A Puzzle in Gradable Adjectives

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1 Introduction

▷ Many gradable adjectives come in pairs of polar antonyms (e.g. happy-sad, true-false, etc.)
▷ the positive poles of the opposition may be prefixed with un- (see (1a))
▷ the negative poles cannot be prefixed with un- (see (1b); Jespersen 1942:466, Zimmer 1964, Horn 2005)
▷ the negative poles are not resistant to negation per se (see (1c))

(1) a. unhappy b. *unsad c. not sad
   unwise       *unstupid           not foolish
   unkind       *unrude             not rude
   untrue       *unfalse            not false
   uneasy       *undifficult        not difficult

▷ corpus data support these judgments
  ◦ British National Corpus (BNC): 100m words
  ◦ Corpus of Contemporary American English (COCA): 450m words
Table 1: *un-* (BNC, COCA)

<table>
<thead>
<tr>
<th></th>
<th>PosA</th>
<th>un-PosA</th>
<th>not PosA</th>
<th>NegA</th>
<th>un-NegA</th>
<th>not NegA</th>
</tr>
</thead>
<tbody>
<tr>
<td>wise</td>
<td>2,118</td>
<td>399</td>
<td>39</td>
<td>1,088</td>
<td>0</td>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
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<td></td>
<td></td>
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<td></td>
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<td>1,822</td>
<td>285</td>
<td>3,241</td>
<td>1</td>
<td>9</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BNC</td>
<td>55,400</td>
<td>5,763</td>
<td>1,623</td>
<td>17,549</td>
<td>0</td>
</tr>
<tr>
<td>sad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COCA</td>
<td>1,855,404</td>
<td>512</td>
<td>102</td>
<td>3,386</td>
<td>0</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>true</td>
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<td>277</td>
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<td>3,529</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

- A possible account of these facts runs like this:

(2) “Negative affixes are not used with adjectival stems that have a ‘negative’ value.” (Zimmer 1964:15)

- this is a restriction on morphological vs syntactic negation
- this is a restriction on *negating negative* adjectives; this is not a coincidence!
2 Some background

- Fodor et al. (1975) make a distinction between four types of negative elements:
  - Class 1: explicitly negative free morphemes, e.g. not
  - Class 2: explicitly negative bound morphemes, e.g. un-, n-ever
  - Class 3: implicitly negative morphemes, e.g. doubt
  - Class 4: pure definitional negatives (PDNs), e.g. kill (cause to become not alive), bachelor (man who is not married).
- Fodor et al. (1975) argue that Class 2 and Class 3 items pattern together, e.g. in their ability to trigger NPIs, and in RTs on sentences containing these items.
- Our results corroborate these findings:
  - Class 2: un-happy etc.
  - Class 3: sad, false, rude, etc.
- We shall argue that Class 3 items contain a Neg-feature (a property they share with Class 1 and Class 2 items).

3 Nanosyntax

Basic principles (Starke 2009, Caha 2009):

- The syntax works only with features and combinations of features
- Each feature is a syntactic head that projects
- Lexical insertion is postsyntactic
- Phrasal spellout: morphemes do not spell out terminal nodes, but phrases, i.e. combinations of features
- Lexical insertion is subject to the Superset Principle

(3) **Superset Principle**

A lexical entry may spell out a syntactic node (SN) iff the features of the lexical entry are a superset of the features dominated by the syntactic node.

In case two items compete for insertion, the Elsewhere Principle applies:

(4) **The Elsewhere Principle**

In case two rules, $R_1$ and $R_2$, can apply in an environment $E$, $R_1$ takes precedence over $R_2$ if it applies in a proper subset of environments compared to $R_2$. (cf. Kiparsky 1973)
4 Prerequisites for the Analysis

4.1 A difference in size

▷ The difference between polar antonyms (e.g. happy-sad) is a difference in the size of the tree, i.e. in the number of features they spell out:

(5) a. NegP ⇒ negative gradable adjective (e.g. sad)

```
   Neg
      ↓
     QP
       ↓
      Q
       ↓
a
  a √
```

b. QP ⇒ positive gradable adjective (e.g. happy)

```
   QP
     ↓
    Q
     ↓
a
  a √
```

4.2 QP

▷ positive gradable adjectives spell out the features Q, a, and the root feature (ignored in the trees to follow):

(6) QP ⇒ intelligent, tall, happy, warm, long, ...

```
   QP
     ↓
    Q
     ↓
a
  a √
```

▷ Q is a feature which denotes a positive quantity
▷ evidence for Q is found in the semantics: John is tall is in fact John is MUCH tall (Bresnan 1973).
▷ much spells out QP
much is a representative of the system of the Q-adjectives (Solt 2015):

<table>
<thead>
<tr>
<th></th>
<th>positive</th>
<th>comparative</th>
<th>superlative</th>
</tr>
</thead>
<tbody>
<tr>
<td>count</td>
<td>many</td>
<td>more</td>
<td>most</td>
</tr>
<tr>
<td>mass</td>
<td>much</td>
<td>most</td>
<td>least</td>
</tr>
<tr>
<td>count</td>
<td>few</td>
<td>fewer</td>
<td>fewest</td>
</tr>
<tr>
<td>mass</td>
<td>little</td>
<td>less</td>
<td>least</td>
</tr>
</tbody>
</table>

evidence also comes from the phenomenon of much-support (Corver 1997), where much appears overtly:

a. John is fond of Mary. Maybe he is too much so.
b. John is fond of Mary. Maybe he is as much so as Bill.
c. The weather was hot in Cairo—so much so that we stayed indoors all day.

schematically: $\text{Deg} + \text{much} + \text{so}$

4.3 Negation

negative markers (like not, non-, un-) are internally complex (De Clercq 2013, to appear)

all negative markers contain a negative feature Neg, expressing semantic negation ($\neg$)

Neg is never spelled out alone: different negative markers spell out different sets of features

concretely:

- assume a (portion of the) functional sequence $<T, \text{Foc}, \text{Deg}, Q>$
in the default case, this is interpreted affirmatively
• at each level, a negative feature Neg expressing semantic negation may be inserted

(11) (NegP)
     /  \
    (Neg) TP
   /   \
  T   (NegP)
 /     \ \
(Neg) FocP
 /       \ \
Foc (NegP)
 /         \ \
(Neg) DegP
 /           \ \
Deg (NegP)
 /             \ 
(Neg) QP

▷ tree (11) is shorthand for a series of four different trees, each corresponding to a particular negative marker
▷ for example, (12) gives the lexical tree for the lexical item not:

(12) NegP ⇒ not
     /  \
    Neg TP
   /   \
  T   FocP
 /     \
Foc DegP
 /       \
Deg QP

▷ negative markers also have an external syntax: in particular, they take scope in various positions in the clause (e.g. sentential scope, constituent scope)
▷ the fseq in the nanospine in (12) mirrors that of the clausal spine
the highest non-negative feature in the nanospine indicates where negation will take scope in the clause
  ◦ if the nanospine spells out as *not*, its highest non-negative feature is either T or Foc; negation will then take scope high in the clausal spine, i.e. be inserted in either SpecFocP or SpecTP
  ◦ if the nanospine has Q as its highest non-negative feature (as in the case of *un-*), its scope will be limited to those positions in the clausal spine where a QP occurs. Since Q only occurs low in the clausal spine, the scope of *un-* will also be low.

5 Solving the puzzle

5.1 Negative gradable adjectives

- negative gradable adjectives add a Neg feature to the structure of positive gradable adjectives given in (6) above:

\[
\begin{align*}
\text{NegP} & \Rightarrow \text{sad, short, bad, cold, small, ...} \\
\text{Neg} & \quad \text{QP} \\
\text{Q} & \quad \text{aP}
\end{align*}
\]

- all (and only) negative gradable adjectives are candidates for spelling out the structure in (13)
- since they are all in a tie with respect to the Elsewhere Principle, any one of them may undergo lexical insertion

5.2 Un-prefixed positive gradable adjectives

- the *un-*prefix spells out a Neg and a Q-feature:

\[
\begin{align*}
\text{NegP} & \Rightarrow \text{un} \\
\text{Neg} & \quad \text{QP} \\
\text{Q}
\end{align*}
\]
an argument for the presence of Q in un- concerns the fact that the meaning of un- involves an element of scalarity (Zimmer 1964:33):

\[(15)\] 
- christian non-christian ‘(not) related to, pertaining to, characteristic of certain religious doctrines’
- christian un-christian ‘a scale of conformity or opposition to certain norms’

\[(16)\] 
<table>
<thead>
<tr>
<th>A</th>
<th>non-A</th>
<th>un-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>non-American</td>
<td>un-American</td>
</tr>
<tr>
<td>grammatical</td>
<td>nongrammatical</td>
<td>ungrammatical</td>
</tr>
<tr>
<td>Cartesian</td>
<td>non-Cartesian</td>
<td>un-Cartesian</td>
</tr>
<tr>
<td>maternal</td>
<td>nonmaternal</td>
<td>unmaternal</td>
</tr>
<tr>
<td>motherly</td>
<td>??nonmotherly</td>
<td>unmotherly</td>
</tr>
</tbody>
</table>

\[(17)\] 
- a. This sentence is more ungrammatical than that one.
- b. *This sentence is more nongrammatical than that one.

un- is a scalar negator
un- spells out both a Neg and a Q-feature

the structure for positive gradable adjectives prefixed with un-:

\[(18)\] 
\[\text{NegP} \Rightarrow \text{un-} \Rightarrow \text{NegQ} \Rightarrow \text{happy} \]

happy is spelled out in the usual way
in a parallel derivation, a complex specifier is created, which spells out as un-
this NegP is merged in the Spec of a Neg head dominating the QP of happy, creating the structure in (18)

5.3 Un-prefixed negative gradable adjectives

- recall the contrast *unsad vs not sad
- both sad and un- contain a negative feature
because the position where these features take scope is identical (QP), stacking them will lead to an illegitimate functional sequence: &lt;Neg, Neg, Q, a&gt;

the structure of *unsad:

(19)

\[
\begin{array}{c}
\text{NegP} \\
\text{NegP} \\
\text{NegP} \\
\text{NegP} \\
\text{Neg} & \text{QP} & \text{Neg} & \text{NegP} & \Rightarrow \text{sad} \\
\text{Q} & \text{Neg} & \text{QP} & \text{Q} & \text{aP}
\end{array}
\]

sad is spelled out in the usual way

in a parallel derivation, a complex specifier is created, which spells out as un-

un- takes scope at QP, but sad already contains a Neg-feature with QP-scope

building the tree in (19) violates the functional sequence, since we now have a sequence &lt;Neg, Neg, Q&gt;

*unsad is representative of a more general pattern where negative markers having identical scope positions cannot be stacked:

(20)

a. *ununhappy
b. *He isn’t not happy

negative markers with different scope positions are stackable:

(21)

a. He isn’t sad.
b. He’s not sad.
c. He isn’t not sad.
d. He isn’t unhappy.
e. He’s not unhappy.
f. ?He isn’t not unhappy

the restriction against prefixing negative adjectives with un- extends to derived negative adjectives: nouns suffixed with -less resist un-prefixation:
(22) breath breathless *unbreathless not breathless
  sense senseless *unsenseless not senseless
  use useless *unuseless not useless
  mercy merciless *unmerciless not merciless

Table 2: -less (BNC, COCA)

<table>
<thead>
<tr>
<th></th>
<th>N-less</th>
<th>un-N-less</th>
<th>not N-less</th>
</tr>
</thead>
<tbody>
<tr>
<td>breath</td>
<td>459</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>BNC</td>
<td>1,505</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>senseless</td>
<td>175</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BNC</td>
<td>1,088</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>merciless</td>
<td>122</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BNC</td>
<td>611</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>useless</td>
<td>1,244</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>BNC</td>
<td>4,529</td>
<td>0</td>
<td>20</td>
</tr>
</tbody>
</table>

▷ these contrast with positive noun-derived adjectives ending in -ful:

(23) success successful unsuccessful not successful
  law lawful unlawful not lawful
  event eventful uneventful not eventful

Table 3: -ful (BNC, COCA)

<table>
<thead>
<tr>
<th></th>
<th>N-ful</th>
<th>un-N-ful</th>
<th>not N-ful</th>
</tr>
</thead>
<tbody>
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<td>921</td>
<td>59</td>
</tr>
<tr>
<td>BNC</td>
<td>40400</td>
<td>2711</td>
<td>275</td>
</tr>
<tr>
<td>lawful</td>
<td>503</td>
<td>896</td>
<td>5</td>
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<td>BNC</td>
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<td>892</td>
<td>12</td>
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<td>1</td>
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<tr>
<td>BNC</td>
<td>255</td>
<td>429</td>
<td>1</td>
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</table>

▷ this suggests that -less spells out the same features as un- (plus an additional a-feature, since it adjectivises nouns):
(24) \[ \text{NegP} \Rightarrow \text{less} \]

\[ \text{Neg} \quad \text{QP} \]

\[ \text{Q} \quad \text{aP} \]

\[ \text{a} \]

\(\triangleright\) the tree of *unuseless:

(25) \[ \text{NegP} \]

\[ \text{NegP} \Rightarrow \text{un-} \quad \text{Neg}' \]

\[ \text{Neg} \quad \text{QP} \]

\[ \text{Neg} \quad \text{NegP} \Rightarrow \text{-less} \]

\[ \text{Q} \quad \text{Neg} \quad \text{QP} \]

\[ \text{Q} \quad \text{aP} \]

\[ \text{a} \quad \text{nP} \Rightarrow \text{use} \]

\(\triangleright\) not shown here: nP moves into SpecNegP to derive the suffixal nature of -less

\(\triangleright\) (25) has the same violation of the fseq as unsad in (19): <Neg, Neg, Q, a>

5.4 Not + adjective

\(\triangleright\) not minimally spells out a negative FocP, and possibly also a TP

\(\triangleright\) the tree for john is not happy is given in (26) (various details omitted):
happy is spelled out in the usual way

- in a parallel derivation, a complex specifier is created, which spells out as not
- the complex specifier takes scope at TP
- all the parts of the tree respect the functional sequence
- a negative adjective adds a Neg-feature and a NegP in the main spine, but for the rest works identically:
(27)

```
AgrSP
   NP  AgrS'
      John
      AgrS  NegP
          is  Neg
              Neg P  Neg'
                  Neg  TP  Neg  TP
                      T  FocP  T  FocP
                          Foc  DegP  Foc  vP
                              Deg  QP  v  DegP
                                  Q  Deg  NegP  ⇒  sad
                                      Neg  QP  aP
```

▷ all the parts of the tree continue to respect the functional sequence

**Summary**

▷ *unsad* involves a restriction against the stacking of two Neg-features with identical scope, violating the $f_{seq}$

▷ the same restriction is observed (in a different form) in *ununhappy* and *unuseless*

▷ this analysis improves on (2), in that there is a principled reason why negative affixes do not combine with negative adjectives

▷ *not sad* is good because two different Neg-complexes, with different scope positions, are stacked.
6 Further support

▷ we discuss a similar restriction against stacking two negative features with identical scope, but not involving morphological negation
▷ this provides a further argument against (2)

6.1 on- (Dutch)

▷ the restriction observed in (1) above holds identically in Dutch, i.e. the prefixal negative marker on- ‘un’ combines only with positive adjectives:
▷ negative adjectives can be negated with niet ‘not’ (e.g. niet droef ‘not sad’).

(28) ongelukkig/*ondroef, *ontriest
    onverstandig, onwijs/*ondom
    ongezond, onwel/*onziek
    oninteressant/*onvervelend, *onsaai
    onfraai/*onlelijk
    ongemakkelijk/*onmoeilijk
    onprettig/*onvervelend

    ‘unhappy/unsad’
    ‘unwise/unfoolish’
    ‘unhealthy, unwell/unsick’
    ‘uninteresting/unboring’
    ‘unnice/unugly’
    ‘uneasy/undifficult’
    ‘unpleasant/unannoying’

▷ Corpus data: Corpus Hedendaags Nederlands, approx. 50m words
Table 4: on- (CHN)

<table>
<thead>
<tr>
<th>PosAdj</th>
<th>unPosAdj</th>
<th>NotPosAdj</th>
<th>NegAdj</th>
<th>unNegAdj</th>
<th>notNegAdj</th>
</tr>
</thead>
<tbody>
<tr>
<td>gelukkig</td>
<td>ongelukkig</td>
<td>niet gelukkig</td>
<td>droef</td>
<td>ondroef</td>
<td>niet droef</td>
</tr>
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<td>0</td>
<td>6</td>
</tr>
<tr>
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<td>ontriest</td>
<td>niet triest</td>
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<td>0</td>
<td>27</td>
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<td>verdrietig</td>
<td>onverdrietig</td>
<td>niet verdrietig</td>
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<td>0</td>
<td>44</td>
</tr>
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<td>niet verstandig</td>
<td>dom</td>
<td>ondom</td>
<td>niet dom</td>
</tr>
<tr>
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<td>onziek</td>
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<td>707</td>
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<td>saai</td>
<td>onsaai</td>
<td>niet saai</td>
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<td>vervelend</td>
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<td>niet vervelend</td>
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<td>lelijk</td>
<td>onlelijk</td>
<td>niet lelijk</td>
</tr>
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<td>4,101</td>
<td>0</td>
<td>73</td>
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<td>gemakkelijk</td>
<td>ongemakkelijk</td>
<td>niet gemakkelijk</td>
<td>moeilijk</td>
<td>onmoeilijk</td>
<td>niet moeilijk</td>
</tr>
<tr>
<td>25,422</td>
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<td>85,836</td>
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<td>2,987</td>
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<td>niet actief</td>
<td>passief</td>
<td>onpassief</td>
<td>niet passief</td>
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<td>1</td>
<td>793</td>
<td>2,214</td>
<td>0</td>
<td>115</td>
</tr>
</tbody>
</table>

- the account is the same as for English:
  - negative adjectives spell out a NegP
  - on- is a complex specifier spelling out $Q+\text{Neg}$, which takes scope at $Q$
  - merging on- in the Spec of NegP at QP violates the functional sequence (as shown in the tree in (27) above)

### 6.2 weinig ‘little’ (Dutch)

- additional evidence supporting this analysis comes from the Q-adjectives *veel* ‘much’ and *weinig* ‘little’

(29) a. veel meer meest
   ‘much’ ‘more’ ‘most’

b. weinig minder minst
   ‘little’ ‘less’ ‘least’

- the positive Q-adjective *veel* ‘much’ cannot modify adjectives, suggesting that *veel* is the equivalent of *much* (compare *much tall*)
weinig can modify adjectives:

(30) a. weinig/*veel waarschijnlijk
   little/much likely
b. weinig/*veel geloofwaardig
   little/much credible
c. weinig/*veel verstandig
   little/much intelligent
d. weinig/*veel duidelijk
   little/much clear

interestingly, weinig ‘little’ shows the same restriction as the negative prefix on- ‘un’ in not combining with negative adjectives:

(31) a. weinig actief/*passief
   little active/passive
b. weinig aangenaam/*vervelend
   little pleasant/annoying
c. weinig vriendelijk/*vijandig
   little friendly/hostile
d. weinig duidelijk/*verward
   little clear/confused
e. weinig interessant/*saai
   little interesting/boring

this distributional pattern is the same as in (1), but since weinig ‘little’ is syntactic (not affixal) negation, it is not accounted for by (2).

weinig cannot modify derived adjectives with the negative prefix on-:

(32) a. weinig geloofwaardig/*ongeloofwaardig
   little credible/incredible
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
Table 5: *weinig* (CHN)

<table>
<thead>
<tr>
<th>PosA</th>
<th>On-PosA</th>
<th>NegA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weinig aangenaam</td>
<td>Weinig onaangenaam</td>
<td>Weinig vervelend</td>
</tr>
<tr>
<td>Weinig vriendelijk</td>
<td>Weinig onvriendelijk</td>
<td>Weinig vijandig</td>
</tr>
<tr>
<td>Weinig duidelijk</td>
<td>Weinig onduidelijk</td>
<td>Weinig verward</td>
</tr>
<tr>
<td>Weinig interessant</td>
<td>Weinig oninterestant</td>
<td>Weinig saai</td>
</tr>
<tr>
<td>Weinig geloofwaardig</td>
<td>Weinig ongeloofwaardig</td>
<td></td>
</tr>
<tr>
<td>Weinig verstandig</td>
<td>Weinig onverstandig</td>
<td>Weinig dom</td>
</tr>
<tr>
<td>Weinig aantrekkelijk</td>
<td>Weinig onaantrekkelijk</td>
<td>Weinig afstotelijk</td>
</tr>
<tr>
<td>Weinig actief</td>
<td>Weinig onactief</td>
<td>Weinig passief</td>
</tr>
<tr>
<td>Weinig zichtbaar</td>
<td>Weinig onzichtbaar</td>
<td></td>
</tr>
</tbody>
</table>

*weinig* cannot modify noun-derived adjectives with the negative suffix *-loos* *'-less':

\[(33)\]

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

*weinig* can modify noun-derived adjectives with the positive suffix *-vol* *'-ful':

\[(34)\]

a. *weinig* berouwvol
little remorseful
b. *weinig* begripvol
little understanding
c. *weinig* hoopvol
little hopeful
d. weinig succesvol
   little successful

Table 6: weinig -vol/-loos (CHN)

<table>
<thead>
<tr>
<th>weinig N-loos</th>
<th>weinig N-vol</th>
</tr>
</thead>
<tbody>
<tr>
<td>weinig ademloos</td>
<td>weinig waardevol</td>
</tr>
<tr>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>weinig zinloos</td>
<td>weinig begrippvol</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>weinig genadeloos</td>
<td>weinig hoopvol</td>
</tr>
<tr>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td>weinig nutteloos</td>
<td>weinig succesvol</td>
</tr>
<tr>
<td>0</td>
<td>127</td>
</tr>
<tr>
<td>weinig sfeerloos</td>
<td>weinig sfeervol</td>
</tr>
<tr>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>weinig belangeloos</td>
<td>weinig belangrijk</td>
</tr>
<tr>
<td>0</td>
<td>11</td>
</tr>
</tbody>
</table>

▷ the distributional evidence suggests that negative adjectives (whether underrived, derived with the prefix on-, or the suffix -loos) share an essential property, viz. the presence of a Neg feature
▷ weinig has the same internal makeup as the prefix on- (and closely resembling that of the suffix -loos):

(35) \[ \text{NegP} \Rightarrow \text{weinig, on-} \]

▷ underived negative adjectives also contain a Neg-feature:

(36) \[ \text{NegP} \Rightarrow \text{vervelend} \]

▷ Consider the tree for weinig + positive adjective …:
...and the tree for *weinig + negative adjective, which features the familiar violation of the fseq:

\[
\begin{array}{c}
\text{(37)} \\
\text{NegP} \\
\text{NegP} \Rightarrow \text{weinig} \\
\text{Neg} \quad \text{QP} \\
\text{Neg} \quad \text{QP} \Rightarrow \text{aangenaam} \\
\text{Q} \\
\text{Q} \\
\text{aP}
\end{array}
\]

the same violation will occur with derived negative adjectives:
- *weinig + on + A
- *weinig + A + loos

Summary:
- the Dutch data show the same restriction as English against un-prefixing negative adjectives
- the negative Q-adjective *weinig* ‘little’ also shows this restriction, despite not involving morphological negation
- this provides a further argument against (2), and in favour of our account

7 Some apparent exceptions

d there exist some apparent exceptions to the generalisation that negative adjectives cannot be prefixed with on- ‘un’:
(39) ongecompliceerd ‘uncomplicated’ (compliceren)
onschadelijk ‘harmless’ (schade)
onschuldig ‘innocent’ (schuld)
ondogmatisch ‘undogmatic’ (dogma)

▷ these adjectives are derived from (negative) verbs or nouns
▷ un-prefixation yields the positive pole of the opposition
▷ if there is a negative head (cf. class 4 Fodor et al. 1975), it attaches to the noun or verb
▷ this does not conflict with the higher negative head spelled out by on-

(40) 

```
  NegP
    NegP ⇒ on- Neg
      Neg QP Neg QP ⇒ -ig
        Q Q aP
          a NegP ⇒ schuld
            Neg nP
```

▷ this tree respects the fseq
▷ the analysis also extends to a class of English examples noted in Zimmer (1964) and Horn (1985), where the un-prefix apparently attaches to a negative base:

(41) unharmed (harm)
unsathed (scathe)
undefeated (defeat)
unblamable (blame)
unobjectionable (object)

▷ the negativity of these adjectives derives from a Neg-feature that is embedded more deeply in the structure (or there is no negative feature in the nouns)
▷ un-prefixation does not lead to an illegitimate fseq
8 Positive adjectives resisting un-prefixation

Quite a few positive adjectives resist un-prefixation as well:

(42) *unlong short
    *unwide narrow
    *unwarm cold
    *unhigh low
    *unfast slow
    *unheavy light
    *ungood bad
    *unlight dark

these adjectives (for the most part) represent objectively measurable dimensions (such as length, width, height, temperature, speed)
there is a (predictable) 1:1 relation between these adjectives and their polar opposites
the negative adjectives block their un-prefixed positive counterparts
they contrast with adjectives that represent more subjective dimensions:

(43) unwise foolish
    unkind rude
    unfriendly rude
    uneasy hard, difficult
    unhappy sad
    unhealthy sick, ill

there is not always a 1:1 relation between these adjectives and their polar opposites
there are (subtle) meaning differences between the un-prefixed positive adjectives and their negative counterparts

9 Conclusion

Summary:
we discussed the following puzzle in gradable adjectives:
un- does not combine with negative adjectives
Dutch weinig does not combine with negative adjectives (whether lexically negative, or negative through affixation)

we developed an account of these restrictions in a nanosyntactic framework, that relies on the following assumptions:

- the difference between positive and negative gradable adjectives is a difference in size
- the way un- and weinig take scope leads to an illegitimate functional sequence if they combine with a negative adjective

the polarity restrictions disappear in a number of cases:

- with the sentential negative marker not
- with negative adjectives that derive from negative nouns or verbs

these cases do not lead to a violation of the $f_{seq}$, because the multiple Neg features are separated by intervening levels of structure

References


Zimmer, Karl. 1964. *Affixal negation in English and other languages* Supplement to *Word*, Monograph No. 5.