Romanian *mai* as an additive particle

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1 Goal

i To examine the distribution of *mai* ('more/ nearly/ still/ again') in Romanian (section 2) and to give a brief overview of its previous syntactic analyses (section 3) ;

ii To suggest a semantic analysis of *mai* as an additive particle in the event domain (section 4) ;

iii To provide some evidence based on crosslinguistic comparison within Romance languages (section 5).

2 The data

2.1 Distribution

Romanian *mai* is a monosyllabic word which appears in several contexts. It may combine with different categories, namely APs (1), adverbials (AdvPs (2), PPs (3)), VPs (4).

(1) *Ion e mai ocupat/inteligent/bolnav decât Petre.*
    john is MAI busy/clever/sick   than   Peter
    John is busier/more clever/sicker than Peter.

(2) *Ion citeşte mai repede/bine decât Petre.*
    John reads   MAI quickly/well than   Peter

John reads more quickly/better than Peter.

(3)   *Ion   a   sosit   mai   pe înserate (decât Petre).*
      John   has   arrived   MAI   at dusk   than   Peter
      John has arrived later in the evening than Peter.

(4)   *Ion   mai   merge   la   bibliotecă.*
      John   MAI   goes   at   library
      John still goes to the library.

However, it cannot combine with DPs (5) or with CPs (cfr. (6.a) vs. (6.b)).

(5)   **Ion   e   mai   un   artist   decât   Petre.*
      John   is   MAI   an   artist   than   Peter

(6)   (a) **Ion   zice   mai   că   vine.*
           John   says   MAI   that   comes

      (b) *Ion   zice   că   mai   vine.*
           John   says   that   MAI   comes
         John says that he will come again.

In this paper, we will focus on *mai* when occurring within the VP (cfr. (4)). We will not analyse cases in which it appears with APs, AdvPs or PPs (cfr. (1)-(3)).

2.2   Properties of *mai* as a VP-adverb

2.2.1   Word order

Mai exibits a very rigid word order with respect to the predicate. More precisely, it is always adjacent to the verbal complex and it can only precede it.

(i)   **Lexical verb.** *Mai* immediately precedes the lexical V when there is no Aux (7).

   (7)   (a) *Ion   mai   merge   la   bibliotecă.*
              John   MAI   goes   at   library
          John still goes to the library.
         (b) **Ion   merge   mai   la   bibliotecă.*
              John   go   MAI   at   library

(ii) **Tense auxiliaries.** *Mai* follows the tense Aux and precedes the lexical V (8).

(8) (a) *Ion   a   mai   mers   la   bibliotecă.*
      John   has   MAI   gone   at   library
    John has already been to the library.
   (b) **Ion   mai   a   mers   la   bibliotecă.*
      John   MAI   has   gone   at   library

Concerning this aspect, it behaves differently with respect to e.g. frequency adverbs, which cannot intervene between tense Aux and V (9.a) but may precede the V (9.b) or follow it (9.c).

(9) (a) **Ion   a   întotdeauna/adesea   mers   la   bibliotecă.*
      John   has   always/often   gone   at   library

   (b) *Ion   întotdeauna/adesea   a   mers   la   bibliotecă.*
      John   always/often   has   gone   at   library
    John has always/often gone to the library.
   (c) *Ion   a   mers   întotdeauna/adesea   la   bibliotecă.*
      John   has   gone   always/often   at   library

(iii) **Modals.** *Mai* must precede both the modal and the lexical V (10).

(10) (a) *Ion   mai   poate   merge   la   bibliotecă.*
      John   MAI   may   go   at   library
    John may still go to the library.
   (b) **Ion   poate   mai   merge   la   bibliotecă.*
      John   may   MAI   go   at   library

However, this position is still accessible for frequency adverbs (11) and other repetitive adverbs, e.g. *iar* 'again' in (12).

(11) (a) *Ion   poate   întotdeauna   merge   la   bibliotecâ.*
      John   may   always   go   at   library
    John may always go to the library.
   (b) *Ion   întotdeauna   poate   merge   la   bibliotecâ.*
      John   always   may   go   at   library

(12) *Ion   poate   iar   merge   la   bibliotecă.*
    John   may   again   go   at   library
    John may go to the library again.

(iv) **Negation.** *Mai* may only occur between the negation and the lexical V (13).

(13) (a) *Ion   nu   mai   merge   la   bibliotecă.*
       John   NEG   MAI   goes   at   library

    John does not go to the library anymore.

  (b) **Ion   mai   nu   merge   la   bibliotecă.*
      John   MAI   NEG   goes   at   library

(v) **Clitics.** *Mai* follows preverbal clitics of direct (14) as well as oblique complements (15).

(14) (a) *Îl   mai   invit   la   cinema.*
       him   MAI   invite   at   movies

    I am inviting him to the movies again.

  (b) **Mai   îl   invit   la   cinema.*
      MAI   him   invite   at   movies

(15) (a) *Îi   mai   dau   idei   pentru   prezentare.*
       him   MAI   give   ideas   for   presentation

    I am giving him ideas for his presentation again/ more ideas for his presentation.

  (b) **Mai   îi   dau   idei   pentru   prezentare.*
      MAI   him   give   ideas   for   presentation

● **Summary**

Mai respects the P(recedence) O(rder) rule (adapted from Barbu (2004))

(16) {PRT$_{\text{SUBJ/INF}}$} {NEG} {CL} {AUX} ADV_{MAI} {AUX} V

2.2.2   Stress

Mai is stressless; the accent is generally carried by its support (17). As such, it cannot occur alone (18) [1].

(17) (a) **Ion   **mai**   vrea   mere.*
      John   MAI   wants   apples

  (b) *Ion   mai   **vrea**   mere.*
      John   MAI   wants   apples

    John wants (some) more apples.

(18) (Q) *Ion   mai   vrea   mere?*
      John   MAI   wants   apples

    Does John want more apples?

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[1]Intonational stress is represented by boldface characters.

(A) (a) *Mai   vrea.*
      MAI   wants

  He wants (some) more.
  (b) **Mai.*
     MAI

2.2.3   Coordination and scope over coordination

Mai cannot be coordinated, irrespective of the nature of the coordinated item (19).

(19) (a) **Ion   nu   mai   şi/sau   prea   merge   la   bibliotecă.*
       John NEG MAI and/or too much goes   at   library

  (b) **Ion   mai   dar   rar   merge   la   bibliotecă.*
      John MAI but   rarely goes   at   library

Mai does not have (or hardly has) scope over coordination either (20).

(20) (a) **Ion   mai   [stă   sau   pleacă]   din   oraş.*
       John MAI stays or   leaves   from   town.

  (b) *? ?Ion   mai   [cumpără   şi   dăruieşte]   cadouri   orfanilor.*
      John   MAI buys   and offers   presents orphans-DAT
    John still buys and gives presents to orphans.

2.2.4   Affixation and affix-like properties

Mai may attach to certain uninflected verbs in the negated form (as gerund (21) and participle (22)).

(21) *Nemaivăzându-şi   prietenii   la petrecere, Ion   se   arătă*
   NEG-MAI-seeing-his friends-the at party   John himself showed
   surprins.
   surprised
   Not seeing his friends at the party any longer, John appeared surprised.

(22) *Ion   se   arătă   surprins   de astfel de lucruri*
   John   himself showed   surprised by such   of things
   nemaivăzute.
   NEG-MAI-seen
   John appeared surprised by such unseen things.

When occurring in certain contexts, *mai* may also have the same interpretation as the bound morpheme *re-* (23).

(23) (a) *Ion   mai   vine   în Paris la toamnă.*
          John MAI comes in Paris at autumn
    John will come again in Paris next autumn.
    (b) *Ion   re-vine   în Paris la toamnă.*
          John RE-comes in Paris at autumn
   John will come again in Paris next autumn.

3   Syntactic analyses

Mai has been the subject of several syntactic analyses.
Due to its constrained distribution (low degree of selection (see section 2), rigid order (2.2.1), clitic-like properties (absence of stress (see section 2.2.2), impossibility of coordination (2.2.3)) and affix-like properties (2.2.4), traditional grammars generally label it a 'semi-adverbial' (Ciompec (1985); DSL (1997); Tasmowski and Reinheimer (2003)).

Recent analyses refine the traditional intuition and take it to be an affix (Legendre (2000); Barbu (2004)) or an ntensifier' of the verb (Monachesi (2005)).

We will not go into the details of these analyses. We will just assume that *mai* occupies the Spec position of a functional projection which is different depending of its hosting category.

- With APs and adverbials, it may be located on the Spec of the DegP projection.

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        DegP
       /    \
    Spec    Deg'
     /\     /   \
    /__\  Deg°   AP
    mai         /\
               /__\
```
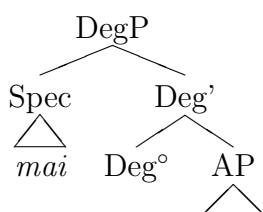
- With VPs, it may occupy the Spec of a functional projection above VP (in the spirit of Cinque (1999)).

```
        FP
       /  \
    Spec   F'
     /\    /  \
    /__\  F°   VP
    mai       /\
             /__\
```
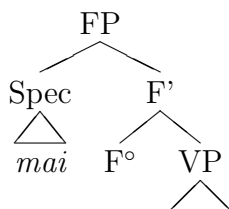
4 Semantic analysis

Mai suffers from no constraints concerning the aspectual class of the predicate, since it combines with states (24) as well as with telic/atelic activities (25.a/b).

(24) *Ion   mai   e   bolnav.*
John MAI is sick

John is still sick.

(25) (a) *Ion   va   mai   citi   un   roman.*
John will MAI read one novel

John will read one more novel.

(b) *Ion   va   mai   citi   (puţin).*
John will MAI read (a little)

John will read (a little bit) more.

Based on these empirical observations, we propose to characterize *mai* in the following way.

- **Mai modifies the event argument of the predicate.**
– Assumption : verbal predicates come with an event argument (Davidson and followers).
– The occurrence of *mai* with stative verbs must be kept distinct from AP/AdvP modification.

Evidence for this assumption can be found in distributional facts. When combining with states, *mai* presents a different position than that of an AP/AdvP modifier (26).

(26) (a) *Ion   e   mai   bolnav   decât   Petre.*
John is MAI sick   than Peter

John is sicker than Peter.

(b) **Ion   mai   e   bolnav   decât   Petre.*
John MAI is sick   then Peter.

(c) *Ion   mai   e   bolnav.*
John MAI is sick

John is still sick.

- **Mai is an additive adverb.**
(i) As such, it contributes to the hosting sentence with an assertive as well as with a presuppositional content (Kartunnen and Peters (1979); König (1991)).
(ii) Addition in the event domain leads to repetition/iteration.

Considering *mai* as a repetitive adverb, we will deal in particular with the problem of presupposition accommodation. We will argue that the 'presupposition satisfaction' approach (Kartunnen and Peters (1979)) should be refined in case of additive adverbs on events, in order to account for restrictions in updating. We will borrow the notion of presupposition as anaphoric element (van der Sandt (1992)) for additive adverbials.

Kartunnen and Peters (1979)

Every lexical item is decomposed into two meaning components :

1. Assertion

2. Presupposition, which has to be satisfied in the context for the assertion to be defined.

Following Kartunnen and Peters (1979), *mai* may be defined as in (27).

(27) *mai* $P(\epsilon_1) = 1$ iff
    (a) $P(\epsilon_1) = 1$
    (b) $\exists \epsilon_2 (P(\epsilon_2))$, undefined otherwise.

The presupposition of existence of *mai* should then be refined posing the following conditions for ϵ_2 :
    (c) $\epsilon_2 \neq \epsilon_1$ (only discrete domains are allowed)
    (d) $\epsilon_2 < \epsilon_1$ (ordering relation, following linear order of time).

The problem for presupposition.
The presupposition carried by *mai* seems to resist negation of $P(\epsilon_1)$ (standard test), in cases of stative or activity predicates ((28) and (29)) .

(28) *Ion   nu   mai   e   bolnav.*
     John NEG MAI is sick
     John isn't sick anymore.

(28) asserts that John isn't sick and presupposes that there has been a prior state of John being sick (cfr. the difference wrt English *still*).

(29) *Ion   spune   că   nu   va   mai   mînca (niciodată) papaia.*
     John says   that NEG will MAI eat   not-once   papaia
     John says that he will (never) eat papaya anymore.

(29) asserts that John will not eat papaya in the future and presupposes that John has eaten papaya in the past.

However, the same does not hold in all sentences : see (30).

(30) *Ion   spune   că   nu   a   mai   mîncat   papaia.*
John   says   that   NEG   has   MAI   eaten   papaya.

John says that he has never tried papaya.

(30) asserts that John hasn't eaten papaya but it does not presuppose that there has been a prior event of eating. On the contrary, it conveys that there hasn't been any event of eating papaya up to John's Utterance Time.

A way to solve the problem ?

Once we take VP-anaphora and full propositional anaphora into account, the claim that presuppositions are anaphoric expressions covers presuppositionnal adverbs like *too* and *even*, aspectual verbs like *begin*, *stop* and *continue*, cleft constructions, temporal clauses and factives. All these triggers are anaphoric in the same sense, though they may differ in their capacity to accommodate. (van der Sandt 1992 :345)

In which sense ϵ_2 is anaphoric wrt ϵ_1 ?
Let's take a look at the positive counterpart of (30), that is (31).

(31) *Ion   spune   că   a   mai   mîncat   papaia.*
John   says   that   has   MAI   eaten   papaya.

John says that he has already tried papaya (once in the past).

Crucially, (31) can be uttered only if John is facing an occurrence of eating papaya at his Utterance Time (while I'm eating papaya I say that I ate it (at least) once more in the past). If it is not the case, another adverbial (*deja*) has to be used instead.

$\Rightarrow$ A way to solve the lack of presupposition in (30) could be to treat the asserted event as an anaphoric element which has to be bound by the presupposed event.

$\Rightarrow$ If the presupposed event is not overtly mentioned in the context, it has to be accommodated for the additive reading to hold.

$\Rightarrow$ We assume that, by default, the presupposed event is accommodated as a fact, that is to say, as occurred in times (and worlds) preceding t_0.

Assumption. Speakers accommodate facts. For temporal chains, this means that $t(\epsilon_2) < t_0$.

(i) In (32), the asserted event is located after t_0. The prior event of eating is by default accommodated before UT. This is not necessary the case if the antecedent is explicit (33)

(32) *Ion   spune   că   va   mai   mînca   papaia.*
John   says   that   will   MAl   eat   papaia
John says that he will eat papaya again.

(33) *Ion   spune   că   va   mînca   papaia   mîine   și   că*
John   says   that   AUX   eat   papaya   tomorrow   and   that
va   mai   mînca   și   poimîine.
will   MAI   eat   also   after tomorrow
John says that he will eat papaya tomorrow and again the day after tomorrow,

(ii) What if we negate the anaphoric element at t_0? Two possibilities left.

1. The presupposition is accommodated in the preceding context (34).

(34) *Ion   spune   că   nu   a   mai   mîncat   papaia   (de*
John   says   that   NEG   has   MAI   eat   papaya   (since
cînd   a   fost   în   Costa   Rica).
when   has   been   in   Costa   Rica)
John says that he has not eaten papaya anymore (since he has been in Costa Rica).

2. If the preceding context does not provide a way to accommodate, the presupposition fails to occurr.

(35) *Ion   spune   că   nu   a   mai   mîncat   papaia.*
John   says   that   NEG   has   MAI   eaten   papaya.
John says that he has never tried papaya.

5   Crosslinguistic data

In this section, we will look for evidence to our conclusion through crosslinguistic comparison within the Romance family. In particular, we will focus on (standard and regional) Italian adverbs *ancora* and *mai.*

5.1   A note on Italian *mai* and *ancora*

• Both Italian and Romanian *mai* can be shown to have derived from Latin adverb *magis* ('more') (VELI (1937)). However, while its positive origin seems uncontroversial, It. *mai* is restricted to polarized contexts in modern Italian [2].

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[2]Note that, contrary to *mai,* most NPI in Italian are also N-words.

(36) (a) *Non   ho   mai   visto Piero.*
       NEG have MAI seen Peter

      I have never seen Peter.

  (b) **Ho   mai   visto Piero.*
       Have MAI seen Peter

  (c) *Hai   mai   visto Piero?*
       Have MAI seen Peter

      Did you ever see Peter?

  (d) *Se mai vedessi Piero, digli   di venire.*
       If   MAI see.SBJ Peter, tell-him to come

      If you ever happen to see Peter, tell him to come.

Contrary to Rom. *mai*, moreover, It. *mai* has no additive properties, neither as an AP/AdvP modifier nor as a VP-adverb.

• Standard Italian *ancora* is an additive adverb (Tovena (1996); Vegnaduzzo (2000)). It differs from Rom. *mai* both syntactically (cfr. (i)) and semantically (cfr, (ii)). However, some similarities can be found (iii).

(i) *Ancora* is phonologically independent, it can be stressed and can occupy different positions in the sentence. This correlates with a wider range of possible interpretations (see for instance (Tovena (1996, 1998)), (Cinque (1999)).

(ii) When combining with stative predicates, *ancora* express continuation and, in the scope of negation, gives rise to phase reversal (37).

  (37) (a) *Piero è   ancora   stanco.*
         Peter is ANCORA tired

       Peter is still tired.

     (b) *Piero non   è   ancora   stanco.*
         Peter NEG is ANCORA tired

       Peter isn't tired yet.

(iii) As for telic/atelic activities, it displays the same interpretations as Rom. *mai* in positive contexts (38).

  (38) (a) *Piero leggerà   ancora   un romanzo.*
         Peter read.FUT ANCORA a   novel

       Peter will read one more novel.

     (b) *Piero leggerà   ancora   un po'.*
         Peter read.FUT ANCORA a   little

       Peter will read a little more.

5.2 Some elements of comparison

If we take *ancora* and Rom. *mai* to be additive adverbs, the comparison of the Romanian data in (31) (repeated here in (40)) with some Nothern Italian varieties (here, Paduan data in (39)) may shed some light on the derivation of It. *mai* as an NPI.

(39) (a) *Piero el dize ch'el ga sercà ancora a papaya.*
          Peter CL says that-CL has tried ANCORA the papaya

      Peter says that he has already tried papaya (once in the past).

      (b) *Piero el dize che no'l ga mai sercà a papaya.*
          Peter CL says that NEG-CL has MAI tried the papaya

      Piero says that he has never tried papaya.

(40) (a) *Ion spune că a mai mîncat papaia.*
          John says that has MAI eaten papaya.

      John says that he has already tried papaya (once in the past).

      (b) *Ion spune că nu a mai mîncat papaia.*
          John says that NEG has MAI eaten papaya.

      John says that he has never tried papaya.

In (39.a), *ancora* behaves as a genuine additive particle with anaphoric meaning, just the same as Rom. *mai* in (31.a).
To deny the occurrence of similar events in the past, (standard and regional) Italian, just as Romanian, recours to *mai*.

NB. Italian *mai* could be claimed to be the elided form of the adverb *giammai* ('yet-mai*), which is sometimes called its 'longer' form (Cinque (1999)). If *già* in Modern Italian is a phase adverbial (meaning 'already'), Latin *iam* had also a deictic value ('now, presently') [3]. The deictic/aspectual component seems then to have been lexically incorporated in It. *mai*, a fact that could explain also the loss of its AP/AdvP modifier properties.

6 Conclusion

– In this paper, we tried to give a first account of the Romanian adverb *mai*, which we analysed as an additive particle on events.
– In the framework of our analysis, we have dealt in particular with the problem of accommodation of the presupposed event. Assuming an ordering relation between the presupposed and the asserted event, we suggest

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[3]Félix Gaffiot, *Dictionnaire Latin-Français* nouvelle édition revue et argumentée sous la direction de Pierre Flobert. Paris : Hachette 2000.

to recover the presupposition by considering it as the antecedent of the asserted event.

– Cases of presupposition failure under negation would then be explained as a failure to be bound by the antecedent. We note in particular that this phenomenon occurs when the anaphoric event is asserted to occur at t_0.

– The advantage of such an analysis is that it gives a hint about the possible diachronic derivation of other aspectual adverbs in Romance (e.g. It. *(già)mai*, Fr. *jamais* and Sp. *jamàs*), once we consider Latin *iam* to be a deictic adverb pointing at t_0.

– At this point we do not have developed the analysis to include AP-AdvP modification, We leave this topic for future research.

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