EGYPTIAN ARABIC AUXILIARIES AND THE CATEGORY OF AUX

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1. Introduction
This paper will examine the arguments, data, and claims presented in Jelinek (1981, 1983) and Steele et al. (1981) regarding the existence of a category of AUX in Egyptian Arabic (EA). \(^1\) I will argue against the existence of such a category in EA, and for a conception of 'auxiliary verb' as a class of lexical items specifiable in terms of a continuum of both syntactic features (such as complementizer-placement) and semantic features (such as types of embedded verbs allowed, subject coreference, and the temporal discreteness of verbal complement). I will argue further that there is no need to set up a separate syntactic category such as AUX for this subclass of lexical items, anymore than it is necessary to set up a separate, purely syntactic category for other subclasses of lexical verbs, such as transitive vs. intransitive verbs. Furthermore, it will be argued that the data on other items included in the category of AUX (e.g., PRON and NEG) do not support the existence of such a category or their inclusion in it. It is not the purpose of this paper, however, to show

\(^1\)Egyptian Arabic is taken here to be the dialect of Cairo, and should more appropriately be termed 'Cairene Arabic'. However, for the purposes of this exposition, I will simply use the term 'Egyptian Arabic', with the above understanding in mind.
that the category of AUX does not exist universally, but merely that it does not exist in EA, on the basis of the arguments and data presented in Jelinek (1981), etc. One could still maintain the existence of such a category, either in EA or cross-linguistically, but such a stand would be based on purely theoretical assumptions about syntactic structure, and not on the actual linguistic data from EA.²

1.0 Arguments for AUX in Egyptian Arabic

Jelinek (1981) proposed that there is a sentence constituent in EA, termed AUX, where tense is marked; tense is never marked elsewhere in the sentence. The members of this proposed syntactic category are as follows: “the finite inflections of the auxiliary verb KWN (= kaan “to be”), the particles marking sentential negation, and certain pronouns marking person subject” (Jelinek 1981:8).³

This conception of a category AUX is based on that of Akmajian, Steele & Wasow (1979), which posits a syntactic category AUX to include MOOD and TENSE. Steele et al. (1981) developed this analysis further by defining the category of AUX cross-linguistically as follows:

Given a set of language internal analyses, in terms of constituents, those constituents which may contain only a specified (i.e. fixed or small) set of elements, crucially containing elements marking tense and/or modality will be identified as non-distinct (Steele et al. 1981:21).

According to Steele et al. (1981), the definitional features of the category AUX include tense marking and a small fixed inventory, while the nondefinitional properties of AUX include particles marking sentential negation and person subject.

1.1 Jelinek’s arguments in support of the claim that these cross-linguistic properties of AUX are manifested in EA are embodied in four points.

The first point has to do with the definitional criteria of ‘tense marking’ and ‘small fixed inventory’. Jelinek claims that KWN “to be” differs from all other verbs in EA in that it “alone of all the members of the morphological class occurs with all predicates in the language to mark tense contrasts” (Jelinek 1981:11), as exemplified in (1)-(4) taken from Jelinek (1981):⁴

(1) ______ / kaan-it / ha-t-kuun bi-ti-ktrib-u
   (is) / was-she/ FUT-she-be PRES-she-write-it
   “She is/was/ will be writing it.”

(2) ______ / kaan-it / ha-t-kuun katab-it-u
   (is) / was-she / FUT-she-be wrote-she-it
   “She has / had / will have written it.”

(3) ______ / kaan-it / ha-t-kuun ha-ti-ktrib-u
   (is) / was-she / FUT-she-be FUT-she-write-it
   “She will / will have / will be going to (write/written/write) it.”

²It is also not the purpose of this paper to examine the implications of this data for the category of INFL. While the notion of INFL is related to and developed historically from AUX, they are distinctly different categories: e.g., AUX is presumably a category with a lexical head, while INFL is not. INFL is a much more abstract category than AUX, and arguments for or against either category cannot automatically be assumed to apply to the other.

³Jelinek later redefines AUX in terms of transitivity as follows: “We can define AUX more economically, and avoid depending upon listing the inventory of this category, by making reference to the functional structure of sentences: AUX is a sentential constituent where only intransitive functions are marked, that embed a function marked in PRED and its arguments.” (Jelinek 1981:35-36). It is also curious to note that, according to Jelinek, “EA has no AUX mods” (Jelinek 1981:153) and yet “AUX always marks sentence mood” (ibid.:204).

⁴The blank line in the first position in the examples (1-3) represents present tense. It is important to note that Jelinek leaves out of consideration the bi-imperfect of kaan (biykuun), which might have created problems for the symmetry of the analysis. Also left out of consideration are compound tenses which involve the unmarked imperfect of kaan (yikuun) embedding a perfect, bi-imperfect or ha-imperfect. In Jelinek’s terms these latter uses are ‘nonfinite’, meaning that they lack TENSE, and hence are not included in the AUX category, despite functioning for all intents and purposes as does any other compound tenses. Also, according to native speakers I consulted, there is some question as to the acceptability of embedding a future verb under the future of kaan, e.g., hatkuun hatiktib “she will be going to write”. For the moment, however, I will let Jelinek’s observation stand as is.
The second point is that the word order KWN-subject-predicate provides "support for the claim that EA sentences have three major constituents: subject, KWN (i.e. AUX) and predicate." (Jelinek 1981:18). It is not obvious, however, how this point relates to the above cross-linguistic characterization of AUX. For the moment, I will take it as being related to the tense-marking definitional property of the AUX category. The word order KWN-subject-predicate is exemplified in (4 a-b):

(4) a. kaan-u ilʔawlaad naym-iin
    were-they the-children sleeping-P
    "The children were sleeping."

b. kaan-it il-bint bi-t-biif burtuʔaan fi-il-suʔ?
    was-she the-girl PRES-she-sell oranges in-the-market
    "The girl was selling oranges in the market."

The third point concerns NEG, one of the nondefinitional members of AUX: NEG shares the same 'sentential locus' as KWN (and hence is in AUX) since the negative particle ma...$ "not" tends to attach to any inflection of KWN (Jelinek 1981:20-21), as shown in (5a), or to occupy that position itself, as in (5b).5

(5) a. ma-kan-$ bi-yi-ktib
    not-was-(he) PRES-he-write
    "He was not writing."

b. miš bi-yi-ktib
    not PRES-he-write
    "He does not write."

5Some of Jelinek's examples are decidedly non-Cairene, but acceptable in Sa'idi (Upper Egyptian) dialect, such as Jelinek's example (36):

(36) ma-ha-y-kun-$ bi-yi-ktib
    not-will-he-be PRES-he-write
    "He will not be writing."

Example (5b) above (which is (33) in Jelinek 1981) is also a more marked form in Cairene, but acceptable.

The fourth point concerns the other nondefinitional member of AUX, viz., PRON: In present tense sentences (where there is no inflection of KWN "to be") "pronouns of separation and negative pronouns occur in the same sentential locus as sentential negation, a locus which it shares with KWN in other sentences" (Jelinek 1981:23):

(6) a. axuu-ya huwwa il-ʔaʔib
    brother-my he the-doctor
    "My brother is the doctor."

b. axuu-ya kaan il-ʔaʔib
    brother-my was-(he) the-doctor
    "My brother was the doctor."

c. axuu-ya ma-huwwaa-$ il-ʔaʔib
    brother-my not-he the-doctor
    "My brother is not the doctor."

d. axuu-ya ma-kan-$ il-ʔaʔib
    brother-my not-was-(he) the-doctor
    "My brother was not the doctor."

In EA, therefore, there are two related definitional criteria for AUX (tense marking and word order involving subject-verb inversion), and two nondefinitional criteria (NEG placement and pronouns of separation). The latter two (points 3 and 4) are also related to the definitional criterion of AUX as having a small, fixed inventory.

2.0 AUX in English and EA

In evaluating Jelinek's arguments for the existence of a category of AUX in EA, it is important first to compare EA to English with regard to this category. The development of the notion AUX as a category is intimately tied to generative-transformational analyses of English done over the past 35 years, and several of the features that Jelinek adduced to support AUX in EA are similar to features of English auxiliary verbs. After examining these apparent similarities, I
will turn to those that are EA-specific.

English auxiliary verbs have a distinctive syntactic behavior which sets them apart from other verbs. This has led some to posit a distinct AUX category for all or some manifestations of these verbs.\(^6\) There is, however, no verb or class of verbs in EA which has characteristics even remotely similar to most of the distinct behaviors associated with English auxiliaries. There is no Do-support, no tag question, no negative contraction, no auxiliary reduction, no \(V\)'-deletion, nor anything resembling these. There are, however, two features of EA AUX-members noted by Jelinek which do seem to resemble those of their English counterparts: the first is contained in point 2 (KWN-subject-predicate word order), and the second in point 3 (NEG attachment) above.

The subject-AUX inversion noted by Jelinek in EA (point 2) is similar in some respects to English subject-auxiliary inversion in yes-no questions. However, in EA it is optional and not indicative of any change in meaning, just a change in emphasis. Also, contrary to the implication of Jelinek's claim, it is not limited to the AUX verb KWN, but can be applied to almost any \(V\)' initial verb in the language, be it in a simple or compound verb phrase:

\[(7)\] a. kaan mihammad bi-y-zaakir
   was-(he) Muhammad PRES-he-studies
   “Muhammad was studying.”

b. fidil mihammad yi-zaakir
   continued-(he) Muhammad he-study
   “Muhammad kept on studying.”

c. bi-n-zaakir ana wi mihammad kull yoom
   PRES-we-study I and Muhammad every day
   “Muhammad and I study every day.”

d. ibtada mihammad yi-fakkar
   started-(he) Muhammad he-think
   “Muhammad started to think.”

The inversion behavior (point 2) cannot, therefore, be used as a criterion (definitional or otherwise) for the category AUX in EA, since it applies to almost any VP-initial verb in the language.

As regards NEG attachment (point 3) we note that in EA, unlike English, there is no restriction on negatives attaching to main verbs, since negative particles may attach to any main verb. Furthermore, contrary to Jelinek's claim, in compound tenses involving KWN, NEG is not always attached to KWN only (cf. (5a) above); it may be attached to an embedded bi-imperfect, with a nonspecific time reference or habitual reading only:

\[(8)\] kaan ma-bi-y-zakir-§
   was(he) not-PRES-he-study
   “He didn’t use to study.” (not: * “He wasn’t studying.”)

NEG attachment (point 3) cannot, therefore, be taken as an argument in support of the inclusion of either KWN or NEG in AUX, since NEG is not always, nor only, attached to KWN when it appears in a sentence.\(^7\)

\(^6\)Among these characteristics are the following (from Pullum & Wilson 1977:742-743; McCawley 1988:210): (a) Subject-Auxiliary inversion (John has left ==&gt; Has John left?); (b) Tag formation (You should leave, shouldn’t you?); (c) Negative placement & Do-support (I have not left I did not leave I * I do not have left); (d) Negative contraction: (I shouldn’t do that if I were you * I triedn’t to succeed); (e) Auxiliary Reduction (I’d told my servant to bring in the bags * I’d my servant bring in the bags); (f) Adverb placement (I can hardly lift this * You tried hardly to lift this); (g) \(V\)'-deletion (Fred must have been singing songs, and Nancy must have, too). However, despite these many distinguishing features of English auxiliaries, some linguists have argued quite convincingly against positing an independent AUX category for English (e.g., Ross 1969; Pullum & Wilson 1977; Gazdar, Pullum & Sag 1982).

\(^7\)The rule for NEG placement in general terms is that NEG generally attaches to the head of \(V\)', i.e., the first verb in the VP, but in certain restricted cases it may also be attached to other parts of verb phrase. Also, while there are restrictions on attachment of NEG to certain types of embedded verbs, e.g., perfect and \(ha\)-imperfect (whether embedded under \(kaan\) or certain other potential auxiliary verbs), it does seem that there is, in general, less restriction on negating embedded imperfec
Given that there is no class of verbs in EA that behaves like English auxiliaries and can, therefore, be used to argue for a category AUX, one might still ask whether or not there are some features particular to EA verbs that would justify such a category. Two such features are found in Jelinek’s point 4 (PRON-placement) and point 1 (only KWN marks tense). As regards the first point (also the second of the nondefinitional criteria), the claim is that pronouns of separation have the same locus as KWN in equational or nonverbal sentences. Yet while this is true, it is also true that they occupy the same locus as any other verb in the language, since locus for Jelinek seems to be merely a question of word order: They occupy the V position in a strongly SVO language. Furthermore, in verbal sentences they do not share the same locus as KWN, since they cannot be used between subject and verb:

(9) *mīhmad huwwa xallaṣ  suyḷ-u
    Muhammad he  finished(his) work-his

This is also true of negative pronouns: In equational or nonverbal sentences, negative pronouns share the same locus with KWN, but that locus is also shared by almost every other verb in the language, viz. V in a (primarily) SVO language. Also, contrary to Jelinek’s (1981:23) assertion that “negative pronouns are limited to present tense sentences where person subject is not marked in the predicate” (i.e., that they are limited to nonverbal predicates), negative pronouns can be used before verbal predicates as well, including the bi-imperfect (10a), ha-imperfect (10b), and AP (10c), but excluding the perfect. They have, in fact, the same distribution as the negative particle mīs/muṣ “not”:

(10) a. ma-huwawwa-s bi-yi-štayal  hina taani
    not-he  PRES-he-works here again
    “He is not working here again!”

b. ma-hiyya-s ha-t-saafir
    not-she  FUT-she-travel
    “She will not travel.”

c. ma-nīi-s raayiḥ
    not-I  going
    “I am not going.”

This means that at least in verbal sentences negative pronouns do not have the same distribution as KWN, since they cannot appear before the perfect while KWN may:

(11) a. kaan xallas  suyl-u
    was(his) finished(his) work-his
    “He had finished his work.”

b. *ma-huwawwa-s xallas  suyl-u
    not-he  finished(his) work-his

They function, in fact, as alternative negative particles rather than as pronouns, which is not surprising given the historical development of mīs/muṣ “not” from negative pronouns (Otto Jastrow, p.c.). Therefore, as alternate negative particles, they do not always share the same locus with kaan “to be”, given the facts noted in the preceding section, viz., that negative particles are not limited to attaching to KWN (as English negation is limited to auxiliaries or a dummy “do”), but rather are attached to all types of verbs.

In sum, these (nondefinitional) criteria regarding pronouns of separation and negative pronouns (Jelinek’s point 4) are not sufficient evidence to show that an AUX category exists and that these items are its nondefinitional members. In present-tense equational sentences (i.e., those without an overt copula), these pronouns do share a locus
with KWN, but it is a locus shared with almost all other verbs in the language — viz., V in a primarily SVO language. In nonequational (verbal) sentences, they do not have the same distributional features as KWN, neither embedding all types of predicates nor being susceptible to subject-verb inversion — these being the two primary defining features of KWN as a member of AUX. 9

The second language specific feature used as evidence for an AUX category is found in Jelinek’s point 1: KWN occurs with all predicates in the language to mark tense contrasts. This is the strongest of the four claims presented by Jelinek, and in a revised form will provide the basis for the alternative analysis to be proposed later in this paper. Nevertheless, it does not provide sufficient proof for the existence of an independent syntactic category of AUX in EA.

Point 1 actually encodes several different claims, both semantic and syntactic. The first claim contained in point 1 is syntactically: KWN occurs with all predicates of the language. There are two parts to this claim. The first has to do with the notion ‘occurring with’, and the second with the class of ‘all the predicates of the language’. As regards the former point, it is not clear what ‘occurs with’ means. It could mean simply that it ‘stands next to’ or is ‘immediately followed by’ another verb, or it could mean that KWN forms a syntactic unit with a following verb, since there is no intervening clause boundary or complementizer between the two. But no indication is given as to which of these it may mean. It is, therefore, not sufficient as it stands to show that KWN is completely different from all other verbs in the language (and thus in a separate syntactic category called AUX) since other verbs ‘occur with’ other verbs, in any of the above senses:

9The behavior of these pronouns of separation may be explained more simply by recognizing that under certain conditions they can function as peripheral members of the syntactic category ‘verb’, which led to their historically attracting NEG-attachment, thus giving rise to the negative pronouns. Synchronically speaking, however, negative pronouns are distinct from pronouns of separation based on their different distributional characteristics (Eisele 1989). Further alternate analysis of these pronouns of separation (or ‘copular pronouns’) are found in Eid (1983), and for Maltese, in Comrie (1982).

(12) a. mihammad fi/dil yi-ktib il-gawaab
Muhammad remained(he) he-write the-letter
“Muhammad continued writing the letter.”
b. ?a?ad-t ?a-fakkar fi-l-maw$d?uf da
sat-I I-think in-the-topic this
“I kept thinking about this topic.”

Until the first part of this syntactic claim is clarified (i.e., what ‘occurs with’ means), it is hard to assess the importance of appearing with ‘all predicates of the language’, since many verbs other than kaan “to be” may also ‘occur with’ the different types of verbs as well:

(13) a. laazim raah
must went(he)
“He must have gone.”
b. laazim yi-ruuh
must he-go
“He must go.”
c. laazim bi-yi-?tayal
must PRES-he-working
“He must be working.”

An argument could be made that these verbs might then also be members of the category of AUX. But so many verbs would fulfill these minimum requirements (where ‘occur with’ is understood as the ability to take a complement without an overt complementizer or clause boundary intervening) that this would contradict the definition of AUX as involving a small, fixed inventory. I will return to this point after examining the second claim of point 1.

This second claim embodied in point 1 is semantic in nature and involves the semantics of KWN and AUX: AUX is the only place where TENSE is marked (“to show tense contrasts”). As far as simple (morphological) verb forms are concerned, this claim is not true. I
have argued elsewhere (Eisele 1988) that 'tense', in the sense of deictic time reference, is marked elsewhere, specifically, it is marked on the different tense forms (perfect, bi-imperfect and ha-imperfect) and is not limited to KWN in AUX, the arguments being primarily based on cooccurrence restrictions with time adverbials.

As far as compound verbs are concerned, this second claim is only partly true, since in many compound-verb phrases the highest verb often carries the deictic time reference, whether or not the verb is kaan "to be". For example, while kaan "to be" is the primary verb to form compound tenses, it is not the only one: yibha (imperfect of ba'ha "be, become") is used similarly to kaan, in that it can embed most types of predicates to indicate temporal contrasts. In (14a), for example, yibha embeds a perfect verb (xad-t "I took"), in (14b) an imperfect (ništayal "we work"), in (14c) an active participle (faatihib"open"), and in (14d) a predicate nominal (yoom il-xamiis "Thursday"):

(14) a. ḥasaafir bukra w-aho ḥagaaza
    w-abʔa xad-t il-yoom min ʔawwil-u
    so-I-will took-I the-day from-start-its
    "I’ll travel Friday... and since it’s a holiday I will have
    taken the whole day from its beginning."

b. Ha-ni-bʔa ni-štayal lamma yi-igi
    will-we-be we-work when he-comes
    "We will get to work when he comes."

c. il-mahall biyibʔa faatihib yoom sabt?
    the-store it-is open Saturday
    "Is the store open Saturday?"

d. miš igimaʃ-na ha-yi-ba yoom il-xamiis in shaʔ allah
    not meeting-our will-it-be Thursday God willing
    "Isn’t our meeting Thursday, God willing?"

Furthermore, other candidates for auxiliary-hood, such as aspectualizers (see Table 2), also carry the deictic time reference of the verb complex they head:

(15) a. ḥafad yi-fakkar
    sat(he) he-thinks
    "He kept on thinking."

b. yuʔud yi-fakkar
    he-sits he-thinks
    "He keeps on thinking."

c. ha-yu-ʔud yi-fakkar
    will-he-sit he-thinks
    "He will keep on thinking."

The fact that kaan "to be" can embed other verbs forms is of primary significance for the morphology and morphosyntax of tense forms, by which I mean the inflectional paradigm of tense forms which includes as members compound tenses, or those made up of kaan and an embedded tense form. In terms of this paradigm, kaan acts as a kind of independent tense morpheme in compound tenses. Yet while this morphosyntactic fact does have syntactic repercussions, these are not sufficient enough to distinguish kaan "to be" syntactically from all other verbs, nor do they prove that kaan is of an entirely different syntactic type than other verbs and therefore should be put into a different category. There are a great many verbs, of various types, that could fulfill these minimum requirements for membership in the category AUX (based on point 1), obviating the need for such a separate syntactic category.

If we want to keep the category AUX in a modified fashion, we could refine the above analysis to require that members of AUX must have at the very least a number of different syntactic features: e.g., that there be absolutely no complementizers or intervening clause boundaries between the AUX member and its complement, and that
there be obligatory subject coreference between the two. As a result a much larger number of verbs would fulfill these requirements, including most aspectualizers (Table 2), one modal (laazim “must”), and verbs of motion used in describing a narrative sequence (only 2 of which are mentioned in Table 2). A modest estimate of the number of verbs that might be included in such a list would be approximately 2530. Such a large number of verbs would weaken the claim for a syntactic category of AUX, since a small, fixed inventory is one of the definitional features of AUX. But quite aside from this, there does not seem to be any syntactic behavior that sets apart these verbs (as just defined) from those that allow optional deletion of the complementizer (e.g., most of the modal verbs other than laazim “must”), which is the more common way of using these verbs. Both types may be inverted (7a-d), and the initial verb generally attracts NEG. In other words, the criteria for AUX are static criteria related to the type of complement that these verbs take. These criteria do not involve any difference in the actual syntactic behavior of these items, a difference which could be used to support the existence of a separate syntactic category different from the category V.

In summary, the criteria Jelinek proposed for setting up an independent syntactic category of AUX (points 1-4 above) do not hold up. First, ‘tense’ is not restricted to KWN either in simple verb forms or in complex verb phrases, and the notion of ‘occurring with’ does not serve to distinguish KWN sufficiently from other types of verbs. Second, subject-verb inversion is not limited to KWN, but can apply to virtually any verb in the language, whether simple or compound. Third, NEG is not exclusively tied to instantiations of KWN when they appear in the sentence, thus NEG is not a potential member of AUX, nor can it be used as a criterion for that category. Fourth, subject pronouns should not be included in AUX, since they do not share the verbal locus exclusively with kaan, but rather with every other verb in the language, and they do not have the same distributional features as kaan: they neither ‘occur with’ all predicates, nor do they undergo subject-verb inversion.

All of these points indicate that there should be no special AUX category posited to house KWN, NEG and PRON, since kaan, even more than English auxiliaries, behaves syntactically like any other verb in EA. However some of the notions contained in point 1, while not sufficient or not sufficiently clear to show that “AUX exists and KWN is its member”, do indicate several features of a possible lexical class of auxiliary verbs (including kaan “to be” as well as other verbs) which I will detail in the next section.

3.0 AUX vs. Auxiliary: Syntactic category vs. lexical class

I have shown that the category AUX as defined by Jelinek does not exist in EA. However, it is undeniable that kaan “to be” and certain other verbs do show some features which set them apart from other verbs. These features, while not sufficient to prove the existence of a distinct syntactic category termed AUX, may still be used to distinguish a lexical class of ‘auxiliary’ verbs.

Before proceeding, however, it is necessary to emphasize the distinction between a syntactic category labeled AUX and a verb labeled auxiliary in the lexicon. AUX, as defined in Jelinek (1981), Steele et al. (1981), and elsewhere, is a distinct syntactic category, characterized by syntactic behaviors different from other regular verbs: placement in the sentence, susceptibility to movement rules, attracting NEG, etc. In the above I have shown that in EA there is essentially no syntactic behavior which distinguishes the proposed members of AUX from other V'-initial verbs in the language. On the other hand, a lexical category labelled ‘auxiliary verb’ makes the claim that there is a subclass of items labeled verbs which behave like any other verb in the same context, in terms of dynamic syntactic features such as movement, placement, negation, etc., but which have in addition certain static features that set them apart from other members of their lexical class. These features relate to the degree to which they form a ‘syntactic unit’ with their complement: whether or
not a complementizer may intervene between the verb and its complement, whether or not subject coreference is required, etc. Such distinguishing features at the lexical level do not require or demand that a separate syntactic category be set up to handle them, since they have more to do with the type of complement the initial verb of a verbal periphrasis may take and little to do with the syntactic behavior of that initial verb.

The features which may be useful in defining this class of auxiliaries are based in part on three of the features contained in Jelinek’s point 1: the notion of ‘occurring with’; (occurring with) all predicates of the language; and marking tense contrasts. Firstly, the notion of an auxiliary ‘occurring with’ a predicate can be paraphrased and expanded upon as the feature(s) which indicate the degree to which an auxiliary forms a syntactic and semantic unit with the following verb. This cannot be taken to mean a simple juxtapositioning of two (or more) verbs in a sentence, since discontinuities do occur. These are exemplified in examples (4) and (7) (repeated below), where *kaan* “to be” and other potential auxiliaries are inverted with their subjects, which then stand in between the auxiliary and its verbal complement.

(4) a. kaan-u il-ʔawlaad naym-iin
   were-they the-children sleeping-P
   “The children were sleeping.”
   b. kaan-it il-bint bi-t-biyy burtuʔaan fi-il-su৴?
   was-she the-girl PRES-she-sell oranges in-the-market
   “The girl was selling oranges in the market.”

(7) a. kaan mihammad bi-y-zaakir
   was-(he) Muhammad PRES-he-study
   “Muhammad was studying.”

b. fidil mihammad yi-zaakir
   continued-(he) Muhammad he-study
   “Muhammad kept on studying.”
   c. bi-n-zaakir ana wi mihammad kull yoom
   PRES-we-study I and Muhammad every day
   “Muhammad and I study every day.”
   d. ibtada mihammad yi-fakkar
   started-(he) Muhammad he-think
   “Muhammad started to think.”

There are, however, two other features (on a superficial syntactic level) which may indicate this unity: the lack of an intervening clause boundary (indicated by lack of a complementizer), and obligatory subject coreference between the auxiliary and the following verb. These features are not clearly indicated at all in Jelinek’s criteria for AUX, but each is an important indicator of the degree of ‘binding’ or unity between the elements of a compound verb phrase.10

Secondly, the notion of occurring with all predicates of a language may be reinterpreted in more general terms as a feature which indicates the embedding properties of a complement-taking verb: certain verbs may embed complements (whether sentential or not) containing any type of verb (e.g., *kaan* “to be”, *ʔaal* “to say”), while others are limited to embedding complements with only a limited type of verb (e.g., *fidil* “to remain” and *ʔaayiz* “wanting” only embed unmarked imperfect verbs).

Thirdly, ‘marking tense contrasts’ may be reinterpreted as a feature which indicates whether or not the embedded verb carries a deictic temporal reference. That is, it indicates the ‘temporal discreteness’ of the complement, the degree of dependence of the embedded verb on the higher verb for its deictic time reference.11

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10For the moment, I cannot examine the fuller consequences of these claims, especially what the lack of a complementizer might mean in terms of constituent structure. This will have to await a future inquiry.

11The notion of temporal discreteness is taken from Huddleston (1980:75) where it is
Certain verbs (kaan “to be”, fidil “to remain”) carry the deictic time reference of the verbal periphrasis while their embedded verbs do not, but other verbs may embed complements with verbs that have an independent deictic time reference (e.g. laazim “must (epistemic)”, radd “to say”, etc.)

The above four features will be taken as features defining a class of auxiliary verbs at the lexical level. ‘Auxiliary verb’ in this analysis is understood as a class of lexical items, and not as a separate syntactic category. This class of lexical items is defined on the basis of the syntactic and semantic features described above, which primarily reflect the embedding properties of these items. Furthermore, the lexical category ‘auxiliary verb’ is understood as a ‘fuzzy category’, or one that is defined in terms of the features of its most ‘prototypical’ or core members (e.g., kaan “to be”), with a periphery of members that share some but not all of these features (e.g., modals such as laazim “must”, aspectualizers like fidil “to remain”). Thus, ‘auxiliaryhood’ reflects a continuum of features, with some verbs being more auxiliary-like, and others being less auxiliary-like.

Each of the above features may be interpreted in terms of the valency (i.e., strict subcategorization features) and selectional features of these items as lexical items. The first of these features (lack of an intervening clause boundary) is a matter of the valency or strict subcategorization of the verb in question, and relates to whether the item in question subcategorizes for a complementizer [COMP] or not. In these terms, kaan “to be”, as well as most aspectualizers, do not subcategorize for a complementizer [- COMP]; for some other verbs the feature is optional [+/- COMP]; and for still some others it is an obligatory feature [+ COMP]. I take this feature to be the most important of the four auxiliary-verb features to be proposed here, since it is the only subcategorization feature for this class of items.

The second feature involves a selection restriction of the possible auxiliary, and relates to whether there is a selectional restriction on subject coreferentiality [COREF] between the first verb of a verbal periphrasis and its following verb(s). For kaan “to be”, the aspectualizers and most of the modals, subject coreferentiality is obligatory [+ COREF], while for others (e.g., sentential complement verbs) it is optional [+/- COREF], while for still others (e.g., some causatives) it is disallowed [- COREF].

The third feature involves the embedding properties of these verbs. It is a selectional restriction on the type of verb which may follow them, and essentially it indicates whether that embedded verb may be modal or non-modal. While kaan “to be” selects any verb as the immediately following verb [+/- MODAL], other possible auxiliaries (aspectualizers and modals) have restrictions on the form of the verb immediately following them, or the verb in the immediately following dependent clause, either [+ MODAL] or [- MODAL]. In general, I take this as the weakest indicator of auxiliaryhood than the other features being proposed here, since it is the most purely semantic feature of them all.

The fourth feature, the ‘temporal discreteness’ of the complement, involves a selectional restriction on the type of time reference that the following verb may have. Does the second verb in a verbal periphrasis carry a deictic time reference? With certain verbs (kaan “to be”, the aspectualizers, and (deontic) modals), the embedded verb may not have an independent deictic time reference [- DEICTIC], while for others (epistemic modals and S-complement verbs) the embedded verb may have an independent deictic time reference [+ DEICTIC].

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12Valency (or strict subcategorization) and selectional restrictions are defined as follows: Valency indicates “restrictions on how many constituents an item can combine with directly and on what syntactic categories those constituents can belong to, for example that put be the V of a [VP V NP PP] constituent.” Selectional restrictions are defined as restrictions “on what can serve as each of the things that the given item is combined with, such as the requirement that the PP with which put is combined denote a ‘destination’. Selectional restrictions are in fact generally restrictions not on the syntactic form of the expressions that a given item combines with but on their denotations” (McCawley 1988:18).
In summary, Table 1 contains the defining features of the lexical category of auxiliary verb in EA, ordered in terms of their importance for distinguishing auxiliaries. Table 2 in turn lists a number of complement-taking verbs, headed by *kaan* “to be” and *yibha* “is, becomes”, considered the core auxiliaries, followed by different subclasses of verbs which share certain of these features. These other verbs may therefore be thought of as members of this class of auxiliaries, to a greater or lesser degree, depending on the type and number of features that they share with the core auxiliaries. For example, according to the most important indicator of auxiliariness (complementizer placement), aspectualizers, *laazim* (both deontic and epistemic), and the causatives *xalla* “let, make” and *saab* “leave” are more auxiliary-like. However, in terms of the number of features shared with the core members, the aspectualizers are the most auxiliary-like, followed by the modals. Conversely, the complement-taking verbs that are least like prototypical auxiliaries are the S-complement type verbs which do not allow complementizer deletion, which allow non-coreference of main and embedded subjects, and which allow deictic embedded verbs. Examples of these are *laal* “say”, *sadda*? “believe”, *Rakkid* “verify”, among others.

4. Conclusion

I have argued that a category of AUX does not exist in EA based on the arguments and criteria presented in Jelinek (1981). I have instead presented an alternative analysis of *kaan* “to be” and other possible auxiliary verbs not considered by Jelinek. The alternative proposed views these auxiliaries as members of a lexical subclass of verbs on the basis of the presence of a limited number of syntactic and semantic features. Much more work needs to be done in this area, both to refine the data from EA and to relate the analysis to more recent work dealing with the nature of syntactic categories and the relationship between linguistic levels.

### Table 1: Distinctive features of lexical auxiliaries

<table>
<thead>
<tr>
<th>Subcategorization Features</th>
<th>Selectional Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complementizer-placement (<em>finn</em>)</td>
<td>Subject coreference</td>
</tr>
<tr>
<td>[+/- COMP] (<em>kaan</em> = [- COMP])</td>
<td>[+/- COREF] (<em>kaan</em> = [+ COREF])</td>
</tr>
<tr>
<td>Deictic time reference in complement</td>
<td>Deictic time reference in complement</td>
</tr>
<tr>
<td>[+/- DEICTIC] (<em>kaan</em> = [- DEICTIC])</td>
<td>[+/- MODAL] (<em>kaan</em> = [+/- MODAL])</td>
</tr>
</tbody>
</table>

### Table 2: Inventory of possible auxiliaries and non-auxiliaries

<table>
<thead>
<tr>
<th>Complementizer Placement</th>
<th>Subject Coreference Complement</th>
<th>Temporal Discreteness of Verbal</th>
<th>Complement Verb Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+/- COMP] [+/- COREF] [+/- DEICTIC] [+/- MODAL]</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>(1) core:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>kaan</em> “be”</td>
</tr>
<tr>
<td><em>yibha</em> “be(come)”</td>
</tr>
<tr>
<td>(2) aspectualizers:</td>
</tr>
<tr>
<td><em>fidd</em> “remain”</td>
</tr>
<tr>
<td><em>yad</em> “continue”</td>
</tr>
<tr>
<td><em>ba</em> “become”</td>
</tr>
<tr>
<td><em>fadd</em> “go back”</td>
</tr>
<tr>
<td><em>fidir</em> “can”</td>
</tr>
<tr>
<td><em>farrab</em> “be nearly”</td>
</tr>
<tr>
<td><em>firif</em> “know how”</td>
</tr>
<tr>
<td><em>lith</em> “catch”</td>
</tr>
<tr>
<td><em>ibada</em> “begin”</td>
</tr>
<tr>
<td><em>haawal</em> “try”</td>
</tr>
<tr>
<td><em>baattral</em> “stop”</td>
</tr>
</tbody>
</table>
### JOHN EISELE

**[+/- COMP] [+/- COREF] [+/- DEICTIC] [+/- MODAL]**

<table>
<thead>
<tr>
<th>(3) epistemic modals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>laaazim “must”</td>
</tr>
<tr>
<td>moomkin “possible”</td>
</tr>
<tr>
<td>yimkin “may”</td>
</tr>
<tr>
<td>gaayiz “possible”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(4) deontic modals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>laaazim</td>
</tr>
<tr>
<td>moomkin</td>
</tr>
<tr>
<td>yimkin</td>
</tr>
<tr>
<td>gaayiz</td>
</tr>
<tr>
<td>mafruud “supposed”</td>
</tr>
<tr>
<td>idfarr “be forced”</td>
</tr>
<tr>
<td>yilib “give up”</td>
</tr>
<tr>
<td>xaaf “fear”</td>
</tr>
<tr>
<td>higayiz “want”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(5) causatives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>xalla “make/let”</td>
</tr>
<tr>
<td>saab “leave”</td>
</tr>
<tr>
<td>yasaab “force”</td>
</tr>
<tr>
<td>sagga “encourage”</td>
</tr>
<tr>
<td>nasaah “advise”</td>
</tr>
<tr>
<td>haaqua “persuade”</td>
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</tbody>
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<table>
<thead>
<tr>
<th>(6) S-complement verbs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ifatkar “think”</td>
</tr>
<tr>
<td>i’tabar “consider”</td>
</tr>
<tr>
<td>fihin “understand”</td>
</tr>
<tr>
<td>raaal “say”</td>
</tr>
<tr>
<td>sadda “believe”</td>
</tr>
<tr>
<td>raakkid “verify”</td>
</tr>
<tr>
<td>nis “forget”</td>
</tr>
<tr>
<td>irif “know”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(7) S-complement nominals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>tann-u “just (do)”</td>
</tr>
<tr>
<td>zamaan-u “time to”</td>
</tr>
<tr>
<td>nifs-u “feel like”</td>
</tr>
<tr>
<td>?aadi-u “mean to”</td>
</tr>
</tbody>
</table>

**REFERENCES**


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