Perfective (non-)extraction in Igbo

Mary Amaechi

University of Ilorin

amaechi.mc@unilorin.edu.ng

Outline

Introduction

- a case of aspect split under extraction in Igbo (Benue-Congo, Nigeria)

Observation

a restriction found under A′-movement from perfective clauses; extracting an XP out of an imperfective clause is grammatical but moving an XP out of a perfective clause results in ungrammaticality; cf. Nwachukwu (1976)

The data

(1) *Imperfective clauses*

    a.   Àdá nà-èrí   ˈjí.
         Ada IPFV-NMZL.eat yam.GEN
         'Ada is eating yam.'

    b.   Gịˈnị̀ kà   Àdá rì-rì   __?
         what FOC Ada eat-SFX
         'What did Ada eat?'

(2) *Perfective clauses*

    a.   Àdá **è-rí-é-lá**   ˈjí.
         Ada NMZL-eat-Á-PFV yam.GEN
         'Ada has eaten yam.'

    b.   *Gịˈnị̀ kà   Àdá **è-rí-é-lá**   __?
         what FOC Ada NMZL-eat-Á-PFV
         intended: 'What has Ada eaten?'

The data

(3)   *Relativization*

    a.   ónyé   ná-èrí   ǃjí
        person IPFV-NMZL.eat yam.GEN
        'the person who is eating yam'   *imperfective*

    b. *ónyé   è-rí-é-lá   ǃjí
        person NMZL-eat-Á-PFV yam.GEN
        intended: 'the person who has eaten yam'   *perfective*

(4) *Long-distance extraction*

a. Úchè gwà-rà   Òbí nà   Àdá è-rí-é-lá   !jí.
   Uche tell-SFX Obi that Ada NMZL-eat-Á-PFV yam.GEN
   'Uche told Obi that Ada has eaten yam.'

b. Ònyé kà   Úchè gwà-rà __ nà   Àdá è-rí-é-lá   !jí?
   who FOC Uche tell-SFX   that Ada NMZL-eat-Á-PFV yam.GEN
   'Who did Uche tell that Ada has eaten yam?'

c. *Ònyé kà   Úchè gwà-rà Òbí (nà) __ (è)-rí-é-lá   !jí.
   who FOC Uche tell-SFX Obi that   NMZL-eat-Á-PFV yam.GEN
   lit: 'Who did Uche tell Obi that has eaten yam.'

d. ?*Gị̀!nị́ kà   Úchè gwà-rà Òbí nà   Àdá è-rí-é-lá   __?
   what FOC Uche tell-SFX Obi that Àdá NMZL-eat-Á-PFV
   lit: 'Who did Uche tell Obi that has eaten yam.'

The data

- the restriction holds under A′-movement dependencies but not base-generated dependencies, e.g., topicalization

(5) Jí,   Àdá è-rí-é-lá   ꜜyá.
     yam.ACC Ada NMZL-eat-Á-PFV 3SG.GEN
     'As for the yam, Ada has eaten it.'   *topicalization*

Claims

- the perfective in Igbo contains two nominal layers, while the imperfective has only one nominal layer
- perfective non-extraction is due to the presence of the nominal layers
- Ā-extraction from the perfective violates the subjacency condition

Outline of the talk

1. the structure of the perfective
2. the extraction restriction
3. analysis
4. conclusion

Background on Igbo

- Igbo is a tone language with three tone: high, low and downstep (Emenanjo, 1978; Nwachukwu, 1995)
- tone plays both lexical and grammatical functions
- vowel harmony based on the [ATR] feature
- Igbo attests rich verbal inflection and derivational affixes (Uwalaka, 1988; Nwachukwu, 1983b; Manfredi, 1991)
- basic word order is S-V-O

    (6)   Àdá rì-rì   jí.
           Ada eat-rv yam.ACC
           'Ada ate yam.'

- head-initial VP
- DP_{ext} undergoes EPP-movement to SpecTP

Outline

Features of the perfective

- The perfective form of the verb consists of an *a-/e-* harmonizing prefix (NMZL), the verb root, the so-called open vowel suffix (OVS) (Á) and the perfective suffix *-lá* (Nwachukwu, 1983a).

  (7) a. Àdá **è-rí-é-lá** [!]jí.
      Ada NMZL-eat-Á-PFV yam.GEN
      'Ada has eaten yam.'

  b. Àdá **á-zà-á-lá** úlò.
      Ada NMZL-sweep-Á-PFV house.GEN
      'Ada has swept the house.'

- the direct object of the verb in the perfective (and the imperfective) is marked with genitive case which is tonal, the downstep in (7-a) (Déchaine, 1993; Manfredi, 1997, 2005; Déchaine and Manfredi, 1998).

The nominalizing prefix

- the harmonizing *a-/e-* prefix on the verb in (7); it nominalizes the verb
  Evidence: the object bears genitive instead of accusative case
  (Déchaine, 1993, 620)
- in both perfective (7) and imperfective (8-b) where the prefix surfaces
  on the verb, the direct object gets genitive case.
- this genitive case is absent in (8-a) where the prefix is not found, the
  direct object in (8-a) gets to be assigned accusative by the verb

  (8)   a.   Àdá rì-rì   jí.
                  Ada eat-SFX yam.ACC
                  'Ada ate yam.'
          b.   Àdá nà-èrí   ǃjí.
                  Ada IPFV-NMZL.eat yam.GEN
                  'Ada is eating yam.'
          c.   Àdá gà-èrí   ǃjí.
                  Ada FUT-NMZL.eat yam.GEN
                  'Ada will eat yam.'

The nominalizing prefix

- also found in bound verb complement (BVC) and on the non-initial verb in some serial verb constructions (SVC) (Emenanjo, 1978; Nwachukwu, 1983a, 1987)

(9) a. Àdá rì-rì   jí   èrí.
         Ada eat-SFX yam.ACC NMZL.eat
         'Ada actually ate the yam.'   *BVC*

     b. Àdá jì   ǹgàjì èrí   ꜜjí.
         Ada hold spoon NMZL.eat yam.GEN
         'Ada is eating yam with a spoon.'   *SVC*

The open vowel suffix (OVS)

- the suffix bears a H tone, and it harmonizes not just to the $+/-$ATR of the preceding verb stem, but also to its level and position (Green and Igwe, 1963)

- the suffix appears in a number of constructions in the language: perfective, V2 in SVC (10-b), coordinate structure (10-c), conditional (*if*) clauses (10-d), subjunctive clauses (10-e), imperatives (10-f) (Green and Igwe, 1963; Manfredi, 1991; Déchaine, 1993).

- the object DPs occurring after the verbs with OVS in all the constructions bear the genitive case (Manfredi, 1991; Déchaine, 1993; Déchaine and Manfredi, 1998)

- the OVS is in complementary distribution with the negative suffix -ghi and the -rV suffix found in factative affirmative clauses (Déchaine, 1993)

The open vowel suffix (OVS)

(10) *Constructions where the OVS is found*

    a.   Àdá **è-rí-é-lá** [!]jí.
        Ada NMZL-eat-Á-PFV yam.GEN
        'Ada has eaten yam.'   *perfective*

    b.   Àdá zù̩-rù̩ ò̩kú̩kò̩ **gbù-ó sí-é rí-é**.
        Ada buy-SFX chicken kill-Á cook-Á eat-Á
        'Ada bought a chicken, killed, cooked and ate (it).'   *SVC*

    c.   Àdá sù̩-rù̩ ákpú̩ mà **sí-é** ó̩f[!]é.
        Ada pound-SFX fufu MA cook-Á soup.GEN
        'Ada pounded fufu and also cooked soup.'   *conjuction*

    d.   (Ó̩ bú̩-rú̩ nà) Àdá **sí-é** ó̩f[!]é.
        3SG COP-SFX that Ada cook-Á soup.GEN
        'If Ada prepares the soup'   *conditional clause*

    e.   (Ó̩ chò̩-rò̩) kà ànyi̩ **kpé-é** [!]ékpéré.
        3SG want-SFX that 3PL pray-Á prayer.GEN
        'S/he wants that we pray.'   *subjunctive*

    f.   **Rí-é** y[!]á!
        eat-Á 3SG.GEN
   'Eat it!'   *imperative*

The perfective suffix

- the final suffix -*tá* in the perfective construction in (7)
- it bears a H tone regardless of the tone of the verb stem
- Nwachukwu (1983a) reports that the suffix is the only affirmative suffix that takes the OVS

The structure of the perfective

I assume that the suffix realizes the Perf head in the structure in (11) below. The perfective projection is below TP and above the affirmative (AffP) projection where the OVS is base-generated.

The structure of the perfective

(11) *The structure of the perfective (preliminary)*

Interim summary
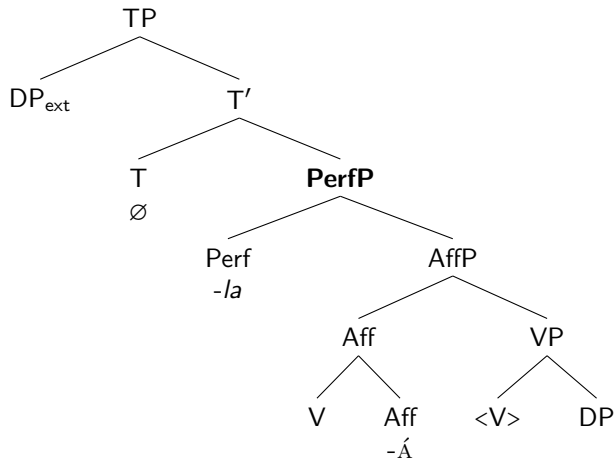
- the perfective involves two different nominalizing elements: the *a-/e-* prefix and the OVS

- these two elements block accusative case and assign genitive case instead

Outline

- both a-/e- prefix and the OVS are required for the extraction restriction to be triggered
- in clauses where one of these affixes but not the other occurs, extraction is not barred.

   (12)   *Extraction from clauses with a-/e- prefix*
      a.   Gị́ꞌnị́ kà   Àdá rì-rì   __ èrí?
           what FOC Ada eat-SFX   NMZL.eat
           'What did Ada eat?'   *BVC*
      b.   Jí   kà Àdá jì   ǹgàjì èrí   __.
           yam.ACC FOC Ada hold spoon NMZL.eat
           'Ada eating YAM with a spoon'   *SVC*

- (13)   *Extraction from clauses with the OVS*
    - a.   Gị̀ʼnị́ kà   Àdá jì   ǹgàjì rí-é ___.
      what FOC Ada hold spoon eat-Á
      'What did Ada eat with a spoon?'

a-/e- prefix and OVS required for the extraction restriction

Further support that the two affixes have to be present for the restriction to hold comes from data from other Igbo varieties.

(14)   *Onitsha -go*

    a.   Àdá **ˈé-rí-gó**   ˈjí.
          Ada NMZL-eat-PFV yam.GEN
          'Ada has eaten yam.'

    b.   Gị̣ˈnị́ kà   Àdá **rì-gò-rò**   __?
          what FOC Ada eat-PFV-SFX
          'What has Ada eaten?'

(15)   *Central Igbo (Nwachukwu, 1976, 69, 105)*

    a.   Ógù **e-rí-e-le**   nnụ̀nụ.
          Ogu NMZL-eat-Á-PFV bird
          'Ogu has eaten a bird.'

    b.   [Àg'a h̃á **rī̄-ri-le**   ] dì   asáà.
          Ag'a 3PL eat-SFX-PFV   COP seven
          'The ag'a yams they have eaten are seven in number.'

Outline

Perfective in Igbo contains two nominal layers

- imperfective has a nominal layer (marked by *a-/e-* prefix (1))
- perfective has two nominal layers (marked by *a-/e-* prefix and OVS (2))
- I assume that the two nominal element in the perfective are nominal layers in the structure of the perfective
- I regard these as the high and the low *n*
- the extraction effect requires the simultaneous presence of the two projections (the high and the low *n*)
- these two projections are not structurally adjacent, but separated by other projections, but they together induce the effect

Perfective in Igbo contains two nominal layers

$\Rightarrow$ **A$'$-extraction from the perfective violates the subjacency condition**

Subjacency condition Chomsky (1973)

no movement over more than one bounding node (DP or TP)

- Chomsky (1973) proposes the subjacency condition, a condition that forbids movement from crossing more that one nominal or clausal category in a single step
- Going by this condition, movement from Y to X in the following structures in (16) violates subjacency.

(16)   a.   . . . X . . . [$_{\text{TP}}$ . . . [$_{\text{DP}}$ . . . Y . . .]] . . .
          b.   . . . X . . . [$_{\text{TP}}$ . . . [$_{\text{TP}}$ . . . Y . . .]] . . .
          c.   . . . X . . . [$_{\text{DP}}$ . . . [$_{\text{DP}}$ . . . Y . . .]] . . .

Perfective in Igbo contains two nominal layers

- Ā-movement from the perfective clause in Igbo is blocked since the XP element to be extracted from the clause would have to cross two nominal projections
- the nominal nodes are marked by the low nP node in (17), which assigns genitive case to the direct object of the verb, and the high nominal phrase, which I assume also nominalizes the perfective clause.

Perfective in Igbo contains two nominal layers

(17)   *Extraction from the perfective involves crossing two nominal nodes*
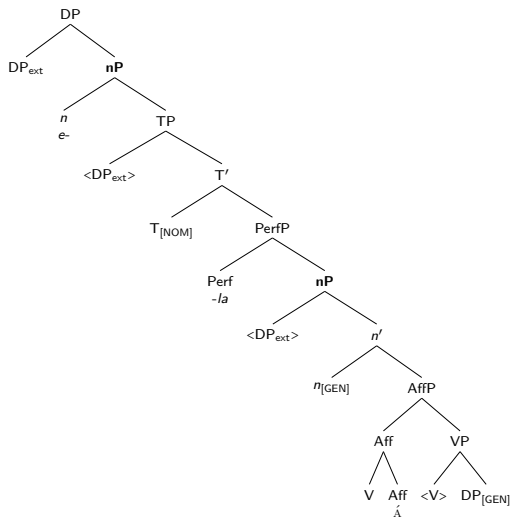
Outline

Conclusion

- In Igbo, it is impossible to extract out of a perfective clause without altering the morphology of the verb
- this effect is the result of double nominalization in the perfective caused by the *a-/e-* nominalizing prefix and the OVS
- I accounted for the extraction restriction as a kind of subjacency violation

Thank you!

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