



## The debate on gradable possibility

- The gradability of modals has received considerable attention in recent literature.
- Some modals are indisputably gradable: *Men are more likely to be incarcerated than women.*
- But there is disagreement about possibility modals:
  - English *possible* is gradable (Lassiter 2011)
    - %It is **possible** that the Jets will win, but it could be more possible. [La11]
  - Possible* is not gradable (Klecha 2012, Portner 2009)
 

Only 0.18% of uses of *possible* in the spoken COCA corpus (Davies 2008-) were in the comparative [K112]

    - Like *dead, American, right* ... (≈0.15%)
    - Unlike *likely* (18%)
    - Unlike gradable adjectives (*big, small, tall* ...) (≈9%)

## Puzzle: German *eh* + possibility modals

Data from German have been taken to suggest that *eh* is an ordinary comparative and that the limited availability of English *more possible* is an uninteresting gap (Kratzer 1981, 2012):

- Der G.-M. **kann eh** der Mörder sein als der K.  
The G.-M. **can EHER** the murderer be than the K.  
'Gauzner-Michl is more likely to be the murderer than Kastenjakl.' [Kr81]
- Dies ist auf regional/lokaler Ebene **eh** möglich, als auf der staatlichen Ebene.  
This is on regional/local level **EHER possible** than on the national level [Web]  
'This is more likely possible on a regional than on a national level.'

## *Eher* is not *-er*

- Ordinary comparative *-er* is ungrammatical with *möglich* 'possible':

| Base form             | Comparative form                                |
|-----------------------|---|
| <i>häufig</i>         | <i>häufig-er</i> 'more frequent'                |
| <i>groß</i>           | <i>größ-er</i> 'bigger'                         |
| <i>wahrscheinlich</i> | <i>wahrscheinlich-er</i> 'more probable/likely' |

- Dies ist auf regionaler Ebene **\*möglich-er** als auf staatlicher Ebene. (Cf. (3))

The fact that *möglich* can seemingly combine with *eh* but not *-er* parallels prototypical non-gradable adjectives:

- Nach diesem Experiment werden (**eh**) die Mäuse in Gruppe 1 after this experiment will **EHER** the mice in group 1 (**eh**) **tot/\*tot-er** sein als die Mäuse in Gruppe 2. **EHER dead/dead-er** be than the mice in group 2 (With *eh*: 'I think it's more likely that after this experiment the mice in group 1 will be dead, rather than those in group 2.')

## The meaning of *eh* vs. *-er*

Though gradable adjectives appear with both *eh* and *-er*, the resulting interpretations differ:

- Eva ist **größ-er/eh** groß als Maria.  
(✓/?? ... but Eva is not tall.)

### tall-COMP:

- Eva's height > Maria's height
- Eva's height need not exceed the contextual standard for tallness

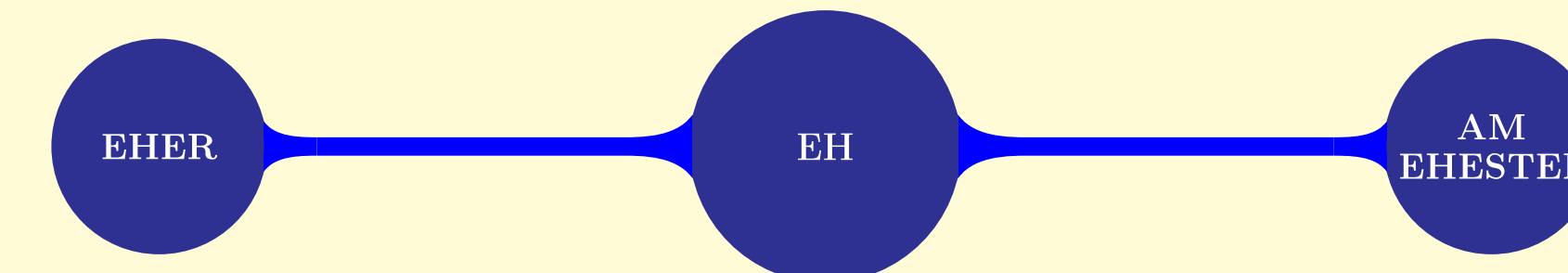
### EHER tall:

- Claim expresses more confidence that Eva is tall than that Maria is
- If conjecture is true,  $[[Eva [POS tall]]]$  is true

## Main claims

- Eher* is semantically complex, not a simple comparative morpheme
- Its internal complexity explains why it can combine with modals of possibility
- The combination of *eh* with possibility modals is not an argument that these modals are gradable

## Analysis: *eh* + *er*



*Eher* is semantically complex, consisting of *eh* and *-er*:

**I.** *Eh* is an epistemic predicate relating a proposition *p* to the degree to which *p* is epistemically clear to a contextually salient individual *z*. In a declarative, *z* is typically the speaker; in a question, it is the addressee (cf. Zimmermann 2004, McCready 2007).

- $[[eh]]^z = \lambda p. \lambda d. p$  is *d*-clear to *z*

Clarity relates to inference or deliberation on the part of *z* (like epistemic *must*; von Stechow 2011). It is infelicitous to compare propositions that are obviously true with *eh*.

**II.** *-er* in *eh-er* is a clausal comparative (consistent with Lechner 2001, 2004): it takes two sets of degrees as arguments, and requires the maximal degree of the second to be greater than the maximal degree of the first (von Stechow 1984).

- $[[er]] = \lambda P_{\langle d,t \rangle}. \lambda Q_{\langle d,t \rangle}. \max(Q) > \max(P)$

**Derivation** of *Eva ist eher groß als Maria*:

- $[er [than eh tall Maria is] [eh Eva is tall]]$
- $[[eh Maria/Eva is tall]]^z = \lambda d. [[Maria/Eva is tall]]$  is *d*-clear to *z*
- $[[er]]^z ([[than eh tall Maria is]]^z) ([[eh Eva is tall]]^z) = \max(\lambda d. [[E. is tall]] \text{ is } d\text{-clear to } z) > \max(\lambda d. [[M. is tall]] \text{ is } d\text{-clear to } z)$

**Degrees of clarity?** Intuitively, a proposition has a higher degree of clarity than another if an individual has better or more reasons to infer it from their indirect evidence (possible implementations: credence function, differentiation of ordering source propositions).

## Immediate consequences

- Doubling the comparative: unlike \*'more taller', 'eh taller' is grammatical and sensible since *eh* does not grade the adjective.
- Der Hirscher ist **eh** schneller als der Ligety als der Matt.  
The Hirscher is **EHER** faster than the Ligety than the Matt  
'Hirscher is more likely than Matt to be faster than Ligety.'
- Eher* on its own: due to its decomposition, *eh* need not grade any (additional) predicate. (Compare with (2))
- Der G.-M. ist **eh** der Mörder als der K.  
The G.-M. is **EHER** the murderer than the K.  
'It seems more likely that G.-M. is the murderer than K.'

## More possible?

- When a modal of possibility (*möglich, kann*) appears with *eh*, what is compared is not possibility itself but epistemic commitment to the possibility of the embedded proposition.

$[er [than eh possible on the national level]]$  (LF of (3))  
 $[eh possible on a regional/local level]]$

$\max(\lambda d. [[It is possible on a regional/local level]] \text{ is } d\text{-clear to } z) > \max(\lambda d. [[It is possible on the national level]] \text{ is } d\text{-clear to } z)$

- Similarly with deontic modals, *eh* does not grade permissibility: 'EHER permissible' = 'more clearly permissible'
- Analyses that attribute gradability to 'possible' lead us to expect the modal in comparative constructions; expectation is not met.
- A traditional view of the modal as an existential quantifier is supported (coercion aside).

- $[[möglich/possible]] = \lambda p \lambda w. \exists v. v \in Acc(w) \& p(v)$

## Further issues

- Eh* is not found on its own except as a discourse particle meaning 'anyways, obviously'.

- Hast Du **eh** die Fenster zugemacht?  
Have you **EH** the window closed  
'You did close the window, didn't you?' (Austrian, Bavarian)

- Meaning seems related to (7): there is no reason to doubt the pre-jacent, which holds independently of the content of the conversation.
- Historically, *eh(-er,-est)* develop from Gothic *air* 'early(-ier,iest)'; temporal meaning is archaic but partially available to speakers (*seit eh und je* 'from time immemorial').

## Conclusions

- Eher* is complex: *eh* 'epistemically clear' + clausal comparative.
- Like in English, 'possible, can' seem to be ungradable in German.
- The inference from *wahrscheinlich* 'likely' to *möglich* 'possible' is clearly valid but does not prove that the items share a scale.

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