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From synthetic to analytic: The present tense in Brazilian Portuguese

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Analyticisation

Linguistic property is not combined into one single word, but into (more than) two (Sapir, 1921: 127–128).

(1) a. entristecer   vs. ficar   triste (BP)
         become.$_{INF}$ sad vs. become.$_{INF}$ sad
         'to sadden' (Carvalho; Bassani, 2021: 56)

     b. da   dianhua (Chinese)
         hit.$_{INF}$ telephone
         'to call' (Huang, 2014: 11)

(2) (Ledgeway, 2017: 868)

     a. Paul-o (Latin)
         Paul.$_{DAT}$
         'To Paul'

     b. à   Paul (French)
         to-the.$_{DAT}$ Paul
         'To Paul'

Analyticisation in Brazilian Portuguese (BP) I

The Verbal Analyticisation is in an advanced state in BP (Cyrino, 2013; Reintges and Cyrino, 2016, 2018, Carvalho and Bassani, 2021).

Mode	Tense	Synthetic form	Analytic form
Indicative	Present	eu acordo	eu estou acordando
			eu tenho acordado
	Past Simple	eu acordei	tinha acordado
	Past Imperfective	eu acordava	eu estava acordando
	Past Perfect	eu acordara	eu tinha acordado
	Future	eu acordarei	eu vou acordar
	Future in the past	eu acordaria	eu ia acordar
Subjunctive	Present	que eu acorde	que eu vá/vou acordar
	Conditional	se eu acordasse	se eu fosse acordar
	Future	quando eu acordar	quando eu for acordar
Imperative	Affirmative	acorde!	vá/vai acordar!
			esteja acordado!
	Negative	não acorde!	não vá/vai acordar!

Table: BP verbal Tense paradigm

The present Tense analyticisation in BP

With a few exceptions, BP does not convey present Tense, i.e., an action simultaneous to speech, by synthetic verbs, but by analytic constructions headed by the functional auxiliary *estar* 'be' followed by the gerund/present participle: estar + V-ndo.

(3)   (Context: My mom calls me now)
      Mãe, eu não posso atender agora porque eu estou apresentando minha tese para pessoas importantes.
      'Mom, I cannot answer you now because I am presenting my thesis to important people.'

The present Tense analyticisation process in BP I

In the 18th century, however...

(4)   (Context: My mom calls me now)
        Mãe, eu não posso atender agora porque eu apresento minha
        tese para pessoas importantes.
        'Mom, I cannot answer you now because I present my thesis
        to important people.'

The present Tense analyticisation process in BP II

(5) (1737/Guerra do Alecrim e da Manjerona)
     (Context: The character leaves the stage with a cloak)
     Sevadilha – Espera, homem, onde levas.PRS o capote?
     'Sevadilha – Wait, man, where are you taking the cloak?'

(6) (1845/O noviço)
     Emilia – Minha mãe, eu não estou triste. (Limpa os olhos com
     o lenço).
     'Emilia – Mom, I am not sad. (Wipes eyes with tissue)'
     Florencia – Ahi tem! De que chora.PRS?
     'Florencia – There is something there. What are you crying
     about?'

The present Tense analyticisation process in BP III

Research question:

- What linguistic (syntactic) changes have taken place in the gap between my 18th and 21st century version?

Data source:

- BP comedy plays written from the 18th to the 21st century available at Tycho Brahe Corpus (University of Campinas – Brazil) [1].

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[1] http://www.tycho.iel.unicamp.br/ tycho/corpus/en/catalogo.html

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Roadmap for this talk

- Lexical verbs;
- Auxiliary verbs;
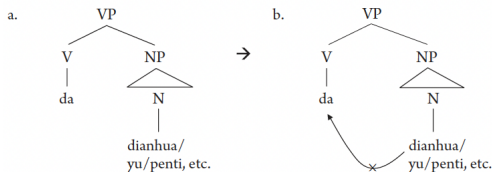- Proposal;
- Final remarks.

A hypothesis I

"head movement results in synthesis, whereas non-movement preserves lexical analyticity" (Huang, 2014: 13)

(7)   to phone, to fish, to sneeze (Huang, 2014: 11)
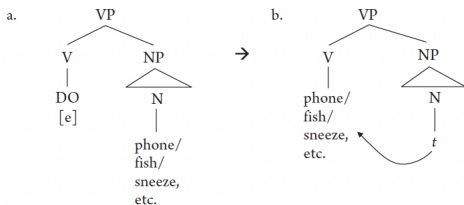
A hypothesis II

(8)   da dianhua (lit. 'hit phone') 'to phone', da yu (lit. 'hit fish') 'to fish', da penti (lit. 'hit sneeze') 'to sneeze' (Huang, 2014:11)

A hypothesis III

"As free functional morphemes, the tense-aspect auxiliary verb or the verbal particle prevent the deflected lexical verb from raising and head-adjoining to the Tense head. In this way, analyticization severely restricts the scope of verb movement operations."   (Reintges and Cyrino, 2016: 183)

(9)   (Reintges and Cyrino, 2016: 183)
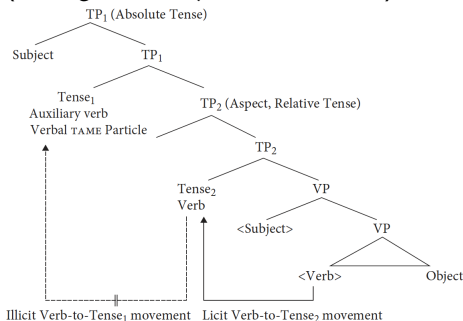
The position of synthetic lexical verbs I

- Verbs are base-merged with their arguments to build the Verbal Phrase (VP):

  (10)   (ADV)[VP [External Argument] [Verb] [Internal Argument]]

- Adverbs have a fixed position in the structure (Edmonds, 1978; Pollock, 1989; Belletti, 1990; Cinque, 1999)

  (11)   a.   *John kisses$_V$ often Mary – Verb ADV ~~Verb~~
          b.   John often kisses$_V$ Mary – ADV Verb

  (12)   a.   Jean embrasse$_V$ souvent Marie – Verb ADV ~~Verb~~
          b.   *Jean souvent embrasse$_V$ Marie – ADV Verb

The position of synthetic lexical verbs II

Adverbs are universally ordered (Cinque, 1999):

(13)   almost > early
        a.   I almost woke up early.
        b.   *I early woke up almost.

The position of synthetic lexical verbs III

(14) The Universal Hierarchy of Functional Projections of the IP (Cinque, 1999)
HIGH: [frankly Mood$_{SpeechAct}$ > [luckily Mood$_{Evaluative}$ > [allegedly Mood$_{Evidential}$ > [probably Mod$_{Epistemic}$ > [once T$_{Past}$ > [then T$_{Future}$ > [perhaps Mood$_{Irrealis}$ > [necessarily Mod$_{Necessity}$ > [possibly Mod$_{possibility}$ > [usually Asp$_{Habitual}$ > [finally Asp$_{Delayed}$ > [tendentially Asp$_{Predispositional}$ > [again Asp$_{Repetitive(I)}$ > [often Asp$_{Frequentative(I)}$ > [willingly Mod$_{Volition}$ > [quickly Asp$_{Celerative(I)}$ >
LOW: [already T$_{Anterior}$ > [no longer Asp$_{Terminative}$ > [still Asp$_{Continuative}$ > [always Asp$_{Continuous}$ > [just Asp$_{Retrospective}$ > [soon Asp$_{Proximative}$ > [briefly Asp$_{Durative}$ > [(?) Asp$_{Generic/Progressive}$ > [almost Asp$_{Prospective}$ > [suddenly Asp$_{Inceptive}$ > [obligatorily Mod$_{Obligation}$ > [in vain Asp$_{Frustrative}$ > [(?) Asp$_{Conative}$ > [completely Asp$_{SgCompletive(I)}$ > [everything Asp$_{PlCompletiv}$ > [well Voice > [early Asp$_{Celerative(II)}$ > [? Asp$_{Inceptive(II)}$ > [again Asp$_{Repetitive(II)}$ > [often Asp$_{Frequentative(II)}$ > vP–VP

The position of synthetic lexical verbs IV

The position of lexical verbs
SOME FIXED ADVERBS

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The position of synthetic lexical verbs V

(15)   The Universal Hierarchy of Functional Projections of the IP (Cinque, 1999)

HIGH: [frankly $Mood_{SpeechAct}$ > [luckily $Mood_{Evaluative}$ > [allegedly $Mood_{Evidential}$ > [probably $Mod_{Epistemic}$ > [once T_{Past} > [then T_{Future} > [perhaps $Mood_{Irrealis}$ > [necessarily $Mod_{Necessity}$ > [possibly $Mod_{possibility}$ > [usually $Asp_{Habitual}$ > [finally $Asp_{Delayed}$ > [tendentially $Asp_{Predispositional}$ > [again $Asp_{Repetitive(I)}$ > [often $Asp_{Frequentative(I)}$ > [willingly $Mod_{Volition}$ > [quickly $Asp_{Celerative(I)}$ >

LOW: [already $T_{Anterior}$ > [no longer $Asp_{Terminative}$ > [still $Asp_{Continuative}$ > [always $Asp_{Continuous}$ > [just $Asp_{Retrospective}$ > [soon $Asp_{Proximative}$ > [briefly $Asp_{Durative}$ > [(?) $Asp_{Generic/Progressive}$ > [almost $Asp_{Prospective}$ > [suddenly $Asp_{Inceptive}$ > [obligatorily $Mod_{Obligation}$ > [in vain $Asp_{Frustrative}$ > [(?) $Asp_{Conative}$ > [completely $Asp_{SgCompletive(I)}$ > [everything $Asp_{PlCompletive}$ > [well Voice > [early $Asp_{Celerative(II)}$ > [? $Asp_{Inceptive(II)}$ > [again $Asp_{Repetitive(II)}$ > [often $Asp_{Frequentative(II)}$ > vP–VP

The position of synthetic lexical verbs VI

The finite lexical verb moves/leaves vP in BP (cf. Galves, 1993, 1994; Costa, 1996; a.o.).

(16)   Pedro acorda [AspAcelerative(II) cedo] (*acorda).
        P. (*early) wakes up early.

(17)   Maria cozinha [Voice bem] (*cozinha).
        M. (*well) cooks well.

(18)   Pedro analisou [AspPlurCompletive tudo] (*analisou) com cuidado.
        P. (*everything) analysed everything carefully.

(19)   Maria comeu [AspSingCompletive(I) completamente] (*comeu) o bolo.
        M. (*completely) ate completely the cake.

The position of synthetic lexical verbs VII

(20)   O José fez [$_{AspFrustrative}$à toa] ($^{*/??}$fez) seu trabalho.
       $^{*/??}$J. in vain did his job.

(21)   a.   O João obrigatoriamente fará o seu trabalho.
            J. obligatorily will do his job.
       b.   O João fará obrigatoriamente o seu trabalho.
            J. will obligatorily do his job.

The finite lexical verb in BP necessarily moves to the left of *à toa*/in vain (Asp$_{Frustrative}$), whereas its movement to the left of *obrigatoria-mente*/obligatorily is optional (Tescari Neto, 2019):

The position of synthetic lexical verbs VIII

Figure: Optional and mandatory movement of finite lexical verb in BP
(Tescari Neto, 2019: 3570)

Diachronic evidence I

THE CASE OF THE ADVERB 'SEMPRE

Diachronic evidence II

- The lexical finite verbs in BP do not precede the temporal/aspectual *sempre* 'always' (Cyrino, 2013; Reintges; Cyrino, 2018; Schifano, 2018; Tescari Neto, 2013).

    (22)   a. $^{*/??}$João vem sempre no parque.
           b.   João sempre vem no parque.

- BP has lost Generalised Verb Movement in Belletti's (1990) term (Cyrino, 2012, 2013; Cyrino; Matos, 2002; Roberts; Kato, 2018);

- One could recognise a period in which V preceded *sempre* 'always', displaying a higher movement, and another period in which V followed the adverb, spelling out the loss of movement.
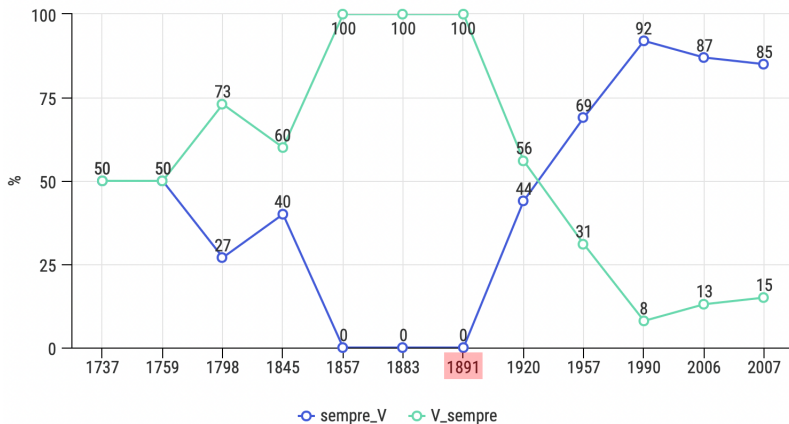
Diachronic evidence III

Figure: The position of the verb in relation to the adverb *sempre* 'always' over time in BP

Synthetic lexical verbs: loss of temporal interpretation I

Synthetic lexical verbs lost movement to a higher position (arguably
to T):
WHY?

Synthetic lexical verbs: loss of temporal interpretation II

BP verbs lost their temporal interpretation (cf. Cyrino, 2013).

(23)   Loss of past simple Tense interpretation (cf. Cyrino, 2013)

    a.   Eu estou feliz   porque eu vivi   muito bem
           I   am   happy because I live.PST very   well
           todos estes anos.
           all   these years
           'I am happy because I have lived very well all these years.'

    b.   Eu adorei   sua blusa!
           I   love.PST your blouse
           'I love your blouse.'

Synthetic lexical verbs: loss of temporal interpretation III

(24)   Loss of future Tense interpretation (cf. Araújo-Adriano; Coelho, 2022)

a.   Será   o   Benedito que não vai   parar   de
     be.FUT the B.   that no go.PRS stop.INF of
     chover!
     rain.INF
     'Good heavens, it will not stop raining!' (cf. *Vai.PRS
     ser.INF o Benedito que não vai parar de chover! 'Will be B.
     that not will stop of rain')

b.   Teu quarto   está ao   Deus dará!.
     your bedroom is   to-the God give.FUT
     'Your bedroom is a mess!' (cf. *Teu quarto está ao Deus
     vai dar! 'Your bedroom is to the God will give'

Synthetic lexical verbs: loss of temporal interpretation IV

(25) Loss of pluperfect interpretation (cf. Araújo-Adriano; Coelho, 2022)

    a.   Quem me dera   ter   100000 reais na
           who   me give.PLU have.INF 100000 reais in-the
           minha conta.
           my   account
           'If only I could have 1000 reais in my bank account!' (cf.
           *Quem me tinha.IPFV dado.PRT ter ... 'Who me have.IPFV
           give.PRT have.INF ...')

    b.   Também pudera!
           too   can.PLU
           'It stands to reason!' (cf. *Também tinha.IPFV podido.PRT
           'Too have.IPFV can.PRT'

Synthetic lexical verbs: loss of temporal interpretation V

(26)   Loss of present Tense interpretation

    a.   *Olha!   A   Maria   come   banana.
          look   the M.   eat.PRS banana
          (cf. Look! M. eats banana')

    b.   A   Maria   come   banana.
          the M.   eat.PRS banana
          'M. eats banana.' (Habitual)

    c.   Golfinhos   são   mamíferos.
          dolphins   be.PRS mammals
          'Dolphins are mammals.' (Generic)

Synthetic lexical verbs: loss of temporal interpretation VI

Verb movement is triggered when Mood, Tense or Aspect bear an
uninterpretable feature (Schifano, 2018).

BP 18th and 19th century:

- V_*sempre*;
- Temporal interpretation of lexical verbs;
- T wrt. lexical verbs had [*u*T] (verb movement).

BP 20th and 21st century:

- *sempre*_V;
- No Temporal interpretation of lexical verbs;
- T wrt. lexical verbs has [*i*T] (no verb movement).

Where are we?

- Before the 19th century, BP lexical verbs moved to a position higher than *sempre* 'always';
- After the 19th century, BP verbs lost (high) verb movement and now they move to a lower position to be placed after *sempre* 'always';
- At some period (arguably in the 19th century), lexical verbs lost their temporal interpretation;
- T lost its [*u*T] feature and now does not trigger verb movement of lexical verbs ([*i*T]).

Auxiliary verbs

HAVE THEY FOLLOWED THE SAME PATTERN?

A hypothesis

Auxiliary verbs do not behave like lexical verbs (Edmonds, 1978; Pollock, 1989).

(27)   [I NP I ([Neg not/pas]) (ADV) [VP V]]

      a. *John likes not Mary – [Lexical Verb] Not [~~Lexical Verb~~]

      b. John does not like Mary – [Auxiliary Verb] Not [Lexical Verb]

(28)   a. He is not happy – [Aux Verb] Not [~~Aux Verb~~]

      b. *He not is happy – Not [Aux Verb]

(29)   a. I always play with my kids – ADV [Lexical Verb]

   b. I will always play with my kids – [Aux Verb] ADV ~~Aux Verb~~

Theoretical Background I

Functional verbs are universally ordered (Tenny, 1987, Cinque, 1999; Harwood, 2015).

(30)   Tense > modality > perfect aspect > progressive aspect > voice
        > verb

(31)   a.   Esse assunto deve ter   estado sendo debatido
              This subject must have been   being debated
              na   imprensa com alguma frequência.
              in-the press   with some   frequency
              'That subject must have been being debated in the press
              with some frequency.'
        b.   *esse assunto ter   deve estado sendo debatido […]
              this subject have must been   being debated

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Theoretical Background II

(32)   Adapted from Harwood, 2015:
        ir 'go to/will' selects an InfP;
        ter 'have' selects a PerfP;
        estar 'be' selects a ProgP;
        ser 'be' selects a VoiceP.
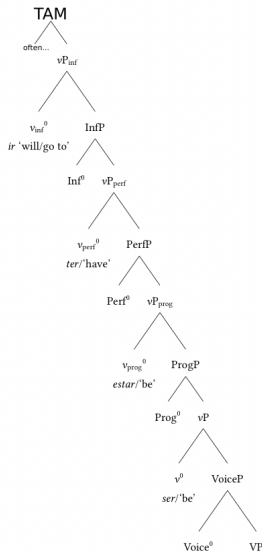
The position of auxiliary verbs

SOME FIXED ADVERBS

Results: The position of auxiliary verbs I

Very low adverbs and auxiliaries.

(33)   The Universal Hierarchy of Functional Projections of the IP (Cinque, 1999)
HIGH: [frankly $Mood_{SpeechAct}$ > [luckily $Mood_{Evaluative}$ > [allegedly $Mood_{Evidential}$ > [probably $Mod_{Epistemic}$ > [once T_{Past} > [then T_{Future} > [perhaps $Mood_{Irrealis}$ > [necessarily $Mod_{Necessity}$ > [possibly $Mod_{possibility}$ > [usually $Asp_{Habitual}$ > [finally $Asp_{Delayed}$ > [tendentially $Asp_{Predispositional}$ > [again $Asp_{Repetitive(I)}$ > [often $Asp_{Frequentative(I)}$ > [willingly $Mod_{Volition}$ > [quickly $Asp_{Celerative(I)}$ >
LOW: [already $T_{Anterior}$ > [no longer $Asp_{Terminative}$ > [still $Asp_{Continuative}$ > [always $Asp_{Continuous}$ > [just $Asp_{Retrospective}$ > [soon $Asp_{Proximative}$ > [briefly $Asp_{Durative}$ > [(?) $Asp_{Generic/Progressive}$ > [almost $Asp_{Prospective}$ > [suddenly $Asp_{Inceptive}$ > [obligatorily $Mod_{Obligation}$ > [in vain $Asp_{Frustrative}$ > [(?) $Asp_{Conative}$ > [completely $Asp_{SgCompletive(I)}$ > [everything $Asp_{PlCompletive}$ > [well Voice > [early $Asp_{Celerative(II)}$ > [? $Asp_{Inceptive(II)}$ > [again $Asp_{Repetitive(II)}$ > [often $Asp_{Frequentative(II)}$ > vP–VP

Results: The position of auxiliary verbs II

(34)   João (*cedo) está (*cedo) acordando cedo
        J. (early) is (early) waking up (early)

(35)   a.   Meus funcionários (*bem) estão (*bem)
              my   employees   (well) are   (well)
              trabalhando bem
              working   (well)
              My employees are working well

        b.   Meus funcionários (*bem) tinham (*bem)
              my   employees   (well) had   (well)
              trabalhado bem
              worked   (well)
              My employees had been working well

Results: The position of auxiliary verbs III

(36)   Meu bebê (*do nada) está (*do nada) chorando do nada.
        My baby (out of nowhere) is (out of nowhere) crying (out of
        nowhere)

(37)   mesmo depois do ensaio, o policial (*de novo) tinha/está/vai
        (*de novo) errando de novo.
        even after the rehearsal, the police (again) is (again) erring
        (again)

(38)   João (*frequentemente) está (*frequentemente) cozinhando
        frequentemente
        J. (frequently) is (frequently) cooking (frequently)

Functional auxiliaries precede very low adverbs.

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Results: The position of auxiliary verbs IV

Higher low adverbs and auxiliaries:

(39)   The Universal Hierarchy of Functional Projections of the IP (Cinque, 1999)
HIGH: [frankly $Mood_{SpeechAct}$ > [luckily $Mood_{Evaluative}$ > [allegedly $Mood_{Evidential}$ > [probably $Mod_{Epistemic}$ > [once T_{Past} > [then T_{Future} > [perhaps $Mood_{Irrealis}$ > [necessarily $Mod_{Necessity}$ > [possibly $Mod_{possibility}$ > [usually $Asp_{Habitual}$ > [finally $Asp_{Delayed}$ > [tendentially $Asp_{Predispositional}$ > [again $Asp_{Repetitive(I)}$ > [often $Asp_{Frequentative(I)}$ > [willingly $Mod_{Volition}$ > [quickly $Asp_{Celerative(I)}$ >
LOW: [already $T_{Anterior}$ > [no longer $Asp_{Terminative}$ > [still $Asp_{Continuative}$ > [always $Asp_{Continuous}$ > [just $Asp_{Retrospective}$ > [soon $Asp_{Proximative}$ > [briefly $Asp_{Durative}$ > [(?) $Asp_{Generic/Progressive}$ > [almost $Asp_{Prospective}$ > [suddenly $Asp_{Inceptive}$ > [obligatorily $Mod_{Obligation}$ > [in vain $Asp_{Frustrative}$ > [(?) $Asp_{Conative}$ > [completely $Asp_{SgCompletive(I)}$ > [everything $Asp_{PlCompletive}$ > [well Voice > [early $Asp_{Celerative(II)}$ > [? $Asp_{Inceptive(II)}$ > [again $Asp_{Repetitive(II)}$ > [often $Asp_{Frequentative(II)}$ > vP–VP

Results: The position of auxiliary verbs V

(40) a. É   fácil saber   se está   passando jogo:
          be.PRS easy know.INF if be.PRS pass.GER game
          meu vizinho   (#/*sempre) está   sempre
          my   neighbor (always)   be.PRS always
          berrando   quando tem   jogo.
          shout.GER when   have.PRS game
          It's easy to know when there's a game on: my neighbor
          is always screaming when there's one.

     b. Meninas, não esqueça   da   importância de
         Ladies, not forget.IMP of=the importance of
         estar sempre$_1$ fazendo sempre$_2$ o   autoexame.
         be.INF always   do.GER always   the self-exame.
         'Ladies, do not forget the importance of always doing
         regularly the breast self-exam.'[2]

Results: The position of auxiliary verbs VI

(41) a. *José não ainda está/tinha chorando/chorado no ban-
          heiro.
          J. not yet is/had crying/cried at the bathroom.

      b. José não está/vai ainda chorando/chorar no banheiro.
          J. not is/had yet crying/cried at the bathroom.

Results: The position of auxiliary verbs VII

Auxiliaries precede *não ...mais* 'no longer' but does not precede the adverb *já* 'already'.

(42) Maria não (*mais) tem/ está/ vai mais   falado/
      M.   no (longer) has/ is/ will (longer) spoken/
      falando/ falar com o   Pedro.
      speaking/ speak with the P.

(43) Pedro já   tinha/ está/ vai (*já)   estudado/
      P.   already had/ is/ will (already) studied/
      estudando/ estudar muito.
      studying/ study   a lot.

Results: The position of auxiliary verbs VIII

Auxiliaries in BP must end up in $T_{(Anterior)}$ (Cinque, 1999) or T-field (Schifano, 2018) to be placed in the proper position mentioned.

(44)   a.
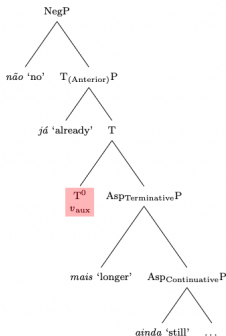
     b.   [Mood[Tense *v* [Aspect]]]

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[2]https://estilopati.wordpress.com/2015/10/15/outubro-rosa-prevencao-e-o-melhor-remedio/
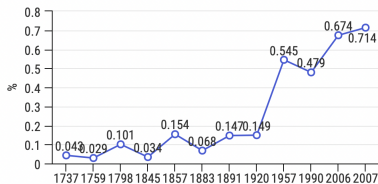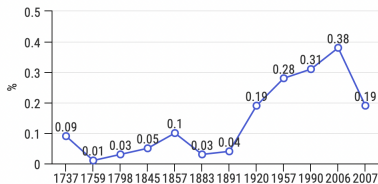
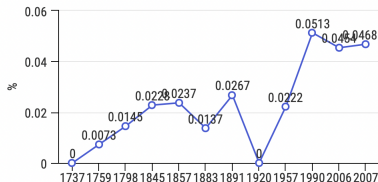# Temporal interpretation of auxiliaries before and after the 19th century I
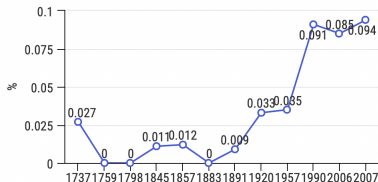
Temporal interpretation of auxiliaries before and after the 19th century II

(45)   (1737/Guerra do Alecrim e da Majerona)
       pois eu confesso que estou tremendo de medo.
       because I confess that I am trembling with fear

(46)   (1845/ O noviço)
       Maninho, estais fazendo muita bulha à mamãe.
       brother, you are making a lot of noisy to mom.

(47)   (1845/ O noviço) Um momento, estou preso, vou passar 6
       anos na cadeia, exultai, senhoras...
       a moment I am in jail, I will spend 6 years in jail, rejoice,
       ladies.

Temporal interpretation of auxiliaries before and after the 19th century III

(48)   (1845/O noviço)
        ...que tinha sido traída por um frade, que debaixo do pretexto
        ...
        ...that had been betrayed by a friar, that under the pretext ...

Temporal interpretation of auxiliaries before and after the 19th century IV

Verb movement is triggered when Mood, Tense or Aspect bear an
uninterpretable feature (Schifano, 2018).

BP 18th and 19th century:

- (V_*sempre*);
- Temporal interpretation of auxiliary verbs;
- T wrt. auxiliary verbs had [*u*T] (verb movement).
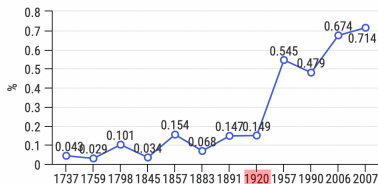
BP 20th and 21st century:

- V_*sempre*;
- Temporal interpretation of auxiliary verbs;
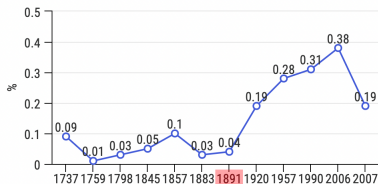- T wrt. auxiliary verbs is still [*u*T] (verb movement).

Where are we? I

- When functional auxiliaries increased abruptly, lexical verbs lost their temporal interpretation (movement to a high position);
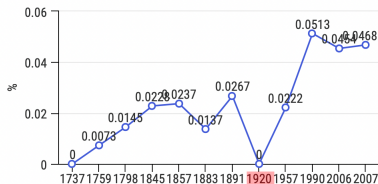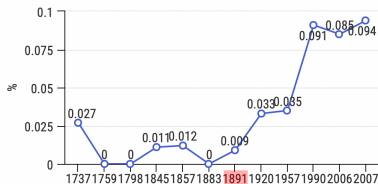
Where are we? II

Figure: % of occurrences of auxiliaries (by number of words) from the 18th to the 21st century plays/Source: Araújo-Adriano (2021)
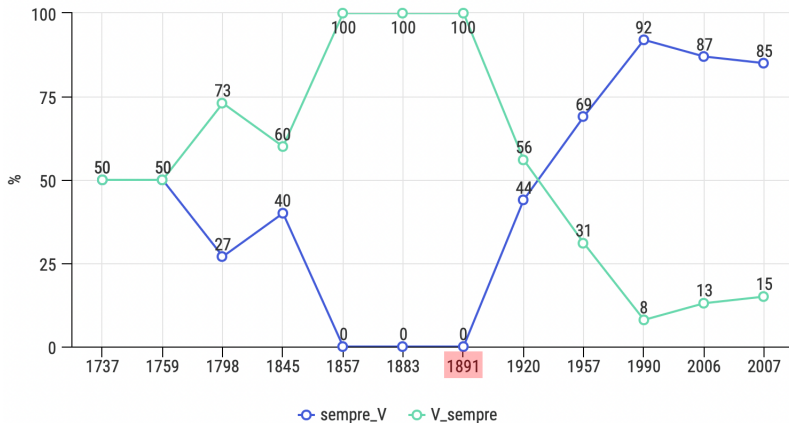
Where are we? III

Figure: The position of the verb in relation to the adverb *sempre* 'always' over time in BP

Where are we? IV

- When lexical verbs lost their temporal interpretation (movement to a high position), functional auxiliaries increased abruptly;

- Functional auxiliaries must be ordered to the right of *já* 'already' and to left of *(não) mais* '(no) longer' and *ainda* 'still', that is, T(Anterior)/T-field;

- Functional auxiliary verbs move higher than lexical verbs in BP;

- T lost its [*u*T] feature wrt. lexical verbs, whereas it still has [*u*T] wrt. functional auxiliaries.

Where are we? V

(49) TAM system in BP prior to the 19th century:
      [Mood [iM] [Tense [uT] [Aspect [uA] [v_{aux}-v-VP]]]]

(50) TAM system in BP after the 19th century:
      [Mood [iM] [Tense [iT] [Aspect [uA] [v-VP]]]]
      [Mood [iM] [Tense [uT] [Aspect [uA] [v_{aux}]]]]

Proposal

How can we formalise this change?

An emergentist approach to parameters I

- The classic Generative algorithm (rich UG):
  PLD + UG = language-I

- The minimalist generative algorithm (non-rich UG):
  PLD + UG + 3rd factor = language-I

"parametric variation is not specified in UG itself. Instead, it arises from underspecified aspects of UG, and is structured by third-factor properties arising largely from the need for efficient learning." (Roberts, 2012: 321)

An emergentist approach to parameters II

(51)   (Roberts, 2012: 321)

Is the head-final feature present on all heads?

Y: **head-final (a)**   N: present on no heads?

Y: **head-initial(b)**   N: present on [+V] categories?

Y:**head-final in**   N: **present**
the clause only(c)   **on ….**

An emergentist approach to parameters III

(52)   For a given value v_i of a parametrically variant feature F (Roberts, 2012):

   a.   Macroparameters: all heads of the relevant type share v_i;

   b.   Mesoparameters: all heads of a given natural class, e.g., [+V], share v_i;

   c.   Microparameters: a small, lexically definable subclass of functional heads (e.g., modal auxiliaries, pronouns) shows v_i;

   d.   Nanoparameters: one or more individual lexical items is/are specified for v_i.

From synthetic to analytic: A matter of Head Movement I

Borer-Chomsky Conjecture:
Al parameters of variation are attributable to differences in the features of the functional heads in the Lexicon.

- Probe (T) and the goal (v_{aux} and vP).

(53)   TAM system in BP prior to the 19th century:
        [Mood [iM] [Tense [uT] [Aspect [uA] [v_{aux}-v-VP]]]]

(54)   TAM system in BP after the 19th century:
        [Mood [iM] [Tense [iT] [Aspect [uA] [v-VP]]]]
        [Mood [iM] [Tense [uT] [Aspect [uA] [v_{aux}]]]]

From synthetic to analytic: A matter of Head Movement II
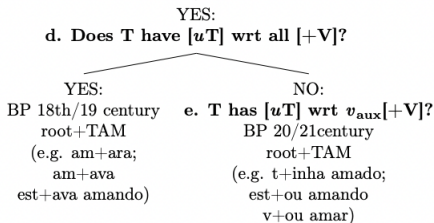
a. All probes trigger head-movement (HM)?

YES:
Polysynthesis

NO:
b. Some probes trigger HM?

NO:
General analytic
TAM root

YES:
c. Does T trigger HM?

NO:
Temporal analytic
TAM root

YES:
d. Does T have [uT] wrt all [+V]?

YES:
BP 18th/19 century
root+TAM
(e.g. am+ara;
am+ava
est+ava amando)

NO:
e. T has [uT] wrt v_{aux}[+V]?
BP 20/21century
root+TAM
(e.g. t+inha amado;
est+ou amando
v+ou amar)
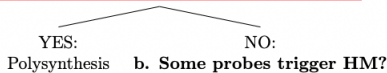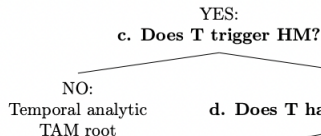
From synthetic to analytic: A matter of Head Movement III

a. All probes trigger head-movement (HM)?
YES: Inuit languages, Southern Tiwa (Polysynthesis)

(55)   a.
      illu-juaq-aluk-mut-uq-lauq-sima-nngit-nama-li-ttauq
      house-big-EMPH-ALL.SG-go-PAST-PERF-NEG-CTG.1sS-but-a
      'But also, because I never went to the really big house.' (Do-
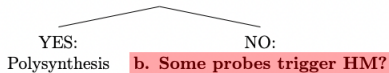   rais, 1988: 8)

    b.   ti-seuan-mU-ban.
       1sg.:A-man-see-past
       'I saw the man.' (Baker, 1996: 327)

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From synthetic to analytic: A matter of Head Movement IV

a. All probes trigger head-movement (HM)?

YES:
Polysynthesis

NO:
b. Some probes trigger HM?

NO:
General analytic
TAM root

YES:
c. Does T trigger HM?

NO:
Temporal analytic
TAM root

YES:
d. Does T have [uT] wrt all [+V]?

YES:
BP 18th/19 century
root+TAM
(e.g. am+ara;
am+ava
est+ava amando)

NO:
e. T has [uT] wrt v_{aux}[+V]?
BP 20/21century
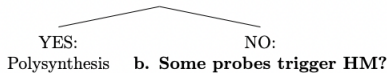root+TAM
(e.g. t+inha amado;
est+ou amando
v+ou amar)

From synthetic to analytic: A matter of Head Movement V

b. Some probes trigger head-movement (HM)?
NO: Chinese (Fully Analytic)
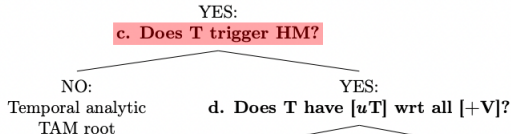
(56)   a.   Zhangsan da-le   dianhua.
            Zhangsan hit-Perf telephone
            'Z. telephoned.' (Huang, 2014: 4)
       b.   ben shu.
            Cl   book
            'book' (Huang, 2014: 8)

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From synthetic to analytic: A matter of Head Movement VI

a. All probes trigger head-movement (HM)?

YES:
Polysynthesis

NO:
b. Some probes trigger HM?

NO:
General analytic
TAM root

YES:
c. Does T trigger HM?

NO:
Temporal analytic
TAM root

YES:
d. Does T have [uT] wrt all [+V]?

YES:
BP 18th/19 century
root+TAM
(e.g. am+ara;
am+ava
est+ava amando)

NO:
e. T has [uT] wrt v_{aux}[+V]?
BP 20/21century
root+TAM
(e.g. t+inha amado;
est+ou amando
v+ou amar)

From synthetic to analytic: A matter of Head Movement VII

c. Does T trigger head-movement (HM)?
NO: Haitian Creole (Only Temporal analytic)

(57)   Mwen pa   kwè   pèsonn ap vini.
        1SG   NEG believe nobody FUT come
        'I don't believe that anybody will come.' (Roberts, 2017: 330)

(58)   Jan te   toujours te   ap   rakonte yon istwa.
        J. PAST always ANT PROG tell   a   story
        'Jan had always been telling a story.' (Cinque 1999: 63)

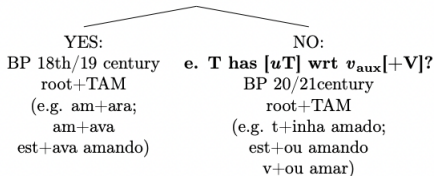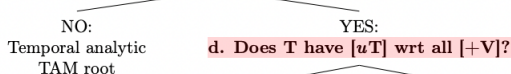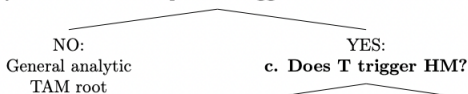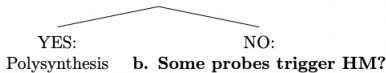# From synthetic to analytic: A matter of Head Movement VIII

"Instead, these specifications [temporal] are deduced from the combination of TMA markers and the lexical aspect of the verb. Put differently, temporal specification is computed based on TMA markers [...]". (Aboh; DeGraff, 2017: 448)

"[...] what they lack is the features capable of attracting V". (Roberts, 2017: 333)

From synthetic to analytic: A matter of Head Movement IX

a. All probes trigger head-movement (HM)?

YES: NO:
Polysynthesis   **b. Some probes trigger HM?**

NO: YES:
General analytic   **c. Does T trigger HM?**
TAM root

NO: YES:
Temporal analytic   **d. Does T have [uT] wrt all [+V]?**
TAM root

YES: NO:
BP 18th/19 century   **e. T has [uT] wrt v_{aux}[+V]?**
root+TAM   BP 20/21century
(e.g. am+ara;   root+TAM
am+ava   (e.g. t+inha amado;
est+ava amando)   est+ou amando
                                   v+ou amar)

From synthetic to analytic: A matter of Head Movement X

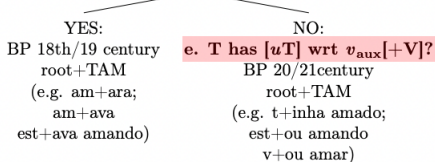d. Does T have [*u*T] wrt. all [+V]?
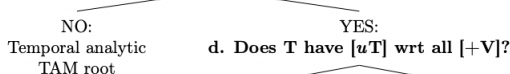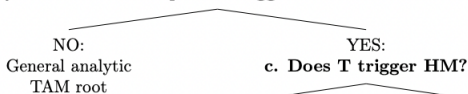YES: BP 18th/19th century/French (Synthetic Language)

(59)   a.   comerá.
            eat.FUT
            'he/she will eat.'
       b.   vai   comer.
            go.PRS   eat.INF
            'he/she will eat'

(60)   Regard! Marie mange   la   soupe.
       look!   M.   eat.PRS the soup
       'M. eats the soup.'

From synthetic to analytic: A matter of Head Movement XI

a. All probes trigger head-movement (HM)?

YES:
Polysynthesis

NO:
b. Some probes trigger HM?

NO:
General analytic
TAM root

YES:
c. Does T trigger HM?

NO:
Temporal analytic
TAM root

YES:
d. Does T have [uT] wrt all [+V]?

YES:
BP 18th/19 century
root+TAM
(e.g. am+ara;
am+ava
est+ava amando)

NO:
e. T has [uT] wrt v_{aux}[+V]?
BP 20/21century
root+TAM
(e.g. t+inha amado;
est+ou amando
v+ou amar)

From synthetic to analytic: A matter of Head Movement XII
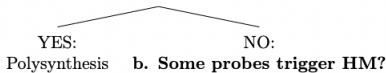
e. Does T have [uT] wrt. v_{aux} [+V]?

YES: BP 20th/21st century (Analytic Language)

(61) a. *comerá.
          eat.FUT
          'he/she will eat.'

      b. vai   comer.
          go.PRS eat.INF
          'he/she will eat'

From meso- to microparameter

(62)   a.   Mesoparameters: all heads of a given natural class, e.g., [+V], share ν_i;

           b.   Microparameters: a small, lexically definable subclass of functional heads (e.g., modal auxiliaries, pronouns) shows ν_i;

           c.   Nanoparameters: one or more individual lexical items is/are specified for ν_i.

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Is everything analytic? Aspectual class I

(63)   Verbal class compatible in an analytic construction

a.   Olha lá!   A   Maria está dançando_{eventive}.
look there the M.   is   dancing
'Look! M. is dancing.'

b.   A   Maria está chegando_{achievement} na
the M.   is   arriving   in=the
Inglaterra.
England
'Look! M. is arriving in England.'

c.   Olha lá!   A   Maria está pintando_{accomplishment}
look there the M.   is   painting
a   casa.
the house
'Look! M. is painting the house.'

Is everything analytic? Aspectual class II

(64)   Verbal class not compatible in an analytic construction

    a.   *Londres está   ficando_{stative} na   Inglaterra.

        London be.PRS stay.PROG   in-the England

        'London is in England.'

    b.   Londres fica_{stative} na   Inglaterra.

        London stay.PRS in-the England

        'London is in England.'

Is everything analytic? Aspectual class III

(65)   (MacDonald, 2008: 5)

    a.   John carried a goat. (activity)

    b.   John carried a goat into the barn. (accomplishment)

(66)   (MacDonald, 2008: 4)

    a.   John drank a beer. (accomplishment)

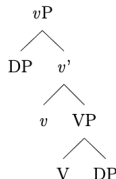   b.   John drank beer. (activity)

Nanoparameters: one or more individual lexical items is/are specified for v_i.

Is everything analytic? Aspectual class IV

(67) Eventives
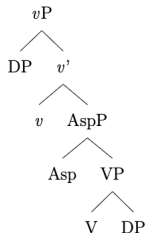
(68) Statives

Is everything analytic? Aspectual class V

Auxiliary *estar* 'be' selects a ProgP (aspectual projection):

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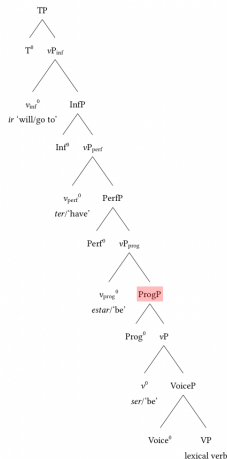
Is everything analytic? Aspectual class VI

Only verbal structures that Agrees with ProgP (activity, accomplishment, and achievement) can be merged with ProgP.
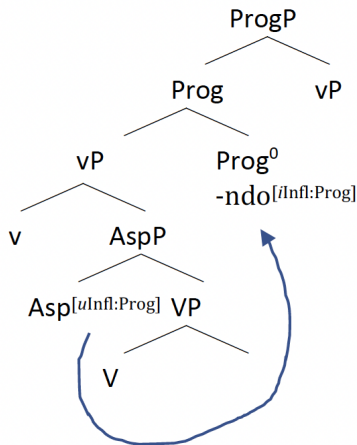
Is everything analytic? Aspectual class VII
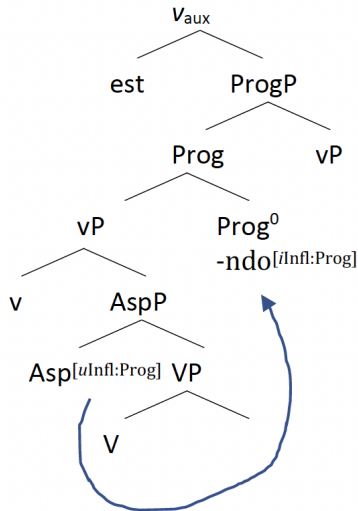
Is everything analytic? Aspectual class VIII

There is no syntactic context for *estar* in a sentence with statives: absence of Asp is absence of ProgP.
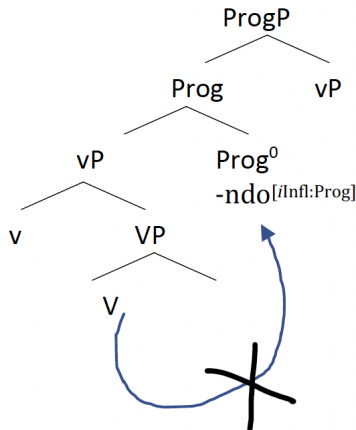
Is everything analytic? Aspectual class IX

(69)   *Maria está estando_{stative} cansada.
       M.   is   being   tired
       'M. has been tired.'

(70)   *Londres está   ficando_{stative} na   Inglaterra.
       London be.PRS stay.PROG   in-the England
       'London is in England.'

Is everything analytic? Football narration I

(71)   Football narration

    a.   Pelé **pega**   a bola e   **chuta**   para o   gol.
          P.   take.$_{PRS}$ the ball and shoot.$_{PRS}$ to   the goal
          'Pelé catches the ball and shoots it into the goal.'

    b.   Neymar **toma** distância para fazer a   cobrança,
          N.   takes distance to   take the kick,
          o   perigo **aumenta**, de   curva, bateu, **afasta**
          the danger increases, from curve, hit,   removes
          a   zaga,   [...] dominou   cruzou, bateu Hugo,
          the defender, [...] dominated, crossed, beat Hugo,
          é Goooooooooolllllllllll gooooooolllllllllll do   São
          is goal   goal   from São
          Paulo (...)
          Paulo (...)

Is everything analytic? Football narration II

'N. takes distance to take the kick, the danger increases,
from a curve, hit, removes the defender, [...] dominated,
crossed, beat Hugo, be gol gol from São Paulo (...)' (adapted
from Fatori, 2010: 120)

Is everything analytic? Performative verbs I

"There is something which is at the moment of uttering being done by the person uttering" (Austin, 1962: 60)

(72)   Performative verbs

    a.   Eu vos declaro$_{\text{performative}}$ (*estou declarando):
            I   you declare   (am   declaring)
            marido   e   mulher.
            husband and wife
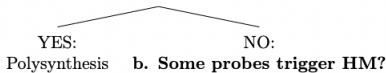   'I pronounce you husband and wife.'

Is everything analytic? Performative verbs II

Performative verbs are the only synthetic lexical verbs in the Present Tense in BP that conveys a Present Tense interpretation (nanoparameter):

- move to T;
- move to a higher position:
    - Left Periphery (Rizzi, 1997)
    - Utterance Phrase (Corr, 2016, 2022)

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Is everything analytic? Performative verbs III

a. **All probes trigger head-movement (HM)?**

YES:
Polysynthesis

NO:
b. **Some probes trigger HM?**

NO:
General analytic
TAM root

YES:
c. **Does T trigger HM?**

NO:
Temporal analytic
TAM root

YES:
d. **Does T have [uT] wrt all [+V]?**

YES:
BP 18th/19 century
root+TAM
(e.g. am+ara;
am+ava
est+ava amando)

NO:
e. **T has [uT] wrt v_{aux}[+V]?**
BP 20/21century
root+TAM
(e.g. t+inha amado;
est+ou amando
v+ou amar)

Final words I

In a nutshell, we have seen that from synthetic to analytic, BP underwent a mesoparametric change.

WHY?

Final words II

"Mesoparameters concern individual syntactic categories (T, V, etc)
and are diachronically stable, but subject to change through
contact." (Biberauer; Roberts, 2013: 2)

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Thank you!

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References