1. Introduction

Raising-verb ‘seem’ is acquired late by typically-developing children (Wexler, 2004; Orfitelli, 2012).

A hypothesis: children’s brain is not mature enough yet to compute raising (Wexler, 2004).

As predicted under this hypothesis, the Dutch equivalents of ‘seem’, schijnen and lijken, are acquired late as well (Koring & Wexler, 2009).

But, interestingly, schijnen and lijken are not acquired at the same time.

Puzzle: Why is there a difference in timing of acquisition?

Both schijnen and lijken are raising-verbs and as such the problem cannot reside in raising itself.

The goal of this talk is to explore the properties of these verbs to find out what causes the delay in acquisition of schijnen.

More in particular, the goals are:

- Investigate the distribution of these verbs
- Define their evidential semantics
- Relate the distributional properties to the semantics as defined
- Define the additional complexity of schijnen in acquisition

2. Distribution

Schijnen and lijken are not as similar as their translation to ‘seem’ would predict.

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Both verbs are evidential, but they encode for a different source of information.

<table>
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<tr>
<th>Lijken:</th>
<th>there is direct, but unclear evidence for ( p ) (van Bruggen, 1980; cf. Rooryck, 2000)</th>
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<tr>
<td>Schijnen:</td>
<td>speaker has indirect reported evidence for ( p ) (Vliegen, 2011; cf. De Haan, 1999, 2007)</td>
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Haegeman (2006) showed that there are differences in distribution. In particular, *schijnen* is much more restricted in its distribution than *lijken* is.

**Modals**

(1) Hij kan *soms* erg aardig *lijken/*schijnen, maar dan opeens wordt hij afstandelijk

‘At times he may seem very nice, but then all of a sudden he becomes distant.’

(Haegeman 2006a:497 (28a-b))

**Auxiliaries**

(2) Het *postmodernisme heeft* de grond onder de wetenschappelijke traditie *lijken/*schijnen te willen wegwen

‘It seems as if postmodernism has tried to demolish the foundations of the scientific tradition’

(Haegeman 2006a:497 (29a-b))

There are different ways to account for these ordering restrictions:

(i) Restrictions on syntax (Cinque, 1999; Cinque & Rizzi, 2008; Haegeman, 2006)


The differences in distribution follow from a semantic difference between the verbs

**I) Subjectivity:**

Speaker asserts \( Q \) in a context \( c \)

(a) The modal base on which \( Q \) is based is subjective iff \( G_c=\{\text{speaker}\} \)

(i.e. it is only the worlds in the speaker’s belief set that are quantified over. This is the solipsistic, special case.)

(b) otherwise, the modal base on which \( Q \) is based is non-subjective


Subjective elements behave like Positive Polarity Items (PPIs) (Giannakidou, 2011; Ernst, 2009). As such, they cannot be embedded under nonveridical operators. (cf. Papafragou, 2006 for the argument that subjective epistemic modals have a more limited distribution)
• An operator “F is veridical if Fp entails or presupposes the truth of p. If inference to the truth of p under F is not possible, F is nonveridical” (Giannakidou, 2011: p. 1674) (e.g. modals, negation, conditionals, question).

The following will show that, indeed, schijnen cannot be embedded under nonveridical operators whereas lijken can be embedded:

**Negation**

(3a) Sophia lijkt niet thuis te zijn
Sophia SEEMS<↓> not home to be
’Sophia doesn’t appear to be at home’
(i) lijken > negation: It appears to be the case that Sophia is not home (current situation has perceptual similarities to not-p situation)
(ii) negation > lijken: It doesn’t appear to be the case that Sophia is home (current situation does not have similarities to p-situation, e.g. speaker concludes from Sophia’s car missing that Sophia doesn’t appear to be home, although in fact she might be)

(3b) Sophia schijnt niet thuis te zijn
Sophia SEEMS<↑> not home to be
’Sophia is not said to be at home’
(i) schijnen > negation: It is the case that the speaker has heard that Sophia is not at home
(ii) #negation > schijnen: It is not the case that the speaker has heard that Sophia is home

**Conditionals** (also observed by Haegeman, 2006)

(4) Als de koorts lijkt/*schijnt te stijgen, dan moet je hem paracetamol geven
If the fever SEEMS<↓/*↑> to increase, then must you him paracetamol give
‘If the fever seems to be increasing, you should give him paracetamol

**Questions**

*In a context in which only A can see the house, B might ask:*

(5a) Lijkt Sophia thuis te zijn?
Seems<↓> Sophia home to be
Does it appear to be the case that Sophia is home?

*In a context in which A knows that B talked to C (a friend of Sophia), A might want to ask B:*

(5b) *Schijnt Sophia thuis te zijn?
Seems<↑> Sophia home to be
But also, factive predicates (also observed by Haegeman, 2006):

(6) Het is verrassend dat Superman jaloers lijkt/*schijnt te zijn op Lois
   It is surprising that Superman jealous SEEMS<LM> to be of Lois
   ‘It’s surprising that Superman seems to be jealous of Lois’
   (adapted from Papafragou, 2006)

3. Subjective *lijken*

Interestingly, *lijken* can be made subjective by adding a first person pronoun:

(7) Sophia lijkt me thuis te zijn
   Sophia seems<LM> to-me home to be
   ‘Sophia must be at home’

*Lijkt-me* : the speaker has inferential evidence for *p*

*Lijkt-me* has the same distribution as *schijnen*, not *lijken*

Conditionals

(8) *Als de koorts mij lijkt te stijgen, dan moet je hem paracetamol geven*
   If the fever to-me SEEMS<LM> to increase, then must you give him paracetamol
   ‘If I infer that the fever is increasing, you should give him paracetamol

Negation

(9) Marko lijkt me niet ziek te zijn
   Marko SEEMS<LM> to-me not ill to be
   ‘I infer that Marko is not ill’

(i) *lijkt-me > negation*: I infer that Marko is not ill: From the fact that I saw him yesterday working out in the gym, I infer that he is not ill

(ii) *#negation > lijkt-me*: It is not the case that I infer that Marko is ill

Questions

(10a) *Lijkt Marko me ziek te zijn?*
    SEEMS<LM> Marko to-me ill to be?
    ‘Do I infer that Marko is ill?’

(10b) Lijkt Marko je ziek te zijn?
    SEEMS<LM> Marko to-you ill to be?
    ‘Does Marko seem to you to be ill?’
Modals

(11a) *Sophia kan me soms een heel slecht humeur lijken te hebben
Sophia can to-me sometimes a very bad mood seem to have
‘Sophia can sometimes appear to be in a bad mood’

(11b) Sophia kan soms een heel slecht humeur lijken te hebben
Sophia can sometimes a very bad mood seem to have

Auxiliaries

(12) *Het postmodernisme heeft mij de grond onder de
The postmodernism has to-me the ground under the
wetenschappelijke traditie lijken te willen wegvagen
scientific tradition SEEM to want away-sweep

4. Intermezzo: modality and evidentiality

Following Izvorski (1997), Matthewson et al. (2007), Faller (2011) among others, schijnen and lijken are analyzed as modals (they depend on a modal base) (cf. Speas, 2008) in Kratzer’s possible worlds framework (1977 and subsequent work). They (some) differ from epistemic modals in the contents of the modal base (Faller, 2011). This has implications for the speaker’s attitude regarding the truth of the embedded proposition.

- If a speaker makes an inference, the proposition should be likely to be true for the speaker (Murray, 2009). The modal base consists of speaker’s knowledge.

(13) Anneloes lijkt me thuis te zijn, maar dat is niet zo
‘I infer that Anneloes is at home, but she’s not’

- But the speaker can acknowledge that the inference might be mistaken:

(14) Anneloes lijkt me thuis te zijn, maar ik kan het verkeerd hebben
‘I infer that Anneloes is at home, but I can be mistaken’

- If the modal base consists of what is perceived, p is not necessarily likely to be true for the speaker. Perceptions might be fallible.

(14) Anneloes lijkt thuis te zijn, maar dat is niet zo
‘Anneloes appears to be at home, but she’s not’

- If the modal base consists of reports, the proposition is not necessarily true for the speaker: reports might be false. However, at first sight, it doesn’t seem to be the case that the proposition can be negated.

(15) Anneloes schijnt thuis te zijn, maar dat is niet zo
‘Anneloes is said to be at home, but she’s not’

- But, the speaker might not believe the report:
(16) Anneloes schijnt thuis te zijn, maar ik geloof er niets van.
Anneloes seems home to be, but I believe there nothing of
‘I’ve heard that Anneloes is at home, but I don’t believe it’

• Or, the speaker might have a contrasting information source:
In a context in which the speaker was skimmed and so lost money from her bank account and contacted the bank to settle this, the speaker might say afterwards:

(17) Het geld schijnt al overgemaakt te zijn, maar ik heb nog niets op mijn bankrekening gezien.
The money SEEMS already transferred to be, but I have still nothing on my bankaccount seen
‘They told me that they transferred the money, but I haven’t seen it yet on my account.’

5. Semantics and implications

(II) Semantics of schijnen:

• \( f_s(i) = \{p \mid p \text{ is the content of what is said at } i \} \) (adapted from Faller, 2011)
• \( [[\text{Schijnen}(p)]]_{c,i} = 1 \text{ iff } \forall x \in G_c: \forall w' \in f_s(i): [[p]]_{c,w'} = 1 \text{ and } G_c = \{\text{speaker}\} \text{ thus schijnen is subjective} \)
  (i.e. the speaker has reported evidence about p and in all worlds corresponding with this evidence p is true)

Cannot be disagreed with:

(18) A: Keith schijnt goed te kunnen surfen
Keith SEEMS good to can surf
‘I’ve heard that Keith is a good surfer’
B: No that’s not true
(i) Keith is not a good surfer
(ii) You weren’t told that he is a good surfer

(III) Semantics of lijken:

• \( f_{pe}(i) = \{p \mid \text{the event described by } p \text{ is perceived at } i\} \) (adapted from Faller, 2011)
• \( [[\text{Lijken}(p)]]_{c,i} = 1 \text{ iff } \forall x \in G_c: \exists w' \in \max_{gs} (\cap f_{pe}(i)): [[p]]_{c,w'} = 1 \text{ and } G_c = \{\text{potential} \} \text{ contains more than one member and is thus non-subjective} \)
  (i.e. the speaker (a member of the group) has perceptual evidence for p and what is perceived resembles a situation in which p is true)

Can be disagreed with:

(19) A: Keith lijkt te zijn een goede surfer
Keith appears to be a good surfer
B: Nee dat is niet waar
No that’s not true
(i) Keith is not a good surfer
(ii) Keith doesn’t appear to be a good surfer although he might be
(IV) Semantics of *lijkt-me*:

- $[[\text{lijkt-me (p)}]]^{c,i} = 1 \iff \forall x \in G_c: \exists w' \in \max_{cd}(\bigcap h(i)): [[p]]^{c,w'} = 1$ and $G_c = \{\text{speaker}\}$

thus *lijkt-me* is subjective
(i.e. speaker has inferential evidence for p and p is thus a good possibility)

Cannot be disagreed with:

(20) A: Keith *lijkt-me* to be a good surfer
B: No that’s not true
   (i) Keith is not a good surfer
   #(ii) You didn’t infer that he is a good surfer

5.1 What do we get?

1. Distribution: PPIs vs. non-PPIs
2. *Lijkt-me*: PPI behavior
3. Acquisition: both *schijnen* and *lijkt-me* acquired later than *lijken*

Relation between subjectivity and PPI-behavior:
- If subjective, an element contributes not-at-issue content
- Not-at-issue content cannot be put under discussion (Murray, 2009; cf. Faller, 2006)

Nonveridical contexts force an evaluation; whereas not-at-issue content cannot be evaluated.
- Also factive predicates force an evaluation.

5.2 Acquisition

Subjective elements are acquired later than non-subjective ones (Koring & De Mulder, in prep.):

*Lijken before Schijnen; Lijkt-me*

Why are subjective elements difficult to acquire?
- It cannot be the conceptual complexity per se
- They require taking the speaker’s perspective
- They contribute not-at-issue content
  - Mapping Hypothesis (Snedeker & Gleitman, 2004)
6. Discussion

Two sources of variation can be identified:
(i) How restricted is the group?
(ii) What does the modal base contain?

Open questions

- Why does the group seem to be more restricted for evidentials in the form of bound morphemes than “modal” evidentials?
- What are the restrictions on the modal base, and related, what is evidence? (cf. Speas, 2004, 2008; McCready, 2011; Schenner, 2012)
- How does this analysis relate to other PPIs?

7. References


