On the timing and mechanics of multiple exponence: Evidence from Armenian verbs

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Outline of the talk

Armenian Indicative marking is a curious case of multiple exponence

We analyze it as post-syntactic, spurious insertion

In terms of derivational mechanics, we analyze it as fission followed by linearization

This has implications for the mechanics of spell out:

Linearization < Fission, Fusion < Vocab Insertion applied cyclically at each node

Armenian

- Armenian is a separate branch of Indo-European.
- Two Standard languages (Eastern, Western), 11 dialect groups [Jah72].
- Today: same group, two dialects: Erzurum (X), Arapgir (O).

Verb basics

▶ Armenian is primarily head-final, suffixing.

▶ Core morphemes in the thematic domain attach ornamental elements (glossed as TH) [DG21].

    (1)   ləv-ats^h-v-i-n
             wash-TH-PASS-TH-3PL

             '(if) they wash themselves'   Erzurum

▶ This is one of the simplest finite forms.

Verb basics

▶ Armenian is primarily head-final, suffixing.
▶ Core morphemes in the thematic domain attach ornamental elements (glossed as TH) [DG21].

(2) M-Word Structure for (1):

▶ The form in (1) is used to form the Indicative via an affix (glossed as IND).

▶ IND is a prefix in most Armenian varieties. A rare case of prefixation in the language. It's idiosyncratic.

(3) gə- ləv-ats^h-v-i-n
     IND-wash-TH-PASS-TH-3PL

     'they wash themselves'   Standard Western

Adding IND

- Caveat: In principle, IND has a more complex distribution.
- IND is a high, syncretic Mood (Indicative, Conditional) x Polarity (Non-negative) morpheme [Bez22].

(4) M-Word Structure for (1):
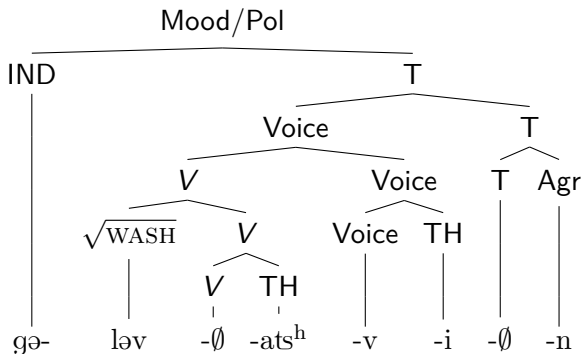
- Erzurum and Arapgir double IND, placing both markers word-peripherally (circumfixation).
- The first IND is a prefix, and the other IND is a suffix.

  (5) $\boxed{\text{k-}}$ əs-e-n $\boxed{\text{-gə}}$

  IND-say-TH-3PL-IND

  'they say'   Erzurum

- Note: A doubled IND is identical to the prefixal IND in Standard Western semantically, it does not provide added value.
- **Question:** How do we model IND-doubling in Erzurum/ Arapgir?

IND-circumfixation vs. Syntax

- ▶ IND-circumfixation is post-syntactic [Bez22].
- ▶ This is best revealed through interactions with clausal syntax.
- ▶ In Erzurum, Wh-words and elements under contrastive focus displace IND to attach to the focused element.
- ▶ A single encliticizing IND is observed.

    (6)   Erzurum

        a.   k-|əs-e-n|-gə   (ʧiʃd)
            IND-say-TH-3PL-IND truth

            'They're right (they say the truth).'

        b.   vev |=gə| (ʧiʃd) əs-e?
            who IND   truth say-TH.3SG

            'Who's right (who says the truth)?'

▶ Claim: This is the same class of phenomena as T-Agr placement in English.

    (7)   English

        a. John <u>finished</u> his chores.

        b. What <u>did</u> John <u>finish</u>?

▶ In 7a, a locally available -ed attaches to the verb. In (7b), a displaced -ed receives do-support.

- ▶ No head-movement to T
- ▶ Wh- movement to CP, followed by T-to-C head-movement
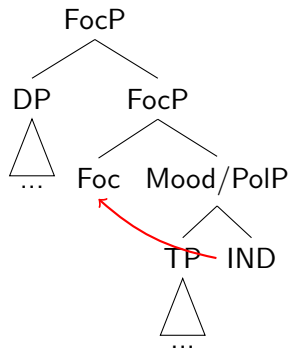- ▶ Morphological merger (local) combines T with the verb in case WH does not happen.

(8) English
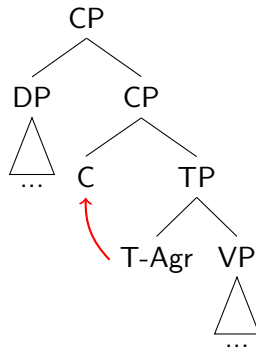
- No head-movement to Mood/Pol
- Wh- movement to FocP, followed by Mood/Pol-to-Foc head-movement
- Morphological merger (local) combines T with the verb in case WH does not happen.

(9) Erzurum

- ▶ No head-movement to Mood/Pol
- ▶ Wh- movement to FocP, followed by Mood/Pol-to-Foc head-movement
- ▶ Morphological merger (local) combines T with the verb in case WH does not happen.
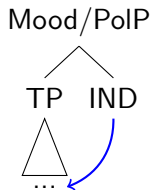- ▶ Circumfixation follows the merger.

(10)   Erzurum

Mood/PolP

TP   IND

...

IND-circumfixation vs. Syntax

▶ No IND-circumfixation is observed if IND is displaced away from the verb.

   (11) Erzurum

      a. $\boxed{\text{k-}}$ əs-e-n $\boxed{\text{-gə}}$ (tʃiʃd)
         IND-say-TH-3PL-IND truth

        'They're right (they say the truth).'

      b. vev $\boxed{\text{=gə}}$ (tʃiʃd) əs-e?
         who IND   truth say-TH.3SG

        'Who's right (who says the truth)?'

▶ Condition, informally: Double IND if it immediately dominates T within its M-Word.

IND-circumfication vs. VI

- ▶ Upper boundary: IND is doubled post-syntactically.
- ▶ Lower boundary: IND is doubled before Vocabulary Insertion.
- ▶ Allomorphy: different allomorphs can be inserted (historically related but not synchronically)

  (12) IND allomorphs in Erzurum

Irregular	Regular
ku- d-a -gə	k- abr-i -gə
IND-give-TH.3SG-IND	IND-live-TH.3SG-IND
'(s)he gives'	'(s)he lives'

- ▶ The suffix is always the default form; the prefix can be irregular.
  - ▶ IND ↔ gə
  - ▶ IND ↔ k /__V
  - ▶ IND ↔ ku /__√give,...

IND-circumfication vs. VI

- Arapgir has a progressive marking pattern that suppresses the suffixal IND.
- Negation data are consistent with a pre-VI approach because Prog placement is independent of IND placement.

(13) Arapgir Habituals

    a. $\boxed{\text{ku-}}$ l-a $\boxed{\text{-gu}}$
       IND-cry-TH-IND
       '(s)he cries.'

    b. ʧʰi-l-a-r
       NEG-cry-TH-CN
       '(s)he doesn't cry.'

(14) Arapgir Progressives

    a. $\boxed{\text{ku-}}$ l-a $\boxed{\text{-(n)ə}}$
       IND-cry-TH-PROG
       '(s)he's crying.'

    b.
       ʧʰi-l-a-r $\boxed{\text{-(n)ə}}$
       NEG-cry-TH-CN-PROG
       '(s)he's not crying.'

▶ The incompatibility between IND and Prog is pre-VI, although the exact mechanics is hard to narrow down.

▶ Can be fusion, impoverishment, or zero-insertion.

   (15) Arapgir Habituals

      a. $\boxed{\text{ku-}}$ l-a $\boxed{\text{-gu}}$

          IND-cry-TH-IND

          '(s)he cries.'

      b. $\boxed{\text{ku-}}$ l-a $\boxed{\text{-}\emptyset}$ $\boxed{\text{-nə}}$

          IND-cry-TH-IND-PROG

          '(s)he is crying.'

Origins

- Origins: grammaticalized /kaj u/ 'exists and' + Verb > prefixal /ku/ IND > /k(ə)/ [BD20].
- A subset of dialects displays the pressure for a prefix > suffix shift, possibly due to head-finality.
- Fieldwork on Erzurum (both endpoints are found in the subdialects):

(16) | k- |abr-i-m
IND-live-TH-1SG
'I live.'   L

(17) abr-i-m| -gə |
live-TH-1SG-IND
'I live.'   R

- (16-17): Variable linearization across Erzurum.

Mobile affixation

▶ Most Erzurum varieties display mobile affixation, mobile placement wrt the verb [BD20].

   (18)   Mobile (MS) Erzurum

        a. $\boxed{\text{ku-}}$ l-a-m
            IND-cry-TH-1SG

            'I cry'   Mono-consonantal root

        b. $\boxed{\text{k-}}$ abr-i-m
            IND-live-TH-1SG

            'I live'   V-initial

        c.   xos-i-m $\boxed{\text{-gə}}$
            speak-TH-1SG-IND

            'I speak'   C-initial non-minimal

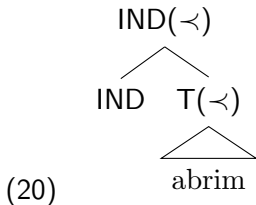▶ Minimality: switch if the conditions are met.

Mobile affixation

- ▶ Assume bottom-up spell out.
- ▶ $\prec$ = precedence, X = the complement of the head in question

  (19) Linearization statements:

  $X * IND \rightarrow X \prec IND$
  / if X is C initial and non-minimal

  $X * IND \rightarrow IND \prec X$

(20)

```
        IND(≺)
        /    \
     IND    T(≺)
              /\
           abrim
```

(21)

```
        IND(≺)
        /    \
     T(≺)    IND
      /\
   xosim
```

IND-circumfixation
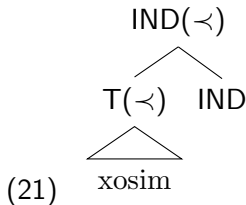
- ▶ IND-circumfication is partial and can be considered a subcase of mobile marking.

    (22)   Mobile and circumfixing (MC) Erzurum

    a. | ku- |l-a-m| -gə |
   IND-cry-TH-1SG-IND
         'I cry'   Mono-consonantal root

    b. | k- |abr-i-m| -gə |
         IND-live-TH-1SG-IND
         'I live'   V-initial

    c.   xos-i-m| -gə |
         speak-TH-1SG-IND
         'I speak'   C-initial non-minimal

▶ Minimality: switch if the conditions are met.
▶ Doubling patterns involve spurious IND insertion to facilitate the prefix flipping.
▶ Spurious morphemes to satisfy morpho-phonological restrictions:
  ▶ do-support, be-support [EN01, GSW21]
  ▶ spurious morphemes [AMV13, Wol08, Wol13]

▶ Similarly to discontinuous agreement in Semitic [Hew22],
  modelling spurious insertion as
  1. Fission (Doubling the nodes)
  2. Linearization

(23)

(24)
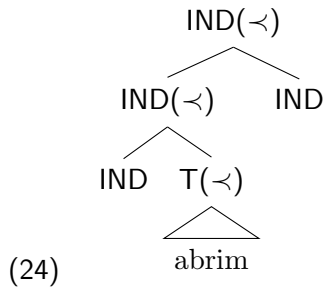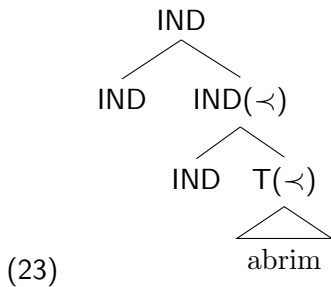
- Assume bottom-up spell out.
- $\prec$ = precedence, X = the complement of the head in question

  (25) Linearization statements (MS and MC Erzurum):

  X * IND $\rightarrow$ X $\prec$ IND
  / if X is C initial and non-minimal

  X * IND $\rightarrow$ IND $\prec$ X
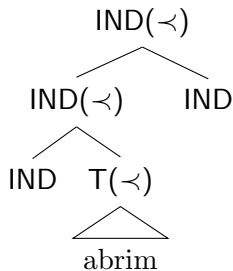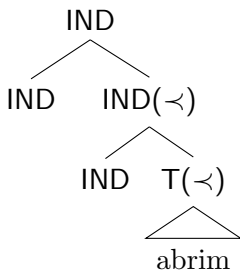
  (26) Fission (MC Erzurum):

  $[\text{IND}(\prec) \ldots] \longrightarrow [\text{IND} \ [\text{IND}(\prec) \ldots] \ ] \ / \ \_\_\sqrt{\text{Root}}$

- Implies linearization interleaved with VI
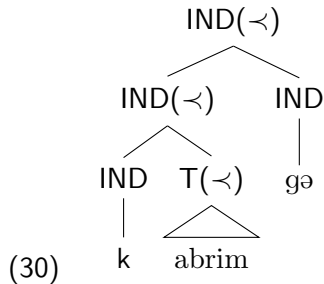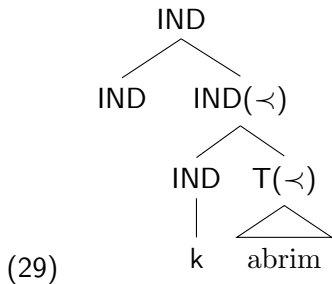
▶ Order of operations cyclically applied at node:
  1. Linearization
  2. Fission (Abstract operations)
  3. Vocabulary insertion

(27)

IND
├── IND
└── IND($\prec$)
    ├── IND
    └── T($\prec$)
        └── abrim

(28)

IND($\prec$)
├── IND($\prec$)
│   ├── IND
│   └── T($\prec$)
│   └── abrim
└── IND

▶ Order of operations cyclically applied at node:
1. Linearization
2. Fission (Abstract operations)
3. Vocabulary insertion

(29)

(30)

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