</td>
<td>&quot;cook&quot;</td>
</tr>
<tr>
<td>nabbih</td>
<td>&quot;warn&quot;</td>
</tr>
<tr>
<td>yasaal</td>
<td>&quot;wash&quot;</td>
</tr>
<tr>
<td>yayaar</td>
<td>&quot;change&quot;</td>
</tr>
<tr>
<td>samn</td>
<td>&quot;sniff&quot;</td>
</tr>
<tr>
<td>yazam</td>
<td>&quot;swim&quot;</td>
</tr>
<tr>
<td>habbil</td>
<td>&quot;meet s.o.&quot;</td>
</tr>
<tr>
<td>yanna</td>
<td>&quot;sing&quot;</td>
</tr>
<tr>
<td>dawwin</td>
<td>&quot;record&quot;</td>
</tr>
<tr>
<td>bazilim</td>
<td>&quot;present&quot;</td>
</tr>
<tr>
<td>ibkada</td>
<td>&quot;begin&quot;</td>
</tr>
<tr>
<td>fahkim</td>
<td>&quot;explain&quot;</td>
</tr>
<tr>
<td>irsallim</td>
<td>&quot;learn&quot;</td>
</tr>
<tr>
<td>gawwib</td>
<td>&quot;answer&quot;</td>
</tr>
<tr>
<td>fakkar</td>
<td>&quot;remind&quot;</td>
</tr>
<tr>
<td>dammar</td>
<td>&quot;destroy&quot;</td>
</tr>
<tr>
<td>kawwini</td>
<td>&quot;create&quot;</td>
</tr>
<tr>
<td>wallat</td>
<td>&quot;turn on&quot;</td>
</tr>
<tr>
<td>mada</td>
<td>&quot;sign&quot;</td>
</tr>
<tr>
<td>rama</td>
<td>&quot;throw away&quot;</td>
</tr>
<tr>
<td>sitta</td>
<td>&quot;turn off&quot;</td>
</tr>
<tr>
<td>baal</td>
<td>&quot;sell&quot;</td>
</tr>
<tr>
<td>saggil</td>
<td>&quot;record&quot;</td>
</tr>
<tr>
<td>watfa</td>
<td>&quot;turn down&quot;</td>
</tr>
<tr>
<td>sahha</td>
<td>&quot;correct&quot;</td>
</tr>
<tr>
<td>wadda</td>
<td>&quot;bid farewell&quot;</td>
</tr>
<tr>
<td>simi 3</td>
<td>&quot;listen&quot;</td>
</tr>
<tr>
<td>sahill</td>
<td>&quot;repair&quot;</td>
</tr>
<tr>
<td>xallas</td>
<td>&quot;finish&quot;</td>
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<td>banaa</td>
<td>&quot;build&quot;</td>
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<tr>
<td>rasam</td>
<td>&quot;draw&quot;</td>
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<tr>
<td>xarrag</td>
<td>&quot;evil s.o.&quot;</td>
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<tr>
<td>xaraar</td>
<td>&quot;destroy&quot;</td>
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<tr>
<td>raftil</td>
<td>&quot;put in order&quot;</td>
</tr>
<tr>
<td>itadaa</td>
<td>&quot;eat lunch&quot;</td>
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<td>fahash</td>
<td>&quot;open&quot;</td>
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<td>sarref</td>
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<td>istikka</td>
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<tr>
<td>xafal</td>
<td>&quot;close&quot;</td>
</tr>
<tr>
<td>xarref</td>
<td>&quot;eat breakfast&quot;</td>
</tr>
</tbody>
</table>

(b) Borderline noninchoatives (AP = present perfect, lissa AP = "just" only)

<table>
<thead>
<tr>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>gaa3</td>
<td>&quot;bring s.th.&quot;</td>
</tr>
<tr>
<td>laabaq</td>
<td>&quot;get paid&quot;</td>
</tr>
<tr>
<td>talab</td>
<td>&quot;request&quot;</td>
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<td>yazzil</td>
<td>&quot;move to&quot;</td>
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<td>xad</td>
<td>&quot;take&quot;</td>
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<tr>
<td>laadhi</td>
<td>&quot;notice&quot;</td>
</tr>
<tr>
<td>na3ah</td>
<td>&quot;transfer s.o. to&quot;</td>
</tr>
<tr>
<td>idda</td>
<td>&quot;give&quot;</td>
</tr>
<tr>
<td>luskar</td>
<td>&quot;peel&quot;</td>
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<tr>
<td>istalam</td>
<td>&quot;receive&quot;</td>
</tr>
<tr>
<td>sirib</td>
<td>&quot;drink&quot;</td>
</tr>
<tr>
<td>kal</td>
<td>&quot;eat&quot;</td>
</tr>
</tbody>
</table>

## NOTES

1. My primary informants were Abbas al-Tonsi of the Center for Arabic Study Abroad at The American University in Cairo (AUC), and Rifaa Amin Abdel-Hafez of International Language Institute (ILI) in Mohandiseen; they deserve a note of special thanks for their interest and patience in answering hundreds of my questions. I would also like to thank Suzanne Masud of AUC, Prof. Rifaa al-Farnawaamy of Cairo University, and Naguib Amin of ILI for their support. Needless to say, any mistakes in the following analysis or data are my own responsibility and should not reflect on the contributions of my informants. This research was supported by a dissertation research grant from the Fulbright Commission, for which I am grateful.

2. For a discussion of the difference between specific and nonspecific time reference, see Eisele (1987). The notion that a processive form entails a change of state is taken from an alternative analysis of the English progressive proposed but discarded by Dowty (1979), viz. that the progressive is used if a change of state were entailed by the verb, or if it expresses volitional control (or the potential for a change of state). Finally, the notion of heterogeneous and homogeneous interval is based on a modified and somewhat simplified version of Dowty's (1979) 'interval-based' analysis of the English progressive and Taylor's (1977) notion of heterogeneous vs. homogeneous predicates.

3. An interesting characteristic of the class of pure stative is the defective morphology of a number of the more common members. For example, kanaa "to be" lacks an AP form, as do faaz "to love", sabah "to be similar". Others like gaaz "to be possible", yimkin "to be possible" lack a perfect form, while others like fana "to mean" lack both an AP form and a perfect form.

4. A degree of polysemic is present for some verbs in the same faasil form. For example, when AP of the verb nassif "get dry, hard" is used to refer to inanimates as it does unmarkedly, then its AP has both a "still" reading with lissa; but when used to refer to a human (used metaphorically meaning "stubborn"), it only has a "still" reading with lissa. Similarly, fitir "to break fast" may be used in an inchoative sense ("to eat breakfast") where the AP = perfect/past, and also in an inchoative sense ("to eat during Ramadam", the Muslim month of fasting) where the AP = present. In the latter sense the AP is only a "still" reading with lissa (literally "a fast-breaker"), while in the former sense it has only a "just" reading ("have just eaten breakfast"). Also, it must be noted that there were a number of conflicting responses to some of these. For example, one native speaker preferred to give a "still/just" reading to lissa kaasib, rather than to lissa kasbaan which was felt to be more 'noun-like', meaning only "winner" and not "having won". This contradicts somewhat the above observations.

5. Among the disagreements regarding these verbs and their APs when used with lissa are the following: fitir "become empty" for one speaker could only have a reading of "still", like fitir "become free for", listed under dejectival inchoative verbs. For hafas "memorize", lissa with the AP had for one speaker only a reading
of "still", indicating that it too might be listed for this speaker as a deadjectival inchoative, since the AP *haafiz* has a purely nominal reading of "one who has memorized the Quran". Finally, for *fallis* "go broke, become bankrupt", a "just" reading for *lissa* + AP was difficult for one speaker to get, since the AP (*mifallis*) seemed to function as an independent nominal form meaning "a penniless person". For this speaker, the *bi*-imperfect of this verb *fallis* as also difficult to accept, since there exists an alternative way of expressing "going bankrupt", namely, *darab tafliisa*, which would be preferably used to mean "he is going bankrupt".

Also, there was one verb which is undeniably a change of state inchoative, but for which the *lissa* + AP test failed, viz. *maat* "to die". The use of *lissa* with *mawyiit* "dead" produced rather scornful expressions from my informants, much as a bad joke would have it. It appears that the 'pragmatics of death' precludes the use of an expression which implies the temporary nature of a state (i.e., *lissa* meaning "still") with a word like *mawyiit* "dead" which refers to a rather permanent state.

6) These verbs or their cognates have been identified in almost every Arabic dialect as being exceptional and problematic. The term 'translocative', in fact, is borrowed from Cowell (1964) on Syrian Arabic. Al-Tonsi referred to these as 'locomotion' verbs and noted their peculiarities, especially as regards the use of their APs with *lissas* — an observation which forms the basis for the following discussion.

7) As far as future readings of the AP are concerned, I have elsewhere (Eisele 1988:216-221) noted that these verbs behave similarly to other verbs with regards to future uses, since almost ALL APs can be used in a future context with certain particles (both positive and negative) expressive of the volitionality of the subject. However, APs of verbs involving location, whether motional or not, can be used with a future sense without any additional particles or emphasis. This was tentatively explained as being due to the fact that expressing location may itself be more expressive of the volitionality of the subject than are the meanings of other types of verbs. I also noted that these verbs, like other verbs now identified as change of state verbs, can have a resultative or past reading with an adverbial like *lissa* (or any other explicitly past time adverbial), meaning that a past event is strongly implied by and associated with the AP form. The future and past/resultative readings of these APs (and others), therefore, do not present any problem for the present class (or for any other class), since these readings are shared among almost all types of change of state verbs.

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Since 1986 the following titles have been published or are scheduled for publication in 1990:

53. SANKOFF, David (ed.): *Diversity and Diachrony*. Amsterdam, 1986.

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