Gradable possibility and epistemic comparison

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Abstract While some modals readily appear in comparative constructions and are clearly gradable (e.g., likely as in p is more likely than q), the gradability of possibility modals (e.g., possible) is controversial. We argue that one of the major reasons to think that possibility modals can be graded, namely the appearance of German possibility modals like möglich ‘possible’ and kann ‘can’ in a special comparative construction involving eher, does not withstand closer scrutiny. We argue that eher is not a simple comparative marker and propose an analysis of eher möglich in which degrees of epistemic commitment are compared, not degrees of possibility. Our analysis explains similarities between eher and epistemic modals in terms of individual orientation, inference, and interaction with attitude predicates. Certain striking similarities between eher and METALINGUISTIC COMPARATIVES are discussed, with notable differences in modality type and distribution arguing against the conflation of these two constructions and contributing to a deeper understanding of special comparative constructions across languages.

Keywords: Modality, gradability, comparatives, superlatives, epistemic predicates, German

1 Introduction: German eher and the debate on gradable possibility

The question of whether, or to what extent, modal predicates exhibit features of GRADABILITY has received considerable attention in the recent literature on modality. The modals in (1) are indisputably gradable: they are grammatical in comparatives and equatives, degree questions, and other degree constructions.\(^1\)

\(^1\) Note that we use the term modals to refer to modal expressions in general, and not narrowly to the class of modal auxiliaries.
modals span a wide range of modality types. They include epistemic-circumstantial modals such as likely, probable and chance, as well as priority modals (e.g., desirable, important as in (1a)) and ability modals (for example, capable of in (1b)).

(1)  
a. It is **more desirable** to have some form of socialized medicine than a system of medical care relying on the private sector.  
b. He demonstrates that museums, their contents, and their manners of display are **as capable** of influencing visitors as speeches or advertisements . . .  
c. How **likely** is a young man in the U.S. to be incarcerated?  
d. Success is somewhat/rather/highly **probable**.

Since gradable modal adjectives have the grammatical footprint of ordinary non-modal adjectives, their properties have recently been discussed within a more general theory of adjective meaning (Portner 2009; Yalcin 2010; Lassiter 2010, 2011; Klecha 2012, 2014; Portner & Rubinstein 2016). This work has primarily been carried out assuming a degree-based classification of scale types, following Kennedy (1997); Rotstein & Winter (2004); Kennedy & McNally (2005); Kennedy (2007). Focusing on the epistemic-circumstantial triplet certain-likely-possible, researchers tend to agree on the classification of likely as a RELATIVE adjective, similar to big or tall. Certain, in contrast, seems to have more in common with (maximum-standard) ABSOLUTE adjectives like full (see Kennedy & McNally 2005) and in some ways behaves like an EXTREME adjective (Portner & Rubinstein 2016). (See Lassiter 2011 and Klecha 2014 for details of applying the scalar diagnostics to modal adjectives.)

What about possibility modals? Kratzer (1981, 1991) famously draws attention to gradability in the modal domain, specifically discussing the fact that the noun possibility can be modified by degree modifiers like good and slight. Kratzer provides definitions for notions like good possibility that—although not compositional—derive the entailment relations between a number of related expressions of possibility (e.g., the entailment from (2a) to (2c) and from (2b) to (2c); Kratzer 1991: 645).

(2)  
a. There is a **good possibility** that Michl is the murderer.  
b. There is a **slight possibility** that Michl is the murderer.

2 In referring to modality types (or “flavors”) below, we follow Portner’s (2009) terminology. **Priority modality** encompasses possibilities and necessities that relate to some priority, subsuming modalities that derive from the law (deontics), from desires (bouletics), and from goals (teleologicals).


5 We remain non-committal with respect to whether degrees are to be thought of as numbers (a natural approach if one identifies likelihood with the scale of probability; see Portner 2009: 75) or as equivalence classes of other types of objects (Kamp 1975; Cresswell 1977; Klein 1980).
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c. Michl might be the murderer.

As far as modal adjectives are concerned, entailment relations and scalar implicatures between *certain*, *likely*, and *possible*, summarized in (3), have motivated a uniform treatment of all members of this family as gradable predicates that measure degrees on the same scale (Lassiter 2010, 2011, 2017). It is worth noting, however, that “co-scalarity” is just one way of framing an explanation of these patterns, and that alternative approaches have been pursued (a hybrid scalar-quantificational approach is one such option; see Yalcin 2010; Klecha 2012, 2014).

(3) a. It is **certain** that $q$ entails It is **likely** that $q$ entails It is **possible** that $q$.
   b. It is **possible** that $q$ implicates It is **not likely/certain** that $q$.

Data pertaining directly to *possible*, i.e., the question of whether or not it is a gradable predicate, has been a topic of debate. Lassiter (2011, 2017) maintains that *possible* is a minimal standard gradable in English, providing examples like (4).

(4) a. It is **possible** that the Jets will win, but it could be **more possible**. (Lassiter 2011)
   b. In a tense situation, it’s **slightly possible** that an asteroid entering our atmosphere could trigger a nuclear war. (Lassiter 2017)

He notes, however, that some speakers “express discomfort” with *more possible* is such examples, “preferring *more likely* even for small values” (ibid.). Klecha (2012) capitalizes on this judgment of discomfort to deny that *possible* is gradable in the first place. He reports the judgements in (5a), complementing Portner’s judgments in (5b). *Possible* appears to be degraded in the comparative and with other degree modifiers. It is compatible with modifiers like *quite* and *entirely/completely*, but only in what are arguably non-gradable uses of these modifiers.

(5) a. It is *more/*very/*so/*too/*OK *quite/*rather possible that the ball is in his left hand. (Klecha 2012)
   b. It is *extremely/?more/entirely/completely possible that ... (Portner 2009)

6 Lassiter (2011) interprets the fact that all three modal adjectives accept proportional degree modifiers, as in *It is 85% possible/likely/certain that*, as further evidence that they are scale-mates. He proposes that this scale is the scale of probability: a ratio scale that is both lower and upper bounded. Klecha (2012) challenges this conclusion by pointing out that $n\%$ is the only proportional modifier that is acceptable with all three modals, whereas *half (way)* or *three quarters* are degraded; ratio modifiers (like *twice as*) seem possible only with *likely* although they are predicted to occur with any gradable predicate that is associated with a ratio scale (*It is twice as *possible/*certain that it will rain today as it is that it will snow*).

7 See Lassiter (2011: §3.4.3.2), Klecha (2012: §2.1) for discussion.
Klecha (2014) also notes that degree modification has a significant negative effect on the acceptability of sentences with possible as rated by participants in an Amazon Mechanical Turk study. Similarly, he notes that out of 3,793 tokens of possible in the spoken section of the Corpus of Contemporary American English (Davies 2008–), in only 2 cases (0.05%) the modal appears with more/-er. Possible generally does not occur with degree modifiers in this corpus.\footnote{Exceptions are quite possible and very possible, of which the former seems to be truly grammatical and not a case of coercion. Klecha (2014) analyzes quite as an intensifier and not a degree modifier in this case.} When the adjectives were clustered on the basis of their co-occurrence with degree modifiers, possible patterned with non-gradable adjectives like pregnant, American and true (pp. 43-45).

In sum, it seems that while there may be theoretical considerations that would make it appealing to posit a gradable possible, empirical data in English do not lend strong support to this view.

Of course, the relative ungrammaticality of more possible may be idiosyncratic to English. Indeed, Kratzer (1981, 2012) brings to light intriguing German data that suggest that possibility modals may in principle be gradable. Her point pertains to adjectival möglich ‘possible’ as well as the verb kann ‘can’. Both, she observes, are grammatical in the following comparative construction:

(6) Der Gauzner-Michl kann eher der Mörder sein als der Kastenjakl.  
The Gauzner-Michl can EHER the murderer be than the Kastenjakl  
‘Gauzner-Michl is more likely to be the murderer than Kastenjakl.’ (Kratzer 1981: 297)

(7) Dies ist auf regionaler Ebene eher möglich als auf staatlicher.  
This is on regional level EHER possible than on national  
‘It’s more likely that this is possible on a regional than on a national level.’\footnote{Slightly modified from http://www.aebr.eu/files/publications/interreg_97.de.pdf, accessed June 17, 2014.}

The glosses in (6) and (7) seem to indicate that the limited availability of English more possible is merely an uninteresting gap. We will argue that these glosses are not quite accurate and that a careful look at the semantic contribution of eher reveals that it is not a simple comparative, and that consequently the co-occurrence of eher with a modal like möglich or kann does not provide an argument that possibility modals are gradable.

We argue in particular that eher is semantically complex, consisting of an inferential epistemic predicate, eh-, and a clausal comparative marker -er. A more accurate (though somewhat over-explicit) gloss of (6) thus says that the speaker is more inclined to believe that Gauzner-Michl is the murderer than that Kastenjakl

\footnotesize

8 Exceptions are quite possible and very possible, of which the former seems to be truly grammatical and not a case of coercion. Klecha (2014) analyzes quite as an intensifier and not a degree modifier in this case.

is. Our analysis further explains why *eher* creates an illusion of grading possibility when it combines with *möglichkann*.

The rest of the paper is structured as follows. In section 2 we show distributional and semantic differences between *eher* and the ordinary comparative *-er* (section 2.1). Building on this we present a (de)compositional analysis of *eher* as comparing epistemic commitment (section 2.2). Section 2.3 draws immediate consequences of the analysis, and section 2.4 deals with the interaction between *eher* and attitude predicates. In section 3 we return to the debate on gradable possibility. Based on our analysis of *eher möglichekann* we conclude that the German construction offers no reason to treat ‘possible’ as a gradable predicate. In this section we also discuss additional constructions in German that at first sight seem to support the gradability of *möglichekann*. Section 4 compares *eher* and another special comparative construction, namely the metalinguistic comparative. We note that despite some affinities they cannot readily be reduced to one another. Section 5 concludes and presents issues left for future research.

## 2 Epistemic comparison

A close look at the German data reveals important differences between *eher* and *-er*, both in terms of their distribution and in terms of their semantic contribution. These differences cast doubt on an analysis of *eher* as an ordinary comparative morpheme and point to an element of epistemic comparison in its interpretation.

### 2.1 Differences between *eher* and *-er*

**Distributional differences**  In German, comparative forms are obtained by adding *-er* to an adjective, irrespective of the number of syllables it has.\(^\text{10}\)

<table>
<thead>
<tr>
<th>Base form</th>
<th>Comparative form</th>
</tr>
</thead>
<tbody>
<tr>
<td>häufig</td>
<td>häufig-<em>er</em> ‘more frequent’</td>
</tr>
<tr>
<td>groß</td>
<td>größ-<em>er</em> ‘bigger’</td>
</tr>
<tr>
<td>wahrscheinlich</td>
<td>wahrscheinlich-<em>er</em> ‘more probable/likely’</td>
</tr>
</tbody>
</table>

**Table 1** Ordinary comparative inflection of German adjectives.

Strikingly, whereas the comparative form of the modal *wahrscheinlich* ‘likely’ is formed in this way, the ordinary comparative *-er* does not readily combine with

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\(^\text{10}\) As seen in Table 1, with the addition of the suffix the vowel in the stem may change.
möglicher ‘possible’: the following sentence is ungrammatical, in sharp contrast to our previous example (7).11

(8) Dies ist auf regionaler Ebene *möglicher als auf staatlicher.
This is on regional level possible-COMP than on national

The fact that möglicher can co-occur with eher but cannot combine with the comparative morpheme -er parallels exactly the behavior of prototypical non-gradable adjectives, e.g., schwanger ‘pregnant’ below.12

(9) Maria ist eher schwanger/*schwanger-er als Eva.
Maria is EHER pregnant/pregnant-COMP than Eva
(With eher: ‘I am more inclined to believe that Maria is pregnant than that Eva is.’)

As the glosses show, eher schwanger does not mean ‘more pregnant’, not even in a coerced sense of ‘more advanced in pregnancy’. Examining comparable phrases with gradable adjectives allows us to discern the meaning contribution of eher. In these cases eher can be contrasted directly with -er.

**Semantic differences** Unlike non-gradable adjectives, gradable ones can appear with both -er and eher. The resulting interpretations differ in a revealing way:

(10) Eva ist größer als Maria.
Eva is tall-COMP than Maria
‘Eva is taller than Maria.’

(11) Eva ist eher groß als Maria.
Eva is EHER tall than Maria
‘I’m more inclined to think that Eva is tall than that Maria is.’

11 Google’s Ngram Viewer does uncover some examples of möglicher as a comparative (followed by als ‘than’) but native speakers we checked with intuit a marked contrast in acceptability between eher möglicher and the comparative, at least in present day German. Note also that the string möglicher is grammatical as the form of the adjective agreeing with a dative noun:

(i) Keine Kündigung wegen möglicher Schwangerschaft
no firing because of possible.DAT pregnancy.DAT

12 Other non-gradable adjectives behave similarly, as is shown in Herburger & Rubinstein 2014a with tot ‘dead’.
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(10) only compares Eva’s height to Maria’s, claiming that Eva’s height exceeds Maria’s. It does not claim that Eva is tall, i.e., Eva’s height need not exceed the contextual standard of tallness. In contrast, (11) conveys that the speaker is more inclined to believe that Eva is tall than that Maria is. To the extent that his conjecture is correct (both in terms of what constitutes the relevant standard of tallness and in terms of how Eva’s and Maria’s heights are judged), Eva is indeed tall. Since (10) can be true without either Eva or Maria being tall simpliciter, it is felicitous to follow this sentence with a continuation ‘but Eva is not tall’. Following (11) with this continuation creates an air of inconsistency regarding the speaker’s commitments: he would be expressing relative confidence that Eva is tall while simultaneously asserting that she is not tall.

The interpretation of *eher* examples like (9), with non-gradable predicates, is similar. The speaker here expresses greater confidence in one of two propositions, e.g., that Maria (as opposed to Eva) is pregnant.

Support for the idea that *eher* sentences compare the speaker’s confidence in two propositions can be found in first person desire reports. While it is possible to say that one wants something more than something else (as with *lieber* ‘rather’ below), it is bizarre to express epistemic confidence in what one’s wishes are, since preference usually requires self awareness. (12) with *eher* is infelicitous for exactly this reason (as is the comparable English sentence, *I’m more inclined to think that I want to go to Vienna than stay in Bregenz*):

(12)  
Ich will lieber/#eher nach Wien fahren als in Bregenz bleiben.  
I want RATHER/EHER to  
(With *lieber*: ‘I prefer to go to Vienna than stay in Bregenz.’)

The oddity of (12) is not expected if *eher* and the desire predicate simply contribute the meaning ‘more desirous’ in this case. In contrast, when the attitude holder is not the speaker, the combination of *eher* with a desire predicate is entirely felicitous (13). In that case the meaning is compositional, expressing how confident the speaker is that the subject has the desire mentioned.

(13)  
Er will eher nach Wien fahren als in Bregenz bleiben.  
He wants EHER to  

13 We thus propose to translate examples like (ii) below with an explicit epistemic component, as ‘I’m more inclined to think that Jockl wanted to commit the murder than Jackl did’, instead of as shown.

(ii)  
Jockl wollte diesen Mord eher begehen als Jackl.  
Jockl wanted this murder EHER commit than Jackl

‘Jockl was more desirous of committing this murder than Jackl.’ (Kratzer 2013: 184)
‘I’m more inclined to think that he wants to travel to Vienna than stay in Bregenz.’

Section 2.3 provides additional data that support the compositional meaning we will attribute to eher. A more complete discussion of its interaction with attitude predicates is presented in section 2.4.

2.2 Analysis: eh+er

The compatibility of eher with non-gradable predicates and the difference between eher and -er with gradable adjectives clearly show that eher is not a simple comparative. This is not to say that the comparative plays no role in the meaning of eher, but it is only one part of it: Eher, we propose, is semantically complex, consisting of an epistemic predicate eh- and the (simple, ordinary) comparative -er.

Our basic analysis is that eh- in eher is an epistemic predicate relating propositions to degrees of belief (14). In this denotation, d is the degree to which the proposition denoted by φ is believed in an information state s, where s is the set of worlds compatible with the knowledge of a relevant individual in the evaluation world w and Bel is a function measuring how strongly the proposition denoted by φ is believed in that information state.14,15

\[
\lambda d. d \leq \text{Bel}_s(\phi)
\]

In a nutshell, our claim is that eh- is a gradable predicate that measures an individual’s confidence in a proposition, or her readiness to believe a proposition.

How do we model degrees of confidence or readiness to believe? One way is to appeal to credence functions, which map a proposition to a number representing how strongly an agent believes it to be true. An implementation that makes a connection to probability is offered in (Pettigrew 2011). Another approach might relate the degree of readiness to believe a proposition to the credibility of the propositions it follows from. An implementation in the deontic domain is worked out in (Portner & Rubinstein 2016). What matters in the present context is that eh- in eher is an epistemic predicate measuring the level of confidence that a contextually relevant individual has toward the prejacent, relative to his or her information state. In what follows, we elaborate on the main components of this analysis, in particular eher’s individual orientation and the relativization to an information state. We then show

14 We have no particular commitments to propositions denoting sets of possible worlds or to modeling information states as sets of possible worlds (or situations). Our definition of information state is inspired by Yalcin (2007), as discussed below. If an alternative view of the contents of belief were found to be more plausible, the definition would need to change accordingly.

15 The parameter c in the formula is a Kaplanian context used to fix the interpretation of indexicals.
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how the addition of the comparative component -er derives our observations about *eher* sentences in the previous section.

### 2.2.1 Individual orientation and relativization to an information state

The individual that is relevant for the interpretation of *eher* varies with linguistic context, as shown in (15). In a declarative, it is typically the speaker (15a). In the complement of an attitude verb it is the attitude holder denoted by the matrix subject (15b), and in a question it is the addressee (15c).

(15) a. Brasilien wird *eher* gewinnen als Peru.
   Brazil will **EHER** win than Peru
   ‘I’m more inclined to think that Brazil will win than Peru.’

   b. Der Kommentator glaubt, dass Brasilien *eher* gewinnen wird als
      The sportscaster thinks that Brazil **EHER** win will than Peru.
      Peru
      ‘The sportscaster thinks that Brazil is more likely to win than Peru.’

   c. Wird *eher* Brasilien oder Peru gewinnen?
      Will **EHER** Brazil or Peru win
      ‘Who do you think is more likely to win, Brazil or Peru?’

This sensitivity of *eher* to a relevant individual recalls other epistemic expressions, such as the modal *might* (Stephenson 2007; Yalcin 2007; Hacquard 2010, among others) and the German particle of uncertainty *wohl* (roughly ‘I suppose, presumably’; Zimmermann 2004, 2009), which are speech event-oriented in unembedded contexts and subject-oriented when embedded under attitude verbs. The switch in individual orientation in questions, from speaker to addressee, is also well known from evidentials crosslinguistically (Speas & Tenny 2003).

Our analysis is inspired by the proposal that epistemic modals are evaluated with respect to an information state, as argued by Yalcin (2007). The information state $s$ is a parameter of evaluation that is referenced by modals and attitude expressions and is “idle” elsewhere (in particular, non-modal predicates and logical connectives have their ordinary truth-conditional semantics in which they are relativized just to a world of evaluation; see Yalcin 2007: 994). We assume that $s$ in unembedded declaratives represents the speaker’s information state (and in this sense the modal is speech event-oriented). In the case of embedding, in contrast, the information

16 The relevant entity could be a group including the speaker; see von Fintel & Gillies 2008; Hegarty 2016 and references therein.
state is the attitude holder’s (the sportscaster’s in (15b)). And in a direct question, by assumption $s$ would be the relativized to the addressee.

Informally, the truth of a sentence like (15a) depends on the degrees to which the speaker believes that each of Brazil and Peru will win. The contribution of the morpheme -er is to compare these degrees, as we show in detail in the next section. Cases of embedding like (15b) present a further issue. Given that both glaubt and the eh- in eher express an epistemic predicate on our account, an important question arises as to the interaction of these two predicates. We do not get a “second order belief ascription” in these cases, that is, a belief about a belief, as we might expect by just interpreting everything we see. The question finds a striking analogy in the semantics of might and is at the heart of Yalcin’s (2007) account. A sentence like (16), for example, describes Bob’s being in his office as a possibility as far as Vann’s beliefs are concerned. We do not interpret it to be saying that Vann believes that he has a certain epistemic state (namely the one normally expressed by might), or that Vann believes that he considers the prejacent possible.

(16) Vann believes that Bob might be in his office. (Yalcin 2007: 996)

To avoid having the embedded might describe a new epistemic state, Yalcin (2007) argues that only the matrix attitude verb shifts the information state for the evaluation of the embedded proposition: from the default one (the speaker’s, represented as $s$ by Yalcin 2007) to the one representing the attitude holder’s beliefs ($S_x$). The following exemplifies this approach with the verb ‘suppose’.

(17) \[
\text{[[x supposes } \phi]^{c,s,w} \text{ is true iff } \forall w' \in S_x^{w} : [[\phi]^{c,S_x,w'} \text{ is true}}
\]

where $S_x^{w} = \text{def the set of worlds not excluded by what } x \text{ supposes in } w$ (Yalcin 2007: 995)

Unlike an attitude verb, an epistemic possibility modal, represented as $\diamond$ below, only performs a check on the contents of the information state, but does not shift it. This analysis of modals like might, may, possible is the dynamic treatment of epistemic modality developed by Veltman (1996) (see also Groenendijk & Stokhof 1975; Groenendijk, Stokhof & Veltman 1996; Beaver 2001). The same applies to eh- according to (14).

(18) \[
\text{[[} \diamond \phi \text{]^{c,s,w} \text{ is true iff } \exists w' \in s : [[\phi]^{c,s,w'} \text{ is true}}
\]

(16) Of course, the speaker may have a different opinion about the possibility of the embedded proposition or how certain it is (modification with adverbs like irrtümlicherweise ‘mistakenly’ or ohne guten Grund ‘with no good reason’ is acceptable, referring to the speaker’s opinions).

18 Our thinking on this matter was prompted by a question from Viola Schmitt.

19 Solutions to this issue are also given in Stephenson (2007); Hacquard (2006, 2010); Hegarty (2016).
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Given (17) and the semantics of *eh* in (14), a second order belief ascription is avoided in (15b) as well. The embedded *eher* will be evaluated with respect to the shifted information state corresponding to the sportscaster’s thought worlds. We then compare how strongly the sportscaster believes Peru will win with how confident she is that Brazil will win. This is demonstrated in the next section.

2.2.2 Adding the comparative

Turning now to what looks like a comparative suffix in *eher*, we assume that -*er* in *eh-er* is a clausal comparative (consistent with Lechner 2001, 2004): it takes two sets of degrees as arguments, and requires that the maximal degree in the second set be greater than the maximal degree in the first (von Stechow 1984).

\[
[-er]_{c,s,w} = \lambda P_{<d,t>} \cdot \lambda Q_{<d,t>} \cdot \max(Q) > \max(P)
\]

The derivation of *Eva ist eher groß als Maria* ((11) above) proceeds as in (21), given an LF representation of this sentence as in (20):

\[
\begin{align*}
(a) & \quad [[eh- Maria/Eva is tall]]_{c,s,w} = \lambda d.d \leq Bel_s([[[Maria/Eva is tall]]_{c,s,w}) \\
(b) & \quad [[-er]]_{c,s,w}([[eh- Maria is tall]]_{c,s,w})([[eh- Eva is tall]]_{c,s,w}) = \\
& \quad \max(\lambda d.d \leq Bel_s([[[Eva is tall]]_{c,s,w}) > \max(\lambda d.d \leq Bel_s([[[Maria is tall]]_{c,s,w}))
\end{align*}
\]

Suppose John does not know how tall Eva or Maria are, but has heard that Eva plays basketball, that her brother is tall, and that Maria is a gymnast. His credences might be 0.6 for the proposition that Eva is tall, and just 0.3 for the proposition that Maria is tall. Modeling readiness to believe as credence, \(\max(\lambda d.d \leq Bel_s([[[Eva is tall]])\) equals 0.6 given John’s information state \(s\). Our analysis predicts that John is justified in uttering *Eva ist eher groß als Maria*.

Note that in felicitous uses of the sentence, the speaker signals that he is not committed to fully believing that Eva is tall (or to fully believing she isn’t). If he did, he would effectively assign a credence of 1 (or 0) to the proposition and would simply assert (or deny) it. This also explains why *eher* comparatives cannot be felicitously followed by a denial of the compared clause (*but Eva is not tall*). The credence assigned to the compared propositions need not be high, however; all that is required is that they be higher than 0 (and lower than 1) that one exceed the other.

Our analysis is decompositional in that -*er* is analyzed as comparing the ‘eh’-ness of two propositions. Given that the epistemic ‘eh’ component does not occur on its own, *eh* is a bound morpheme on our analysis (as reflected by our notation). One could also think of *eher* as an unanalyzed comparative operator akin to a quantifier that compares magnitudes of an individual’s credence in two propositions.\(^{20}\) This

\(^{20}\) We thank an anonymous reviewer for raising this alternative.
would be consistent with our main claim that *eher* is not a simple comparative. However, we believe that the (de)compositional analysis is overall preferable. One reason derives from the existence of the superlative (*am ehesten*). According to Bobaljik (2012), superlatives always contain comparatives in the morpho-syntax. Superlative *am ehesten* thus implies the existence of a comparative of credence in the morpho-syntax. Given that we independently have a semantics for *-er*, considerations of uniformity and economical representation motivate decomposition. In addition, although the *eh- of modal* *eher* does not appear unbound as an epistemic predicate, it does appear on its own with two not unrelated meanings: as a discourse particle and as an expression with a temporal meaning (see section 5). These considerations are not knock down arguments for decomposition, but taken together they lend plausibility to the view.

We turn next to the more complex case of *eher* embedded under an attitude predicate (e.g., (15b)). Given the kind of analysis we adopted in (17), *glaubt* ‘believe’ shifts the evaluation parameter of the information state from the default one, namely the speaker’s, to the attitude holder’s. The interpretation of the embedded sentence then proceeds much like what we saw above, resulting in a comparison of the attitude holder’s readiness to believe the two propositions in question.

(22) *The sportscaster believes [-er [than *eh-* will win Peru] [eh- Brazil will win]]*

(23) a. [[sprt believes *φ*]]\textsuperscript{c,s,w} is true iff \( \forall w' \in S_{sprt}^w : [[φ]]^{c,s_{sprt},w'} \) is true, where \( S_{sprt}^w \) is the set of worlds not excluded by what sportscaster *sprt* believes in \( w \)

b. [[-er]]\textsuperscript{c,s,w}([[than *eh-* will win Peru]]\textsuperscript{c,s,w}([[eh- Brazil will win]]\textsuperscript{c,s,w})) = max(\( λ.d.d ≤ Bel_s([[Brazil will win]]^{c,s,w}) \)) > max(\( λ.d.d ≤ Bel_s([[Peru will win]]^{c,s,w}) \))

c. \([[(22)]]^{c,s,w} \) is true iff \( \forall w' \in S_{sprt}^w : \max(\( λ.d.d ≤ Bel_{s_{sprt}}([[Brazil will win]]^{c,s_{sprt},w'}) \)) > \max(\( λ.d.d ≤ Bel_{s_{sprt}}([[Peru will win]]^{c,s_{sprt},w'}) \))

The truth conditions in (23c) require that the sportscaster have a stronger belief in Brazil’s winning than in Peru’s winning. The universal quantification over worlds in \( S_{sprt}^w \) is vacuous here (cf. Yalcın 2007) since what is compared is a degree of belief in a proposition, a value defined over the entire information state.  

Evidence that the shift to the attitude holder’s belief state affects the interpretation of predicates in the embedded clause comes from the following difference between *eher* and the regular comparative *-er*:

(iii) a. #Daniel glaubt, dass Marion *eher groß* ist als sie ist. ‘#Daniel thinks that Marion *EHER tall* is than she is’

b. Daniel glaubt, dass Marion *größ-er* ist als sie ist. ‘Daniel thinks that Marion is taller than he thinks she is.’

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2.2.3 Inference

One important characteristic of *eher* is that it is inferential. For example, (11) (repeated in (24)) requires deliberation or inference on the part of the speaker.

(24) Eva ist *eher* groß als Maria.
   Eva is EHER tall than Maria
   ‘I’m more inclined to think that Eva is tall than that Maria is.’

One type of scenario in which the sentence can be used, and indeed the most obvious one in which it is appropriate, is where we do not have direct evidence about Eva or Maria’s height but are required to infer which of the two might be tall; we cannot see them and have no fully reliable information about their actual height but might take into account that we heard that Eva plays basketball and that her brother is tall. Though less salient, we can also use the sentence felicitously when we actually have direct evidence of the girls’ respective heights but do not know which one qualifies as tall in the context. For instance, we have heard that for a certain position on a sports team one needs to be tall, but we do not know how tall; having direct information about the height differential between Eva and Maria but not knowing whether Eva’s height surpasses the tall threshold, the inference we are required to draw concerns the contextual threshold for tallness (this is the “metalinguistic” use discussed by Barker (2002)). Importantly, the evidential requirement is for inference, not for indirectness, as argued by Rett (2016) for *must*. In particular, (24) is infelitious in a context in which the evidence for the prejacent is indirect but no inference is involved, e.g., if the speaker doesn’t know if Eva is taller than Maria but the basketball coach reliably told her that it is the case.

In being inferential, *eher* recalls epistemic modals like English *must* (Palmer 1979; Izvorski 1997; von Fintel & Gillies 2010; Rett 2016) and evidentials like St’a’t’imcets *k’a* (Rullmann, Matthewson & Davis 2008). As von Fintel & Gillies (2010) discuss, *It must be raining* is felicitous when the speaker reaches an inference about rain (e.g., after seeing people come in with wet umbrellas), without directly observing it. Or, following our observation above, she may be from a dessert country.

‘Daniel thinks that Marion is taller than she (actually) is.’

While there is a coherent reading of the second sentence, one where the *than* clause is interpreted *de re* and refers to Marion’s actual height, no such reading is available for the first. We believe this may follow from the epistemic nature of *eher* that we have argued for, in light of Yalcin’s (2015) observation that epistemic *might* in certain cases disallows *de re* interpretations in its scope (see also von Fintel & Iatridou 2003). The relation between epistemic modality and *de re* interpretation is still a matter of debate and is beyond the scope of our paper. We are grateful to the reviewers for prompting us to think about these types of examples.

22 We thank Anna Szabolcsi and an anonymous reviewer for drawing our attention to this.
and has only heard stories about rain and snow but never experienced them, until on a trip to Scandinavia she feels something fall from the sky and touch her skin. She thinks 'this might be snow.' She has all the sense data but no way of knowing if the predicate applies; it’s all based on reasoning from previous descriptions.

That *eh-* should resemble other epistemic modals in signalling inference seems intuitively relatable to the fact that it denotes a relation between propositions and degrees of epistemic commitment relative to an information state. What may occasion talk of degrees of belief (rather than simple assertion of φ or simple assertion of knowledge that φ) is that some reasoning or inference is required because the evidence is inconclusive, for instance, or because the speaker has the data but is not clear on what it means exactly. We may say that *eh-* is evaluated with respect to an information state that represents a subset of the relevant individual’s beliefs, namely those that are based on inferential evidence (see the epistemic modal base for the St’át’imcets inferential modal *k’a* in Rullmann et al. 2008 or the justification precondition proposed by Rett 2016 for epistemic and deontic *must*).

2.3 Immediate consequences

Because *ehler* compares inferential confidence in propositions and is not a modifier of gradable predicates, we predict that it can also occur “on its own”, without there being any gradable expression in the propositions being compared. And, indeed, (25), which lacks a gradable predicate, is fully acceptable. It is at least as natural as Kratzer’s original example in (6), which contains the putatively gradable possibility modal *kann*. A somewhat overly explicit translation of (6) would be ‘I am more inclined to think that GM may be the murderer than that K may be the murderer.’

(25) Der Gauzner-Michl ist *ehler* der Mörder als der Kastenjakl.
    The Gauzner-Michl is EHER the murderer than the Kastenjakl
    ‘I am more inclined to think that GM is the murderer than that K is.’

A similar set of examples is given by von Fintel & Kratzer (2014), who claim that including the possibility modal *kann* ‘can’, or even a neceeesity modal *muss* ‘must’, in an *ehler* comparison has little effect on meaning (p. 178). We think that the somewhat cumbersome cases in which an epistemic modal is added are interpreted in a concord-like fashion.23 By the same token our analysis directly explains why

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23 The literature on modal concord is vast (see e.g. Zeijlstra 2008; Geurts & Huitink 2006; Huitink 2012; Grosz 2010; Anand & Brasoveanu 2010). Especially relevant to our topic are studies that examine modal embedding under attitude verbs (Anand & Hacquard 2013; Kratzer 2011; Cui 2015). The fact that *ehler* can, to a certain degree, embed epistemic modals of various forces is potentially relevant to the debate in the literature on whether modal concord is subject to a constraint on matching force. In future work we hope to explore whether the analysis that we presented for the lack of secondary
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adding a non-epistemic modal is not similarly innocuous.\(^{24}\)

The following naturally occurring example is another instance of *eher* occurring without an adjacent gradable expression (Gerhard Derflinger, p.c.). It also shows *eher* appearing in first position in a main clause, something we will return to later.

(26) **Eher** war’s der Bomoar-Rudl, der das Amthoferhaus angezündet  
      **EHER** was-it the Bomoar-Rudl, who the Amthoferhouse set.on.fire  
      hat, als  der Birchbamer-Sepp.  
      has, than the Birchbamer-Sepp  
      ‘I’m more inclined to think that it was Bomoar-Rudl who set the Amthofer house on fire than that it was Birchbamer-Sepp.’

The fact that *eher* easily occurs without a gradable predicate supports our view that it is not a simple comparative morpheme.

A related prediction concerns the context-updating (“metalinguistic”) use of vague predicates like ‘tall’ in *eher* comparatives. As noted by Barker (2002), this interpretation is absent when the adjective appears in the comparative (e.g., *Bill is taller than Feynmann* gives no hint as to who counts as tall in the context). The fact that *eher* on our view does not combine with ‘tall’ as a comparative in sentences like *Eva ist eher gross als Maria* but rather embeds ‘tall’ within the scope of *eher*—leads us to predict the context-updating use that we already observed in section 2.2.3 above: on this use the heights of both are evident but what is at stake is who fits the contextual standard for being tall.\(^{25}\)

Our analysis makes further predictions. One is that (27) is grammatical and coherent. It compares the speaker’s confidence that skier Kristoffersen is faster than Hirscher to her confidence that Pinturault can beat Hirscher.

belief ascription for *eher* embedded under ‘believe’ should be extended to the examples where an epistemic modal appears in the scope of *eher*.

\(^{24}\) With deontic modals embedded under *eher* the interpretation is entirely compositional and the difference in quantificational force between not having a modal, having *darf* (‘may’) and having *muss* (‘must’) is clear. The speaker in the following example is expressing her comparative epistemic commitment to Trudi being permitted or obliged to travel to China rather than to Japan:

(27) Im Herbst **darf** (/**muss**) Trudi **eher** nach China als nach Japan reisen.  
      In fall  **may** (/**must**) Trudi **EHER** to China than to Japan travel  
      ‘I’m more inclined to think that in the fall Trudi will be allowed to (/will have to) travel to China rather than to Japan.’

\(^{25}\) We are grateful to one of the reviewers for pointing out this prediction.
The Kristoffersen is more inclined to think that Kristoffersen is faster than Hirscher than I am inclined to think that Pinturault is faster than Hirscher.

On our analysis *eher* does not really combine with ‘fast(er)’; it compares the speaker’s confidence in two propositions, each of which contains the comparative. We thus explain how (27) differs from doubled -er comparatives, which are as ungrammatical in German as in English (cf. *more faster*).

A further prediction is that *eher*, if decomposed, would allow ‘much’ to combine with its comparative component in the same way that ‘much’ combines with the comparative in ‘faster’. This prediction is borne out:

(28) a. Der Hirscher war viel schneller als der Kristoffersen.
   the Hirscher was much faster than the Kristoffersen
   ‘Hirscher was much faster than Kristoffersen.’

b. Der Hirscher wird viel *eher* gewinnen als der Kristoffersen.
   the Hirscher will much EHER win than the Kirstoffersen
   ‘I’m much more inclined to think that Hirscher will win than Kirstoffersen.’

Finally, as mentioned above, it is also possible to have a superlative form of *eh-*, one that follows the regular German morphological pattern for forming superlatives with adverbial expressions (29a). The meaning is the one that is expected on our analysis, as seen in (29b).

(29) a. Der Hirscher fuhr am schnell-sten.
   the Hirscher went AM fast-EST
   ‘Hirscher went the fastest.’

b. Der Hirscher wird am *ehe-sten* gewinnen.
   the Hirscher will AM EH-EST win
   ‘I’m most inclined to think that Hirscher will win.’

### 2.4 Interaction with attitude predicates

We turn now to the interaction of *eher* with attitude predicates. We show that the position of *eher* in a clause determines its individual orientation. Accordingly, we explain a number of correlations between the position of *eher* and the subject of the attitude predicate in various configurations.
Above we noted the oddness of *eher* in examples with first person desire reports like (12). The epistemic content we attribute to *eh-* explains this oddness; such examples amount to a comparison of epistemic confidence that one holds certain desires, where this comparison is only felicitous when there is no certainty and some amount of guesswork is involved. This conflicts with the fact that one is normally fully aware of what one desires.

Though combining *eher* with a desire predicate in the first person is pragmatically strange, *eher* is quite natural with a first person subject with belief predicates (30) (also with *vermuten* `suspect`, and *sagen* `say` and *meinen* `mean` on their proferring use). Although under our analysis of *eher* there are two epistemic predicates in the matrix clause in these sentences, in their interpretation we do not perceive a second order belief ascription.

(30) Ich glaube *eher*, dass es grün als blau ist.
    "I believe *EHER* that it green than blue is"
    ‘I’m more inclined to think that it’s green rather than blue.’

When we have *eher* in initial position and a third person subject of a belief predicate, as in (31a), we find that both epistemic predicates *eh-* and ‘think’ are interpreted. The combination is odd, however, when the subject of the attitude predicate appears in the first person (31b); the sentence is interpreted as having the odd self-reflective meaning ‘I’m more inclined to think that I think it is green than I am inclined to think that I think it is blue’.

(31) a. *Eher glaubt er, dass es grün ist.*
    "EHER believes he that it green is"
    ‘I’m more inclined to think that he believes that it’s green.’ Not: ‘He is more inclined to think that it’s green.’

b. ??*Eher glaube ich, dass es grün ist.*
    "EHER believe I that it green is"

Given what we saw earlier, we can diagnose the problem in (31b) as arising from second order belief ascription relativized to one and the same individual, in this case the speaker. In contrast, the combination is fine with a third person subject, as in (31a). Here, the epistemic component introduced by *eher* seems to be anchored to the speaker, while the attitude predicate is anchored to the subject. It is perfectly coherent to describe the speaker’s beliefs about the beliefs of a third person.

As we saw, the situation is markedly different when *eher* appears in non-initial position in the matrix clause, as in (30). Here we do not find a second order belief ascription, suggesting that unlike in (31), one epistemic component effectively vanishes. The contrast between (31b) and (30) can be taken to suggest that syntactic position plays a role and that in the case of non-initial matrix *eher*, but only there, it
is possible to interpret *eher* as if it appeared downstairs. This would also explain why the sentence is close in meaning to one where *eher* actually surfaces in the embedded clause (recall (15b) and our analysis of this example in (23)).

Given this analysis, it is now interesting to consider what happens when we have non-initial *eher* in the matrix clause alongside a non-first person subject for the belief predicate (cf. (15b)). What we find is an ambiguity:

\[(32) \text{Der Kommentator glaubt } \textbf{eher}, \text{ dass Brasilien gewinnen wird als Peru.} \]

\[\text{The sportscaster thinks } \textbf{EHER} \text{ that Brazil will win than Peru}\]

(i) ‘The sportscaster thinks that Brazil is more likely to win than Peru.’ or (ii) ‘I’m more inclined to believe that the sportscaster thinks that Brazil will win than I am inclined to believe that he thinks Peru will win’.

This ambiguity suggests that interpreting *eher* as if it appeared downstairs is optional (reading (ii)) and that the bleaching of one of the epistemic predicates that we observed goes together with this kind of interpretation (reading (i)). That this ambiguity should not be discernible in our initial example (30) can be attributed to the fact that the reading where *eher* is not interpreted as if it were downstairs would have resulted in a pragmatically bizarre self-reflective second order belief ascription.

\[
\begin{array}{|c|c|c|}
\hline
\text{Individual orientation} & \text{Epistemic displacement} \\
\hline
\text{ATTITUDE [EHER]} & \text{attitude holder} & \text{single} \\
\text{ATTITUDE EHER […]} & \text{attitude holder} & \text{single} \\
& \text{speaker} & \text{double} \\
\text{EHER ATTITUDE […]} & \text{speaker} & \text{double} \\
\hline
\end{array}
\]

\textbf{Table 2} Interaction with attitude predicates.

Finally, we also see that with initial *eher* the anchoring to the speaker is obligatory. This suggests that anchoring is a matter of locality. Perhaps close proximity to a speech act operator forces it to the exclusion of other options. Descriptively we can say that *eher* can be anchored only to the speaker when it appears sentence initially, to either the speaker or the attitude holder when it appears in the clause containing the belief predicate and to only the attitude holder when it appears in the clause embedded under ‘believe’.

26 This pattern resembles neg-raising, the phenomenon of a matrix negation seemingly being interpreted below certain matrix attitude verbs. Neg-raising has been given different accounts in the literature (see Bartsch 1973; Horn 1972, 1989; Gajewski 2007; Romoli 2013; Collins & Postal 2014). We hope that the properties of *eher* will be explored in future work and prove relevant to this discussion.
3 Gradable possible?

Let us return to our initial concern, the co-occurrence of *eher* with a possibility modal. We have proposed that when a modal of possibility (*möglich, kann*) appears with *eher*, what is compared is not possibility itself but a relevant individual’s epistemic commitment to the possibility of the embedded proposition. For example, (7) has the following LF and is interpreted as saying that the speaker is more inclined to think that it is possible on a regional than on a national level:

(33) \[
\begin{align*}
\text{max} & (\lambda d. d \leq \text{Bel}_s([\text{It is possible on a regional level}])) \\
> & \text{max} (\lambda d. d \leq \text{Bel}_s([\text{It is possible on the national level}]))
\end{align*}
\]

At least as far as *eher* is concerned, there is no reason to assume that ‘possible’ is a gradable modal notion. A traditional view of the modal as an existential quantifier, as in (18) above, is not refuted.

(34) \[
[[\text{möglich/possible } \phi]]^{c,s,w} = \exists w'. w' \in s : [[\phi]]^{c,s,w'}
\]

Are there additional data to support the view that ‘possible’ is gradable? As noted above, inference patterns relating *possible, likely, and certain* have been taken to suggest that ‘possible’ expresses a low degree on an epistemic scale isomorphic with the scale of probability (Lassiter 2011). A non-gradable analysis of ‘possible’, however, is not incompatible with these inferences. Klecha (2012, 2014) maintains a non-gradable analysis of *possible* and provides a scale-based analysis of *likely* that accounts for the entailment relation between them.

We can think of two additional arguments for the gradability of German ‘possible’ that could be advanced (although we are not aware that they have been). The first concerns surface co-occurrence of possibility modals with a degree modifier, and the second a specific construction in which *möglich* seems to appear in superlative form. We will now argue that neither provides an argument that ‘possible’ is gradable in German.

Possibility modals seem to be graded not only in *eher* comparatives but also when they are modified by the adverbs *leicht* ‘easily’ and *gut* ‘good, well’ (see Kratzer 1981: ex. (7); comparable English expressions are *may well be possible, easily possible, and good possibility*).

(35) a. Es ist *gut/leicht möglich*, dass Brasilien gewinnt.
It is *well/easily possible* that Brazil wins
‘It is easily possible that Brazil wins.’
b. Es **kann** aber auch **gut/leicht** sein, dass Spanien gewinnt.

   **It can** but also **well/easily** be **that Spain wins**

   ‘But it is also easily the case that Spain wins.’

Arguably, however, ‘easily’ here does not grade the modal itself but some epistemic confidence on the part of the speaker that something is possible; ‘easily’ and ‘well’ in this construction do not modify the weak modals but rather epistemic predicates of some sort or modifiers of an epistemic predicate that is tacit/null in the sentence. Support for this analysis comes from examples like (36), where these adverbs occur on their own in sentences that convey epistemic judgments.

(36) **Das sind leicht/gut und gern** sieben Meter.

   That is **easily/well and gladly** seven meters

   ‘That is easily seven meters.’

The fact that *leicht* and *gut* (in the phrase *gut und gern*) appear in epistemic judgments like (36) supports the view that they contribute a similar epistemic sense in sentences with the weak modals *möglich* and *kann*. As in our analysis of *eher*, this epistemic component is independent of whether or not the sentence they modify contains a modal. On this view, *eher* expresses an epistemic judgment that is comparative, while *leicht/gut* convey epistemic confidence of a particular degree.27

Another noteworthy construction appears in (37). Strikingly, the modal appears with a prototypical marker of gradability in this construction: superlative morphology.28,29

(37) **Alle wollen eine möglich-st schnell-e Lösung.**

   everyone wants a **possible-EST fast-F.ACC** solution

   ‘Everyone wants a solution that is as fast as possible.’

Despite appearances, the superlative on ‘possible’ is not really a superlative grading possibility. (37) describes a universally held desire for a solution that is fast as possible. It expresses a meaning very similar to the construction known as the adjectival modal superlative (Corver 1997; Larson 2000; Schwarz 2005; Romero 2000).

27 English *easily* seems to behave similarly. For detailed discussion and analysis see Klecha (2014: §5).
28 We thank Timothy Leffel for pointing out the relevance of these examples for our discussion.
29 Under certain conditions, e.g., depending on the definiteness of the modified noun, superlative morphology may surface on the adjective and not on the modal in this construction:

   (v) **Komm bitte auf dem schnell-st möglich-en Weg.**

   *Come please on the fast-F.ACC possible-DAT way*

   ‘Please come in the quickest way possible.’

Understanding these alternative manifestations goes beyond the scope of this paper.
Adopting Romero’s (2013)’s analysis of modal superlatives, ‘possible’ is interpreted “non-locally” in this construction, i.e., not as a modifier of the noun it precedes. Rather, the superlative is clausal and one of the clauses it takes as an argument contains ‘possible’ as a regular modal operator. If this type of analysis is right, then locutions like möglichst schnell are easily disposed of as an argument for graded possibility.

4 Epistemic comparison versus metalinguistic comparison

According to our analysis, eher is a comparative, but one that does not compare degrees to which an adjectival property holds, but degrees of epistemic commitment regarding a state of affairs. Another comparative construction that has been argued to operate on a higher level than that of the adjectival degrees is the METALINGUISTIC COMPARATIVE in English (MLC more; McCawley 1968; Lechner 2009; Morzycki 2009, 2011, cf. also Giannakidou & Stavrou 2009; Giannakidou & Yoon 2009, 2011 on Greek, Korean and Japanese MLCs). Given this similarity, the question arises as to whether MLCs and eher comparatives may just be instances of the same construction. This question is raised in Herburger & Rubinstein 2014b and more prominently in von Fintel & Kratzer’s (2014) recent squib on eher. We argue that what we have said about eher comparatives does not directly extend to MLCs, despite some similarities between the two constructions.

The following are some examples of MLCs. The expressions following more and than can be adjectival, as in (38a), but they need not be (38b)-(38c). Accordingly, adjectives in this construction need not be gradable (see (38a)).

(38) a. Their motives for recycling are more financial than ecological.
   b. She is more an actress than a singer.

30 A “local”, or modifying, reading of the modal and the noun it precedes is also possible. As noted by Schwarz (2005), following Corver (1997) on Dutch, the local reading arises in German when both prenominal adjectives are inflected (größ-t-e, möglich-e below).

(vi) Ich habe das größ-t/größ-t-e möglich-e Geschenk gekauft.
   I have that big-EST/big-EST-ACC possible-ACC present bought
   ‘I bought the largest present possible.’ vs. ‘I bought the largest of the possible presents.’

Interestingly, an uninflected superlative seems to be only possible with a limited set of adjectives, e.g., ‘big’, ‘small’, ‘good’, ‘fast’. It certainly is not possible with every adjective (*elegante-st mögliche Lösung ‘most elegant solution possible’, *rötste mögliche Lippenstift ‘reddest lipstick possible’).

31 A different analysis is pursued by Schwarz (2005), who proposes that the superlative and ‘possible’ do indeed form a unit. Crucially, however, it is a primitive, non-compositional unit [-est possible]. Since neither -est and possible have their normal meaning on Schwarz’s analysis, it ultimately does not provide an argument that ‘possible’ is graded by -est.

32 To our knowledge, existing analyses of MLCs have not been extended to eher as of yet.
c. He is more in love with the project manager than interested in the project.

German *eher* can seemingly also be used to compare the application of two predicates (39). In parallel to the English MLC construction, these need not be gradable and can be expressed by elements of various syntactic types.

(39) Sie ist *eher* Schauspielerin als Sängerin

She is *EHER* actress than singer

Similarities between *eher* and MLC *more* further include the fact that the comparative morpheme (*more, eher*) does not really combine with the following adjective, at least not in the same way that the regular comparative morpheme *-er* does.\(^33\) Another similarity is that both allow, more easily than regular comparatives, comparisons with adjectives that express incommensurable properties.\(^34\)

But despite initial appearances, *eher* comparatives and MLCs are clearly distinct. While MLCs have been characterized as involving a judgment about aptness (e.g., how apt or true it is to say that financial, ecological in (38a) hold of the subject, their motive for recycling), an *eher* comparative trades in epistemic confidence.

The *eher* sentence in (39), for example, compares epistemic confidence about what holds true of a particular individual and is appropriate when the speaker (a detective, say) is looking at a room of someone he knows to be a performing artist and wonders what exactly their profession is: based on the amount of make-up products and costumes and based also on the absence of sheet music and instruments, he surmises (39). English (38b) is not felicitous in this kind of scenario. To express a similar meaning we need to add an epistemic predicate:

(40) She is more likely an actress than a singer.

Without *likely*, the English MLC in (38b) would be natural in a context in which the speaker is intimately familiar with a certain individual (e.g., their best friend) and is trying to give the most accurate description of their properties. Of course, often the reason that one description is chosen over another is that what it expresses is judged as being more accurate, but at times it can be stylistic, metalinguistic matters that affect the choice, rather than extensional ones.

A similar point can be made regarding (41). We may say of a certain claim:

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\(^{33}\) Although *more* is adjacent to the first adjective in MLCs, the sentence becomes ungrammatical if the adjective appears in its usual comparative form (compare *George is *dumber/*more dumb than crazy; Morzycki 2011). A similar pattern appears with *eher* (*Erich ist *ehrgeizig-*er/eher ehrgeizig als begabt* ‘Erich is more ambitious than talented’).

\(^{34}\) Morzycki (2011) places a question mark on *The chair is more wide than heavy* and a star on *The chair is wider than it is heavy* (p. 57). The *eher* sentence corresponding to the former is similarly grammatical (*Der Sessel ist eher breit als/denn schwer*). While the *more* example may also sound somewhat deviant, Morzycki (2011) argues that it is “salvageable” in a context that makes the comparison between the predicates relevant.
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(41) It is more ‘a lie’ than ‘an alternative fact’.

But we cannot express the equivalent with *eher*. Since it is agreed that the claim is not true and both labels (‘lie’, ‘alternative fact’) extensionally convey this, the *eher* comparison, which expresses comparison of epistemic commitment, is infelicitous:

(42) #Das ist *eher* eine Lüge als eine alternative Tatsache.
That is, *EHER* a lie than an alternative fact

Also related to our observation that *eher* has an epistemic component absent in MLC *more*, we find that of the two, only *eher* is felicitous in sentences where we make predictions about the future. For example, the German *eher* sentence in (43a) is appropriate as an answer to the question *How do you think their team will do?*, but the English MLC example in (44) seems infelicitous, again in contrast with the example that employs *likely*:\(^{35}\)

(43) a. Sie werden *eher* verlieren als gewinnen.
    they will *EHER* lose than win
    ‘I am more inclined to think that they will lose than that they will win.’

b. They are *more likely* to lose than win.

(44) #They will *more* lose than win.

Finally, a very clear difference between *eher* comparatives and MLCs concerns the *than* phrase. In MLCs it usually expresses a property, on a par with the expression following *more*. (The restriction is semantic, not syntactic, since the two components may differ in their syntactic category; see (38) and Morzycki 2011 for additional English examples). Since *Bill* when used as a referring expression in (45) does not denote a property, the sentence is ill-formed.

(45) *George is *more* dumb than Bill.*

The situation with *eher* sentences is markedly different. What is overtly expressed in the *als*-phrase is the element in which two otherwise identical propositions differ. This element need not have the semantic type of property-denoting expression (e.g., *Maria* in *Eva ist *eher* groß als Maria*, example (11) above).\(^{36}\) German (11) is thus not replicable as an MLC in English.\(^{37}\)

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35 An additional difference we’d like to mention is that in contrast to *eher*, which readily permits a superlative version *am ehesten* that expresses epistemic confidence, there is no MLC *most* describing what is ‘most apt to say’. Instead, MLC *more* seems to have a *less* and *as much* counterparts; see Morzycki (2011: §5.6).
36 Recall our syntactic assumptions and semantic analysis of this example in (20)-(21).
37 As Morzycki (2011) points out there are some cases in English where at least one syntactic argument
Summarizing, German *eher* and English MLC *more* both show that comparison need not take place between the degrees denoted by gradable adjectives. Our analysis of *eher* shows a way of achieving comparison that is similar but not identical to the so-called metalinguistic comparison, by combining an ordinary comparative meaning with an epistemic predicate. It accounts for the semantic and morphological properties discussed in this section. While MLCs also share some of these properties, they may ultimately derive from different reasons. Understanding the full range of special comparison constructions of which arguably MLCs and *eher* are members of is an interesting topic for further research.

5 Conclusions

In this paper, we took a close look at German *eher* comparatives with possibility modals, a construction whose relevance for the debate on gradable modality had been observed by Kratzer in her seminal work, and which at first sight seems to provide compelling evidence for a gradable notion of possibility. We argued that *eher* is semantically complex: it includes a clausal comparative component, denoted by -er, and a gradable epistemic component, expressed by *eh-*. When *eher* appears together with a possibility modal, it does not grade that modal. Rather, it expresses a comparison between how ready a relevant individual is to believe two possibility statements. We showed that this analysis of *eher* explains its appearance in sentences lacking gradable expressions. Additional constructions in which possibility modals seem to be graded were also argued not to provide evidence for gradable denotations of modals like *möglicb* ‘possible’. In sum, we conclude that there is little reason to believe that *möglicb* is gradable in German. While the dearth of *more possible* examples might have been set aside as a curious gap rendered insignificant by the German data, our discussion suggests that this gap is not accidental.

This brings us back to the more fundamental and currently debated question of graded possibility, and the analysis of modals like *möglicb* and their counterparts in other languages. Lassiter (2011, 2017) maintains that despite their marginal status for many speakers (and linguists; recall the quantitative estimation by Klecha 2012, 2014), there are attested examples of English *possible* combining with comparative *more, less* and *too*. He furthermore draws attention to the use of the noun *possibility* in locutions like *increased possibility*, which on analogy to *increased* of MLC *more* is clausal (Clarence is a syntactician more than Herman is a semanticist; Morzycki 2011: 68). Based on data from Greek and Korean, Giannakidou & Stavrou (2009) and Giannakidou & Yoon (2009, 2011) propose that both arguments of an MLC may be propositional. According to Giannakidou and Yoon’s analysis, the Korean *kipota* (a dedicated MLC morpheme related to ‘say’; see also Sawada 2007 on Japanese *i-yori* ‘say-than’) and Greek MLC ‘than’ (*para*), which is said to be emphatic and express preference, are propositional operators. In this respect, MLCs in these languages seem more similar to the German *eher* comparatives.
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speed/temperature/size are taken to show the basic gradability of the modal concept (Lassiter 2017). These facts are consistent with his analysis that ‘possible’, or at least English possible, is a minimum standard scalar term. As to why some feel less sanguine about the acceptability of more possible, he notes that the intuitions of speakers (linguists) may not be entirely reflective of their competence and that possible may be in competition with likely. This would lead to the expectation that in other languages one should also be able to say ‘more possible’ or ‘increased possibility.’ This, however, neither Hebrew, Spanish, or German seem to allow; one reverts to modal expressions meaning ‘probable’ or ‘chance’ in order to express these comparisons in these languages. As to why English more possible and increased possibility can be found in some contexts, this could also be explained by saying that for some speakers possible does not only mean ‘possible’ (a non-gradable concept) but has a second meaning, in addition to its regular modal meaning, in which it means something akin to ‘has a non-negligeable probability’, which clearly is gradable. In other words, Lassiter’s analysis would be right, but only for a subset of cases.

Turning to German again, our analysis posits a morpheme ehe- measuring epistemic commitment, which, throughout the paper, has only been encountered as a bound morpheme attached to a comparative suffix. Eh cannot occur unbounded in German as an epistemic predicate. There is, however, a discourse particle eh which seems quite closely related in meaning. It is particularly common in Austrian and Bavarian dialects.

(46) Das ist auf regionaler Ebene eh möglich.

That is on regional level EH possible

‘That is anyways possible on a regional level.’

The discourse particle eh roughly translates as ‘anyways’ or ‘obviously’, invoking the relevance of some additional information. It conveys that there is no reason to doubt the prejacent and that it holds independently of the content of the conversation (Hentschel 1986; similar characterizations are cited in Csipak & Zobel’s 2015 review of the literature). Csipak & Zobel (2015) discuss some interesting regional differences in terms of the situations in which it can be used. They claim that in Austrian German38 eh p signals that the speaker wants the addressee to exclude ¬p from the doxastic alternatives. In Federal German, on the other hand, eh p is used more like sowieso as signaling that a salient Question Under Discussion is either decided or rendered irrelevant by p.

Abstracting away from the fact that eh is used as a discourse particle, one thing it seems to have in common with the bound morpheme ehe- that we find in eher is that it expresses epistemic confidence in the prejacent. Because there is no overt

38 Setting aside dialects of the westernmost province of Vorarlberg.
comparative component added to the discourse particle, the level of confidence expressed in the prejacent is high, just as a non-modal relative adjective like tall predicates a contextually high degree of tallness to an individual, in contrast with the comparative taller, which compares two degrees of tallness without committing to either one being above a contextually given threshold. While this is by no means an analysis, we believe it may be a fruitful avenue for ultimately understanding the homophony between eh- and eh.

A second notable fact about eher and the superlative am ehesten is that they can be used to express temporal, not just modal, comparison. The temporal meaning in fact predates the modal meaning, as eh(-er,-est) develop from Gothic air ‘early(-ier,-iest)’. The temporal meaning of eh(e), eher, ehest though somewhat old-fashioned is still available to speakers. It appears in phrases like seit eh und je ‘from time immemorial’ and is also compositionally available: (47) (repeated from (15a) above), for example, can be used to predict that Brazil will win before Peru.39

(47) Brasilien wird eher gewinnen als Peru.
Brazil will EHER win than Peru
(i) ‘I’m more inclined to think that Brazil will win than Peru.’ or (ii) ‘Brazil will win before Peru will.’

It is arguably also the temporal meaning that appears in combination with the volitional predicate in the following slightly archaic-sounding sentence.

39 Kratzer (2013) (see also von Fintel & Kratzer 2014), highlights the temporal reading of eher in relation to a curious fact about what appear to be cross-scalar comparisons like (vii). An epistemic reading is not available here (hence the *), but a temporal reading of eher is fully grammatical (eher seems to require stress for the sentence to be fully acceptable).

   (vii) Jockl wollte diesen Mord eher begehen als er konnte.
   Jockl wanted this murder EHER commit than he could
   ‘Jockl was more desirous than capable of committing the murder.’

Kratzer leaves the ungrammaticality of the non-temporal reading as a puzzle, noting that it would seem to indicate that comparison across ‘want’ and ‘can’ is impossible here. Other examples with ‘want’, ‘can’ and eher seem less deviant, however. In (viii), wollen and können are stressed and eher has the epistemic reading:

   (viii) weil Jockl diesen Mord eher begehen WOLLTE als begehen KONNTE.
   because Jockl this murder EHER commit wanted than commit could
   ‘because I am more inclined to think that Jockl wanted to commit this murder than I am to think that he could actually commit it.’

If desire and possibility are comparable when embedded under epistemic eher, the ungrammaticality of (vii) on the epistemic interpretation might have an independent syntactic explanation. Possibly, the lack of parallelism in syntactic positions of the finite verbs in (vii) interferes with a requirement that these verbs be stressed in epistemic eher comparison. The focus sensitivity of eher on its epistemic reading (as opposed to its temporal reading) is a topic we must leave for future research.
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(48) **Eher** will ich sterben als ihn heiraten.

EHER want I die than him.ACC marry
‘I’d sooner die than marry him.’

The strong dislike expressed by (48) to marry a certain person may be attributed to a temporal reading of *eher*. Assuming one generally first does that which one is less disinclined or unhappy to do, and that one does not want to die, then if marriage to the person in question seems even less appealing than dying, it follows that one certainly does not want to marry that person. A pragmatically-motivated explanation of this sort predicts that the phenomenon would not be limited to German *eher*. And indeed it seems to be more general. It is worth noting that English *sooner* and Hebrew *lifney še-* ‘before that’ are similar in having both a temporal reading and a modal-like meaning expressing (dis)preference. Interestingly, these expressions (as well as *rather*, which historically also derives from ‘earlier’), cannot be used in the epistemic sense described in this paper. Unlike *eher*, they are restricted in their modal uses to volitional contexts.\(^{40}\)

It is tempting to pursue an account that draws a connection between the temporal and epistemic modal meanings of *eher*. We would like to speculate about a possible (though, given the cross-linguistic variation, clearly not necessary) connection between ‘early’ and ‘readiness to believe’. Similar to what we just suggested in connection with the volitional predicate, presumably, the clearer something is the sooner a speaker is to commit to it. We hope to explore this connection between epistemic clarity and temporal progression in more depth in future work.

**References**


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40 See Goncharov & Irimia (2017) for discussion of potential factors licensing epistemic comparatives in a wider variety of languages.


Goncharov, Julie & Monica A. Irimia. 2017. Modal comparatives: a cross-linguistic
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