CONDITIONALS IN JÓOLA EEGIMAA: A DESCRIPTIVE ANALYSIS

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The present study documents and analyzes conditional constructions in Jóola Eegimaa (Eegimaa, henceforth). On the surface, Eegimaa has morphemes which denote conditionality. However, these morphemes, *me* and *éni*, do not exclusively mark conditional clauses. They are also found in various other subordinate constructions where they introduce various clauses. The heart of my argument is that in Eegimaa, intonation is the most reliable indicator of conditionality. The data has clearly shown that the morphemes *me* and *éni* can be omitted in conditional constructions. The analysis has revealed two shared acoustic features between morphologically marked conditional sentences and those conditional sentences which do not contain any conditional morphemes. These features are (1) an intonation break separating the antecedent from the consequent, and (2) the antecedent consistently ending with a falling pitch.

1. Introduction

Conditional constructions have the general format *if P, then Q*. Proposition *P* is referred to as the *antecedent* or the *protasis* and proposition *Q* is known as the *consequent* or the *apodosis* (Salone 1979, Caron 2006). In this paper, I take a descriptive approach to Eegimaa conditional constructions, allotting special attention to the role intonation plays in the expression of conditionality in Eegimaa. As demonstrated in section 6, Eegimaa is a language in which intonation is a much more reliable indicator of conditionality than any morphological markers. The morphemes *me* and *éni* are found in conditional sentences. However, these morphemes are also found in other clausal constructions where they fulfill different functions. What the data has consistently shown is that Eegimaa conditionals are characterized by an intonation break separating the antecedent from the consequent, and that the antecedent is consistently marked by a falling pitch before the break. Before getting further into the crucial role of intonation in Eegimaa conditional constructions, it is necessary to provide some background information about Eegimaa since this language is almost unknown to most linguists, and it is not only under-documented but also endangered. Such information is provided in section 2. Section 3 describes the type of data upon which this research is based, and the techniques used to collect the data. Section 4 discusses the morphemes (*me* and *éni*) which, on the surface serve as conditional markers in Eegimaa, whereas section 5 deals with the proper combination of tense, aspect, and modality (TAM) in Eegimaa conditional constructions. Section 6 describes the role of intonation in the expression of conditionality. I will conclude with a summary of the findings of this research, and then give some suggestions for future research.

2. Background information about Eegimaa

Eegimaa belongs to the Atlantic branch of Niger-Congo. It is spoken in the western part of the district of Ziguinchor (Senegal). It is a member of the Bak group, a cluster of languages spoken in the southern regions of Senegal (Kolda and Ziguinchor), in the Republic of Guinea Bissau, and in Gambia. Eegimaa is not only understudied, it is also an endangered language. Eegimaa people are estimated at 7,000. However, the number of Eegimaa people who actually speak the language is below this figure.

The destiny of language does not rest solely on the number of people who speak the language. The attitude of the speech community toward their own language is critical to the future of that language. Eegimaa has two serious competitors: (1) Wolof which is spoken by at least 90% of the Senegalese people (both first and second language speakers), and (2) French which is the official language of Senegal but spoken by at most 15% of Senegalese people. In the past, Wolof was not popular in the Eegimaa speaking area. The only people who knew Wolof were those who lived in the cities either for work or school purposes. Today, Wolof is actually the preferred language of communication among Eegimaa youth. The majority of Eegimaa children raised in the cities by Eegimaa parents are not fluent in Eegimaa. Some Eegimaa parents have actually ceased speaking Eegimaa to their children. In their households, French and Wolof are the languages children grow up speaking.

Eegimaa is an SVO language. It is a pro-drop language, meaning that the subject of the verb can be and usually is omitted, since there is a subject agreement marker prefixed to the verb. Except in infinitive clauses, the subject marker occurs in all other clauses and it is required, regardless of whether or not the DP subject is overtly mentioned.

(1)   Subject marking and DP subject dropping
    a. (Au)   ***u***-wañ-om   min   (ínje)   ***i***-ccam-i
        PRN.2.SG SM.2.SG-cultivte-OM.1.SG   COMP   PRN.1.SG   SM.1.SG-pay-OM.2.SG
        'You cultivate for me and I pay you.'

    b. U-ññil   wawu ***gu***-kkay-e   e-box
        CL-child CL.DEF SM.3.PL-go-PFV CL-dance
        'The children went to dance.' (Their purpose was to dance.)

    c. U-ññil   wawu ***gu***-kkay-e   ***gu***-box
        CL-child CL.DEF SM.3.PL-go-PFV SM.3.PL-dance
        'The children went to dance.' (They did dance.)

In (1b-c), the DP subject *u-ññil wawu* can be omitted if the context makes it clear that some uniquely identifiable children are being referred to. Otherwise, its omission will pose a pragmatic (not a syntactic) issue, since all plural DP subjects referring to humans also take the subject marker *gu-*.

Eegimaa has three types of prefixes. These are the class markers, the subject markers, and the realis marker *n-*. However, the language has many suffixes and it is highly agglutinative. Bassene and Safir (2017) provide a comprehensive analysis of Eegimaa stem structure. Their study shows that the language allows an array of suffixes to co-occur, as shown in (2).

(2)   Multiple suffixation in Eegimaa
       Gu-sal-en-or-é-rit-ol[1]
       SM.3.PL-praise-REP-RCM-HAB-NEG-OM.3.SG
       'They usually do not praise him/her continuously for each other.'
       'The usually do not praise each other continuously for him/her'

Eegimaa does not mark present and past tenses. The only tense markers found in the language are *pan* and *ban* which denote future. These are independent morphemes and always precede the verb. *Pan* denotes a relatively distant future, whereas *ban* denotes immediate future and conveys the meaning 'about to' (see section 5). The language has many aspectual markers some of which are independent morphemes which appear before the verb, and others are suffixes.

3. The data and the data collection process

This paper is based on data from natural conversation and from elicitation. The conversation data provided 16 sentences with conditional constructions and three other related sentences with *éni*, which is found in many conditional constructions, but expressing a doubt rather than a condition. The 19 sentences from the conversation data together with 90 other sentences that I created (as a native speaker) were given to other native speakers for grammaticality judgments. Among the 90 sentences, 30 sentences do not express conditionality; 15 of these 30 contain purpose clauses, 5 are interrogative sentences, and the remaining 10 contain various types of dependent clauses. The reason for including these 30 non-conditional sentences is that in Eegimaa, conditional sentences expressed without an overt conditional marker and purpose sentences expressed without a subordinating conjunction differ only in their intonation patterns. The morpheme *me*, found in many conditional sentences, is also found in subordinate clauses and in interrogative sentences. Informants were instructed to say each sentence as naturally as possible and then state whether or not the sentence is grammatical. Once a sentence was judged grammatical, informants were asked to comment on the meaning of the sentence and the contexts in which the sentence can be used. I also asked ten subjects to translate 20 French conditional clauses into Eegimaa.

4. Conditionals in Eegimaa

This section will focus exclusively on the marking of conditionality with the morphemes *me* and *éni*, as illustrated in (3)-(6). The role of intonation in Eegimaa conditional constructions will be addressed in section 6. Let us examine the data in (3).

(3)   The use of *me* in conditional constructions.
       a. [Gu-sen-i   ***me*,**]_P [n'   u-nnom-en-il   é-be.]_Q
          SM.3.PL-give-OM.2.SG   DEP   CON   SM.2.SG-buy-CAUS-OM.3.PL   CL-cow
          'If they give you (money), you sell them a cow.'

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1   In Eegimaa, the ordering of RCM, RFM and OM may be fixed, in which case the argument interpretation is always ambiguous, or optional with a fixed interpretation.

   b. [A-xaw-ul   ***me***,]ₚ [ni   jí-jji-ol.]_Q
      SM.3.SG-ask-OM.2.PL DEP   CON   SM.2.PL-give-OM.3.SG
      'If s/he asks you (for something), you give him/her.'

   c. [A-lob-om   ***me***,]ₚ [n'   i-sen-ol.]_Q
      SM.3.SG-tell-OM.1.SG DEP   CON   SM.1.SG-give-OM.3.SG
      'If s/he tells me, I give him/her (something).'

   d. [A-roren-i   ***me***,]ₚ [n'   u-lob-ol.]_Q
      SM.3.SG-ask-OM.2.SG DEP   CON   SM.2.SG-tell-OM.3.SG
      'If s/he asks you, you tell him/her.'

   e. [A-jel-om   ***me***,]ₚ [n'   i-tteg-ol.]_Q
      SM.3.SG-insult-OM.1.SG DEP   CON   SM.1.SG-beat-OM.3.SG
      'If s/he insults me, I beat him/her.'

   The morpheme *me* establishes a dependency relation between two clauses. The '*me*-clause' in the sentences above indicates the condition that must be met in order for the consequent proposition to be assertable. The two clauses are conjoined by the connective *ni*[2] which always has to appear, otherwise the sentence will not be grammatical.

   Caron (2006) reports that in many African languages, the morphemes which introduce conditional clauses are also used in the formation of temporal clauses. As a result, the conditionals introduced by such morphemes have both temporal and conditional readings. Caron's report holds for Eegimaa, as Eegimaa conditional clauses introduced by ***me*** encodes both readings. The sentences in (3) also have a temporal reading. The context in which ***me*** is used may, however, make one reading more salient. In (4) for example, the first two sentences clearly encode the temporal location when the paying event will take place. Note that the conjunction *no* (which corresponds to the English conjunctions 'when' and 'then') and the dependency marker ***me*** can co-occur in the same clause, as shown in (4b). In (4c), the potential and temporal readings are equally available, unless additional context is provided which favors one reading over the other. As for (4d), all my informants systematically select the temporal reading. However, once given the context of a poor individual uttering that sentence, most of them favor the hypothetical reading, although they acknowledge that the temporal reading is still available.

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2   In the conditional constructions in (3) and in most conditionals in the rest of this paper, the consequent begins with the connective morpheme *ni*. The function of this morpheme is not restricted to linking the consequent to its antecedent. Rather, it conjoins words, phrases and sentences. In a narrative discourse, *ni* is often placed at the beginning of a sentence or after the subject NP to indicate that the event expressed by the sentence is relevant to some event previously expressed in the discourse. Note that *ni* is incompatible with the future marker *pan*, and it is also incompatible with the purpose marker *min*.

(4)   *me* with both conditional and temporal readings

    a. No n-á-tug[3]-e   sí-ralam, n'   a-ccam-i

        when RLS- SM.3.SG-hold-PFV CL-money CON   SM.3.SG-pay-OM.2.SG

        'Whenever s/he has money, s/he pays you.'

    b. No n-á-tux   ***me***   sí-ralam, n'   a-ccam-i

        when RLS-SM.3.SG-hold   DEP   CL-money CON   SM.3.SG-pay-OM.2.SG

        'Whenever s/he has money, s/he pays you.'

    c. [A-túx   ***me***   sí-ralam,]_P [n'   a-ccam-i.]_Q

        SM.3.SG-hold DEP   CL-money   CON   SM.3.SG-pay-OM.2.SG

        'If/when s/he has money, s/he pays you.'

    d. [I-túx   ***me***   sí-ralam,]_P [n'   i-ccam-i.]_Q

        SM.1.SG-hold DEP   CL-money   CON   SM.1.SG-pay-OM.2.SG

        'If/when I have money, I pay you.'

Aspectual affixes, as we shall see in section 5, also disambiguate *me*-clauses, as they favor the conditional reading. Note that *me* always occurs immediately after the verb of the antecedent, and before any DP object.

Another morpheme used in Eegimaa conditional constructions is *éni*. This is actually a copula and corresponds to a class marker plus 'be'. When used to introduced a conditional, it appears at the beginning of the conditional clause and has the meaning 'be it that'. Conditionals introduced by *éni* differ from those introduced by *me* in various respects. First, the ambiguity observed in *me*-clauses is missing in *éni*-clauses. With *éni*, the hypothetical situation described by the conditional clause is stronger. There is even a doubt that the state of affairs or events described in the conditional clause will ever arise.

(5)   Examples of conditional clauses introduced by *éni*

    a. [***E-ní***   a-sen-i,]_P   [n'   u-nnom-en-ol   é-be.]_Q

        CL-be   SM.3.SG-give-OM.2.SG CON   SM.2.SG-buy-CAUS-OM.3.SG   CL-cow

        'If s/he gives you (money), sell him/her a cow.'

    b. [***E-ní***   a-xaw-ul,]_P   [ni   jí-jji-ol.]_Q

        CL-be   SM.3.SG-ask-OM.2.PL   CON   SM.2.PL-give-OM.3.SG

        'If s/he asks you (for something), give him/her.'

    c. [***E-ní***   a-lob-om,]_P   [n'   i-sen-ol.]_Q

        CL-be   SM.3.SG-tell-OM.1.SG   CON   SM.1.SG-give-OM.3.SG

        'If s/he tells me, I give him/her (something).'

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3   There is a phonological rule in Eegimaa which changes voiceless velar stop /k/ to its voiced counterpart /g/ in stem final position when a suffix beginning with a vowel is added.

d. [***E-ní***   a-roren-i,]ₚ   [n'   u-lob-ol.]_Q
   CL-be   SM.3.SG-ask-OM.2.SG   CON   SM.2.SG-tell-OM.3.SG
   'If s/he asks you, tell him/her.'

e. [***E-ní***   a-jel-om,]ₚ   [n'   i-tteg-ol.]_Q
   CL-be   SM.3.SG-insult-OM.1.SG CON   SM.1.SG-beat-OM.3.SG
   'If s/he insults me, I beat him/her.'

The form *éni* has a variant, *eno*, also found in conditional sentences (Bassene 2007, Sagna 2008). However, the data collected does not provide a clear pattern regarding the context in which *eno* occurs. What transpires from the investigation is that *éni* is more common in Eegimaa conditionals than *eno*. In an experiment, I asked 10 subjects to translate 20 French conditional sentences into Eegimaa. The morpheme *eno* did not appear in any of the Eegimaa sentences they produced. They used either *éni* or *me*, or they expressed the condition via a falling pitch at the end of the antecedent followed by a pause between the antecedent and the consequent. In another experiment, a grammaticality judgment test, the same subjects were given 14 pairs of Eegimaa conditional sentences and they were asked to state whether or not these sentences were grammatical. In each pair, the sentences only differed by one being marked with *éni* and the other with *eno*. All subjects found the two types of sentences grammatical; although they have a preference for the *éni*-sentences. An analysis of conversation data also revealed that *éni* is more common in conditional sentences than *eno*.

(6)   Sample of the éni-eno grammaticality judgement test
   a. [***E-ní***   a-roren-i,]ₚ   [n'   u-lob-ol.]_Q
      CL-be   SM.3.SG-ask-OM.2.SG   CON   SM.2.SG-tell-OM.3.SG
      'If s/he asks you, tell him/her.'

   b. [***E-no***   a-roren-i,]ₚ   [n'   u-lob-ol.]_Q
      CL-be   SM.3.SG-ask-OM.2.SG   CON   SM.2.SG-tell-OM.3.SG
      'If s/he asks you, tell him/her.'

   c. [***E-ní***   a-jel-om,]ₚ   [n'   i-tteg-ol.]_Q
      CL-be   SM.3.SG-insult-OM.1.SG CON   SM.1.SG-beat-OM.3.SG
      'If s/he insults me, I beat him/her.'

   d. [***E-no***   a-jel-om,]ₚ   [n'   i-tteg-ol.]_Q
      CL-be   SM.3.SG-insult-OM.1.SG CON   SM.1.SG-beat-OM.3.SG
      'If s/he insults me, I beat him/her.'

Further investigation needs to be conducted to see if there is any nuance between *éni* and *eno* conditional sentences and if there are any specific contexts in which one can be used instead of the other.

Éni and *me* can appear in the same sentence as shown in (7). In such cases, the *me*-clause does not have a conditional reading, but a temporal or a manner reading, meaning the way the event or the state described in the antecedent occur. In (7a), the *me*-clause contains the time adverbial

marker *no*. Without this adverbial marker, the sentence will not be grammatical. Note that *éni* is moved to the beginning of the sentence and yet it still introduces the second clause which is the conditional clause. The adverbial marker *no* is repeated in the conditional clause. Such a repetition is only optional if *éni* is moved; otherwise, *no* is required. Also notice that the fronting of *éni* is only possible in cases where the state of affairs or events denoted by the conditional clause are located in a specific time frame. For instance, in (7a) the giving event is conditioned by an antecedent which should have been realized *at the moment when s/he asked*. In contexts where the antecedent proposition is not situated in a given time frame, the fronting of *éni* will yield an ungrammatical structure, as shown in (7b). In (7c), the *me*-clause denotes a manner. This is the third interpretation of *me*-clause we have seen thus far, and there are actually more, since *me* attaches to any dependent clause. The ungrammaticality of sentence (7d) results from the fact that double conditional marking is not allowed in Eegimaa.

(7)   Co-occurrence of *éni* and *me*

    a. [**E-ní**$_j$ no   n-a-roren-ul   **me**   [t_j]   (no)   ju-lob-ol,]$_P$
        CL-be   when   RLS-SM.3.SG-ask-OM.2.PL   DEP   when   SM.2.PL-tell-OM.3.SG

        [n'   a-sen-ul.]$_Q$
        CON   SM.3.SG-give-OM.2.PL
        'If you told him/her when s/he asked you, s/he would give you.'

    b. *[**E-ní**$_j$ n-a-roren-ul   **me**   [t_j]   ju-lob-ol,]$_P$
        CL-be   RLS-SM.3.SG-ask-OM.2.PL   DEP   SM.2.PL-tell-OM.3.SG

        [n'   a-sen-ul.]$_Q$
        CON   SM.3.SG-give-OM.2.PL
        'If you told him/her when s/he asked you, s/he would give you.'

    c. N'   a-roren-ul   **me**   [E-ní   ju-lob-ol,]$_P$
        CON   SM.3.SG-ask-OM.2.PL   DEP   CL-be   SM.2.PL-tell-OM.3.SG

        [n'   a-sen-ul.]$_Q$
        CON   SM.3.SG-give-OM.2.PL
        'The way s/he asked, if you tell him/her, s/he will give you.'

    d. *[**E-ní**   a-roren-ul   **me**,]$_P$ [ni   ju-lob-ol.]$_Q$
        CL-be   SM.3.SG-ask-OM.2.PL   DEP   CON   SM.2.PL-tell-OM.3.SG
        'If s/he ask, tell him/her.'

The fact that *me*-clauses may have temporal and manner readings as well as conditional readings raises the question whether the conditional reading in (3a-e) and (4c-d) is attributable to the presence of *me* in the clause or to something else. The answer has been alluded to earlier when I defined this morpheme as a '*dependency*' marker. Neither *me* nor *éni* are required in Eegimaa conditional constructions. The intonation suffices to signal a condition, and Eegimaa speakers rely

much more on intonational cues than any of these morphemes. I will return to the crucial role of intonation in section (6).

5. TAM in Eegimaa conditional constructions

The Tense-Aspect-Modality (TAM) system of Eegimaa is very complex and a detailed discussion of this system is beyond the scope of this paper. In what fallows, I will only discuss some features of the TAM system and their relevance to Eegimaa conditional system.

Recall that in Eegimaa the only tense markers are the independent morphemes *pan* and *ban*. However, these also have a modal and aspectual readings. *Ban* actually corresponds to 'be about to' and in that regard, it can be viewed as an aspectual marker. As for *pan*, it usually marks a future state or event that is required (future imperative). In (8), the consequent propositions must be realized, should the conditions defined by the antecedent propositions be satisfied.

(8)   The use of *pan* in conditional constructions
   a. [A-sen-i   me,]ₚ [***pan***   u-nnom-en-ol   é-be.]_Q
       SM.3.SG-give-OM.2.SG   DEP   FUT   SM.2.SG-buy-CAUS-OM.3.SG   CL-cow
       'If s/he gives you (money), you will (have to) sell him/her a cow.'

   b. [A-xaw-ul   me,]ₚ [***pan***   jí-jji-ol.]_Q
       SM.3.SG-ask-OM.2.PL DEP   FUT   SM.2.PL-give-OM.3.SG
       'If s/he asks you (for something), you will (have to) give him/her.'

   c. [A-lob-il   me,]ₚ [***pan***   gu-sen-ol.]_Q
       SM.3.SG-tell-OM.3.PL DEP   FUT   SM.3.PL-give-OM.3.SG
       'If s/he tells them, they will (have to) give him/her (something).'

   d. [A-roren-i   me,]ₚ [***pan***   u-lob-ol.]_Q
       SM.3.SG-ask-OM.2.SG DEP   FUT   SM.2.SG-tell-OM.3.SG
       'If s/he asks you, you will (have to) tell him/her'

   e. [U-tex   me   a-ññol   á-vvi,]ₚ [***pan***   u-xox.]_Q
       SM.3.SG-beat DEP   CL-child CL-king   FUT   SM.3.SG-sacrifice
       'If you beat a child of a king, you will (have to) perform a sacrifice.'

   f. [E-ní   a-añ-i,]ₚ   [pan   u-rog-ol.]_Q
       CL-be   SM.3.SG-cultivate-OM.2.SG   FUT   SM-2.SG-plant-OM.3.SG
       'If he cultivates for you, you will (have to) plant for him.'

Eegimaa is an *aspect salient* language, meaning that the emphasis is on the aspectual content, instead of the temporal location of the event or the state. Therefore, it is necessary to examine the combinations of aspectual markers between the antecedent and the consequent. Let us start by examining the data in (9). The suffix *-en,* glossed as FMR (formerly), describes a situation that existed in the past, but may no longer exist at the time of speech. Used in a conditional construction, this morpheme introduces a counterfactual situation. For instance, in each of the

sentences in (9), the proposition asserted by the antecedent is assumed to be false, as is the consequent.

(9) Aspectual affix *-en* in conditional constructions
  a. [A-sen-en-i,]P   [n'   u-nnom-en-en-ol   é-be.]Q
     SM.3.SG-give-FMR-OM.2.SG   CON   SM.2.SG-buy-CAUS-FMR-OM.3.SG   CL-cow
     'If s/he had given you (money), you would have sold him/her a cow.'

  b. *[A-sen-en-i,]P   [n'   u-nnom-en-ol   é-be.]Q
     SM.3.SG-give-FMR-OM.2.SG   CON   SM.2.SG-buy-CAUS-OM.3.SG   CL-cow
     'If s/he had given you (money), you would have sold him/her a cow.'

  c. [E-ní-en   a-sen-en-i,]P   [n'   u-nnom-en-en-ol   é-be.]Q
     CL-be-FMR   SM.3.SG-give-FMR-OM.2.SG   CON   SM.2.SG-buy-CAUS-FMR-OM.3.SG   CL-cow
     'If s/he had given you (money), you would have sold him/her a cow'

  d. *[E-ní   a-sen-en-i,]P   [n'   u-nnom-en[4]-en-ol   é-be.]Q
     CL-be   SM.3.SG-give-FMR-OM.2.SG   CON   SM.2.SG-buy-CAUS-FMR-OM.3.SG   CL-cow
     'If s/he had given you (money), you would have sold him/her a cow'

In sentences (9a) amd (9c), the assumptions is that the subject did not give the money to purchase a cow and as a result, no cows were sold to him/her. To indicate that both proposition did not obtain, *-en* has to attach to the verbs of both clauses. The ungrammaticality in (9b) and (9d) is imputable to the omission of this morpheme in one of the main verbs of the clauses or in (the copula) *éni*.

There are instances, however, where the antecedent may express a counterfactual situation without *-en* in the consequent clause. In such cases, the consequent is still viewed as realizable and may actualize, should the proposition described in the antecedent come true. Such conditionals are therefore referred to in the literature as *hypothetical* (Thompson, Longacre & Hwang 2007). Let us examine the sentences in (10). In (10a), it is not too late to make a contribution. In (10b), the 'planting' event can still be realized, 'if they cultivate for me'. Attaching the morpheme *-en* to the verbs *-kkan* and *-rog* would mark the consequents in both cases as unrealized.

(10) A counterfactual antecedent, but a potential consequent
  a. [Gu-baj-en,]P   [n'   gu-kkan.]Q
     SM.3.PL-have-FMR   CON   SM.1.SG-contribute
     'If they had (money), they would contribute.'

  b. [Gu-wañ-en-om,]P   [n   i-rog-il.]Q
     SM.3.PL-cultivate-FMR-OM.1.SG   CON   SM.1.SG-plant-OM.3.PL
     'If they cultivated for me, I would plant for them.'

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4 Note that in Eegimaa, the causative morpheme and the affix which describes a former event or state are homophonous.

Two of my informants view sentences such as those in (10) as ambiguous. According to these informants, the consequents in (10) can also be conceived as counterfactual.

A crucially important feature of Eegimaa verbal system is the distinction between *realis* and *irrealis* mood. The discussion follows Mithun's (1995) conceptual distinction of the realis-irrealis categories whereby realis markers indicate states and events viewed as 'actualized, actually occurring or having occurred', whereas irrealis markers indicates states and events presented as non-actualized. What follows is a discussion of the *realis-irrealis* distinction as it patterns in Eegimaa, and its relevance to Eegimaa conditional constructions.

Finite verbs in Eegimaa are marked with the prefix *n-* to indicate that the state or event actually occurred or is hypothesized to have occurred. If the state or event described by the verb did not occur, or has been projected into the future, using the subjunctive or imperative moods, *n-* is not used; *n-*[5] is used only when the subject is singular human or first person plural human.

In most of the Eegimaa conditional sentences discussed up to this point, the verb of the antecedent as well as the verb of consequent are in their irrealis forms. Let us examine the data in (11). All the verbs of the antecedents in (11) are in the realis form because the events they denote are hypothesized as having actually occurred. This explains the use of the perfective marker *-e* in (11b) and (11d). It should be pointed out that the omission of the perfective marker in (11a) and (11c) is due to the fact that in Eegimaa object clitics are incompatible with the perfective marker and, therefore, they do not co-occur. The verbs of all the consequents in (11) are in the irrealis form, since the events denoted by these verbs did not occur.

(11) Realis-irrealis in Eegimaa conditionals

    a. [E-ní   n-a-sen-i,]$_P$ [n'   u-nnom-en-ol   é-be.]$_Q$
       CL-be   RLS-SM.3.SG-give-OM.2.SG   CON   SM.2.SG-buy-OM.3.SG   CL-cow
       'If s/he gave you, you sell him/her a cow.'

    b. [E-ní   n-a-sen-e,]$_P$ [n'   u-nnom-en-ol   é-be.]$_Q$
       CL-be   RLS-SM.3.SG-give-PFV   CON   SM.2.SG-buy-OM.3.SG   CL-cow
       'If s/he gave, you sell him/her a cow.'

    c. [E-ní   n-a-xaw-ul,]$_P$ [ni   jí-jji-ol.]$_Q$
       CL-be   RLS-SM.3.SG-ask-OM.2.PL   CON   SM.2.PL-give-OM.3.SG
       'If s/he asked you, you give him/her.'

    d. [E-ní   n-a-xaw-e,]$_P$ [ni   jí-jji-ol.]$_Q$
       CL-be   RLS-SM.3.SG-ask-PFV   CON   SM.2.PL-give-OM.3.SG
       'If s/he asked, you give him/her.'

Perfective aspect is marked in three ways in Eegimaa. One way is through the suffix *-e*, as shown in (11b) and (11d). It can also be expressed with just the bare infinitive to which a subject agreement marker is attached. This is often referred to as 'the narrative present', as it is used in storytelling. The third way to express the perfective aspect in Eegimaa is via reduplication. The

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5   In serial verbal constructions, the prefix *n-* is only attached to the first verb. For instance, in *n-u-kka-e ú-ssil u-tiñ* 'you went, cooked and ate', repeating *n-* to any of the subsequent verbs will result in an ungrammatical sentence.

difference between perfective expressed with reduplication and that expressed with the morpheme
-e lies in the level of emphasis regarding the completeness of the event expressed by the verb.
Reduplication provides emphasis that the event really happened.

Eegimaa has another aspectual marker *-e* used to describe habitual events. The data in (12)
illustrates the use of this morpheme in conditional constructions.

(12) The habitual aspect *-e* in Eegimaa conditionals
    a. [E-ní   n-a-tiñ-e-tiñ   gu-ssax,]ₚ   [ni   jí-jji-ol.]Q
        CL-be   RLS-SM.3.SG-eat-HAB-eat   CL-bean   CON   SM-2.PL-give-OM.3.SG
        'If s/he eats beans, you give him/her.'

    b. [E-ní   n-a-ccam-e-ccam,]ₚ   [ni   ji-mmag-en-ol.]Q
        CL-be   RLS-SM.3.SG-pay-HAB-pay   CON   SM.2.PL-borrow-CAUS-OM.3.SG
        'If s/he (habitually) pays back (his debts), you lend him/her.'

The habitual marker *-e* only occurs in reduplication, as shown in (12a-b), whereas the
perfective *-e* actually blocks[6] the reduplication process. For more discussion of these affixes and
how they operate in Eegimaa stem structure, see Bassene and Safir (2017).

The perfective marker and the habitual marker can attach to the verbs of the antecedent and the
consequent, as illustrated in (13). In such conditionals, the consequent presents a conclusion
drawn from the information contained in the antecedent. These types of inferential conditionals are
known as epistemic conditionals (Sweetser 1990).

(13) Perfective and habitual aspects matching between the antecedent and the consequent and
      epistemic readings
    a. [E-ní   n-á-ttuŋ-e   e-mmano yai,]ₚ [e-ba-e.]Q
        CL-be   RLS-SM.3.SG-grind-PFV CL-rice   CL.DEF CL-finish-PFV
        'If s/he has ground the rice, it must be finished.'

    b. [E-ní   n-a-tiñ-e-tiñ   gu-ssax,]ₚ   [jí-jji-e-ol-jji.]Q
        CL-be   RLS-SM.3.SG-eat-HAB-eat   CL-bean   SM-2.PL-give-HAB-OM.3.SG-give
        'If s/he habitually eats beans, you must have habitually given him/her (some).

In conditional constructions, only the verb of the antecedent can be reduplicated. As shown in
(14), reduplication of *éni* or the verb of the consequent results in ungrammaticality.

(14) Reduplication in conditional constructions
    a. [E-ní n-a-sen-i-sen,]ₚ   [n'   u-nnom-en-ol   é-be]Q
        CL-be RLS-SM.3.SG-give-OM.2.SG-give   CON   SM.2.SG-buy-CAUS-OM.3.SG   CL-cow
        'If s/he really gave you (money), sell him/her a cow.'

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6   Stems to which the perfective marker *-e* is attached cannot be reduplicated.

b. *[E-ní-ni   n-a-sen-i-sen,]ₚ   [n'   u-nnom-en-ol-nnom-en
  CL-be-be   RLS-SM.3.SG-give-OM.2.SG-give   CON   SM.2.SG-buy-CAUS-OM.3.SG-buy-CAUS

  é-be]_Q
  CL-cow

  'If s/he really gave you (money), sell him/her a cow.'

c. [E-ní   n-a-xaw-ul-xaw,]ₚ   [ni   jí-jji-ol.]_Q
  CL-be   RLS-SM.3.SG-ask-OM.2.PL-ask   CON   SM.2.PL-give-OM.3.SG
  'If s/he really asked you (for something), you give him/her.'

d. *[E-ní-ni   n-a-xaw-ul-xaw,]ₚ   [ni   jí-jji-ol-jji.]_Q
  CL-be   RLS-SM.3.SG-ask-OM.2.PL-ask   CON   SM.2.PL-give-OM.3.SG-give
  'If s/he really asked you (for something), you give him/her.'

e. [E-ní   n-a-wañ-wañ,]ₚ   [ni   ji-ccam-ol.]_Q
  CL-be   RLS-SM.3.SG-cultivate-cultivate   CON   SM.2.PL-pay-OM.3.SG-pay
  'If s/he really cultivated, you pay him.'

f. *[E-ní-ni   n-a-wañ-wañ,]ₚ   [ni   ji-ccam-ol-ccam.]_Q
  CL-be   RLS-SM.3.SG-cultivate-cultivate   CON   SM.2.PL-pay-OM.3.SG-pay
  'If s/he really cultivated, you pay him.'

I mentioned earlier that the morpheme *me* is actually a dependency marker and that *éni* expresses conditionality as well as doubt. In the dialogue below, *éni* is not expressing a condition, but a doubt that the event denoted by the verb *sen* 'give' would occur at all.

(15) *éni* denoting doubt

Aliou: I-jow   a-ppal-i   á-jji-l-om   ju-xulol.
          SM.1.SG-go CL-friend-POSS.2.SG SM.3.SG-give-LOC-OM.1.SG CL-chicken
          'I am going to get a chicken from your friend.'

Banna: E-ní   xum   pan   a-sen-i!
          CL-be   DM   FUT   SM.3.SG-give-OM.2.SG
          'If he will give you.' (I doubt that he will give you.)

The data in (16) also illustrates the use of *me* in non-conditional sentences. In (16a), *me* is found in a relative clause, whereas in (16b) it appears in a clause which denotes the manner with which an event occurs.

(16) *me* in non-conditional sentences

a. Sú-jur   sasu   g-a-maŋ-ut   ***me***   bú-llar   pan   gu-mmor.
  CL-girl   CL.DEF   SM.3.PL-REL-want-NEG   DEP   CL-work   FUT   SM.3.PL-starve
  'The girls who do not want to work will starve.'

b. Min a-jow   ***me***,   m-o   n-a-ot-ul-o;   xani   ju-ol.
    CONJ SM.3.SG-go DEP   CL-PRN RLS-SM-3.SG-return-LOC-IFM   NEG   CL-fish
    'S/he returned the way s/he went; without fish.'

The discussion of Eegimaa conditionals as presented thus far clearly suggests that the morphemes *me* and *éni* are not reliable indicators of conditionality, as they also introduce a variety of non-conditional clauses. In the following section, I will show that Eegimaa speakers rely more on intonation in their expression and interpretation of conditionality than other markers, and that *me* and *éni* are not required in conditional constructions.

6. The role of intonation in the expression of conditionality in Eegimaa

In its most restricted sense[7], the term *intonation* refers to the variation of pitch in speech (Nolan 2006) and performs various functions. This section will be confined to the syntactic function of intonation in Eegimaa, specifically to its role in conditional constructions. In this research, I conducted an acoustic analysis of 60 sentences. These include 15 conditional sentences containing the morpheme *me*, 15 conditional sentences with *éni*, 15 conditional sentences without an overt conditional marker, and 15 sentences containing purpose clauses. I hypothesized that the determining factor in the expression and interpretation of conditionality in Eegimaa is intonation. The acoustic analysis confirms that the morpheme *me* and *éni* are not required in Eegimaa conditional constructions, and that intonation is a more reliable indicator of conditionality in Eegimaa. The sentences in (17) illustrate the three ways conditionality is marked in Eegimaa. Contrary to (17a) and (17c), in (17b) the antecedent has no marker, yet, all my informants understood it as a conditional.

(17) Three ways of expressing conditionality in Eegimaa
    a. [Gu-baj   me,]$_P$ [pan   gu-kkan.]$_Q$
       SM.3.PL-have DEP   CON   SM.3.PL-contribute
       'If they have, they will contribute.'

    b. [Gu-baj,]$_P$ [n'   gu-kkan.]$_Q$
       SM.3.PL-have CON   SM.3.PL-contribute
       'If they have, they will contribute.'

    c. [E-ní   i-baj,]$_P$ [pan   i-kkan.]$_Q$
       CL-be   SM.1.SG-have   FUT   SM.1.SG-contribute
       'If I have, I will contribute.'

The acoustic analysis revealed that all conditionals share two properties: (1) there is always an intonation break between the antecedent and the consequent, and (2) at a normal speech rate, the antecedent consistently ends in a falling pitch, as shown in the three spectrograms below. The vertical lines in the spectrograms indicate the intonation break separating the antecedent from the consequent. There are various factors which can disrupt the continuity of the pitch. For instance,

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7 Pitch patterns are linked to such prosodic components as voice quality, loudness, as well as timing.
   Therefore, these components are sometimes included in the definition of intonation.

voiceless sounds and geminates affect the pitch pattern, as can be seen in the spectrograms where the presence of the geminate [kk] results in a pitch break in the consequent. However, the acoustic analysis of Eegimaa conditionals shows that regardless of the neighboring sounds between the antecedent and the consequent, there is *always* an intonation break separating the two clauses. Without such a break, the sentence does not have a conditional interpretation.

(18) Pitch pattern in Eegimaa conditionals
    a.   Gubaj me, pan gukkan.   b. Gubaj, n'gukkan.


    c.   Eni ibaj, pan ikkan.
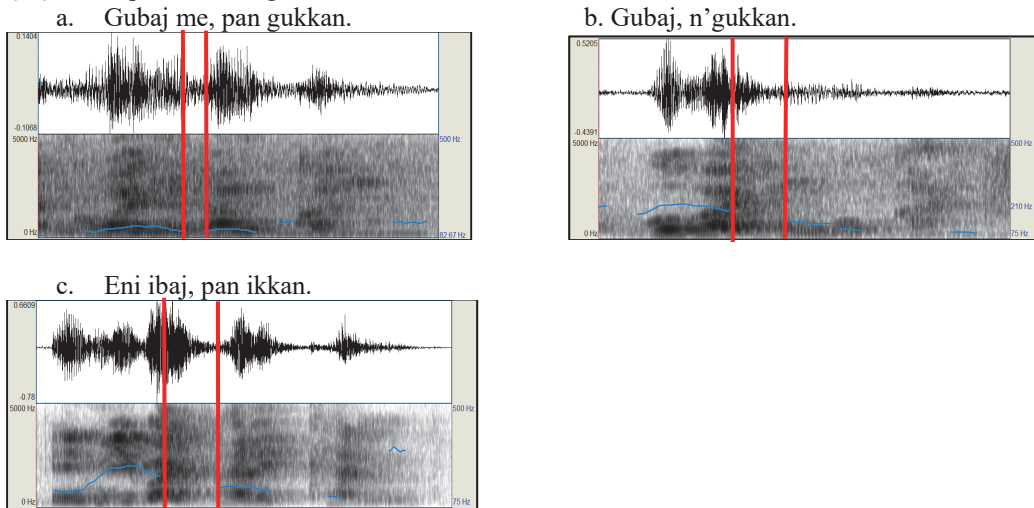
Both of the sentences in (19) can have a purpose or a conditional interpretation, depending on whether or not they are pronounced with a pause after the first clause (*usenom*).

 (19) Contrast between a conditional and a purpose clause in Eegimaa
    a.   [U-sen-om,]$_P$ [n'   i-ccam.]$_Q$
         SM.2.SG-give-OM.1.SG   CON   SM.1.SG-pay
         'If you give me (the money), I will pay.'

    b.   U-sen-om   n'   i-ccam.
         SM.2.SG-give-OM.1.SG   CON   SM.1.SG-pay
         'You give me (the money) so that I pay.'

The spectrogram in (20a) shows an intonation break after the clause *usenom* and the sentence is, therefore, interpreted as a conditional, whereas in (20b) there is no break between the two clauses. Without such a break, the sentence is understood as denoting a purpose. The arrow indicates the boundary between the two clauses.

(20) Pitch contrast between a conditional and a purpose clauses in Eegimaa
     a.   Usenom, n' iccam.   b.   Usenom n'   iccam.
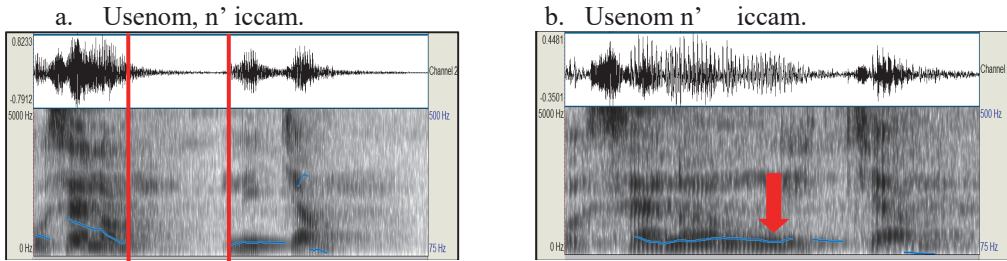
The crucial role of intonation in Eegimaa conditional constructions is further illustrated in the data presented in (21). Pronouncing (21a) with a pause after the first VP (*asenom*) yields a conditional sentence. But without this pause, the result is (21b) which is a reduced[8] relative clause. Sentences (21c) and (21d) also present similar contrast. (21c) is a conditional sentence, whereas (21d) expresses a doubt. Intonation break is also the only distinctive feature between these two sentences.

(21) Further contrast between conditional and non-conditional sentences

  a. [A-sen-om   *me,*]ₚ [n'   i-ccam.]_Q
      SM.3.SG-give-OM.1.SG   DEP   CON   SM.1.SG-pay
      'If s/he gives me (the money), I pay.'

  b. A-sen-om   *me*   n'   i-ccam.
      SM.3.SG-give-OM.1.SG   DEP   CON   SM.1.SG-pay
      '(The boy) who gave me (the money) so that I paid.'

  c. [*E-ní*   a-sen-om,]ₚ   [n'   i-ccam.]_Q
      CL-be   SM.3.SG-give-OM.1.SG   CON   SM.1.SG-pay
      'If s/he gives me (the money), I pay.'

  d. *E-ní*   a-sen-om   n'   i-ccam!
      CL-be   SM.3.SG-give-OM.1.SG   CON   SM.1.SG-pay
      'I doubt that s/he will give me (the money) so that I pay'

The intonation break observed in Eegimaa conditional constructions is also reported in many languages. In a contrastive study of the intonation patterns of English and Persian, Hayati (1998) observes such a break between the antecedent and the consequent in both languages. Wolof also show that type of break between the antecedent and the consequent. However, the difference between Eegimaa and languages such as English and Wolof is that in these languages the conditional marker is required, whereas in Eegimaa the combination of a falling pitch and a pause suffices to signal conditionality.

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8   (21b) is a relative clause the antecedent of which has been omitted. Such constructions are very common in Eegimaa. Obviously, the context must be very clear to allow for the antecedent to be left out without posing any interpretation issue.

7. Conclusion

In this paper, I adopted a descriptive approach to the study of Eegimaa conditionals. The analysis, supported by acoustic evidence, has revealed some interesting properties of Eegimaa conditionals. It has been shown that the morphemes *me* and *éni* are neither necessary nor sufficient markers of conditionality in Eegimaa. The morpheme *me* actually denotes dependency and, therefore, it is found in subordinate clauses of various types. The morpheme *éni* very often denotes a doubt. The combination of a falling pitch and a pause is the most reliable indicator of conditionality in Eegimaa. It has been determined in this study that the morphemes *me* and *éni* can be omitted in conditional sentences without any syntactic or pragmatic repercussions.

A final point is characterizing the proper combination of TAM morphemes in the antecedent and the consequent. In the expression of counterfactual situations, the morpheme *-en* is attached to the verbs of both clauses. When *-en* is attached only to the main verb of the antecedent, the consequent of the resulting sentence is interpreted as still realizable. However, two of my informants view such sentences as ambiguous, arguing that the consequents in these sentences can also be interpreted as not realizable. We have seen in section 5 that the perfective aspect can also be expressed in Eegimaa with just the bare infinitive and the subject marker. Therefore, the point made by these informants deserves further investigation. Furthermore, most conditional sentences discussed in this paper are *content-world* or *predictive* conditionals, meaning that in these conditionals, the consequents predict some state of affairs or events (Sweetser 1990, Dancygier 1998). A discussion of how *epistemic* (conclusive) and *speech act* (directive) conditionals are constructed in Eegimaa will certainly give us a broader view of Eegimaa conditional system. For example, in a very small set of Eegimaa data (4 sentences), the perfective marker *-e* seems to play a role in the formation of epistemic conditionals. A thorough investigation of these types of conditionals will certainly add to our understanding of Eegimaa conditional system.

Abbreviations used

CAUS	causative	PFV	perfective
CL	class marker	PL	plural
COMP	complementizer	POSS	possessive
CON	connective	PRN	pronoun
CONJ	conjunction	RCM	reciprocal
DEF	definite article	REL	relative
DEP	dependency	REP	repetition
FUT	future	RFM	reflexive marker
HAB	habitual	RLS	realis
IFM	inherent reflexive marker	SG	singular
LOC	locative	SM	subject marker
NEG	negation	TAM	time, aspect, modality
OM	object marker	PFV	perfective

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