The nanosyntax of negative markers

Karen De Clercq
FWO/U Gent

Geneva, Université de Genève
21 November 2019

Outline

Table of Contents

Negation in logic

Negative markers in natural language

(1) a. He is **un**happy.
   b. His behaviour is **in**human.
   c. He is **dis**loyal.
   d. He is **non**professional.
   e. He is **not** happy (but sad).
   f. He is**n't** happy.

- ¬ does not coincide with what it means to be a negative marker
- negative markers consist of ¬ and other features
- some languages morphologically reflect that there are differences between negative markers; others don't.

Aims

- propose a classification of negative markers in predicational copular clauses (Higgins 1972; 1979) with adjectival predicates expressing properties;
- discuss syncretism patterns between negative markers in these clauses
- show how these syncretism patterns provide a tool to probe the internal structure of negation
- propose a nanosyntactic account of negative markers
- apply it to two case studies

Table of Contents

A classification of negative markers

	N1	**N2**	**N3**	**N4**
	Predicate denial	*Predicate negation*	*Predicate term negation*	
scope over	tensed predicate	untensed predicate	predicate term	predicate term
stack on	N2, N3, N4	N3, N4	N4	-
semantics	contradiction	contradiction	contradiction	contrariety
function	denying	contrasting/modifying	classifying	characterizing
	n't/not	not	non-	un-/dis-

Stacking properties

(2) a. She isn't NOT unhappy.
     b. Nonunhappy people are the best.
     c. nondisenfranchized, noninfinite
     d. *She isn'tn't happy.
     e. *She is not n'thappy.
     f. *Unnonhappy people are the best.
     g. *undisloyal, *disunhappy

- ▶ n't > not > non- > un-/ dis-/in-

Function of negative markers

(3) a. He isn't happy. (N1: denying)

b. not long ago (N2: modifying)

c. John was not happy, but sad. (N2: contrasting)

d. Use non-fat milk instead of whole milk. ⬚ (Kjellmer 2005: 162) (N3: classifying)

e. Some parents say children in Sarajevo have become increasingly disobedient and difficult to control during this wartime. (Kjellmer 2005: 162-163) (N4: characterizing)

Table of Contents

Typological sample

- 8 syncretism patterns attested
- not possible to look at all of them in detail
- this talk: English, Greek and Czech

English: overview

	N1	N2	N3	N4
English informal	-n't	not	non-	un-
English formal	not	not	non-	un-

Greek: *a-*

(4)   a.   Ine   an- endimi.
              be.pres.3sg neg- honest.nom.fem.
              'She is dishonest.

       b.   Ine   an– ithikos
              be.pres.3sg neg- moral.nom.masc.
              'He is amoral.'

       c.   I   methodhos tu ine   a- katalili
              Det method   his be.pres.3sg neg- suitable.nom.fem
              'His method is un- suitable.'

       d.   Ine   a- thriskos
              be.pres.3sg neg- religious.nom.masc.
              'He is unreligious/irreligious.'

Greek: *mi-*

(5) a. Ine   mi- thriskos.
         be.pres.3sg neg- religous.nom.masc.
         'He is non-religious.'

   b. Ta mi- emborika   proionda.
       the neg- commercial products
       'the noncommercial products.'

   c. Ine   mi- elinas
       be.pres.3sg non- Greek.nom.masc
       'He is non-Greek.' 'He is a foreigner.'

Greek: *mi- > a*

(6)   *a-mi-thriskos
       neg-neg-religious.nom.acc

(7)   a.   Ine   mi a-   theos.
            be.pres.3sg neg neg- theist.nom.masc.
            'He is non-atheist.'

     b.   mi a-   theoretiki psychiatriki
            neg neg- theoretical psychiatry
            'non atheoretical psychiatry'

     c.   Ine   mi a-   thriskos.
            be.pres.3sg neg neg- religious.nom.masc.
            'He is non ir- religious.'

     d.   Ine   mi an- ithikos.
            be.pres.3sg neg neg -moral.nom.masc.
            He is non immoral.' (p.c. George Tsoulas)

Greek: oxi

(8)   I Roxanni metakomise oxi poli kero prin.
The Roxanne moved.3sg neg much time ago
'Roxanne moved not long ago.' (Giannakidou 1998: 50)

(9)   a.   Podhosferistis ine   oxi ithopios
            Football.player be.pres.3sg no actor
            'He is a football player and not an actor'

        b.   (Aftos) ine   Elinas ke oxi fliaros? adhinato
            He   be.pres.3sg Greek and no chatty   impossible
            'He is Greek, and (he is) not chatty? Impossible'

Greek: oxi > mi- > a-

(10) a. A: aftos dhen ine   katholu kalos stin   dhulia
          A: He   neg be.pres.3sg. neg.at.all good in.the work
          tu.
          his
          'He is not good at all at his work'
      b. B: e,   oxi mi -epangelmatikos omos. . .
          B: disc-part., neg neg -professional   though
          'but not unprofessional though . . .'

Greek: dhen > oxi > mi- > a-

(11) a. Den ine an- endimi.
neg is neg- honest.nom.fem.
' She is not dishonest'

b. Dhen ine mi- thriskos.
Neg is neg- religous.nom.masc.
'He is not non-religious.'

(12) a. A: Ine OXI eksipnos ala ergatikos.
is neg clever but hardworking
'He is not clever, but hardworking.'

b. B: DHEN ine OXI eksipnos ala ergatikos.
neg is neg clever but hardworking
'It is not the case that he is not clever, but hardworking.'

Greek: overview

	N1$^{\text{Neg}}$	**N2**$^{\text{Neg}}$	**N3**$^{\text{Neg}}$	**N4**$^{\text{Neg}}$
Greek	dhen	oxi	mi	a-

(13) a.   Je ne-   loajální.
                is neg- loyal
                'He is disloyal.'

      b.   Je ne-   tolerantní.
                is neg- tolerant
                'He is intolerant.'

(14) a.   Je ne-   přátelský
                is neg-friendly
                'He is hostile'/ 'He is adverse'

      b.   Je ne-   mocný.
                he neg- powerful.
                'He is ill.' (Kovarikova et al. 2012: 824)

Czech: N3 ne-

(15)   a.   Jeho metoda je ne- profesionální.
           his   method is neg- professional
           'His method is nonprofessional.'

         b.   Jeho metoda je ne- komerční.
           his   method is neg- commercial
           'His method is noncommercial.'

         c.   Jeho metoda je ne- adekvátní.
           his   method is neg- adequate
           'His method is inadequate.'

         d.   Je ne- americký.
           is   neg American
           'He is un- American.'
           'He is non- American.'

Czech: N2 ne

(16)   On je ne ne- šťastný, on je šťastný.
            he is neg neg- happy,   he is happy.
            He is not unhappy, but happy.'

$Foc_{Neg} > Class_{Neg}/Q_{Neg}$

Czech: N1 ne-

(17) a. Ja ne- jsem št'astný.
          I neg- am happy.
          'I am not happy.'

Czech: ne- > ne > ne-
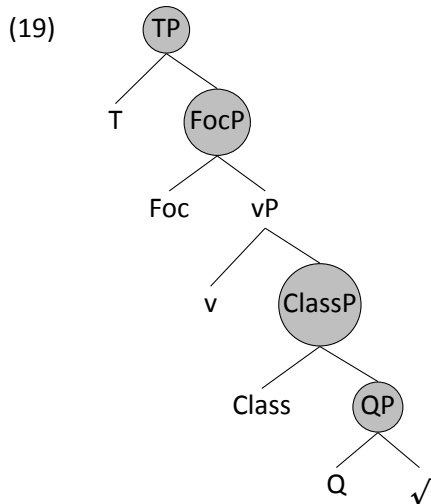
(18) ?On není ne ne- šťastný.
    he neg-is neg neg happy.
    'He isn't not unhappy'

Czech: overview

	N1	N2	N3	N4
Czech	ne-	ne	ne-	ne-

	N1	N2	N3	N4
English informal	n't	not	non-	un-
Greek	dhen	oxi	mi	a-
English formal	not	not	non-	un
Czech	ne-	ne	ne-	ne-

Labels and scope/surface position

(19)

(20) a. ALL the students weren't happy, *weren't they/were they?

b. All the students were NOT happy, weren't they/were they?

c. John is unhappy, *is he/isn't he?

(21)   a.   John can not eat vegetables (deontic)
       b.   'It is not the case that John is permitted to eat
            vegetables' NOT CAN
       c.   'It is permitted that John not eat vegetables' CAN NOT
            (Cormack and Smith 2002)

(22)   a.   John can't eat vegetables (deontic)
       b.   'It is not the case that John is permitted to eat
            vegetables' NOT CAN
       c.   *'It is permitted that John not eat vegetables' CAN NOT

A classification of negative markers

	T^{Neg}-markers	Foc^{Neg}-marker	Class^{Neg}-markers	Q^{Neg}-markers
	N1-markers	N2-markers	N3-markers	N4-markers
	Predicate denial	*Predicate negation*	*Predicate term negation*	
scope over	tensed predicate	untensed predicate	predicate term	predicate term
stack on	Foc, Class, Q	Class, Q	Q	-
semantics	contradiction	contradiction	contradiction	contrariety
function	denying	contrasting/modifying	classifying	characterizing

Logically possible patterns

(23)

1	A	A	A	A
2	A	A	A	B
3	A	A	B	A
4	A	A	B	B
5	A	A	B	C
6	A	B	B	A
7	A	B	B	B
8	A	B	B	C
9	A	B	A	A
10	A	B	A	B
11	A	B	A	C
12	A	B	C	A
13	A	B	C	B
14	A	B	C	C
15	A	B	C	D

	T^{Neg}	Foc^{Neg}	$Class^{Neg}$	Q^{Neg}
	N1	N2	N3	N4
English informal	n't	not	non-	un-
Greek	dhen	oxi	mi	a-
English formal	not	not	non-	un
Czech	ne-	ne	ne-	ne-

- Greek, like English, provides morphological support for the idea that negative markers in these four positions differ.
- Czech provides support for the idea that the four negative markers have something in common.

Typological data

	T^neg	Foc^neg	Class^neg	Q^neg
Greek	dhen	oxi	mi	a-
French (formal)	ne …pas	pas	non	iN-
Korean	(-ci) an(i) (ha-)	an(i)	pi-	pul-
	(-ci) mos (ha-)	mos	mol-	mol-
English	not	not	non	un-
French (informal)	pas	pas	non	iN-
Swedish	inte	inte	icke-	o-
Turkish	degil	degil	gayri/olmayan	-siz
Japanese	nai	nai	hi-	hu(/bu)/mu
Khwe	vé	ŋya	ó-	ó
Chinese	bù	bù	fēi	fēi
MS Arabic	laa	laa	ghayr-	ghayr-
Persian	na	na	qheyr-	qheyr-
Mayalayam	alla	alla	a-	a-
Moroccan Arabic	ma (ši)	muši	muši	muši
Hungarian	nem	nem	nem	-tElEn
Hebrew	lo	lo	lo	bilti-
Dutch	niet	niet	niet-	on-
Russian	ne	ne	ne-	ne-
Czech	ne-	ne	ne-	ne-
Malagasy	tsy	tsy	tsy	tsy
Hixkaryana	-hi-	-hi-	-hi-	-hi-
Tümpisa Shoshone	ke(e)	ke(e)	ke(e)	ke(e)

*ABA

Syncretism targets only contiguous cells in a paradigm

- ▶ If a language has a marker X to mark Q-negation, and a syncretic marker to mark T-negation, then Class-negation and Foc-negation will also be expressed by means of marker X.

(24)	1	A	A	A	A	Czech, Russian, . . .
	2	A	A	A	B	Hungarian, Dutch,. . .
	3	A	A	B	A	
	4	A	A	B	B	Chinese, MS Arabic, . . .
	5	A	A	B	C	English, Swedish, . . .
	6	A	B	B	A	
	7	A	B	B	B	Moroccan Arabic
	8	A	B	B	C	?
	9	A	B	A	A	
	10	A	B	A	B	
	11	A	B	A	C	
	12	A	B	C	A	
	13	A	B	C	B	
	14	A	B	C	C	Khwe
	15	A	B	C	D	Greek, . . .

	T^{neg}	Foc^{neg}	Class^{neg}	Q^{neg}	
Greek	dhen	oxi	mi	a-	Pattern 15
French (formal)	ne ...pas	pas	non	iN-	
Korean	(-ci) an(i) (ha-)	an(i)	pi-	pul-	
	(-ci) mos (ha-)	mos	mol-	mol-	
English (formal)	not	not	non	un-	Pattern 5
French (informal)	pas	pas	non	iN-	
Swedish	inte	inte	icke-	o-	
Turkish	degil	degil	gayri/olmayan	-siz	
Japanese	nai	nai	hi-	hu(/bu)/mu	
Khwe	vé	ŋya	ó-	ó	Pattern 14
Chinese	bù	bù	fēi	fēi	Pattern 5
MS Arabic	laa	laa	ghayr-	ghayr-	
Persian	na	na	qheyr-	qheyr-	
Mayalayam	alla	alla	a-	a-	
Moroccan Arabic	ma (ši)	muši	muši	muši	Pattern 7
Hungarian	nem	nem	nem	-tElEn	Pattern 2
Hebrew	lo	lo	lo	bilti-	
Dutch	niet	niet	niet-	on-	
Russian	ne	ne	ne	ne-	Pattern 1
Czech	ne-	ne-	ne-	ne-	
Malagasy	tsy	tsy	tsy	tsy	
Hixkaryana	-hi-	-hi-	-hi-	-hi-	
Tümpisa Shoshone	ke(e)	ke(e)	ke(e)	ke(e)	

Pattern 8?

- All attested patterns are AAB/ABB/ABC patterns.
- The unattested patterns are ABA.
- Pattern 8 is not an ABA, but it is not attested in the sample.

French revisited: pattern 8

(25) a. Le but de cette organisation est non non-lucratif,
the goal of this organisation is NEG NEG-lucrative,
mais commercial.
but commercial.
The goal of this organisation is not non-profit, but
commercial.

b. Les déchets sont non non-dangereux, mais vraiment
the trashes are NEG NEG-dangerous, but really
mortels si on les touche.
mortal if one them touches.
'This trash is not non-dangerous, but really
life-threatening if you touch it.'

	T^{neg}-marker	Foc^{neg}-marker	$Class^{neg}$-marker	Q^{neg}-marker
Pattern 8	(ne) pas	non	non(-)	iN-, (dé(s)-)
Pattern 2	pas	pas	non(-)	iN-, (dé(s)-)

(26)   a.   Il s'arrête,   pas non in-quiet.
           he himself-stopped, NEG NEG NEG-calm
           'He stopped, not not worried

       b.   Il a éte pas non in -quiet, mais totalement en
           he has been NEG NEG NEG -calm, but   completely in
           panique.
           panic
           'He hasn't been not restless, but completely in panic.'

(27)   Il s'arrête,   non pas in-quiet,   mais curieux.
       he REFL.stopped, NEG NEG NEG-calm, but   curious
       'He stopped, not worried, but curious.'

                                        (Grevisse and Goosse [1936] 1993: 1446)

Table of Contents

The syncretisms indicate

- ▶ that scopally different negative markers are related
- ▶ how they can be ordered
  - ▶ Q_{Neg} < $Class_{Neg}$ < $FocQ_{Neg}$ < T_{Neg}
  - ▶ T_{Neg} < Foc_{Neg} < $Class_{Neg}$ < Q_{Neg}

- morphology is not arbitrary, but tracks the natural scope of negation
- morphology probes into the underlying structure of negative markers and shows how they are related (cf. Caha 2009's case hierarchy)

Subclassification

(28)   {T, Foc, Class, Q} = W

            T   {Foc, Class, Q} = X

                  Foc   {Class, Q} = Y

                           Class   {Q} = Z

(29)   {Q, Class, Foc, T} = W

            Q   {Class, Foc, T} = X

                  Class   {Foc, T} = Y

                           Foc   {T} = Z
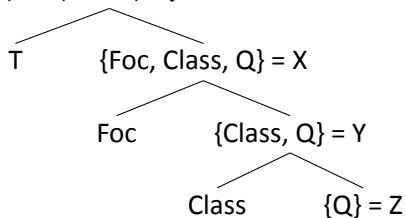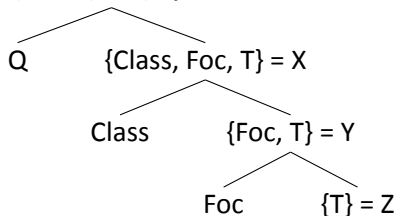
Cumulative subclassification

(30) a. W = T-marker
     b. W, X = Foc-marker
     c. W, X, Y = Class-marker
     d. W, X, Y, Z = Q-marker

(31) a. W = Q-marker
     b. W, X = Class-marker
     c. W, X, Y = Foc-marker
     d. W, X, Y, Z = T-marker

- all negative markers consist of a [Neg] feature, corresponding to ¬
  - [Q], [Class], [Foc] and [T]

Two possible decompositions

(32)   a.   T, Neg = T_{Neg}-markers

          b.   T, Foc, Neg = Foc_{Neg}-markers

          c.   T, Foc, Class, Neg = $Class_{Neg}$-markers

          d.   T, Foc, Class, Q, Neg = Q_{Neg}-markers

(33)   a.   Q, Neg = Q_{Neg}-markers

          b.   Q, Class, Neg = $Class_{Neg}$-markers

          c.   Q, Class, Foc, Neg = Foc_{Neg}-markers

          d.   Q, Class, Foc, T, Neg = T_{Neg}-markers

Which order?

(34)

```
        QP
       /  \
      Q   ClassP
          /   \
       Class  FocP
              /  \
            Foc   TP
                 /  \
                T   Neg
```

(35)

```
        TP
       /  \
      T   FocP
          /   \
        Foc   ClassP
              /   \
           Class   QP
                  /  \
                 Q   Neg
```
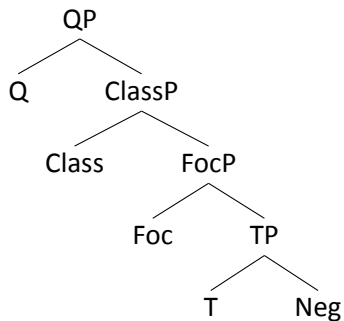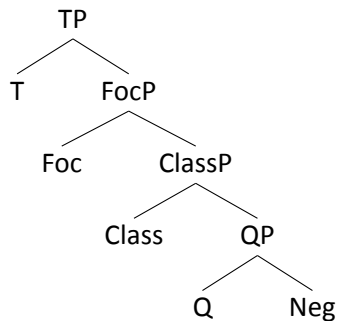
Containment (I): English

- *un-* and *-iN* are derived from Proto-Indo-European (PIE) **n-*, which is a variant of **ne-* (Harper 2013).
- *Non-* consists of **ne* and the Latin word *oinum*, meaning 'one' (Horn 2001: 453)
- *not* is the unstressed variant of *naught*, which consists of PIE **ne* and Old English (OE) *wiht* which means 'person, creature, thing' (Horn 2001: 455, Harper 2013).

- not > un-/iN- ⇒ T/Foc > Q
- non > un-/iN- ⇒ Class > Q

Containment (II): le bon usage French

- formal written French provides support for the fact that Foc_{Neg}-markers are contained in T_{Neg}-markers
- *pas* is contained in the bipartite structure *ne …pas*, giving rise to T_{Neg}.

- ne . . . pas > pas

$\Rightarrow$ T > Foc

The fseq for negation

(36)

```
              TP
            /    \
           T      FocP
                /    \
              Foc    ClassP
                    /    \
                 Class    QP
                        /    \
                       Q      Neg
```
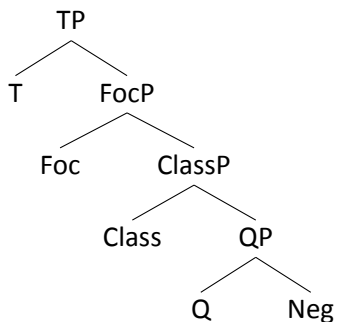
Starke (2018)

- prefix: a structure with a binary grouping at the bottom
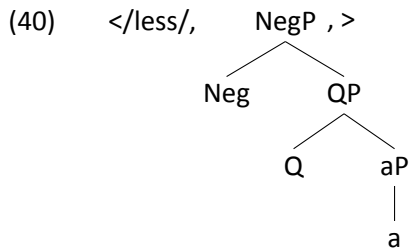- suffix: a structure with a singleton at the bottom

Lexical items: English (I)

(37)   </not/,   TP >

```
          TP
         /  \
        T   FocP
           /   \
         Foc   ClassP
              /    \
           Class    QP
                   /  \
                  Q    Neg
```

Lexical items: English (II)

(38)   </non/,   ClassP >

Class   QP

Q   Neg

Lexical items: English (III)

(39)   </un/,   QP >

```
           QP
          /  \
         Q    Neg
```
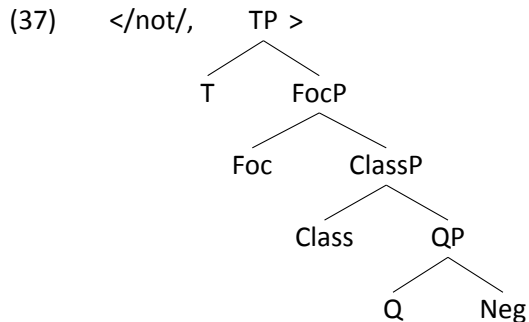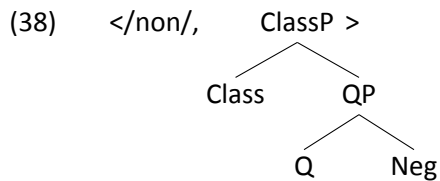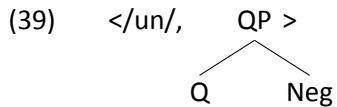
Lexical items: English (IV)

(40)   </less/,   NegP , >

```
              NegP
            /      \
         Neg        QP
                  /    \
                 Q      aP
                        |
                        a
```

- most English negative markers are created in a separate derivation
- cf. the spellout algorithm

John is not happy
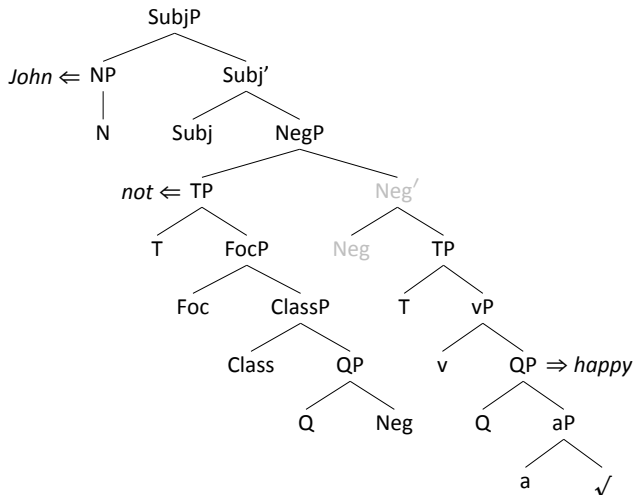
Conclusion

- negative markers across the lexical-functional divide show meaningful syncretism patterns, i.e. there are no *ABA patterns, providing support for the idea that scopally different markers are connected

- all scopally different negative markers share properties (Czech), whilst also being different (Greek)

- all negative markers can be treated in the same module of the grammar, i.e. syntax.

- the negative syncretism patterns also suggest a containment relation between the predicates the negators modify: V>N>A

Table of Contents

Case study I: *Neg Neg

- negative markers can be stacked and give rise to Double negation within the same clause, only if they belong to different categories and can stack in different positions
- the data that follow provide support for
  - the syntactic distinctions between negative markers
  - the presence of [neg] in gradable negative adjectives

The data (I): Morphological Q-negation

(41)　　*undishonest　　　　not dishonest
　　　　*undiscourteous　　　not discourteous
　　　　*undisloyal　　　　　not disloyal
　　　　*undiscomfortable　not discomfortable

(42)　　*unimpossible　　not impossible
　　　　*unillogical　　　not illogical
　　　　*unabnormal　　　not abnormal
　　　　*unatypical　　　　not atypical
　　　　*ununhappy　　　　not unhappy
　　　　*disdishonest　　not dishonest

The data (I): Morphological Q-negation

(43)   breathless   *unbreathless   not breathless
           senseless   *unsenseless   not senseless
           merciless   *unmerciless   not merciless
           useless   *unuseless   not useless
           cheerless   *uncheerless   not cheerless

(44)   successful   unsuccessful   not successful
           lawful   unlawful   not lawful
           eventful   uneventful   not eventful
           helpful   unhelpful   not helpful
           faithful   unfaithful   not faithful

The data (I): Morphological Q-negation

(45)   a.   **un**happy   b.   **unsad   c.   not sad
        unwise   *unstupid   not stupid
        unclean   *undirty   not dirty
        unhealthy   *unsick   not sick
        unkind   *unrude   not rude
        untrue   *unfalse   not false
        uneasy   *undifficult   not difficult

⇒ negative adjectives also contain a Neg feature

The data (I): Morphological Q-negation

(46)   a.   Negative affixes are not used with adjectival stems that have a 'negative' value (Zimmer 1964: 15)

            b.   The stem to which a relatively nonproductive negative affix can attach tends to be an UNMARKED, WEAK POSITIVE scalar value (Horn 2001: 286)

The data (I): Morphological Q-negation

(46)   a.   Negative affixes are not used with adjectival stems that have a 'negative' value (Zimmer 1964: 15)

            b.   The stem to which a relatively nonproductive negative affix can attach tends to be an UNMARKED, WEAK POSITIVE scalar value (Horn 2001: 286)

⇒ the restriction to affixes explains the contrast (45b-c)

The data (I): Morphological Q-negation

(47)   Words in *un* are thrown out if the morpheme *dis* is uniquely
        contained in the cycle adjacent to *un*.(Siegel (1977: 192))

(48)   Condition on *un*-prefixation:
        Un's base may not have negative content. (Allen (1978: 50),
        Seuren and Jaspers (2014: 632))

⇒ this restriction captures the data from (41)-(45).

The data (I): Morphological Q-negation

BUT:

- ▶ Support from Dutch that this restriction also pertains to syntactic negation, not only to morphological negation.

The data (II): Syntactic Q-negation

(49) a. weinig actief/*passief
    little active/passive
  b. weinig gezond/*ziek
    little healthy/sick
  c. weinig correct/*fout
    little correct/wrong
  d. weinig verstandig/*dom
    little clear/confused
  e. weinig interessant/*saai
    little interesting/boring
  f. weinig duidelijk/*verward
    little clear/confused

The data (II): Syntactic Q-negation

(50) a. weinig geloofwaardig/*ongeloofwaardig
          little   credible/unbelievable
      b. weinig verstandig/*onverstandig
          little   intelligent/unintelligent
      c. weinig aantrekkelijk/*onaantrekkelijk
          little   attractive/unattractive
      d. weinig duidelijk/*onduidelijk
          little   clear/unclear
      e. weinig zichtbaar/*onzichtbaar
          little   visible/invisible
      f. weinig geduldig/*ongeduldig
          'little   patient/impatient'

(51)   a.   weinig berouwvol
            little   remorseful
       b.   weinig hoopvol
            little   hopeful
       c.   weinig succesvol
            little   successful
       d.   weinig belangrijk
            little   important

(52)   a.   *weinig ademloos
            little   breathless
       b.   *weinig zinloos
            little   senseless
       c.   *weinig genadeloos
            little   merciless
       d.   *weinig nutteloos
            little   useless

Analysis

*<Neg, Neg>

The functional sequence must not contain two immediately consecutive negative features.

Analysis

*<X, X>

The functional sequence must not contain two immediately consecutive identical features.

undishonest

(53)

```
                          NegP
              ┌────────────┴────────────┐
    un- ⇐ QP_un                        NegP
         ┌──┴──┐              ┌──────────┴──────────┐
         Q    Neg    dis- ⇐ QP_dis              QP ⇒ honest
                          ┌──┴──┐              ┌──┴──┐
                          Q    Neg            Q     √
```
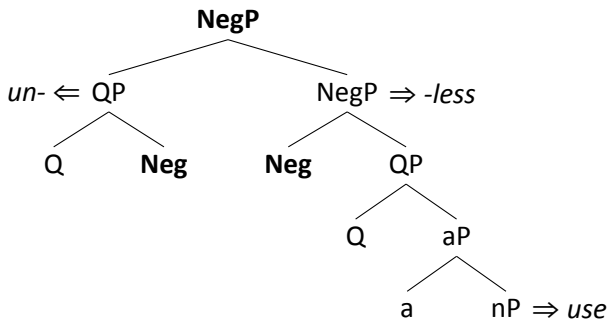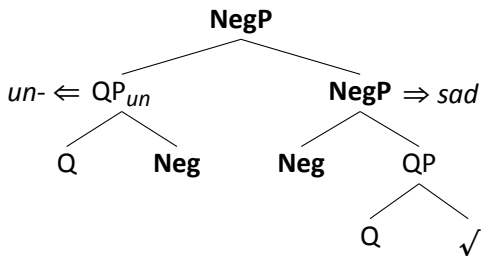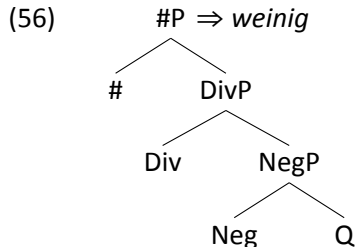
unuseless

(54)

```
                        NegP
              ┌──────────┴──────────┐
        un- ⇐ QP               NegP ⇒ -less
            ┌──┴──┐            ┌──┴──┐
            Q    Neg          Neg    QP
                                  ┌──┴──┐
                                  Q    aP
                                     ┌──┴──┐
                                     a    nP ⇒ use
```

unsad

(55)

```
                          NegP
              _____|_____
            /                                   \
    un- ⇐ QP_un                              NegP ⇒ sad
           _|_                              ___|___
          /    \                           /       \
         Q     Neg                       Neg       QP
                                                   _|_
                                                  /    \
                                                 Q      √
```

weinig

(56)   #P ⇒ *weinig*

    # DivP

      Div NegP

         Neg Q
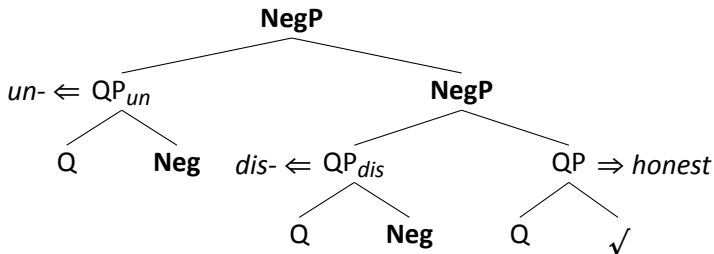
- ▶ DivP and #P are absent in the syntactic structure when *weinig* modifies adjectives.

weinig actief

(57)

```
                        NegP
              ┌──────────┴──────────┐
     weinig ⇐ NegP              QP ⇒ actief
          ┌────┴────┐          ┌────┴────┐
        Neg         Q         Q          √
```

weinig passief

(58)

```
                         NegP
                        /    \
        weinig ⇐ NegP          NegP ⇒ passief
                /    \          /    \
            Neg       Q      Neg      QP
                                     /  \
                                    Q    √
```

*weinig zinloos

(59)

```
                         NegP
              ┌───────────┴───────────┐
        weinig ⇐ NegP             NegP ⇒ -loos
            ┌─────┴─────┐       ┌─────┴─────┐
          Neg          Q      Neg          QP
                                       ┌────┴────┐
                                       Q         aP
                                             ┌────┴────┐
                                             a      nP ⇒ zin
```
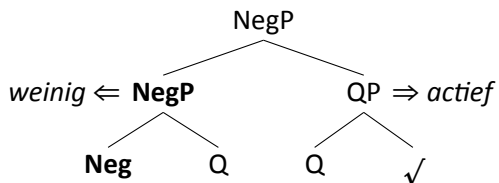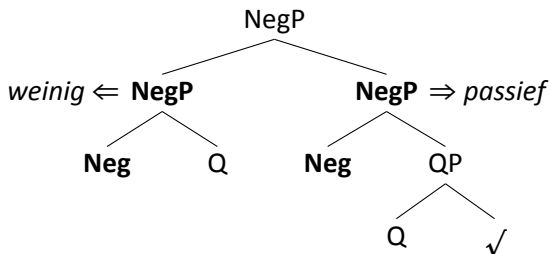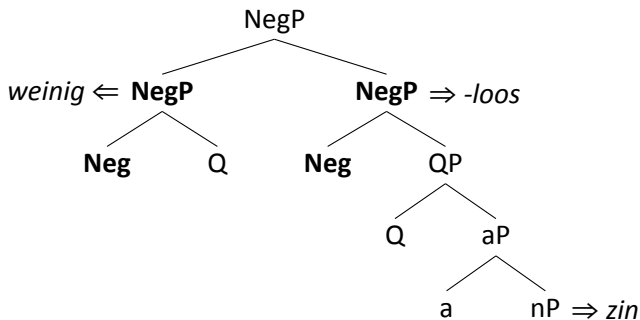
John is not sad
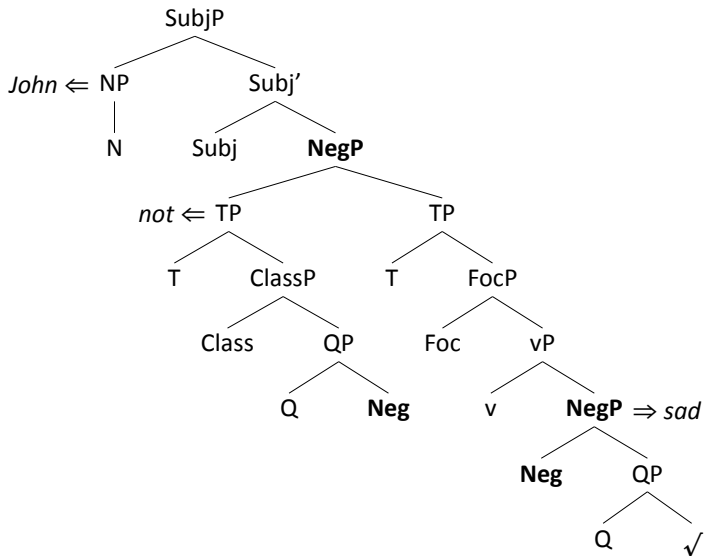
Why would a semantic account not suffice?

(60)   ¬¬P(x)

Intermediate conclusion

- Negative markers cannot be stacked on negative adjectival predicates, unless there are intervening layers of structure
- Negative markers with the same scope cannot be stacked, whilst stacking within the same clause is in principle not ruled out
- The *Neg-Neg restriction is valid within what is traditionally considered the domain of morphology and the domain of syntax.

Table of Contents

(61) a. Je n' ai   pas faim.
          I NEG have neg hunger
          'I'm not hungry.' ⇒ Le bon usage French
      b. J' ai   pas faim.
          I have NEG hunger
          'I'm not hungry.'⇒ Colloquial French

(62)   a.   Stage I: Preverbal expression of sentential negation.

           b.   Stage II: Discontinuous expression of sentential negation.

           c.   Stage III: Postverbal expression of sentential negation. (De Swart 2010: 114)

Jespersen Cycle

(63)   a.   jeo ne di. (1600) (Ia)
          b.   je ne dis (pas). (1600-1700) (Ib)
          c.   je ne dis pas. (Standard written French = BUF) (IIa)
          d.   je (ne) dis pas. (Standard spoken French) (IIb)
          e.   je dis pas. (Colloquial French = CF) (III)

(Jespersen 1924: 335-336, Rowlett 1998: 90)

BUF and asymmetry

- asymmetric approaches (Breitbarth and Haegeman 2010: 68)
  - *pas*: inherently negative element with *ne* acquiring negativity via Dynamic Agree (Rowlett 1998: 28; Rizzi and Roberts 1996: 76) or Agree (Roberts and Roussou 2003: 154-155, Roberts 2007: 64-81)
  - *pas* is semantically negative and *ne* an NPI (Zeijlstra 2009).
    ⇒ none of these approaches actually captures why *ne* is required in a particular stage of the language

Pull or push

- Pull chain approaches: *ne* weakens and triggers change (Jespersen's approach)
- Push chain approaches: new emphatic negator pushes old negator away (Meillet 1921, Hansen 2013: 51-53)

(64)   a.   < /iN-/, [$_{QP}$ Q Neg] >

          b.   < /non/ [$_{ClassP}$ Class [$_{QP}$ Q Neg]] >

          c.   < /pas/ [$_{FocP}$ Foc [$_{ClassP}$ Class [$_{QP}$ Q Neg]]] >

          d.   < /ne/ [$_{MoodP}$ Mood T]] >

SubjP
- *elle* MoodP
- *ne* ⇐ MoodP AgrSP
- Mood T 3P NegP
- $T_{PST}P$ 3P ⇒ *-t* TP $Event_{Init}P$
- *sembl-* ⇐ AspP $T_{PST}P$ ⇒ *-ai-* 3 t_{ne} FocP ⇒ *pas* t_3P SC
- Asp $Event_{Init}$ T_{PST} Foc ClassP t_{elle} QP ⇒ *heureuse*
- Class QP Q √
- Q Neg
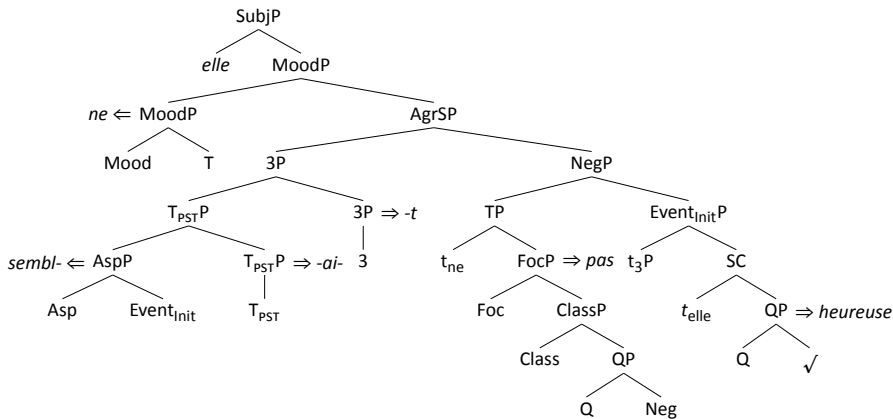
(65)   a.   < /iN-/, [$_{QP}$ Q Neg] >

       b.   < /non/ [$_{ClassP}$ Class [$_{QP}$ Q Neg]]>

       c.   < /pas/ [TP T [FocP Foc [ClassP Class [QP Q Neg]]] >

       d.   < /ne/ [$_{MoodP}$ Mood T] >

Table of Contents

(66)   </un-/,   QP >
                  Q   Neg

(67)   </iN-/,   QP >
                  Q   Neg

(68)   </patient/,   QP , PATIENT>

              Q   aP

                      a   √

(69)   </-/,   NEGP -, >

           iN-   patient

Pointers (I)

(70)

VP ⟺ /–/, CHAT

shoot   DP

the   breeze

Pointers (II)

(72) $T_{PST}P \Rightarrow$ *brought*

(71) $VP \Rightarrow$ *bring*

V   ...

T_{PST} $VP \Rightarrow$ ~~bring~~

V   ...

(73) a. < /bring/, [$_{VP}$ V], BRING >

b. < /brought/, [$_{T_{PST}P}$ T_{PST} BRING], BRING >

(74)
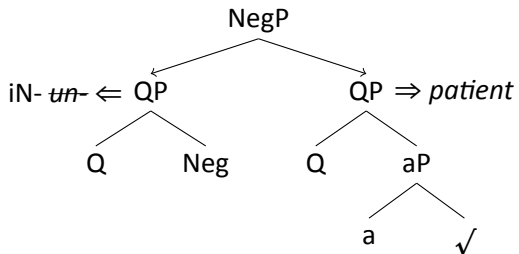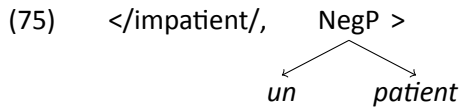
```
                          NegP
              ╱────────────────────╲
iN- u̶n̶- ⇐ QP                        QP ⇒ patient
         ╱──╲                    ╱──╲
        Q    Neg                Q    aP
                                    ╱──╲
                                   a    √
```

*

(75) </impatient/,   NegP >

      un   *patient*

Table of Contents

Conclusion

- Negative markers have internal structure, accounting for the different scopal positions they can have

- Support for the internal structure comes from syncretisms between four types of different markers and the absence of ABA-patterns amongst these markers

- Negative markers cannot be stacked on negative adjectival predicates, unless there are intervening layers of structure: there is a syntactic *Neg-Neg constraint.

- The system is well-equipped to capture diachronic change, like Jespersen Cycle.

- Competition between productive and unproductive negative markers can be captured by the pointer mechanism.

Allen, M. R. (1978). *Morphological Investigations*. Ph.D. dissertation, University of Connecticut, Storrs, CT.

Breitbarth, A. and Haegeman, L. (2010). "Continuity is change: the long tail of Jespersen's cycle in Flemish". In A. Breitbarth, C. Lucas, S. Watts and D. Willis, eds., *Continuity and change in grammar*, Amsterdam: John Benjamins. 61–76.

Caha, P. (2009). *The Nanosyntax of Case*. Ph.D. dissertation, University of Tromsø, Tromsø.

Cormack, A. and Smith, N. (2002). "Modals and Negation in English". In S. Barbiers, F. Beukema and W. v. d. Wurf, eds., *Modality and its interaction with the verbal system*, Amsterdam: John Benjamins. 133–163.

De Swart, H. (2010). *Expression and Interpretation of Negation: an OT Typology*. Dordrecht: Springer.

Giannakidou, A. (1998). *Polarity Sensitivity as (Non)Veridical Dependency*. Amsterdam: John Benjamins.

Grevisse, M. and Goosse, A. ([1936] 1993). *Le bon usage*. Paris: Duculot.

Hansen, M.-B. M. (2013). "Negation in the history of French". In *The history of negation in the languages of Europe and the Mediterranean*, Oxford University Press. 51–76.

Harper, D. (2013). Online etymology dictionary. http://www.etymonline.com.

Higgins, F. R. (1972). *The Pseudocleft construction in English*. Ph.D. dissertation, Massachusetts Institute of Technology.

Higgins, F. R. (1979). *The Pseudocleft construction in English*. New York: Garland.

Horn, L. (2001). *A Natural History of Negation*. Chicago, IL: The University of Chicago Press, 2nd edition.

Jespersen, O. (1924). *The philosophy of grammar*. London: Allen and Unwin.

Kjellmer, G. (2005). "Negated adjectives in Modern English". *Studia Neophilologica* 77, 156–170.

Kovarikova, D., Chlumska, L. and Cvrcek, V. (2012). "What belongs in a dictionary? The Example of Negation in Czech". In R. V. Fjeld and J. M. Torjusen, eds., *Proceedings of the 15th Euralex International Congress*. University of Oslo. 822–827.