Comparison via *eher*

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Abstract

This paper is about the semantics of the German adverb *eher*, which has three, or perhaps four, readings: temporal, epistemic, metalinguistic and -- depending on whether it is accepted as a genuine reading -- preference. In its epistemic reading, *eher* gained prominence in semantics because it was used by Kratzer (1981) to argue that the notion of possibility is gradable. *Eher* has also received attention from a diachronic perspective, where it has been compared to the English adverb *rather* (Gergel 2009).

Our analysis starts from the temporal reading which, first of all, expresses temporal precedence. We argue that temporal *eher* is indexical (unlike *früher* / 'earlier'), comparing closeness to a perspectival center, and that the non-temporal readings inherit their basic structure from the temporal one. The analysis of the non-temporal readings will be embedded in a Kratzer-style ordering semantics, deviating from the standard picture in assuming (i), that both the modal base and the ordering source are relativized to a perspective holder and (ii), that in the case of metalinguistic *eher*, interpretations (in the sense of Barker 2002 / Krifka 2012) are compared instead of worlds. Our analysis is different from that developed by Herburger & Rubinstein (2018), which ignores the temporal as well as the metalinguistic reading and takes recourse to "degrees of belief".

At the end of the paper, we briefly look at expressions related to *eher*, including English *more* and its German counterpart *mehr* as well as English *rather*, and also at the modal reading of German *schon* ('already').

1   Introduction

The German adverb *eher* has three or perhaps four readings: temporal, epistemic, metalinguistic and -- depending on whether it is accepted as a genuine reading, -- preference. In the temporal reading, *eher* expresses temporal precedence. In (1), for example, the opening time of Aldi (a supermarket) is said to precede that of Penny (another supermarket). In the epistemic reading, *eher* expresses a higher degree of likelihood. In the example in (2), the likelihood of the Peruvian team winning the football match exceeds that of the Brazilian team winning. Finally, there is a metalinguistic reading according to which one expression is said to be more adequate than another one in describing a given situation. In (3), the term *blau* ('blue') is said to be a better description of the color of the shirt than the term *grün* ('green').

(1)   Aldi öffnet eher als Penny.   ***temporal***
        'Aldi opens sooner than Penny.'

(2)   Peru wird eher gewinnen als Brasilien.   ***epistemic***
        'Peru is more likely to win than Brazil.'

(3)   Das Hemd ist eher blau als grün.   ***metalinguistic***
        Roughly: 'the shirt is more blue than green.'

It has frequently been claimed that *eher* also has a preference reading (e.g. König et al. 1990). For example, for many speakers (4) could be used as an answer to the question of what they would like to drink:

(4)   Ich würde eher Wein als Bier nehmen.   ***preference***
        'I would rather have wine than beer.'

In section 4.3 we argue that such examples should not in fact be analyzed as genuine preference readings. But regardless, it is clear that *eher* can in certain contexts express something like preference.

Eher gained prominence in semantics because it was used by Kratzer to argue that the notion of possibility is gradable (Kratzer 1981, 2012). One of her examples is in (5).

(5)   Der Gauzner-Michl kann eher der Mörder sein als der Kastenjakl.
        'Gauzner-Michl is more likely to be the murderer than Kastenjakl.'

Following Kratzer, *eher* sentences are evidence that possibility is not a homogenous notion but instead graded in the sense that one option may be "more possible" than another. This led her to introduce a second conversational background in addition to the modal base including the premises. The second background imposes an order on the modal base and is thus called the *ordering source*:

> "*Kann eher …. als* expresses comparative possibility. Comparative possibility was the main motivation for introducing a distinction between modal bases and ordering sources." (Kratzer 2012, p. 61)

It is important to keep in mind, however, that Kratzer does not claim that *eher* is a comparative morpheme like *-er* in German and *more* in English; that is, *eher möglich* is not claimed to be a comparative form of *möglich* ('possible'). Extending the focus of this work, von Fintel & Kratzer (2014) express their puzzlement over the role of German *eher* and address, in particular, the relation between the epistemic and the metalinguistic readings, raising the question of whether *eher* is genuinely ambiguous between a metalinguistic and a modal comparison reading.

Eher has also received attention from a diachronic perspective. In Gergel (2009, 2016), two steps in the development of German *eher* are compared to similar developmental steps of the English adverb *rather*. In both cases, the temporal meaning – which is still available for *eher* but lost for *rather* – was the original one, and the ordering relation that it encoded became the common core of further developments.

As to the semantics of *eher*, there is, most importantly, an in-depth analysis by Herburger & Rubinstein (2018). They analyze *eher* as the comparative form of a – nonexistent – gradable epistemic predicate *eh-* measuring an individual's confidence in a proposition. Their account focuses solely on the epistemic reading of *eher*, neglecting the metalinguistic and even the temporal uses.

In this paper, we will present a semantic analysis of *eher* starting from the temporal use and extending to the epistemic and metalinguistic uses, which we will argue inherit their basic structure from the temporal one. The temporal use of *eher*, first of all, indicates temporal precedence, like *früher* ('earlier). It will be shown, however, that *eher*, unlike *früher*, is indexical in requiring a deictic center corresponding to the *now* of a perspective holder – the speaker or narrator or some other agent. Temporal *eher* indicates that the earlier point in time is closer to the *now* of the perspective holder – in short, *eher* compares closeness to a perspectival center.

Our analysis of the non-temporal uses of *eher* will be embedded in a Kratzer-style ordering semantics including a modal base and an ordering source – either epistemic or interpretational to account for metalinguistic uses. The ordering source imposes a relation of "better world" (or "better interpretation") on the modal base, where the optimal world (or interpretation) satisfies the maximal possible set of constraints given by the ordering source. To this basic picture we add the innovation

that both the modal base and the ordering source are not absolute but rather relativized to a perspective holder. The structure we assume can thus be seen as corresponding to the indexical structure of temporal *eher*, such that being closer to the temporal perspectival center is reflected by being better according to an ordering source relativized to the perspective holder. Thus in non-temporal uses of *eher*, the role of the temporal perspective is taken over in a sense by the ordering source representing an optimum relative to a perspective holder – non-temporal *eher* compares closeness to this optimum.

Before proceeding, let us point out that while our focus is on a single German adverb, it is not at all unusual cross-linguistically to find a lexical item that has two or more of the readings in (1)-(4) that have been attributed to *eher*. As discussed by Gergel (2009, 2016), English *rather* has followed a similar diachronic path to *eher* and shares some of the same uses; observe also the preference use of English temporal *sooner*, as for example in *I would sooner die than marry him*. Looking beyond Germanic, the Greek comparative marker *para* and the Korean *kipota* can express both preference as well as metalinguistic comparison (Giannakidou & Yoon 2011). And in languages including Bulgarian, Romanian, Italian and others, a temporal comparative (e.g. Romanian *mai degrabă* 'more soon') can be used to express a comparison of likelihood, that is, an epistemic comparison (Goncharov & Irimia 2018). Some of these items also have additional readings. In particular, the Russian *skoree* 'sooner' has epistemic, preference and metalinguistic uses in addition to the temporal one, thus spanning the same range of readings attributed to German *eher*. Thus the paradigm in (1)-(4) represents what appears to be a more general possibility in the expression of comparison cross-linguistically, and as such we believe that the analysis developed here has relevance to the semantics of comparison more broadly.

This paper is organized as follows: Section 2 reports previous accounts of *eher*, including a brief outline of its diachronic development. In section 3 the analysis of temporal *eher* is presented. Building on that, the epistemic, (apparent) preference and metalinguistic uses are described in sections 4 and 5. In section 6, we briefly look at several expressions that are in some way related to *eher*, including English *more* and its German counterpart *mehr*, English *rather*, and German *schon* 'already'.

2   Previous accounts of *eher*

The literature on the semantics of *eher* is sparse. There is an elaborate semantic analysis by Herburger & Rubinstein (2014, 2018) focusing on epistemic *eher*, and there is an excellent master thesis by Hehl (2014) suggesting a unified scalar account for temporal and modal uses. Moreover, in Gergel (2009, 2016) *eher* is compared to English *rather* from a diachronic point of view. Unfortunately there is, as far as we know, no literature on the semantics of temporal *eher*. There is also no specific mention of *eher* in the literature on metalinguistic comparison.

Gergel argues in his papers in (2009) and (2016) that, even though historically unrelated, German *eher* and English *rather* were subject to analogous developmental steps. In the first, a temporal comparative adverb developed into a modal as well as a metalinguistic meaning and in the second step the modal meaning turned into a degree modifier.

According to the standard etymological dictionaries for German, Grimm (1854–1960) and Pfeiffer (1993), the adverb *eher* can be traced back to Old High German *ēr* meaning *früher*, *eher* ('earlier'), which is a comparative form for which the positive form is lost. There is a temporal subordinator *ehe* ('before') which developed out of the adverb in Middle High German, but *ehe* is neither in Old High German nor in Modern High German a positive form. The positive is only visible in

Gothic *air* ('früh', 'early') and Greek *ḗri* ('früh, morgens', 'early, in the morning') and also Avestan *ayar* ('Tag', 'day').

English *rather* originates from Old English *(h)ræþor*, the comparative form of an attested positive form *(h)ræþ* ('soon', 'early', 'quickly'). In contrast to German *eher*, the temporal meaning is no longer available for *rather* in Modern English. In Modern English it has a preference meaning, but there is no epistemic meaning and also (we argue) no metalinguistic use. It does, however, have a contrastive use in discourse ('instead'). Finally, there is the degree modifier use which is not available with German *eher.* In Section 6.2 we return to the comparison of *eher* and *rather*.

Hehl (2014) presents a master thesis aiming at a uniform degree-based analysis of *eher* in its temporal as well as modal uses (excluding metalinguistic uses). The idea is that *eher* compares degrees of various nature, be they temporal degrees as employed in the degree analysis of *früh* and *spät* by von Stechow (2009), or degrees of desire or probability. This allows for a semantic interpretation of *eher* as a degree quantifier based on a temporal positive form *eh(e)*, which is postulated by Hehl for some historical stage of German. To give substance to such an approach, the connection between the temporal and the modal scale has to be explained beyond the fact that they are both ordered domains. Hehl does not provide a formal explanation, but she reports her intuition as a native speaker that the preferred or more probable alternative is "closer in some sense". This intuition corresponds to our finding that *eher* expresses closeness to a perspectival center; see section 3.

Herburger and Rubinstein (2014, 2018) (the latter henceforth H&R) argue that *eher* is not a comparative morpheme like English *more.* They furthermore show that *eher möglich* cannot be analyzed as the comparative form of *möglich*, and that (contra Lassiter 2011) *möglich* 'possible' is not gradable. As evidence, they cite the following: First, the *-er* comparative is ungrammatical, **möglicher*;[1] secondly, *eher* can be combined with undoubtedly nongradable adjectives, see (6a); and finally, the comparative form and the combination with *eher* differ clearly in meaning. For example, (6b) responds to a QUD asking in which of the two cities the temperature is higher, conveying that the temperature in Oslo exceeds that in Moscow. In contrast, (6c) responds to a QUD inquiring about warm places in January, and claims that this is more likely in Barcelona than in Berlin.[2]

(6) a. Maria ist eher schwanger/*schwanger-er als Eva.   = (9) in H&R
        'Maria is EHER pregnant/pregnant-COMP than Eva.'
        (With *eher*: 'I am more inclined to believe that Maria is pregnant than that Eva is.')

   b. In Oslo ist es (im Januar) wärmer als in Moskau.   adapted from H&R (10)/(11)
        'In Oslo it is warmer (in January) than in Moscow.'

   c. In Barcelona ist es (im Januar) eher warm als in Berlin.
        'In Barcelona it is more likely to be warm (in January) than in Berlin.'

H&R suggest an interpretation of *eher* such that it is a comparative form of a missing positive *eh*, which is conceived of as a "gradable predicate that measures an individual's confidence in a proposition, or

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[1] In German, *-er* is the comparative marker for all gradable adjectives. The comparative marker *-er* must not be confused with the masculine strong inflection marker *-er* as in *ein möglicher Weg* 'a possible route'.

[2] In (6b) the standard of *warm* ('warm') is irrelevant. In (6c) it does play a role, which is why it would be odd to use *Oslo* and *Moscow* in this example. (6c) does not entail, however, that it is in fact warm in Barcelona. Herburger & Rubinstein, for their analogous example in (11), agree that it is felicitous to continue the sentence by denying the entailment while claiming that such a continuation creates an air of inconsistency regarding the speaker's commitments. We think, however, that such a continuation would be fully consistent.

her readiness to believe a proposition" (H&R, p.7). More formally, *eh* is proposed to take a proposition φ to a set of degrees such that an agent believes φ to these degrees:

(7) $[[eh\text{-}φ]]^{c,s,w}=λd.d ≤ Bel_s([[φ]]^{c,s,w})$ H&R (14)

The semantics for *eher* is then straightforwardly given by treating the comparative morpheme *-er* in the standard way as a degree quantifier that introduces a `greater than' relation.

This analysis is based on a predicate that doesn't exist (and maybe never has), and it has to take recourse to "degrees of belief" even though this is an unanalyzed notion, and the gradability of *believe* is as questionable as the gradability of *möglich*. However, once we step back from the particular implementation, the analysis is close in spirit to the account we will develop, because it includes an individual relevant for the interpretation of *eher* (typically the speaker, but maybe also an attitude holder). In our account, such a relativization is encoded in the perspective center and is motivated by the indexical nature of temporal *eher*.

H&R consider their analysis as universally covering all uses of *eher*. They leave temporal readings aside, however, and they mark as degraded cases like (8) where *eher* occurs in a first person desire report, arguing that *eher* cannot be used to convey the speaker's or agent's preference.

(8)   (= H&R (12); according to their judgement unacceptable as a preference reading;)
       Ich will   eher   nach Wien fahren als   in Bregenz bleiben.
       I   want EHER to   Wien travel than in Bregenz stay
       (intended: 'I prefer to go to Vienna rather than stay in Bregenz.')

On further enquiries, it appears that these limitations may be in part be related to regional differences. While the preference use of *eher* is attested in Federal German, it seems more marked in Austrian German. Similarly, the temporal use of *eher* is less prominent in Austrian German.[3] We return to a more in-depth discussion of H&R's arguments regarding the preference use in section 4.3, where we argue on the basis of additional data that even though the sentence in (8) can be used to express a preference it should not be analyzed as a true preference reading.

H&R, moreover, argue that *eher* comparison is distinct from metalinguistic comparison using the example in (9). They discuss a scenario in which the *eher* comparison in (9a) is appropriate, but the English metalinguistic comparison with *more* in (9b) is not appropriate. In English one has to use the epistemic sentence in (9c).

(9)   "… 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) [=9a]." (H&R p.19)

       a. Sie ist eher Schauspielerin als Sängerin   H&R (39)
          'She is EHER actress than singer.'

       b. She is more an actress than a singer.   H&R (38b)

       c. She is more likely an actress than a singer.   H&R (40)

This argument, however, merely demonstrates that in the given 'detective' scenario, the *eher* sentence receives an epistemic interpretation. This is not a possible reading for English (9b), which is the reason why (9b) is not acceptable in the detective scenario. However, the scenario can be changed to suggest

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a metalinguistic interpretation on which German (9a) is felicitous and English (9b) is felicitous as well. Suppose the speaker is attending a musical production. The main character acts fantastically, but her singing is only mediocre. In view of this, the speaker whispers the sentence in (9a) to his companion. In English, in that scenario one would have to use the metalinguistic comparison in (9b), showing that the German *eher* sentence has a metalinguistic reading.

The two scenarios above are evidence that *eher* comparison can have an epistemic as well as a metalinguistic reading. In fact, in an earlier section, H&R discuss an example with a gradable adjective (*Eva ist eher groß als Maria* 'Eva is more likely to be tall than Maria' or `Eva is a clearer case of tall than Maria'). They connect it to Barker's (2002) Feynman example and conclude that there is a metalinguistic use. This makes the rejection of a metalinguistic reading in the case of (9a) even more surprising. In what follows we will assume that, in an appropriate context, an *eher* comparison can have a metalinguistic interpretation, and present an analysis in section 5.

Looking beyond German, Goncharov & Irimia (2020) take up the analysis of H&R and apply it to what they call *epistemic comparatives* (EC) in Bulgarian and Romanian – *po-skoro* and *maj degrabă* ('sooner'), respectively. They focus on the interaction of ECs with other expressions of speaker's uncertainty, namely epistemic modals and grammaticalized inferential indirect evidentials. While epistemic modals are compatible with ECs in Bulgarian and Romanian, inferential indirect evidentials are not. Goncharov & Irimia suggest an analysis such that ECs and grammaticalized inferential evidentials are both degree modifiers of a speech act operator ASSERT (for the gradability of ASSERT see Greenberg & Wolf 2018) and argue that ECs are deviant with grammaticalized inferential evidentials because they compete for the degree modifier position.

Interestingly, Goncharov & Irimia only mention in passing that both epistemic comparatives – Bulgarian *po-skoro* as well as Romanian *maj degrabă* – correspond to temporal comparatives meaning *sooner*. They do not address the synchronic relation between the temporal and the epistemic comparatives and refer the reader to Gergel (2016) for a diachronic account. But as noted in Section 1, in an earlier paper (Goncharov & Irimia 2018) they present data from a number of other languages, e.g. Russian, where a similar pattern obtains. The existence of such similarities across languages points to the broader relevance for the unified account of *eher* that we develop here.

3   Temporal *eher*

We depart from Herburger & Rubinstein in taking the basic meaning of *eher* to be the temporal one shown in (1) and in (10a). In taking this view we align our synchronic analysis of *eher* to the previously discussed pattern of its diachronic development, according to which the temporal meaning was the original one from which other uses (modal, metalinguistic) developed.

In this reading, *eher* expresses temporal precedence between two events – in (10a) Anna's arrival in Cologne temporally precedes Berta's arrival. This might suggest that *eher* is equivalent in meaning to *früher* ('earlier'), and in fact (10a) and (10b) appear equivalent at first sight.

(10)   a. Anna kam eher als Berta in Köln an.

     b. Anna kam früher als Berta in Köln an.
        'Anna arrived sooner / earlier in Cologne than Berta.'

Von Stechow (2009) presents a semantic analysis of *früh* ('early') and *spät* ('late') in a degree-like fashion, analogous to treatments of gradable adjectives like *tall*. He points out that *früh* is the negative antonym of *spät,* which is evident in questions (*Wie spät /*früh ist es?* Lit. 'How late/early is it?'). The

basic idea of von Stechow's analysis is that times correspond to degrees; more precisely, the run time of an event corresponds to a degree of lateness. Simplifying considerably, *spät* is true of an event iff its run time is later than a contextually given cut-off of lateness, whereas an event is *früh* iff its run time precedes a cut-off of earliness.[4]

Früher and *später* are analysed as comparatives by von Stechow, an analysis that is implemented via quantification over times: *Alla kam später als Caroline* ('Alla came later than Caroline.') is true if the set of times such that Caroline came this late is a subset of the set of times such that Alla came this late.[5] Moreover, *Alla kam später als Caroline* is true iff *Caroline kam früher als Alla* is true. Again grossly simplifying, the analysis yields the result in (11) (where τ provides the event time).

(11) $event_1$ *früher als* $event_2$ iff $event_2$ *später als* $event_1$ iff $\tau(event_1) < \tau(event_2)$

This analysis of *früher* and *später* is convincing in its analogy to degree semantics, in particular because *früher* and *später* are in fact treated as comparatives. When comparing *früher* to *eher*, however, there are two facts that prevent a straightforward adaptation. One is the lack of a positive form in the case of *eher* and the other is the observation that *eher*, unlike *früher*, seems to require something like a perspectival center. We start with the latter.

3.1   Perspectival center

Consider the example in (12a, b). Both versions express temporal precedence. But the *eher* version comes with an additional constraint which becomes apparent when comparing two situations in which the sentences can be used. In the first situation there are two individuals A and B having a dialogue. Let us call this type of situation *personal*. Suppose A wants to buy something for breakfast early in the morning and asks B where to get some food at this time of the day. In this type of situation both (12a) and (b) – *früher* and *eher* – are perfectly acceptable in the answer. In the other situation – the *impersonal* one – there is a meeting of the executive board of the Aldi corporation in which their leading competitors are being discussed. On a slide, a list of the differences between the two supermarkets of Aldi and Penny are shown. In such a list the sentence in (12a) with *früher* is fully acceptable. But the *eher* sentence in (12b) seems not quite adequate: It gives the impression of lack of distance; it has an air of subjectivity or improper familiarity.

(12)   a. Aldi öffnet früher als Penny.
        b. Aldi öffnet eher als Penny.
            'Aldi [supermarket] opens earlier / sooner than Penny'

Similarly, imagine an exchange between two persons A and B on a train platform waiting for someone to arrive from either Hamburg or Cologne. A has checked the train information by smartphone and informs B. This would be a personal situation, in which (13a) as well as (13b) – *früher* as well as *eher* – are perfectly acceptable. For an impersonal situation imagine someone on a train platform listening to a German Rail announcement over the loudspeaker. In the announcement, the *früher* sentence in

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[4] To be precise, von Stechow in this paper in addition suggests implementing the notion of a standard by dividing the scale into a negative, a neutral and a positive range, instead of introducing a cut-off value. An event *e* counts as *spät* iff its event time is in the positive range and it counts as *früh* iff the event time is in the negative range. Moreover, *früh* and *spät* denote not just measure functions of event times but relations between event time and reference time.

[5] von Stechow's example (54): *Alla kam später als Caroline.* 'Alla came later than Caroline.' iff
     $[\lambda t \in I.\exists e.\ C(e)\ \&\ \tau(e) \subseteq Past_1\ \&\ Past_1 \geq t] \subset [\lambda t \in I.\exists e.\ A(e)\ \&\ \tau(e) \subseteq Past_2\ \&\ Past_2 \geq t]$

(13a) would be fully acceptable. But the *eher* sentence in (13b) would suggest some intimacy that you would not want to hear from a German Rail loudspeaker. In fact, in this context the preferred reading of (13b) would be epistemic (which would be slightly ridiculous as an announcement by German Rail).

(13) a. Der Zug aus Hamburg kommt früher an als der Zug aus Köln.
      b.   Der Zug aus Hamburg kommt eher an als der Zug aus Köln.
          'The train from Hamburg will arrive earlier/sooner than the one from Cologne.'

In the example in (14) (adapted from Gergel 2016) the personal situation might, for example, be a conversation between tourists in a South Pacific area discussing which of the small islands they should visit now because they might be flooded by a rise in sea level next year. In such a situation both the *früher* and the *eher* version of (14) would be fine. The impersonal situation in this example might be a scientific report in a geological journal on the consequences of global warming for the South Pacific islands. The *früher* version is fine in this context. But the *eher* version conveys an air of subjectivity which is not appropriate in a scientific report.

(14) a. Die westliche Insel wird früher verschwinden als die im Norden.
      b. Die westliche Insel wird eher verschwinden als die im Norden.
          'The western island will disappear earlier/sooner than the one in the north'

Let us finally consider the past tense variants in (15). The personal situation may be constructed as a conversation between senior local residents who personally observed the gradual disappearance of the islands. In such a situation *früher* as well as *eher* are acceptable. The impersonal situation might be a scientific report about a long ago geo-historical event. *Früher* would be fully acceptable but, as before, *eher* does not seem appropriate in a scientific report.

(15) a. Die westliche Insel verschwand früher als die im Norden.
      b. Die westliche Insel verschwand eher als die im Norden.
          'The western island disappeared earlier/sooner than the one in the north'

To briefly summarize: The use of *früher* is acceptable in personal as well as impersonal situations in all of the examples. The use of *eher*, while acceptable in personal situations, is not appropriate in impersonal situations. In none of these examples is it totally unacceptable, but it seems somehow out of place – subjective, overly familiar, lacking distance. All of these descriptions point to what we take to be the core characteristic of *eher*, which is closeness to a perspectival center – *eher* compares two items as to which is closer to the perspectival center.

In order to capture the intuition of closeness to a perspectival center we will briefly consider the temporal adverb *bald* ('soon'), which is frequently considered as the semantic equivalent of the lost positive form of *eher* (e.g. Duden grammar 2005).

3.2   *Bald*

Bald ('soon') is an indexical adverb expressing posteriority relative to the deictic center, which is usually the utterance time (*Hier-jetzt-ich Origo* 'here-now-I' origo, cf. Bühler 1934, Kaplan 1989). *Bald* indicates that an event is in the near future of the deictic center, which is the utterance time by default. One standard reference on temporal and locative adverbs in German is Ehrich (1992), in which adverbs from the temporal and the locative domain are analyzed in parallel. Instead of, e.g., speaking about a time scale, Ehrich refers to regions given by distances, e.g., proximal vs. distal. This idea is the basis of our notion of closeness. Following Ehrich, *bald* locates an event in a temporal region that is posterior

as well as proximal to the deictic center – the event in (16) will happen shortly after the time of utterance.

(16)   Bald ist Weihnachten.
        'Soon it will be Christmas'

As expected with indexical temporal adverbs, the deictic center may be shifted. This happens in free indirect discourse (FID; Eckardt 2015) but also in less marked contexts, see (17). As pointed out by Ehrich (1992), *bald* also has an anaphoric use which is frequently marked by *danach* `afterwards' and is set aside in this section.

(17)   In den fünfziger Jahren kam der wirtschaftliche Aufschwung. Der Wohlstand stieg, die Automobile wurden immer günstiger, und bald hatte das motorisierte Zweirad als Verkehrsmittel ausgedient.

        'The economic boom came in the fifties. Prosperity increased, cars became cheaper and cheaper, and soon the motorized two-wheeler had become obsolete as a means of transport.'

The assumption that *bald* takes the place of the (lost) positive form of *eher* leads us to expect it will behave similarly to *eher* when comparing it to the positive form of *früher*, i.e. *früh*, in personal and impersonal situations. The findings in the previous section predict that *früh* should be acceptable in both types of situations, while *bald* is appropriate in personal situations only. The sentences in (18)-(20) correspond to (12)-(14).

Starting with the *bald* versions, their use in personal situations is fully acceptable. When you ask me early in the morning where you can buy food at this time of the day, (18a) would be a perfect answer. Similarly, (19a) is fine when you ask me about the arrival of the Hamburg train, and the same holds for (20a) in the Pacific island tourists' conversation. Considering impersonal situations, (18a) would appear fairly subjective in the documents of a meeting of an executive board. Used as a loudspeaker announcement on a train platform, (19a) is even more ridiculous than the *eher* sentence in (13b), and in a scientific report (20a) seems to again lack professional neutrality.

The *früh* versions in (18b)-(20b) are acceptable in personal as well as impersonal situations. More importantly, they differ in meaning from the *bald* versions in a way that will be helpful in understanding the difference between the *eher/früher* versions. Being positive forms, both *früh* and *bald* relate to a standard – what counts as early and what counts as close in a particular context. However, whereas *bald* is a two-place relation expressing closeness between the event time and the deictic center, *früh* is just a one-place predicate expressing that an event counts as early – the intuition of closeness is completely lost.

(18)   a. Aldi öffnet bald.
        b. Aldi öffnet früh.
            'Aldi opens soon/early.'

(19)   a. Der Zug aus Hamburg kommt bald an.
        b. Der Zug aus Hamburg kommt früh an.
            'The train from Hamburg will soon arrive / arrive early.'

(20)   a. Die westliche Insel wird bald verschwinden.
        b. Die westliche Insel wird früh verschwinden.
            'The western island will soon disappear / will disappear early.'

3.3   Closeness to the perspectival center[6]

On the assumption that *bald* is semantically equivalent to the lost positive form, we expect *eher* to be indexical, and express closeness to the deictic center and posteriority, and in addition to show the characteristics of a comparative form. Consider *Aldi öffnet eher/früher als Penny*. Taking closeness into account, the Aldi opening time is closer to the deictic center than that of Penny and thus Aldi-opening temporally precedes Penny-opening. Thus the *eher* sentence entails the *früher* sentence. It should be noted, however, that even though both *eher* and *früher* are temporal comparatives, the comparative relations are fundamentally different: in the case of *früher*, comparison is between points in time, while in the case of *eher* comparison is between distances to the deictic center.

Additional support for the requirement of a deictic center is provided by past tense *eher* sentences. In present or future tense, the requirement of closeness could also be satisfied by closeness to the utterance time – if event1 is closer to the utterance time than event2, the former temporally precedes the latter. In a past sentence, however, if event1 is closer to the utterance time than event2, then the latter will temporally precede the former. It is only with the help of a shiftable deictic center that the event that takes place *eher* ('sooner') also takes place *früher* ('earlier').

In their paper on tense in texts, Kamp and Rohrer describe temporal adverbs shifting the deictic center (Kamp & Rohrer 1983). They distinguish two types of perspectives. One is the perspective of a protagonist in free indirect discourse. The other perspective is called *temporal*. It provides a temporal point of reference, a deictic center, but it is neutral with respect to whether there is a protagonist, that is, an agent with its own doxastic state. In both types of perspectives, the deictic center of an indexical adverb may be shifted. But the temporal perspective is less demanding in that there need not be a protagonist – it is sufficient to assume a speaker/narrator inviting the addressee to take a particular perspective.

Kamp and Rohrer characterize the temporal perspective as shown in the quote below. It refers to a story about a parliamentary debate that has been told up to an event that happens at six o'clock. In the next sentence the narrator wants to say that, at six, there were only 25 persons in the room.

> Kamp & Rohrer:
> "… Would you say
> > (a)   A ce moment il n'y avait plus que 25 personnes dans la salle.
> > ['At this time there weren't more than 25 persons in the room.']
> or would you prefer
> > (b)   Maintenant il n'y avait plus que 25 personnes dans la salle.
> > ['Now there weren't more than 25 persons in the room.']
>
> You can try the same text in English or German. Would you choose *jetzt* ['now'] or *zu diesem Zeitpunkt* ['at this time']? If both seem to be correct, what difference can you see? Our answer is that you can use both, but that there is an important intuitive difference. If you use *à ce moment* ['at this time'] then the temporal perspective remains throughout the complete text that of the utterance time: each event is presented as a separate unit seen from a later vantage point.
> > If the author uses *maintenant* ['now'] then the perspective shifts towards the reference point of the last sentence in the p. s. [passé simple]. The author then tries to give the impression that the situation is viewed from that temporal angle, from the position of someone who could have been attending the debate. You will never find *maintenant* in a

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[6] We owe special thanks to Antje Roßdeutscher for pointing out the relevance of Kamp & Rohrer's temporal perspective to the analysis of *eher*.

newspaper article which reports a sequence of events in a purely factual, detached manner." (Kamp & Rohrer 1983, p. 265)

What Kamp and Rohrer say about the temporal perspective is exactly what we want to capture with the help of distinguishing between personal and impersonal situations. A personal situation is such that it allows for the temporal angle of someone who is or could have been present in the situation. The role of the perspective holder is taken by the speaker/narrator and is offered to the addressee. Personal situations are suitable for the use of *eher* since by choosing to use *eher,* the speaker adopts a temporal perspective internal to the eventuality described (i.e. as if he/she were there), and invites the addressee to share that perspective. An impersonal situation, on the other hand, is such that eventualities should be described "in a purely factual, detached manner". The use of *eher* in impersonal situations appears not appropriate because in such contexts the speaker should not insert him/herself into the eventuality described, but rather stay removed from it (or in fact downplay his or her existence entirely).[7]

It has to be noted though that personal situations do not block *früher* – there is no need to establish a temporal perspective just because it would be natural to do so. This is why in (13) (repeated below) when occurring in the platform dialogue (the personal situation), both *eher* and *früher* are fully acceptable. Considering impersonal situations, on the other hand, Kamp and Rohrer's claim is clearly too strong. We looked for contexts that would block the use of *eher* and we found that even in legislative texts, which are for sure impersonal, *eher* is not totally unacceptable, although *früher* is favoured.[8] Consider (13) in the context of a German Rail loudspeaker announcement again. Although the use of *früher* would be favored, the bare meaning of the *eher* version is intelligible – train arrival from Hamburg precedes train arrival from Cologne – simply because the *eher* version entails the *früher* version.

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[7] A reviewer raises the possibility that the difference between *früher* and *eher* in examples such as those discussed here may simply be one of register. We do not dispute that there is a correlation with register, in that temporal *eher* is more felicitous in informal registers than formal ones. However, we suggest that this difference actually derives from the perspectival nature of *eher* that we have outlined above: A characteristic of formal registers (e.g. scientific reports) is precisely that speakers or writers typically do not "insert themselves" into the information being communicated (see e.g. Biber 1988 on first person pronouns).

[8] We collected judgments by native speakers using corpus examples of *früher* / *eher* from which the adverb had been removed; for each stimulus sentence, informants were asked for their preference between *früher* and *eher* to fill in the blank. The overall tendency we found was that the more lawlike or generic an example is, the less preferred is the use of *eher* as compared to *früher*, but we did not find cases in which *eher* appeared totally unacceptable. Below are two examples with very low *eher* preference.

(a)   From a travel guide about Tehran:
… An solchen Tagen haben die Geschäfte bis 22 Uhr geöffnet, teilweise bis 23 Uhr, die Bars und Restaurants maximal bis 24 Uhr. Danach ist Teheran wie ausgestorben. Freitags schließen auch die Bars und Restaurants früher / eher.
'On such days, the stores are open until 10 p.m., sometimes until 11 p.m., and the bars and restaurants are open until midnight at the latest. After that, Tehran is as if deserted. On Fridays, the bars and restaurants also close earlier.'

(b)   From the rules of procedure of the German Bundestag:
… Der Bundestag tritt spätestens am dreißigsten Tage nach der Wahl zusammen. Der Präsident des Bundestages kann ihn früher / eher einberufen. Er ist hierzu verpflichtet, wenn ein Drittel der Mitglieder […] es verlangen.
'The Bundestag shall convene no later than the thirtieth day after the election. The President of the Bundestag may convene it earlier. He shall be obliged to do so if one third of the members […] so request.'

(13) a. Der Zug aus Hamburg kommt früher an als der Zug aus Köln.

    b. Der Zug aus Hamburg kommt eher an als der Zug aus Köln.

       'The train from Hamburg will arrive earlier/sooner than the one from Cologne.'

In the interest of simple terminology, we will call the deictic center the *perspectival center c_P* and speak of a *perspective holder* when necessary (though this need not be a protagonist in the sense of FID), and we will use the index *P* to mark perspectival notions throughout the paper.

In (21) - (22) formal representations of the meanings of *früher* and *eher* are presented. *UT* denotes the utterance time, $\tau(hh)$ and $\tau(col)$ are the arrival times of the trains from Hamburg and Cologne, and $[c_P,t]$ is the temporal distance between the perspectival center c_P and some posterior time *t*. (21a) and (21b) are in present tense, which has a futurate interpretation in German. Thus the utterance time precedes the arrival times of the trains. In (22), due to past tense, the arrival times precede the utterance time. What is more important, in the *früher* version in (21a) the precedence relation between the arrival of the Hamburg train and that of the Cologne train is directly expressed by the adverb *früher* – $\tau(hh) < \tau(col)$. In contrast, in the *eher* versions (21b) and (22) the precedence relation between the arrival times is entailed, since the adverb *eher* compares distances to the perspectival center: That of the Hamburg train is properly included in that of the Cologne train – $[c_P,\tau(hh)] \subset [c_P,\tau(col)]$.

(21) a. Der Zug aus Hamburg kommt früher an als der Zug aus Köln.   (=13a)

        $UT < \tau(hh)$ & $UT < \tau(col)$ & $\tau(hh) < \tau(col)$

    b. Der Zug aus Hamburg kommt eher an als der Zug aus Köln.   (=13b)

        $UT < \tau(hh)$ & $UT < \tau(col)$ & $c_P = UT$ & $[c_P, \tau(hh)] \subset [c_P, \tau(col)]$

(22)   Der Zug aus Hamburg kam eher an als der Zug aus Köln.

       'The train from Hamburg arrived sooner than the train from Cologne'

       $\tau(hh) < UT$ & $\tau(col) < UT$ & $c_P < \tau(hh)$ & $[c_P, \tau(hh)] \subset [c_P, \tau(col)]$

Summing up, when contrasting *eher* and *früher*, it turned out that, even though both adverbs convey a precedence relation between two events, this is achieved in two different ways. While *früher* directly compares time points, *eher* is indexical, comparing temporal distances to the deictic center. Indexicality and closeness will be the crucial components in adapting the temporal interpretation of *eher* to its non-temporal interpretations. In all of the non-temporal uses, the item mentioned in the target of the comparison is closer to some kind of a perspective center than the one mentioned in the standard of the comparison. Assuming that the perspective holder is the speaker, in *Peru wird eher gewinnen als Brasilien*. ('Peru is more likely to win than Brazil') the possibility of Peru winning is closer to what the speaker considers certain than Brazil winning. Likewise, in *Das Hemd ist eher blau als grün*. ('The shirt is more blue than green') the term *blau* comes closer to the actual color of the shirt than the term *grün*.

We will use the modal framework in Kratzer (2012). While in the temporal reading the perspectival center c_P is a point in time, in the non-temporal readings it will be the optimum given by the ordering source. Being closer to the perspectival center then means being closer to the most normal or interpretationally adequate world/interpretation. This raises the question of the nature of the perspective holder. We learned from Kamp & Rohrer (1983) that a temporal perspective is that of a speaker/narrator guiding the addressee through the temporal course of the narration, not necessarily that of a protagonist in the sense if FID. Similarly, in the non-temporal readings of *eher* the

perspective holder need not be a designated agent, but can instead be the speaker/narrator taking a particular stance (see Eckardt 2015 for the notion of a narrator as opposed to a protagonist).

The general meaning of *eher* proposed in this paper is given by a (possibly partial) order of closeness to a perspectival center which is provided by orderings of different natures, as shown in (23), where c_P is a general placeholder for the perspectival center and $\leq_D$ stands for a (partial) order on the respective domain. In the interest of simplifying the presentation, in the next two sections we will implicitly assume that c_P is the minimum of the ordering. Thus the general form to start with in the next two sections will be the one in (23).

(23) General meaning of *eher*

$$[[\alpha \text{ } eher \text{ } als \text{ } \beta]] \text{ iff } c_P \leq_D \alpha, \beta \text{ and } \alpha \text{ is closer to } c_P \text{ than } \beta.$$

4 The modal use of *eher*

As mentioned in the introduction, the adverb *eher* gained prominence in semantics because it was used by Kratzer (1981, 2012) to argue that the notion of possibility is gradable: One alternative can be more or less possible than another. This observation was the motivation for introducing a second conversational background – the ordering source – into the framework, in addition to the modal base. While the modal base represents information about how the world is, or what the agent knows about the world, the ordering source provides a way to rank this information. Ranking may be based on assumptions about normal courses of events – stereotypes – but also on normative standards or preferences. Ranking is performed by comparing worlds according to how close they come to the optimum specified by the ordering source: A world is higher ranked than another one if it satisfies a superset of the ordering source constraints satisfied by the lower ranked world (but see Katz et al. 2012 for different ways of using the ordering source).

Kratzer's notions of modal base and ordering source are absolute in the sense that they are not relativized to an agent different from the speaker. Adapting Kratzer's framework in order to account for non-temporal readings of *eher* requires defining modal base and ordering source relative to a perspective *P*, as shown in (24a).[9] The order imposed by the ordering source is thus relative to the perspective, as in (24b,c); (24b) describes a non-strict ordering relation, and (24c) the corresponding strict order defined in terms of it.

(24) a. Modal base and ordering source relative to perspective *P*

   f_p: $W \rightarrow$ sets of propositions

   g_p: $W \rightarrow$ sets of propositions

b. "world v is at least as close to the perspectival center as world w (as seen from world w_0)":

   $\forall v,w \in \cap f_p(w_0): v \leq_{gp(w0)} w \text{ iff } \{z \in g_p(w_0): v \in z\} \supseteq \{z \in g_p(w_0): w \in z\}$

c. "world v is closer to the perspectival center than world w (as seen from world w_0)":

   $\forall v,w \in \cap f_p(w_0): v <_{gp(w0)} w \text{ iff } v \leq_{gp(w0)} w \text{ and } \neg w \leq_{gp(w0)} v$

Based on the notion of closeness to the perspectival center, the meaning of non-temporal *eher* is given in (25). Since comparison by *eher* is asymmetric (as are natural language comparatives in general), we

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[9] The idea of perspectival modality is also found in Roberts (ms.) who suggests an indexical analysis of the epistemic modal auxiliaries *must* and *might*.

use the strict ordering relation in (24c). In the next section this version will be revised by adding another constraint.

(25) $[[\alpha \text{ eher als } \beta]]^P$ iff $\forall w \in \cap f_p(w_0). w \in \beta \rightarrow \exists v \in \cap f_p(w_0). v \in \alpha \& v <_{gp(w0)} w$ (to be revised)

4.1   Epistemic *eher*

Let us now consider the epistemic reading of *eher*. In this reading the modal base is an epistemic one, representing the perspective holder's knowledge state, and the ordering source is about the normal course of events (according to the perspective holder). Thus the sentence in (26a) is understood such that under normal circumstances Peru is more likely to win than Brazil. According to the semantics given for epistemic *eher* in (25), the truth conditions are as shown in (26b).

(26)   a. Peru wird eher gewinnen als Brasilien.
          'Peru is more likely to win than Brazil.'

       b. [[Peru wird eher gewinnen als Brasilien.]]^P (to be revised)
           iff $\forall w \in$ BRAZIL-WINS $\exists v \in$ PERU-WINS. $v <_{gp(w0)} w$

There are two different scenarios in which the sentence in (26a) can be evaluated. Assume that we are talking about the World Cup. If Peru plays Brazil in, e.g., the final, alternatives are complementary: Either Peru wins and Brazil loses the match or vice versa. If, however, Peru and Brazil are playing against different teams in the group stage, Peru may win and Brazil lose, or vice versa, or they both may win, or both lose. So in the final of the World Cup, alternatives are complementary, but in a group stage match they are not.

In the example in figure 1, a final scenario is shown. Suppose the modal base includes worlds $w_1 \dots w_8$ and the ordering source is such that it induces the order shown in figure 1 (the ordering source is shown below the figures). In the top world w_1 maximally many ordering source constraints are fulfilled – this is the perspectival center. Since alternatives are complementary, every world is either a Brazil-wins world or a Peru-wins world, but never both or neither. According to the interpretation in (26b) the sentence is true iff for all Brazil-wins worlds there is a Peru-wins world that is closer to the center, which is satisfied in the example. Note that in a situation with complementary alternatives the sentence in (26a) entails (27).

(27)   Unter idealen Bedingungen wird Peru gewinnen.
        'Under ideal circumstances Peru will win.'

In the example in figure 2, a group stage scenario is demonstrated. The modal base and the ordering source are as before in figure 1 and thus the order is the same. There is, however, no requirement that worlds are complementary: There may be worlds in which both Peru and Brazil win and worlds in which neither of them wins. The truth conditions in (26b) are again satisfied in figure 2: For every Brazil-wins world there is a Peru-wins world closer to the center. In the center world neither team wins, showing that in a group stage scenario (26a) does not entail (27).

However, group stage scenarios allow for cases in which the sentence in (26a) appears infelicitous. Suppose, for example, that there are only two Peru-win worlds, w_4 and w_7, and only w_7 is a Brazil-win world. That is, Brazil only wins in a world in which Peru also wins. This is depicted in figure 3. Would we want to be committed to the truth of (26a), as would be predicted by the truth conditions in (26b)? We would rather not, but we would not want to be committed to falsity either. Now consider the converse scenario shown in figure 4: Everything is as before apart from the fact that w_4 is now a Peru-

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and-Brazil-win world while w_7 is a Brazil-only-win world. According to the truth-condition in (26b) the sentence in (26a) would be false in this situation, but in fact it appears infelicitous again. This is evidence that in order for (26a) to be evaluated there has to be a Brazil-win world that is not a Peru-win world, and vice versa. Revised truth conditions will be given below.
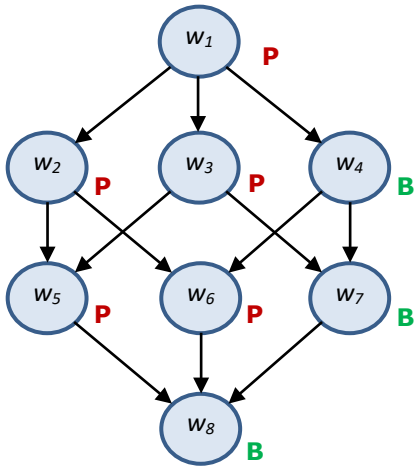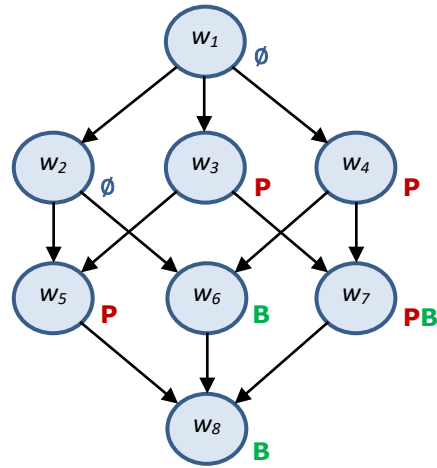

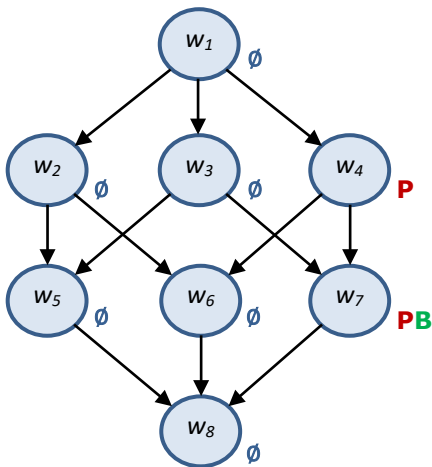
Figure 1: Final, (26a) true
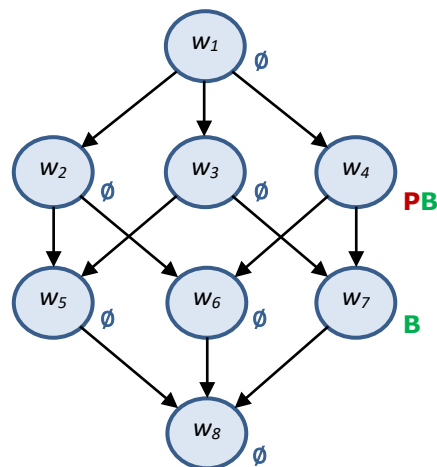

Figure 2: Group, (26a) true

Figure 3: Group, (26a) infelicitous

Figure 4: Group, (26a) infelicitous

Modal base and ordering source in Fig 1 - 4:

$\cap f_P(w_0) = \{w_1, w_2, ..., w_8\}$,

$g_P(w_0) = \{C_1, C_2, C_3\}$ where C_1: *Peru's players are healthy*, C_2: *The refs are fair*, C_3: *The weather is good*

in w_1: C_1, C_2, C_3 are satisfied,	in w_2: C_1, C_2 are satisfied,	in w_3: C_1, C_3 are satisfied,
in w_4: C_2, C_3 are satisfied,	in w_5: C_1 is satisfied,	in w_6: C_2 is satisfied,
in w_7: C_3 is satisfied,	in w_8: none is satisfied	

Here is another example: Suppose Anna and Berta are invited to a party but Berta is a bit shy, so she will only come if Anna comes. Therefore, scenarios for evaluation are restricted to ones in which any

Berta-world is also an Anna-world, but there may be Anna-worlds that are not Berta-worlds. Consider a scenario analogous to the figure 3 scenario, in which there is just one Anna+Berta world and one Anna-only world, and in all the other worlds neither Anna nor Berta will come to the party. Let us assume that in this scenario the Anna-only world is "better" than the Anna+Berta world according to the ordering source. So the truth conditions in (25) would be satisfied. Nevertheless, the sentence in (28) is according to our judgments infelicitous in this scenario. Apparently, the *eher* sentence in (28) presupposes a Berta-only world as well as an Anna-only world in order to be evaluated.

(28)   *Anna wird eher auf die Party kommen als Berta.*
         'Anna is more likely to come to the party than Berta.'

The presupposition revealed by the infelicitous cases in figure 3 and 4 as well as in the Berta-too-shy scenario is such that *eher* sentences require disjoint alternatives in the modal base. There has to be at least one Peru-but-not-Brazil world and at least one Brazil-but-not-Peru world, regardless of what else happens, and only these worlds are relevant to the truth conditions of *eher*. We revise the interpretation in (26b) by adding a condition that we refer to as *disjointness*; see (29):[10]

(29) $[[$Peru wird eher gewinnen als Brasilien.$]]^p$ (revised version)

        <u>presupposition:</u>

        $\exists v \in \cap f_p(w_0).\ v \in$ Peru-wins $\&\ v \notin$ Brazil-wins $\ \&\ \exists w \in \cap f_p(w_0).\ w \in$ Brazil-wins $\&\ w \notin$ Peru-wins

        <u>assertion:</u>

        $\forall w \in \cap f_p(w_0).\ (w \in$ Brazil-wins $\&\ w \notin$ Peru-wins$) \rightarrow\ \exists v \in \cap f_p(w_0).(v \in$ Peru-wins $\&\ v \notin$ Brazil-wins$)$

         $\&\ v <_{gp(w0)} w$

Stepping back, when we started investigating epistemic *eher* we considered only complementary alternatives, as in the World Cup final scenario in figure 1, where chances add up to 100%. It turned out that epistemic *eher* may also be used in a non-complementary situation, as in the World Cup group scenario in figure 2. This is evidence that the alternatives need not be complementary – there may be worlds in the modal base in which neither of them holds. And alternatives need not be disjoint in the strict sense – there may be worlds in which both of them hold. Such worlds are, however, irrelevant in deciding whether an *eher* sentence is true or false. Requiring that the order imposed by the ordering source is strict excludes the situation in figure 4 from being a truth-maker for the *eher* sentence in (26a) (and it excludes pathological situations in which every world satisfies both alternatives). But it would still allow the figure 3 situation to verify (26a) and the figure 4 situation to falsify (26a), which is against our intuition. The purpose of the disjointness presupposition in (29) is to rule out the use of *eher* in such situations by ensuring that the modal base includes a non-trivial subset of relevant worlds, here, both Peru-not-Brazil worlds as well as Brazil-not-Peru worlds.[11]

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[10] The notion of disjointness used here is less strict than one might expect: It is not required that all worlds in a modal base have to be disjoint, just that there are disjoint worlds, and only these worlds matter.

[11] Intuitively, worlds satisfying both alternatives at the same time should not be relevant in evaluation. This is not an issue of the ordering relation (strict/non-strict) but instead refers to the nature of alternatives. As shown in Umbach (2004), alternatives triggered by focus must satisfy comparability conditions originally established by Lang (1984) for conjuncts in a coordination: They must be subsumed by a common "super-concept" and, more importantly, they must not subsume one another. We do not consider focus in this paper. It seems safe to assume, though, that items in a comparative construction are subject to the same conditions as focus alternatives, and in particular must not subsume or entail one another. From this point of view, the intuition that

The fact that *eher* sentences presuppose the existence of disjoint alternatives leads to accommodation effects. The sentence *Peru wird eher gewinnen als Brasilien* ('Peru is more likely to win than Brazil.') presupposes that the modal base includes a Peru-only and a Brazil-only world. Likewise, the sentences *Anna wird eher auf die Party kommen als Berta* ('Anna is more likely to come to the party than Berta.') presupposes that the modal base includes an Anna-only world and a Berta-only world. But it does not require that chances of Anna coming decrease if chances of Berta coming increase or vice versa, and it does not entail that in the best of all world Anna will come to the party.

As shown above, the disjointness presupposition is essential in the truth conditions of the epistemic reading of *eher*. This raises the question of whether it is required by other readings of *eher*. In the temporal reading disjointness is trivially satisfied since time points are disjoint. In the metalinguistic reading, we will see that disjointness is required, too.

4.2   *Eher* with overt modals

In addition to conveying epistemic modality itself, *eher* can also co-occur with a modal verb or adverb on an (apparent) epistemic reading. In fact, as noted earlier, it was examples such as (5) (repeated below) that first brought attention to *eher* in the semantics literature.

(5)   Der Gauzner-Michl kann eher der Mörder sein als der Kastenjakl.   (Kratzer 1981)
        'Gauzner-Michl is more likely to be the murderer than Kastenjakl.'

What is curious about such examples is that there seems to be no clear difference in meaning between *eher* sentences with and without an overt modal, and furthermore little if any difference between a possibility modal such as *kann* 'can, might' and a necessity modal such as *muss* 'must'. By way of illustration, von Fintel & Kratzer (2014) observe that the following three sentences are very close in meaning and appear to be truth conditionally equivalent:

(30)   a. Das ist eher eine japanische als eine chinesische Maschine.

        b. Das kann eher eine japanische als eine chinesische Maschine sein.

        c. Das muss eher eine japanische als eine chinesische Maschine sein.
          'This is more likely a Japanese than a Chinese machine.'

Such cases are reminiscent of the phenomenon of modal concord (Geurts & Huitink 2006, Zeijlstra 2007, Anand & Brasoveanu 2010, Grosz 2010, Huitink 2012), where two modal expressions matched in modal type and force seemingly contribute only a single modal meaning. Herburger & Rubenstein (2018) propose that *eher* plus an overt epistemic modal should be analyzed as such, though they do not opt for a particular theory of modal concord or offer a compositional analysis.

We do not rule out that a concord reading may sometimes be available, particularly with possibility modals, and for such cases we concur with Herburger and Rubenstein that their analysis should be subsumed under a more general theory of modal concord. However, careful consideration of a wider range of examples brings out subtle differences in meaning and felicitous contexts of use between bare *eher* sentences and their counterparts with overt modals, suggesting that in many cases, the modal does in fact make a separate semantic contribution. Consider again our original example of epistemic *eher*, as well as its counterparts with the overt possibility modal *kann* and necessity modal *muss*:

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worlds satisfying both alternatives at the same time are irrelevant in *eher* comparison is backed by the general principle of comparability and contrast called "semantic independence" in Lang (1984).

(31)   a. Peru wird eher gewinnen als Brasilien.

         b. Peru kann eher gewinnen als Brasilien.

         c. Peru muss eher gewinnen als Brasilien.
            Roughly: 'Peru is more likely to win than Brazil.'

The bare *eher* sentence (31a) expresses a simple comparison of (the speaker's assessment of) relative likelihood: Peru is more likely to win than Brazil. As noted earlier, it is acceptable both in the final match situation (Peru plays Brazil; one or the other will win) as well as in the group stage situation (Peru and Brazil play different teams; one of the two, both, or neither might win). The *kann* 'can' version in (31b) is subtly different in meaning, tending to receive an ability interpretation ('it is more likely that Peru has the ability to win than that Brazil has') or a more general circumstantial reading ('it is more likely that circumstances are such that Peru can win than that Brazil can win'). And curiously, it is perfectly acceptable in the group stage situation, but slightly infelicitous in the final match situation. Finally, (31c) with *muss* is somewhat difficult to interpret. As has been frequently observed for English *must* (see e.g. von Fintel & Gillies 2010), *muss* here introduces an inferential or evidential implication, signaling that the speaker's claim is based on reasoning from indirect evidence; but it is difficult to imagine what sort of evidence could be available as to the result of a game taking place in the future. When we shift to describing an event in the past, things change. Example (32) – the past tense counterpart of (31c) – again suggests that the speaker is drawing an inference about the game's outcome on the basis of some particular evidence; but here we can easily picture it being uttered by a speaker who does not know who won but has, say, heard cheering from the apartment of a neighbor, an ardent Peru fan. And in fact, (31c) improves if we imagine a wizard looking into a crystal ball and observing some future eventuality (e.g. cheering Peru fans) that gives a clue to the more likely winner.

(32)   Peru muss eher gewonnen haben als Brasilien.
         Roughly: '(Based on the evidence) Peru is more likely to have won than Brazil.'

The examples in (33) make a related point. Consider the situation of a raffle, where Anna has purchased 10 of the 100 total tickets sold while Berta purchased only 1. (33a) with bare *eher* is a felicitous description of this situation, as is (33b) with *muss eher*. But (33b) does not have a concord reading, nor does *muss* introduce evidentiality (as in (31c), it is difficult to accommodate a source of evidence here). Rather, *muss* appears to contribute its own modal force, something like logical necessity; the interpretive effect is as if the speaker were explaining the rules of probability. So once again, the modal verb is not semantically inert.

(33)   a. Anna wird eher gewinnen als Berta.
            'Anna is more likely to win than Berta.'

         b. Anna muss eher gewinnen als Berta.
            'It is necessarily the case (given these circumstances) that Anna has a greater likelihood of winning than Berta.'

Observe that these effects are also present in the original von Fintel and Kratzer examples, once one knows what to look for. Specifically, (30a) with bare *eher* is felicitous in two different situations: when we are certain that the machine is either Chinese or Japanese but we don't know which; and when our knowledge is compatible with a wider range of possible origins, e.g. Chinese, Japanese, Korean, Russian, etc. The first of these is parallel to the final match situation in the football example in (31), whereas the second is similar to the group stage situation. And just as in that case, (30b) with *kann eher* is most felicitous in the latter type of situation, and less so in the former. Finally,

(30c) with *muss eher* again has a 'reasoning from evidence' flavor that is absent from the other two variants. We think that this particular triplet gives the illusion of equivalence because we imagine a situation where the speaker is standing in front of the machine in question and basing her claim on what she observes of its properties; in this case, what is known (epistemic *eher*), what the relevant circumstances are (*kann*), and what the evidence is for making a judgment (*muss*) largely overlap. As we have seen above, other sorts of examples make the distinction between these more apparent.

To summarize, we take this discussion to show that in many cases, a modal in combination with epistemic *eher* makes a semantic contribution. To work out a particular example, we propose that *kann* in (31b) introduces existential quantification over a circumstantial modal base $f_{circ}(w)$ that represents the relevant facts in w and is independent of the perspective holder. We then derive the following as the presupposed and asserted content of the sentence:[12]

(34) Peru kann eher gewinnen als Brasilien.

    <u>Presupposition:</u>

      $\exists v \in \cap f_p(w_0)[\exists v' \in \cap f_{circ}(v).v' \in$ Peru-wins $\& \neg \exists v'' \in \cap f_{circ}(v).v'' \in$ Brazil-wins$]$ &

        $\exists w \in \cap f_p(w_0)[\exists w' \in \cap f_{circ}(w).w' \in$ Brazil-wins $\& \neg \exists w'' \in \cap f_{circ}(w).w'' \in$ Peru-wins$]$

    <u>Assertion:</u>

      $\forall w \in \cap f_p(w_0)[[\exists w' \in \cap f_{circ}(w).w' \in$ Brazil-wins $\& \neg \exists w'' \in \cap f_{circ}(w).w'' \in$ Peru-wins$] \rightarrow$

        $[\exists v \in \cap f_p(w_0).\exists v' \in \cap f_{circ}(v).v' \in$ Peru-wins $\& \neg \exists v'' \in \cap f_{circ}(v).v'' \in$ Brazil-wins $\& v <_{gp(w_0)} w]]$

To paraphrase, (34) assert that worlds in which the circumstances are such that it is possible for Peru but not Brazil to win are more in line with what is normal or expected (according to the perspective holder *P*) than worlds in which the circumstances are such that it is possible for Brazil but not Peru to win. Thus while a bare *eher* sentence compares the likelihood of two eventualities, a *kann eher* sentence compares the likelihood that two eventualities are possible given the circumstances, the relevant individuals' abilities, etc. This accords with our intuitions about the interpretation of the sentence. Furthermore, the restricted distribution of the *kann eher* variant can be related to an implicature introduced by *kann*. (34) requires us to consider worlds in which it is possible (given the circumstances) for Peru to win but not possible for Brazil to win (and also those where the reverse holds). If the interpretation of *kann* is strengthened from 'possible' to 'possible but not certain', then these are worlds in which it is possible but not certain for Peru to win but not possible for Brazil to win. In the group stage situation, such worlds exist: If Peru and Brazil are playing in different games, we can imagine a state of affairs where it is possible but not certain that Peru can win theirs, but not even possible that Brazil win theirs. But in the final scenario where Peru plays Brazil, there can be no such world, because if it is not possible in *w* that Brazil wins, it is certain that Peru will win in *w*. Hence the *kann eher* sentence is odd in the final stage scenario, in that it requires this implicature to be cancelled.

Turning to *muss eher*, its proper analysis depends on how *muss* `must' itself should be analyzed, currently a much debated question (see e.g. von Fintel & Gillies 2010, Lassiter 2016, Mandelkern 2019). Minimally we think that in the relevant examples, it introduces a constraint on the modal base or context of utterance, for example that the matter in question is not settled by direct evidence (von Fintel & Gillies 2010), or that salient arguments can be identified (Waldon 2021). We have to leave a

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[12] Observe that contrary to the surface word order, *eher* here takes scope semantically over *kann*. This is in line with previous observations that epistemic modals tend to be interpreted as scoping over modals of other flavors, even when the word order is the opposite (e.g. Nauze 2008).

full analysis of these cases, as well as those potentially involving true modal concord, as topics for future research.

4.3   Apparent preference reading of *eher*

German dictionaries, like the Duden (n.d.) and the Digital Dictionary of the Academy of Sciences (DWDS), as well as the German-English dictionary of adverbs and particles by König et al. (1990) list a preference reading of *eher* exemplified in (35a-f). In (35g) we add a naturally occurring example.

(35)   a.   Da gehe ich auf keinen Fall hin, eher arbeite ich den ganzen Tag.   (König et al.)

'I won't go there under any circumstances, I'd rather spend the whole day working.'

b.   Ich würde eher auf das Geld verzichten als unsere Kunden betrügen   (König et al.)

'I'd rather give up the money than cheat our customers.'

c.   Ich würde eher sterben als ihn zu heiraten.   (König et al.)

`I would sooner die than marry him'

d.   Eher lasse ich mir einen Finger abhacken (als das Geheimnis zu verraten).   (DWDS)

'I would rather have my finger cut off (than reveal the secret)'

e.   Wir gehen eher etwas früher weg, als dass wir ein Taxi nehmen müssen.   (DWDS)

`We would rather leave a little earlier than have to take a taxi'

f.   Nawalny ist eher ins Gefängnis gegangen als Asyl zu beantragen.   (Radio feature)

`Nawalny went to jail in preference to applying for asylum'

Initially it might seem that such apparent preference examples can be easily accommodated via an extension of our account of epistemic *eher*, simply by replacing the epistemic modal base and ordering source with a circumstantial modal base and a bouletic ordering source, reflecting the desires of the perspective holder. However, the availability of a clear preference reading turns out to be much more limited than would be predicted under such an analysis.[13]

As noted in section 2, Herburger & Rubinstein (2018) express doubt that there is a preference reading of *eher*. One of their crucial examples is (36a), which they report to be unacceptable, and in particular to lack the preference interpretation that would be available if *eher* were replaced by *lieber* 'rather'/`preferably'. This is predicted in their account: They analyze (36a) to mean that the speaker claims that she is more inclined to believe that she wants to go to Vienna than to remain in Bregenz, which is odd since preference requires self-awareness. In a third person desire report such as (36b), *eher* likewise does not express preference; but this is unproblematic because according to H&R the sentence conveys the speaker's degree of confidence in a report about a third person.

(36)   a.   (= H&R (12); according to their judgement unacceptable)

Ich will eher nach Wien fahren als in Bregenz bleiben.
'I want EHER to Wien travel than in Bregenz stay.'

(intended: 'I prefer to go to Vienna rather than stay in Bregenz.')

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[13] We would like to thank the two anonymous JoS reviewers for encouraging us to take another look at the preference reading of *eher*. Their comments have led to a revised and we think much improved account of the data.

b.　Er will eher nach Wien fahren als in Bregenz bleiben.　　　　　= H&R (13)

　　　　'He wants EHER to Wien travel than in Bregenz stay.'

　　　　'I'm more inclined to think that he wants to travel to Vienna than stay in Bregenz.'

We do not share H&R's judgement about the unacceptability of (36a). From our point of view, this sentence conveys a preference-like reading in the same way as found in the examples in (35). As discussed in section 2, however, the discrepancy might be explained by the differences between Federal German and Austrian German. Thus H&R's judgment regarding (36a) is not necessarily evidence against the existence of a true preference reading for *eher* in some varieties of German.

　　　A further restriction on the apparent preference use of *eher*, pointed out to us by a reviewer, relates to verbal mood. The examples in (37) illustrate two types of preference statements: The context in (37a) sets up an expression of generic preference, while that in (37b) asks for an expression of episodic preference. In the generic context in (a) the *eher* sentence with indicative mood is easily understood as expressing a preference; but in the episodic context in (b) the verb is required to be in the subjunctive mood. The indicative version in (B'), if acceptable at all, can only be understood via inference from a generic statement: "I usually prefer wine to beer, and this is what I do now".

(37)　　a.　　　Interview in a lifestyle journal (generic context):

　　　　　　　A: Sind Sie ein Weintrinker oder ein Biertrinker?

　　　　　　　　`Are you a wine drinker or a beer drinker?'

　　　　　　　B: Ich trinke eher Wein als Bier.

　　　　　　　　`I prefer drinking wine to beer.'

　　　　b.　　　A offers to bring drinks from the bar (episodic context):

　　　　　　　A: Vermutlich gibt es nur Wein oder Bier - was hättest du gern?

　　　　　　　　`Probably there is only wine or beer – what would you like to have?'

　　　　　　　B: Ich würde eher Wein als Bier trinken.

　　　　　　　B: ?? Ich trinke eher Wein als Bier.

　　　　　　　　Intended: 'I'd prefer wine to beer.'

However, the observation that in episodic preference contexts subjunctive mood is required is not specific to *eher*, but instead characterizes expressions of preference more generally. It is also found, e.g., with German *lieber* 'rather'/'preferably' and *bevorzugen* 'prefer' and with *prefer* in English; see (38). Thus the requirement for the subjunctive in episodic readings does not rule out the existence of a true preference reading for *eher*, but instead points to a more general connection between the comparison of (contextual) alternatives and the subjunctive mood; see Villalta (2008) on the selection restrictions of the subjunctive mood in Spanish.

(38)　In generic contexts:

　　　a.　Ich trinke lieber Wein als Bier.

　　　b.　Ich bevorzuge Wein gegenüber Bier.

　　　c.　I prefer wine to beer.

　　　In episodic contexts:

　　　d.　Ich würde lieber Wein als Bier trinken.

　　　e.　Ich würde Wein gegenüber Bier bevorzugen.

f. I would prefer wine to beer.

Thus the data discussed up to this point are compatible with the view that the relevant examples (e.g. (35), (37)) exemplify a true preference reading of *eher*, involving a bouletic ordering source, with some regional variation in the availability of this reading. There is however another possibility, namely that what appears to be a preference reading is actually a special case of the epistemic reading, expressing which of two eventualities is more likely or consistent with the normal course of events, with the implication of preference arising as an inference along the lines of "usually, one is more likely to do what one prefers to do". This latter option could account for some speakers' apparent intuition that *eher* does not really express preference; it also might explain the observed frequency of first person preference examples, as in (35a-e), since it is particularly natural to equate a speaker's assessment of what they themselves are likely to do with what they prefer to do. Here it must be noted that even in the first person case, actual likelihood and preference can diverge, as shown in (39).

(39) A: Wo fährst du an Ostern hin, nach Wien oder nach Bregenz?
       `Where will you go for Easter, to Vienna or to Bregenz?'
     B. Ich würde eher nach Wien als nach Bregenz fahren, wegen der neuen Ausstellung, obwohl ich wegen der Kinder wahrscheinlich nach Bregenz fahre.
       'I would rather go to Vienna than Bregenz, on account of the new exhibit, though because of the children I'll probably go to Bregenz.'

But in this case, the relation of comparative likelihood introduced by *eher* would not relate to the actual world but rather to the situation in some hypothetical world or worlds, in this example ones in which there are no children involved.

Strong evidence in favor of this second option, and against the conclusion that *eher* has a true preference reading, is provided by example (40). Suppose that I have entered a raffle that has several prizes, including a television and a bicycle, with the winner of each being chosen randomly. If my friend asks which of the two I would most like to win, I can answer with *lieber* as in (a); but (b) with *eher* is impossible.

(40) Which of the TV and the bike would you most like to win?

    a. Ich würde lieber das Fahrrad als den Fernseher gewinnen.

    b. *Ich würde eher das Fahrrad als den Fernseher gewinnen.

    c. I'd rather win the bicycle than the television.

This example demonstrates that the apparent preference reading of *eher* is blocked if the subject is not in a position to choose – in the raffle, you cannot choose whether to win the TV or the bike. That is, the preference reading requires the possibility of choice on the part of an agent, most typically the speaker. Observe that this also characterizes the earlier examples from the DWDS and König et al. in (35), all of which feature an element of choice.

We conclude therefore that the apparent preference reading of *eher* should in fact be aligned to the epistemic reading. As in epistemic examples such as (1), the ordering source is one that captures the 'normal' or more likely course of events according to the perspective holder. The difference lies in the modal base. Whereas in ordinary epistemic *eher* sentences it consists of worlds compatible with what is known in the actual world, in epistemic preference examples it is instead some set of hypothetical worlds in which a choice is made; in (37b), for example, these might be worlds just like the actual one but in which the speaker has both beer and wine in front of her and chooses between them. Generic preference examples such as (37a) might then be analyzed as involving a generic modal

base containing actual situations of choice. In either case, the *eher* sentence expresses the perspective holder's subjective assessment of relative likelihood, specifically the likelihood in relevant situations of their choosing one or the other of two options. The feeling of preference arises via an inference as to the reason for the more likely choice. Thus we concur with H&R that *eher* lacks a true preference interpretation; but our analysis provides an explanation for why it can nonetheless be used to communicate something like preference.

Note finally that in the case of English *rather*, there is no element of choice required – the raffle question in (40) can be felicitously answered as in (40c). Thus English *rather* may convey preference even if the speaker cannot choose one of the alternatives. From this point of view, *rather*, unlike *eher*, has a genuine preference reading. In section 6.2 we return to a more detailed comparison of *eher* and *rather*, where we will conclude that in other respects besides this one, *rather* has evolved further from its original temporal meaning than *eher* has.

5   Metalinguistic *eher*

The metalinguistic reading of the adverb *eher* is exemplified in (41) (=(3) in the introduction). The meaning of (41) can be paraphrased as "From the point of view of the perspective holder, it is more adequate to call the shirt blue than to call it green".[14] The metalinguistic reading of an *eher* comparison presupposes that the speaker is familiar with the facts of the world: In order to assert that it is more adequate to call the shirt blue than to call it green the speaker has to be familiar with the color of the shirt, e.g., by visual access. Thus the uncertainty expressed in this reading is not about the actual color of the shirt, but rather about what the best name for that color would be. In this sense the metalinguistic reading of *eher* comparison is the flip side of the epistemic reading: While the epistemic reading expresses uncertainty about the facts of the world presupposing certainty about the adequacy of the linguistic terms, the metalinguistic reading expresses uncertainty about the linguistic terms presupposing certainty about the facts.

The sentence in (41) has a metalinguistic interpretation provided that the speaker has, e.g., visual access to the shirt. If he has not, the sentence can only be read epistemically, in the sense of "The shirt will presumably be blue rather than green", which is marginally possible, though it would preferably be marked by a modal adverb and/or a modal verb (*presumably / will* etc.).

(41)   Das Hemd ist eher blau als grün.
        'The shirt is EHER blue than green.'

Herburger and Rubinstein (2018) doubt that *eher* can be used to express metalinguistic comparison. Their example is repeated in (42). As discussed in section 2, their argument against the existence of a metalinguistic reading is based on a scenario in which the speaker is a detective who searches a room attempting to determine what the profession of the inhabitant is. This is a scenario in which the speaker is uncertain about the facts, so it is no surprise that a metalinguistic reading is excluded. But suppose again that the speaker is attending a musical production and the main character acts fantastically and sings not terribly well. In this scenario the speaker is uncertain about the adequate linguistic term; that is, the sentence is used metalinguistically (see also section 2).

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[14] In this and the next section we will not translate *eher* in the examples in order to avoid confusion with English *more*.

(42)   Sie ist eher Schauspielerin als Sängerin.
       'She is EHER actress than singer.'

Spelling out the metalinguistic reading of *eher* comparison requires a formal framework that allows access to possible linguistic interpretations in addition to possible worlds. We will make use of the idea in Barker (2002) and Krifka (2012), according to which interpretations (Barker calls them contexts) are viewed as truthmakers just like worlds. Propositions are true relative to a world and an interpretation. We will adopt this idea within Kratzer's framework of modality though in a simplified (non-dynamic) manner. A more elaborate account has to be left for future work.

5.1   Restrictions

Metalinguistic comparison by *eher* is subject to two constraints: *disjointness* and *commonality.* They will be considered one by one in this section. Metalinguistic *eher* comparison presupposes disjointness, as does epistemic *eher* comparison. In the epistemic case disjointness was evidenced by the scenario in figure 3 and 4. The sentence *Peru wird eher gewinnen als Brasilien* ('Peru is more likely to win than Brazil.') presupposes that there are worlds such that either Peru or Brazil but not both win, and comparison is between these alternatives (see the definition in (29)). Similarly, in (41) *blau* ('blue') and *grün* 'green' have to be distinct colors. So there have to be interpretations in which the shirt is considered as either blue or green but not both.

The sentence in (43a) appears to be a counterexample at first sight, since *blau* subsumes *blaugrün* ('blue-green'). It has to be observed, however, that (43a) is acceptable as a metalinguistic *eher* comparison only if *blau* and *blaugrün* are considered as two distinct colors, that is, (43a) requires presupposition accommodation. This is even more obvious in (43b), which is not acceptable because *Esstisch* ('*dining table*') is subsumed by *Tisch* ('table') and it would be hard to accommodate disjoint interpretations of the two terms.

(43)   a. Das Hemd ist eher blau als blau-grün.
           'The shirt is EHER blue than blue-green.'

       b. # Das ist eher ein Esstisch als ein Tisch.
           'This is EHER a dining table than a table.'

Disjointness postulates that there are interpretations according to which – for a given state of affairs – one of the alternatives holds but not the other. In the case of (41), there has to be an interpretation such that the shirt in question is blue, and an interpretation such that it is green. Disjointness enforces accommodation in cases like (43a) and blocks cases like (43b) – we can think of interpretations such that *blue* and *blue-green* are distinct colors but we cannot think of a dining table which is not a table.

Furthermore, disjointness explains why (44) is unacceptable as a regular metalinguistic comparison.[15] Suppose, you ordered a beautiful orange shirt from Amazon.com and when you open the package you find that they sent a blue one. The sentence in (44) would then mean that it is more adequate to call the shirt blue than to call it orange, which would be a weird statement. Compare (44) to (41): German *blau* and *grün* denote overlapping parts of the color spectrum, so there is an area in which you may call the shirt either *blau* or *grün*. However, there is no area in which the shades of the color spectrum denoted by *blau* and *orange* overlap, so there are no interpretations such that a given

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[15] Note that (44) may be read epistemically, for example, if you ordered a shirt without fixing the color, and before opening the parcel you wonder what they sent.

shirt may, depending on interpretation, be called either blue or orange. This is why a metalinguistic reading of (44) can only be understood as an ironic comment on the concept of color at Amazon.

(44) ?? Das Hemd ist eher blau als orange.
      'The shirt is EHER blue than orange'

The same effect is shown in (45a) and (b): Even though Portugal and Spain are adjacent there is no overlap because there is a state border between the two countries. Whether a particular place is Portuguese or Spanish is a matter of fact, not a matter of language. Therefore, (45a) does not license a metalinguistic reading; the only possible reading is epistemic. This is why (45a) gives the impression that the speaker is uncertain whether she spent her holidays in Portugal or in Spain. In contrast, Uckermark and Schorfheide are two adjacent regions (close to Berlin) lacking a definite border between them. A particular place in the border area may be subsumed under the name *Uckermark* or the name *Schorfheide*, and thus (45b) is acceptable as a metalinguistic comparison.

(45) Colleague: How was your trip to Spain / to Uckermark?

      a. # … Ich war eher in Portugal als in Spanien.

      b. Ich war eher in der Schorfheide als in der Uckermark.

        'I was EHER in Portugal / Schorfheide than in Spain / Uckermark.'

Generalizing the problem that became visible in (44) and (45), for a metalinguistic *eher* comparison to be acceptable there have to be interpretations such that the given state of affairs can be described by either term – the shirt is adequately described as being blue according to one interpretation and adequately described as being green according to another one. This problem is accounted for by the disjointness presupposition discussed above since it entails the existence of two disjoint interpretations for one and the same state of affairs, see (55).

The second constraint on metalinguistic comparison is commonality: In order to compare two properties, they have to relate to a common dimension; you cannot compare properties that relate to different dimensions, for example, *blau* 'blue' and *teuer* 'expensive'. The sentence in (46a) satisfies disjointness as soon as there is an interpretation such that the given shirt is blue and not expensive, and there is an interpretation such that it is expensive but not blue. And note that, unlike the blue and orange case there is nothing in the world preventing a given shirt from being blue in one interpretation and being expensive in another one. Nevertheless (46a) is unacceptable – it would be absurd to compare color to price, since they are independent dimensions. Similarly, (46b) is unacceptable because the dimension of darkness is independent from that of hue. Therefore a *commonality constraint* is postulated which ensures that alternatives in an *eher* comparison refer to the same dimension.

(46) a. # Das Hemd ist eher blau als teuer.
          'The shirt is EHER blue than expensive'

      b. # Das Hemd ist eher blau als dunkel.
          'The shirt is EHER blue than dark'

The commonality constraint is well known from subcomparatives: A board may be longer than it is wide, but it cannot be longer than it is expensive. Degree comparatives must make use of the same type of degrees, i.e. the same scale. The examples in (47a,b) are evidence that the same constraint applies to predicates in a metalinguistic *eher* comparison: They must share a dimension, like color, or

more generally share a domain, which is why (47a) is acceptable while (47b) is not (see also the footnote on Lang's (1984) comparability conditions in section 4.2).

(47) a. Das ist eher ein Hocker als ein Stuhl.
          'This is EHER a stool than a chair.'

      b. # Das ist eher ein Werkzeugkasten als ein Stuhl.
          'This is EHER a tool box than a chair.'

In concluding the data section we take a step back. When considering epistemic *eher* we took (48a) as a paradigm example: two individuals are compared with respect to one property (*Peru, Brazil – win*). When considering metalinguistic *eher* we took as a paradigm example the one in (49a). In this example two properties are compared with respect to one individual (*blue, green – the shirt*). The remaining options are demonstrated in (48b) and (49b). In the first, *eher* is epistemic (indicated by future tense) – the likelihood of two properties (or rather: future events) is compared with respect to one individual. The question addressed by this sentence could be *What will Peru do in this situation*? As before, disjointness is required: There has to be a world in which Peru pays the fine without exiting and there has to be a world in which it exits without paying the fine.

(48) a. Peru wird eher gewinnen als Brasilien.
          'Peru is more likely to win than Brazil.'

      b. Peru wird eher die Strafe zahlen als aus der Meisterschaft aussteigen.
          'Peru is more likely to pay the fine than exit from the competition.'

In (49b), *eher* can have an epistemic reading or a metalinguistic reading. The epistemic reading would be such that it is more likely that Anna is a high risk patient than that Berta is such a patient, maybe due to age. On the metalinguistic reading Anna and Berta are compared with respect to the question who would be better suited to exemplify a given property: *Who out of Anna and Berta is better suited to exemplify the property of being a high risk patient*? Disjointness is satisfied if there is an interpretation such that Anna counts as a high risk patient but Berta does not, and there is another interpretation such that Berta counts as a high risk patient but Anna does not. So what (48) and (49) show is that the question of whether we compare individuals or properties is independent of whether the reading is epistemic or metalinguistic. Both readings allow for the comparison of two properties with respect to one individual and also for the comparison of two individuals with respect to one property.

(49) a. Das Hemd ist eher blau als grün.
          'The shirt is EHER blue than green.'

      b. Anna ist eher ein Risikopatient als Berta.
          'Anna is EHER a high risk patient than Berta.'

Finally, metalinguistic comparison of two individuals with respect to one property as in (49b) is close to Barker's metalinguistic use of gradable adjectives (see section 5.3). Instead of using the predicate *high risk patient* to provide information about the individuals Anna and Berta, the individuals are used to provide information on how to interpret the predicate. Closeness to Barker's metalinguistic use of gradable adjectives suggests testing the same arrangement with gradable adjectives. The sentence in (50), on a metalinguistic interpretation, is not fully acceptable. One might think it says that Anna comes closer to the standard of being tall than Berta. But the sentence is mostly rejected by German speakers. This effect is no surprise in view of the fact that disjointness is not fully satisfied: Suppose Anna is taller

than Berta. Then Anna may exceed the standard of tallness without Berta doing so. But then the reverse situation is excluded – if Berta exceeds the standard Anna does so as well.

(50) ?? Anna ist eher groß als Berta.
      'Anna is EHER tall than Berta.'

5.3   Worlds & interpretations

Metalinguistic uses of *eher* sentences convey constraints on possible interpretations of linguistic expressions instead of constraints on possible worlds. A semantic framework thus has to provide possible interpretations in addition to possible worlds. We will make use of the idea in Krifka (2012), going back to Barker (2002), that interpretations are truthmakers just like worlds. We will extend Kratzer's framework of modality including possible interpretations in addition to possible worlds, though in a simplified manner.

The role of interpretations in addition to worlds becomes clear in Barker's popular Feynman example. The observation is this: The sentence *Feynman is tall* may be used to answer a question about Feynman's height, as in (51a). If so it provides information about the actual world, namely that Feynman's height exceeds the standard for someone to count as tall in the context of the utterance, that is, according to the actual interpretation of *tall*. The same sentence may also be used to answer a question about the standard, as in (51b). In this case it provides information about the current interpretation, namely that the standard is below Feynman's height. Note that the question in (51a) presupposes that Ann is familiar with the standard, but is uncertain about Feynman's height, whereas in (51b) Ann is familiar with Feynman's actual height, e.g., by visual access, but is uncertain about the standard.

(51) a. Ann: What is Feynman's height?
          Ben: Feynman is tall.

      b. Ann: What is the standard for counting as tall?
          Ben: Feynman is tall.

The Feynman example demonstrates the interaction between worlds and interpretations with gradable adjectives – they may provide information about the world and they may provide information about the interpretation. The two-faced nature of sentences – affecting worlds and affecting interpretations – is also found beyond the area of gradable adjectives, although licit occurrences are limited. Krifka's (2012) paper addresses the semantics of indefinite singular generic sentences (*A madrigal is polyphonic*), arguing that they affect interpretations instead of worlds (these sentences are called *definitional* in contrast to *descriptive*). As a formal framework, Krifka suggests a straightforward extension of the classical idea of a common ground such that it is given by a pair consisting of a set of worlds and a set of interpretations ⟨*W, I*⟩; the meaning of a sentence is relative to a world and an interpretation. Krifka defines update rules for descriptive and definitional sentences such that the former restrict the set of worlds of the common ground and the latter restrict the set of interpretations.[16]

Following Krifka (2012), interpretations are truthmakers just like worlds. We adopt this idea and extend Kratzer's modality framework so that propositions denote sets of world-interpretation pairs

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[16] We will not go into the details of the update rules because we will not address issues of dynamic update in this paper.

instead of sets of worlds only. Modal base and ordering source will be adjusted accordingly, see (52) and (53).

(52) Given a set of worlds W and a set of interpretations I;

A proposition ϕ denotes a set of world-interpretation pairs: $[[\phi]] \subseteq W \times I$
where $[[\phi]]^{i0,w0} = \{\langle w,i \rangle \mid \phi$ is true in world w under interpretation i$\}$

(53) Modal base f_p and ordering source g_p (relative to perspectival center P)
are defined as mappings from world-interpretation pairs to sets of propositions:

$$f_p: W \times I \rightarrow \wp(\wp(W \times I)),$$

$$g_p: W \times I \rightarrow \wp(\wp(W \times I))$$

We will make one major simplification which, while limiting the expressiveness as compared to Barker's and Krifka's systems, facilitates the presentation of the extended modal framework: We will assume that for modal base as well as ordering source, one of the two parameters is constant. This yields a notion of "better world" relative to a given interpretation, and it yields a notion of "better interpretation" relative to a given world; see the definitions in (54). Hence metalinguistic uses of *eher* sentences are assumed to affect only interpretations, and epistemic uses are assumed to affect only worlds. We are aware that these assumptions are overly rigid, excluding, for example, accommodation effects. We will nevertheless retain this simplification and leave a more elaborated account for future work. Except for the extension to tuples of worlds and interpretations, the definition in (54a,b) corresponds to that in (24b,c) while (54c,d) is the mirror image. [17]

(54) ***Better world***

a. "World v is at least as close to the perspectival center as world w (as seen from world w_0 and interpretation i_0)"

$\forall v,w \in {}_{wlds}(\cap f_p(\langle w_0,i_0 \rangle))$:
$v \leq_{gp(\langle w0,i0 \rangle)} w$ iff $\{z \in g_p \langle w_0,i_0 \rangle): v \in {}_{wlds}(z)\} \supseteq \{z \in g_p(\langle w_0,i_0 \rangle): w \in {}_{wlds}(z)\}$

b. "World v is closer to the perspectival center as world w (as seen from world w_0 and interpretation i_0)"

$\forall v,w \in {}_{wlds}(\cap f_p(\langle w_0,i_0 \rangle))$:
$v <_{gp(\langle w0,i0 \rangle)} w$ iff $v \leq_{gp(\langle w0,i0 \rangle)} w$ & $\neg w \leq_{gp(\langle w0,i0 \rangle)} v$

Better interpretation

c. "Interpretation j is at least as close to the perspectival center as interpretation k (as seen from world w_0 and interpretation i_0."

$\forall j,k \in {}_{ints}(\cap f_p(\langle w_0,i_0 \rangle))$:
$j \leq_{gp(\langle w0,i0 \rangle)} k$ iff $\{z \in g_p(\langle w_0,i_0 \rangle): j \in {}_{ints}(z)\} \supseteq \{z \in g_p(\langle w_0,i_0 \rangle): k \in {}_{ints}(z)\}$

d. "Interpretation j is closer to the perspectival center as interpretation k (as seen from world w_0 and interpretation i_0."

$\forall j,k \in {}_{ints}(\cap f_p(\langle w_0,i_0 \rangle))$:
$j <_{gp(\langle w0,i0 \rangle)} k$ iff $j \leq_{gp(\langle w0,i0 \rangle)} k$ & $\neg k \leq_{gp(\langle w0,i0 \rangle)} j$

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[17] $_{wlds}$ and $_{ints}$ are functions taking a set of world-interpretation pairs to the set of world / interpretation parameters.

In (55) the semantics of the metalinguistic usage of (41) (*Das Hemd ist eher blau als grün* – 'the shirt is EHER blue than green') is shown. As in the case of epistemic *eher* in (29), existence of disjoint interpretations is presupposed, and it is asserted that, for all disjoint interpretations, if they are *Hemd-grün* interpretations then there is a better *Hemd-blau* interpretation.

(55) Metalinguistic *eher*

[[*Das Hemd ist eher blau als grün*]]^p

Presupposition:

$\exists j \in {}_{ints}(\cap f_p(\langle w_0, i_0 \rangle))$. $j \in {}_{ints}$(shirt-blue) & $j \notin {}_{ints}$(shirt-green)

& $\exists k \in {}_{ints}(\cap f_p(\langle w_0, i_0 \rangle))$. $k \in {}_{ints}$(shirt-green) & $k \notin {}_{ints}$(shirt-blue)

Assertion:

$\forall k \in {}_{ints}(\cap f_p(\langle w_0, i_0 \rangle))$. ($k \in {}_{ints}$(shirt-green) & $k \notin {}_{ints}$(shirt-blue))

$\rightarrow \exists j \in {}_{ints}(\cap f_p(\langle w_0, i_0 \rangle))$. $j \in {}_{ints}$(shirt-blue) & $j \notin {}_{ints}$(shirt-green) & $j <_{gp(\langle w0, i0 \rangle)} k$

An example scenario is shown in figures 5 and 6. Figure 5 shows the actual shade of the shirt together with interpretations i_1 to i_6 dividing the color spectrum between blue and green (recall that we assume a fixed world parameter w_0.) The shade of the shirt is such that it counts as green in i_1, i_2, i_3, and it counts as blue in i_4, i_5, i_6. Let us assume that interpretations are ordered as shown in figure 6. According to this order the sentence *Das Hemd ist eher blau als grün* ('The shirt is EHER blue than green.') is true, since for each *shirt-green* (G) interpretation there is a higher ranked *shirt-blue* (B) interpretation.
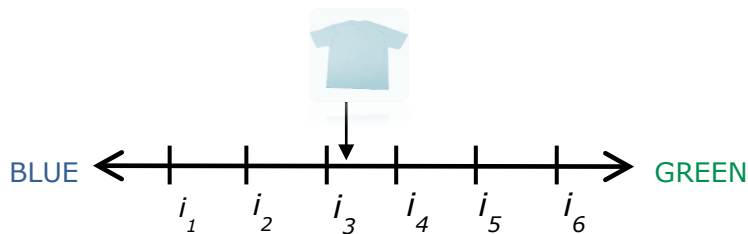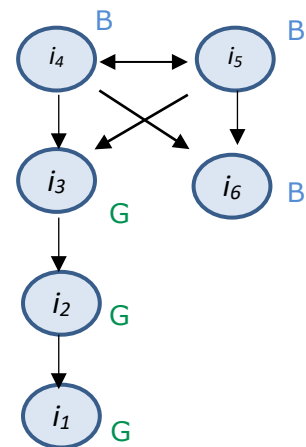

Fig. 5

Fig. 6

The question remains as to the nature of the ordering source. In the epistemic case, ordering sources are collections of propositions about, e.g., normal courses of events or normative standards (for a more detailed discussion of epistemic ordering sources see Katz et al 2012). Setting aside structural matters, the question in the metalinguistic case is: What kind of propositions are relevant as elements of the ordering source? Intuitively, propositions in the ordering source should represent what the perspective holder takes to be normal interpretations. This can be expressed in the form of propositions about objects in the world, for example, gemstones: *emeralds are green*, *sapphires are blue*, *aquamarines are blue*, *rubies are red*, and so forth. We would also require coherence in the sense

that entities in the world whose colors fall between those of sapphires and aquamarines are also called blue. Let us assume that the ordering source in the above example contains four propositions:

(56) $g_P(w_0)$ = {C_1: *sapphires are blue,* C_2: *aquamarines are blue,* C_3: *turquoise is blue,*
       C_4: *emeralds are green*}

We assume, moreover, that due to their color shade in the actual world w_0 sapphires, aquamarines, turquoise and emeralds are positioned on the color spectrum as shown in figure 7.[18] Interpretations $i_1 \dots i_6$ divide the color spectrum as indicated. These interpretations satisfy the constraints in the ordering source in (56) as shown in (57) yielding the order of interpretations in figure 6.

(57) i_1 satisfies C4,

       i_2 satisfies C1 and C4,

       i_3 satisfies C1, C2 and C4,

       i_4 and i_5 satisfy C1, C2, C3 and C4,

       i_6 satisfies C1, C2, C3
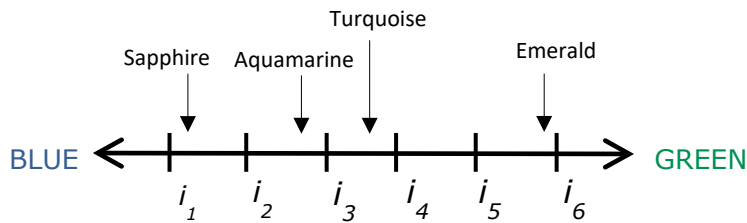
Fig. 7

Expanding the Kratzer framework to pairs of possible worlds and possible interpretations is up to this point straightforward, since we assume that interpretations vary only relative to a fixed world w_0. As acknowledged above, things get more demanding as soon as interaction of worlds and interpretations is taken into account. Moreover, the picture presented here suggests that worlds and interpretations are on a par, which is not quite true. For discussion, see the concluding section 7.

6   Comparison to related expressions

There are a number of expressions that are in some way similar to *eher*. In this section we briefly look at several of these, including English *more* and its German counterpart *mehr*, English *rather*, and German *schon* 'already'.

6.1   *Eher*, *more*, *mehr* and metalinguistic comparison

In the previous section, we analyzed the metalinguistics use of *eher* such that it gets its meaning from an ordering on interpretations rather than worlds. In this section, we briefly consider how *eher* sentences relate to other constructions expressing metalinguistic comparison. We already saw one prominent case in Section 2, namely English *more*, which is illustrated below with a classic example from McCawley (1968):

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[18] For the sake of simplicity, we ignore the fact that each of these stones come in a wide variety of colors, and consider only the most prototypical examples of each.

(58)   Your problems are more financial than legal.

Roughly speaking, (58) expresses that (according to the speaker), the interlocutor's problems are more appropriately described, or characterized, as being financial than as being legal.

There are two prominent recent semantic accounts of metalinguistic comparatives which should be mentioned, Morzycki (2011) on English and Giannakidou & Yoon (2011) on Greek and Korean. Morzycki (2011) proposes an analysis of English metalinguistic comparison of predicates, as in (59), based on the notion of halos of imprecision (Lasersohn 1999). The basic idea is that while ordinary comparatives make use of scales that are lexically determined by particular adjectives, metalinguistic comparatives make use of a generally available scale of imprecision or "pragmatic slack" – in order for the proposition in (59) that George is more dumb than crazy to be true it need not be absolutely true that George is dumb, so long as it is more "nearly true" that he is dumb than that he is crazy.

(59)   George is more dumb than crazy.

   Paraphrase according to Morzycki (2011): The degree of precision that George could be said to be dumb is higher than the degree of precision that George could be said to be crazy.

This idea is implemented by recasting Lasersohn's halos of imprecision as sets of similar alternatives of a particular degree of precision, where degrees range between 0 and 1. Take, for example, the alternatives of the predicate *dumb* at precision 0.8. This set includes all predicates that resemble *dumb* to degree 0.8, for example, *dumb*, *ignorant*, *dopey*, *foolish*, *slow-witted*, etc. The singleton set {*dumb*} corresponds to maximal precision and the set of all predicates $D_{<e;t>}$ corresponds to no precision at all.

   Metalinguistic *more* is then interpreted as comparing degrees of precision; see (60). The sentence in (59) is true if there is a degree of precision and there is a predicate *f* in the halo of *dumb* at this degree of precision – say *stupid* – and calling George *f* is true, but there is no predicate *g* in the halo of *crazy* at this degree of precision such that calling George *g* is true. Note that this interpretation requires that degrees of precision are comparable across lexical items.

(60)   [[George is more dumb than crazy]]^w = 1 iff

   ∃d [∃f. f∈[[dumb]]^d & f(George)(w)] & ¬∃g. g∈[[crazy]]^d & g(George)(w)]

   (Morzycki 2011, p. 54)

Giannakidou & Yoon (2011), building on earlier ideas in Giannakidou and Stavrou (2009), focus on metalinguistic comparatives in Greek and Korean. Both languages have a special comparative marker – Greek p*ara* and Korean *kipota* – expressing preference of expression as well as preference of content, see (61-64) (= 40, 39, 43, 41 in Giannakidou and Yoon).

(61)   Kalitera na pethano para na ton pandrefto!   [Greek]
        better SUBJ die.1SG than SUBJ him marry.1SG
        'I would rather die than marry him.'

   Paraphrase: It is more preferable to me to die than to marry him.

(62)   O Pavlos ine perissotero philologhos para glossologhos.   [Greek]
        the Paul   is-3SG more   philologist   than linguist
        'John is a philologist rather than a linguist.'

   Paraphrase: In the present context, I prefer the sentence 'Paul is a philologist' to the sentence 'Paul is a linguist'.

(63) Onulpam ne-wa naka-kipota cip-ey iss-keyss-ta.   [Korean]
      tonight   you-with go out-saying.than home-LOC stay-will-DECL
      'I prefer to stay home rather than to go out with you tonight.'
       Paraphrase: 'I prefer to stay home rather than to go out with you tonight'.

(64) Lee-nun pwucirenha-ta-kipota ttokttokha-ta.   [Korean]
      Lee-TOP industrious-DECL-saying.than bright-DECL
      'Lee is more bright than industrious.'

      Paraphrase: In the present context, I prefer the sentence 'Lee is bright' to the sentence
      'Lee is industrious'.

All of (61)-(64) are subsumed under the notion of metalinguistic comparatives. An interpretation is suggested such that $MORE_{ML}$ makes use of a gradable attitude *desire* of an agent α directed at either preference of expression or preference of content. In (65) the meaning of $MORE_{ML}$ is defined referring to content: the ordering of degrees of desire is based on the semantic content of the sentences *P* and *Q*. Substituting *P* and *Q* by their quotations (in the sense of Potts 2007) yields the metalinguistic preference variant, (see Giannakidou & Yoon 2011, p.639).

(65) $[[MORE_{ML}]] = \lambda P \lambda Q [P >_{Des(\alpha)(c)} Q]$

> where $>_{Des(\alpha)(c)}$ is an ordering function such that: for *P* and *Q* and degrees *d* and *d'*, the degree *d* to which α desires *P* in *c* is greater than the degree *d'* to which α desires *Q* in *c*; α is the anchor of comparison; *P* and *Q* are Potts tuples for sentences <Π;Σ;α: t >.[19]

The two approaches by Morzycki and by Giannakidou & Yoon are quite different from each other, and also quite different from the account of metalinguistic *eher* that we developed in Section 5. A natural question that arises is whether unification is possible: Could our analysis of metalinguistic *eher* be extended to metalinguistic comparison by *more* in English or *para* in Greek? Or alternatively, might one of the two analyses above prove superior in accounting for the German *eher* data than the one we have proposed? While we do not have a complete answer to these questions, there is evidence that such a unified approach is not called for, the reason being that there seem to be different varieties of metalinguistics comparison with slightly different meanings. In particular, English *more* has a German cognate *mehr*, which is also used to compare predicates, but which diverges from *eher* in interpretation and distribution. Below we show some relevant data, drawn in part from Baier (2009).

      Observe first that both the *eher* sentence in (66) and the *mehr/more* examples in (67) are acceptable. But there is a subtle difference in interpretation. The *eher* version has a binary flavor: Müller is not a clear case of either a businessman or an athlete, but given a choice between these two terms, the speaker proposes that the former is a better characterization than the latter. The *mehr* sentence in (67a) by contrast lacks this `forced choice' implication, but instead conveys that Müller is both a businessman and athlete, but has more characteristic properties of the former than of the latter.

(66) Müller ist eher Geschäftsmann als Sportler.

      `Müller is better described a businessman than as an athlete.'

(67) a. Müller ist mehr Geschäftsmann als Sportler.

---

[19] where Π is the phonological representation, Σ is the syntactic representation, and α the semantic representations of an expression σ, (Potts 2007).

b. Müller is more (of a) businessman than (an) athlete.

In other cases, the difference is one of grammaticality. In particular, *eher* can compare predicates that are complementary or contrary opposites, whereas *mehr* and *more* are unacceptable on this use, at least with the intended metalinguistic reading; see (68)-(71). For example, (71a,b) can, if at all, only be understood as comparing the number of areas within Germany in which the disease in question is rare versus common, and – in contrast to the *eher* sentence in (70) – cannot be used to convey that its overall prevalence is better described as rare than common.

(68) Mein Husten ist eher schlimmer geworden als besser.
      'My cough got worse rather than better.'

(69) a. *Mein Husten ist mehr schlimmer geworden als besser.

      b. ?? My cough got more better than worse.

(70) Die Krankheit ist in Deutschland eher selten als häufig.
      'The disease is better called rare than common in Germany.'

(71) a. ?? Die Krankheit ist in Deutschland mehr selten als häufig.

      b. ?? The disease is more rare than common in Germany.

Finally, and we think relatedly, a metalinguistic *eher* sentence can occur without an overt standard phrase, with the interpretation that is most naturally filled in being a comparison to the antonym of the overt predicate. This is not possible with *mehr* or *more*, unless the comparison predicate is present or highly salient in the discourse. We consider this use of *eher* further in Section 6.2, where we argue that it should not be analyzed as a degree modifier.

(72)   Ihr Verhalten erscheint eher töricht (als vernünftig).
       `Their behavior seemed foolish (rather than reasonable).'

(73) a. ?? Ihr Verhalten erscheint mehr töricht.

      b. ?? Their behavior seemed more foolish.

We propose that these patterns characterizing *eher* fall out from the account developed in this paper, and thus that the different behavior of *more* and *mehr* indicate that these items, while also metalinguistic, require a different analysis. A metalinguistic *eher* sentence of the form *eher P als Q* expresses the relation `better interpretation' (see 54d). As with other varieties of *eher* comparisons, it introduces a presupposition of disjointness according to which there are interpretations $i \in I$ on which P obtains as well as those on which Q obtains. Furthermore, its truth conditions are such that only those interpretations according to which either P or Q obtains (i.e. not both or neither) are relevant. The result, we argue, is that the two contrasted predicates are construed as opposite poles of a spectrum, with a scalar territory in between that is resolved via the choice of interpretation $i \in I$.

This property makes an *eher* comparison particularly natural when the lexical semantics of the predicates in question is such that exactly this relationship holds. This is the case in our original example *eher blau als grün* `blue rather than green': As speakers of the language we know that *blue* and *green* denote disjoint but neighboring ranges on the color spectrum, though there is indeterminacy as to where precisely the line between the two should be drawn. The same property also allows the contrasted predicate to be elided. In (72), for example, one readily infers that the predicate that forms the opposite end of a spectrum to *töricht* 'foolish' must be something like *vernünftig* 'reasonable'. But even when a relation of lexical antonymy does not hold, as for instance

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in the case of *Geschäftsmann* 'businessman' versus *Sportler* 'athlete', the speaker's choice to use *eher* forces us to accommodate such an interpretation, that is, to construe clear cases of `businessman' and 'athlete' as two ends of a spectrum on which an individual can be placed, with some indeterminate territory in between.

We suggest that metalinguistic *more* and *mehr* sentences do not have an equivalent disjointness requirement, and thus do not require the accommodation of a 'forced choice' or 'either-or' interpretation in the way that *eher* sentences do. Precisely what sort of analysis such items require is a topic beyond the scope of this paper, though we think plausible options might be an analysis in terms of imprecision and halos *a la* Morzycki, or perhaps one in terms of closeness to a prototype. We do though think it is likely that there are other items cross-linguistically that should be analyzed along the same lines as *eher*. Greek p*ara* and Korean *kipota* are possible candidates; we are not however able to pursue this here.

As a final point, we observe that certain cases involving the comparison of antonyms might initially appear problematic for our proposed disjointness presupposition, specifically that a metalinguistic sentence of the form *eher P als Q* requires there to be an interpretation *i* on which *P* obtains and one on which *Q* obtains. In an example such as (70), there is a frequency of the disease such that on one way of interpreting *selten* 'rare' and *häufig* 'common', this frequency counts as rare, while on another way it counts as common. But consider (68): How could the same progression of my cough be acceptably characterized as both `getting better' and 'getting worse'? What is relevant here is that `good' and 'bad' are multidimensional predicates, which are subjective even in their comparative forms. Depending on how different aspects of severity (e.g. frequency, intensity, painfulness) are weighted, the relative ordering of two eventualities (e.g. my cough last week versus today) could indeed change. The reader is referred to recent work on adjectival subjectivity (Bylinina 2017; McNally & Stojanovic 2017; Solt 2018; Umbach 2021) for discussion. Importantly, though, this flexibility of interpretation is not sufficient to rescue *mehr/more* comparatives with such predicates, suggesting that these do not operate directly on alternate interpretations but rather assume a fixed interpretation and operate on its flexible or graded character.

6.2 *eher* vs. *rather*

As we observed earlier, even though historically unrelated, English *rather* has followed a very similar diachronic trajectory to German *eher*, originating as a temporal comparative and from there developing a modal use comparing propositions and subsequently a pre-adjectival use (see especially Gergel 2009, 2016 for the steps of development of the two items; see also Dietrich & Napoli 1982 for an in-depth discussion of *rather*). The distribution of present-day *rather* appears to overlap that of *eher*. While the original temporal meaning has been lost, and there is no epistemic use, *rather* does have a preference use, as discussed previously:

(74)   I would rather have wine than beer.

Authors including Gergel (2009, 2016) and Giannakidou & Yoon (2011) claim that *rather* also can be used to form metalinguistic comparative*s*. An example of the apparent metalinguistic use would be the following:

(75)   The shirt is blue rather than green.

Finally, Gergel (2016) notes an apparent parallel in examples such as the following, where *eher* and *rather* precede a gradable adjective, thus appearing to serve as degree modifiers:

(76)   a.   Hans ist eher groß.

        b.   Hans is rather tall.

That two etymologically unrelated items exhibit such clear diachronic and synchronic parallels is, we believe, further support for our overall approach of pursuing a unified analysis of *eher*. The similar behavior of *rather* suggests that temporal comparatives have a tendency to develop other sorts of comparative meanings (cf. also Goncharov & Irimia 2018 for further cross-linguistic parallels). It is thus desirable that this development be captured in the semantics with an analysis that derives the other meanings as extensions of the original temporal one.

At the same time, however, *rather* and *eher* diverge in their behavior more than has been recognized by previous authors, and this argues against extending the present analysis of *eher* also to *rather*. In section 4 we observed this already for the preference reading: Whereas we argued that examples of `preference' *eher* are best analyzed as expressing a variety of comparative likelihood, *rather* appears to have a genuine preference reading. A divergence between the two items can also be observed in the posited metalinguistic use. The example (75) is on the surface parallel to our original example (3) of metalinguistic *eher*. But observe that both of the following are perfectly acceptable. (77a) for example could be used in the situation where I had ordered an orange shirt from Amazon.com and opened the box to find that the shirt they sent was instead blue; (77b) could be used to correct your erroneous belief that I vacationed in Portugal. Recall that the corresponding *eher* sentences ((44), (45a) in section 5.1) are deviant.

(77)   a.   The shirt is blue rather than orange.

        b.   I was in Spain rather than Portugal.

These examples indicate that *rather* lacks the presupposition of overlap that characterizes metalinguistic *eher* – there has to be an interpretation on which *P* obtains and an interpretation on which *Q* obtains – which derives from the more basic disjointness requirement found with all uses of *eher*. The absence of an overlap presupposition is also seen in cases where *rather* seems to translate a felicitous *eher* sentence: (75) for example lacks the hedged feel of its *eher* counterpart, i.e. the sense that either 'blue' or 'green' is a possible if not ideal characterization. Similarly, to state that *she is an actress rather than a singer* would be somewhat odd in a situation where we observe the performer in question both singing and acting, but more felicitous if used to correct a matter of fact (e.g. if the interlocutor had falsely claimed that some individual was a singer). On such a corrective use, *eher* is not possible:

(78)   A: Meryl Streep is a singer. / Meryl Streep ist Sängerin.

        B: No, that's wrong! She's an actress rather than a singer

        B: #Nein, das stimmt nicht! Sie ist eher Schauspielerin als Sängerin.

In all of the metalinguistic cases we have discussed, the *eher* sentence would be better if not perfectly translated with *more* instead of *rather*.

We take these differences to indicate that *rather* does not in fact have a true metalinguistic use. The examples that have been characterized as metalinguistic are, we believe, instances of a more general contrastive usage paraphrasable with *instead*, on which a proposition that has been asserted or is salient in the context is denied, and a factual alternative is asserted in its place. This is a correction type of contrast: It is presupposed that there are two alternatives where only one of them applies, and

it is asserted that one alternative applies instead of the other one.[20] That is, while *eher* comparison can be about interpretations (the metalinguistic use), *rather* sentences are always about facts of the world.

A difference in interpretation can be observed in the pre-adjectival use as well. Gergel (2016) argues that in examples such as (76), both *eher* and *rather* function as modifiers of the gradable adjective. In both languages, this use emerged later than the others we have considered. Gergel takes this to mean that although the diachronic paths of development of *rather* and *eher* diverged somewhat, they ended up essentially in the same place.

We do not concur with this interpretation. To the extent that appropriate diagnostics can be found, these suggest that English *rather* in (76b) is a true degree modifier, i.e. a member of the class that includes items such as *very*, *slightly* and *fairly*. *Eher* in (76a), however, is not. Instead, as alluded to above, we take examples such as this to be cases of metalinguistic *eher* in which an antonymic comparison predicate has been elided (*eher groß als klein* 'better described as tall than short').

As evidence, observe first that *rather* can be used to answer a *how Adj* question, as can the German degree modifier *ziemlich* 'fairly, pretty'. But an answer with *eher* is less felicitous, and to the extent that it is acceptable has a different meaning: Whereas (79a,b) say something about Hans' degree of height, (79c) is a hedged assertion that he qualifies as *groß* 'tall', which would not be a coherent answer to the question:

(79)   How tall is Hans? / Wie groß ist Hans?

  a. He is rather tall.

  b. Er ist ziemlich groß.

  c. # Er ist eher groß.

Once the possibility of hedging is removed, *eher* becomes unacceptable. Suppose two people are arguing about the height of a mutual acquaintance; one believes he is somewhat above average height, while the other believes he is quite short. The first interlocutor can emphatically argue his position with (80a) or (80b); but (80c) with *eher* is impossible.

(80)   a. I am absolutely sure. He is rather tall.

  b. Ich bin ganz sicher. Er ist ziemlich groß.

  c. # Ich bin ganz sicher. Er ist eher groß.

Thus while pre-adjectival *rather* serves to describe the degree to which the property denoted by the adjective holds of an individual, pre-adjectival *eher* does not.

Relatedly, *rather* and *ziemlich* can alternate with other degree modifiers, but *eher* is unnatural in such contexts, suggesting that it has a different function than constraining the range of degrees introduced by a gradable adjective:

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[20] In German, this type of contrast makes use of *sondern* instead of *aber*. While in (a) Ronald could have eaten the apple and the banana, in (b) he could have eaten either the apple or the banana, but not both; see Umbach (2004).

 (a) Ronald hat nicht den Apfel, aber die Banane gegessen.
   'Ronald did not eat the apple but the banana.'

 (b) Ronald hat nicht den Apfel, sondern die Banane gegessen.
   'Ronald did not eat the apple but instead he ate the banana.'

(81)   a. The film wasn't just rather good, it was very good.

        b. Der Film war nicht nur ziemlich gut, er war sehr gut.

        c. ?? Der Film war nicht nur eher gut, er war sehr gut.

We hypothesize that the degree-modifier use of *rather* originated from a comparative in which the second predicate is elided, just as is possible for present-day *eher*. But its meaning on this use has shifted, such that it now directly modifies the adjective. *Eher* may also be developing a degree modifier use, but it apparently has not reached that stage in the way that *rather* has. In this respect as well as others, *rather* has developed further away from its original temporal comparative meaning, both in the loss of the temporal use (still present for *eher* at least in Federal German), in the development of a genuine preference interpretation, and in the emergence of a degree-modifier use in which its comparative character has largely been lost.

6.3 *eher* vs. *schon*

The last of the expressions related to *eher* considered in this section is *schon* 'already'. The focus will be on its occurrence as a modal particle which is, according to Zimmermann (2018), a non-at-issue counterpart to epistemic *eher*.

German *schon* is, first of all, an aspectual particle operating on alternatives provided by focus. Following Krifka (2000), *schon* induces an order on the set of alternatives and restricts the alternatives such that the focus alternative is the greatest of all available alternatives (this is referred to as the "focus is maximum" presupposition below).

The order on alternatives may be aligned to a temporal sequence or to natural numbers, or to other contextually relevant orderings (Krifka therefore suggests the general term *scale alignment particle* instead of *aspectual particle*). In Krifka's example (82a) (=(6) in Krifka 2000), the set of alternatives triggered by focus (*Lydia-is-1-month, Lydia-is-2-month* etc.) is ordered by alignment to time (or numbers) and is constrained by *schon* such that *Lydia-is-3-month* is the greatest element; see (85). The effect of the particle *schon* consists in suggesting that alternatives beyond the focused one – *Lydia-is-4-month* etc. – are not up for debate ("focus is maximum"). This leads to the rhetorical effect observed for *schon*. In (82) for example, there is a flavor of mirativity – surprisingly, Lydia is three month old instead of only one or two.

(82)   a. Lydia ist schon drei$_F$ Monate alt.   Krifka (2000)
           'Lydia is already three month old.'

        b. Alt(Lydia3m) = {Lydia1m, Lydia2m, Lydia3m}   where Lydia1m $\leq_A$ Lydia2m $\leq_A$ Lydia3m

Similarly, in the example in (83) alternatives are ordered by alignment to temporal sequence satisfying the constraint that the focus is the greatest element. As a result we learn that only previous (non-)rain is relevant, and that the fact that it is raining now is somewhat surprising.

(83)   a. [Es regnet schon]$_F$.   Krifka (2000)

        b. Alt(rain) = {rain, ¬rain}   where ¬rain $\leq_A$ rain

Zimmermann (2018) investigates the use of German *schon* as a modal particle, as shown in (84) (=(2a) in his paper). Following Zimmermann, modal *schon* indicates a weakened speaker

commitment.[21] For example, the answer in (84) conveys the impression that the speaker is aware of possible evidence against the claim that St. Pauli is a good team.

(84)   Q: What do you think about St. Pauli?   Zimmermann (2018)

         A: Das ist schon 'n gutes TEAM, alles in allem.
             'Well, all in all, they are a pretty good team, alright.'

Zimmermann adopts Krifka's interpretation of *schon* as a scale alignment particle operating on ordered alternatives while presupposing that the focused alternative is the greatest of all available alternatives. For modal *schon* he suggests that the order of alternatives is determined by the evidence available in the modal base of an agent (e.g. the speaker); that is, p is higher in the ranking of alternatives than q iff the number of propositions in the modal base supporting p exceeds the number of propositions supporting q. This is spelled out in (86) (=(4) in Zimmermann), where p is the focused alternative (*St. Pauli is a good team*) and $\neg p$ is its negation. Accordingly, modal *schon* in (86) triggers a non-at-issue inference indicating that the number of propositions in the modal base supporting the proposition that *St. Pauli is a good team* exceeds the number of propositions supporting the converse.

(85) General meaning of *schon* (Krifka 2000)

. $[[schon]]^C < BG, F, \leq_A> = BG(F);$ defined iff $\forall X \in A_C [X \leq_A F]$

                                  (BG = background, F = focus, $\leq_A$ = a scale of focus alternatives)

(86)   Non-at-issue inference triggered by modal *schon* (Zimmermann 2018)

       $\neg p \leq_{EVAL,x} p = 1$ iff $|\{q \mid q \in MB_{CIRC, x} \land q \text{ supports } \neg p\}| \leq |\{q \mid q \in MB_{CIRC, x} \land q \text{ supports } p\}|$

                             ($MB_{CIRC,x}$ = circumstantial modal base of agent x)

What makes Zimmermann's analyses of *schon* relevant to the analysis of *eher* in the current paper is his claim that modal *schon* is the non-at-issue counterpart of *eher*. For example, the (non-at-issue) inference triggered by modal *schon* in (84), namely that St. Pauli is rather a good team than not (see (4c) in Zimmermann 2018), is said to correspond to the (at-issue) interpretation of the *eher* sentence in (87). Zimmeramnn refers to Herburger & Rubinstein's (2014) analysis of *eher* as comparing an agent's readiness to believe (see section 2) and argues that their analysis comes very close to his analysis of *schon* in terms of available evidence, and that the only difference is in the at-issue vs. non-at-issue status.

(87)   St.Pauli ist eher eine gute Mannschaft (als nicht).

     'St. Pauli is EHER a good team (than not).'

The similarity between (modal) *schon* and (epistemic) *eher* is obvious. In fact, our analysis of epistemic *eher* comes even closer to Zimmermann's analysis of modal *schon* than that by Herburger & Rubinstein, because it is embedded in Kratzer's ordering framework. However, there are differences between modal *schon* and epistemic *eher* that should not be overlooked. First of all, sentences with modal *schon* assert their at-issue content − (84) asserts that St. Pauli is a good team − while *eher* sentence are modals, meaning that there is no such assertion in (87).

    At the same time, the comparison expressed by epistemic *eher* refers to an ordering established by the perspective holder's ordering source. The ordering referred to by *schon* is, first of all, an ordering

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[21] More precisely, unaccented modal *schon* indicates a weakened speaker commitment while accented *schon* indicates a strong commitment and is used for correction. We focus on the unaccented version.

on alternatives, which is aligned to an order provided by an agent-relative modal base $MB_{CIRC,x}$. However, alternatives triggered by focus come with particular focus effects which are absent if expressions are not focus-sensitive. In the case of modal *schon,* focus-sensitivity triggers the "focus is maximum" presupposition. Therefore (84) conveys the impression that the asserted proposition (that St. Pauli is a good team) is at the upper end of what the speaker is willing to admit. In the case of *eher*, which is clearly not focus-sensitive, there is no such effect.

Finally, modal *schon* is frequently combined with *eher.* Zimmermann argues that the combination is a modal concord pair with parallel semantic content though on differ levels (at-issue / non-at-issue). The example in (88) is probably closest to what Zimmermann refers to (he doesn't give an example).[22]

(88) St.Pauli ist schon eher ein gutes Team (als ein Abstiegskandidat).
      'St.Pauli is SCHON EHER a good team (than a relegation candidate).'

Importantly, the combination of *schon* and *eher* in this example does not appear redundant. Without modal *schon* there would be no mirativity effect, and without *eher* there would be no likelihood. This suggests that the two expressions do not form a modal concord pair with parallel semantic content. It seems more appropriate to think of *schon* and *eher* as both making use of the order given by an ordering source but use it for two different purposes. While *eher* operates on the order of worlds induced by the ordering source, *schon* operates on the order of focus alternatives provided by scale alignment. And while *eher* refers to better worlds, *schon* refers to maximal focus alternatives. From this point of view, modal *schon* and epistemic *eher,* though collaborators, do not operate in parallel on different levels but rather fulfill separate tasks while accessing the same ordering.

7   Conclusion

In this paper, we propose a unified analysis of German *eher* for temporal, epistemic, and metalinguistic readings. We analyze *eher* as a comparative form expressing a strict order. We do not assume though that there is a corresponding positive − a positive form of *eher* is not attested in modern High German and was not even attested in Old High German. The semantics of *eher* developed in this paper is such that two alternatives are compared with respect to their closeness to a perspectival center. The nature of the center depends on the reading of *eher:* in the temporal case it is given by the center of the temporal perspective, in the epistemic case it is given by the "best world" according to the perspective holder's ordering source, and in the metalinguistic case it is given by the "best interpretation".

Our analysis started from the insight that temporal *eher* is not equivalent to *früher* ('earlier'). Instead, *eher* is indexical in relating to a deictic center provided by the speaker or some other perspective holder. So *eher* does not just compare temporal precedence but instead compares closeness to the deictic center. This finding opened the door to the modal reading. Kratzer's ordering semantics for modals offers a notion of "better world" which can be used directly as semantics for epistemic *eher* (which is not surprising given the fact that *eher* comparison was among the data motivating ordering semantics). We added only two small pieces, the perspectival center and the disjointness requirement (ensuring the existence of alternatives that do not subsume one another).

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[22] Note that *schon* may also combine with temporal *eher* (*Aldi öffnet schon eher als Penny*. 'Aldi opens SCHON earlier than Penny.') and even with metalinguistic *eher* (*Das Hemd ist schon eher blau als grün*. 'The shirt is SCHON EHER blue than green.') Details are left to future research.

The metalinguistic reading is analyzed as the flip side of the epistemic reading: While the epistemic reading expresses uncertainty about the facts of the world presupposing certainty about the adequacy of linguistic terms, the metalinguistic reading expresses uncertainty about linguistic terms presupposing certainty about the facts. In a recent contribution, von Fintel and Kratzer (2014) express their puzzlement over the role of German *eher* and, in particular, raise the question of whether *eher* is genuinely ambiguous between a metalinguistic and a modal comparison reading. The answer in this paper is: No, it is not.

Following the ideas of Barker (2002) and Krifka (2012) we include interpretations into to the modal framework as another type of truthmakers, in addition to worlds. We consider this move as not just a technical solution. Investigating metalinguistic *eher* with the tool of interpretations next to worlds helps to understand how flexible a language can (not) be. Our favorite example is the blue / orange case: *Das Hemd ist eher blau als orange* ('The shirt is EHER blue than orange.') which is definitely not acceptable. We argue that metalinguistic *eher* comparison of two predicates requires an overlap area: There must be an interpretation such that the particular shade of the shirt counts as *blau* and an interpretation such that it counts as *orange*. This is not the case in the blue/orange example, since, in German, the core meanings of *blau* and *orange* do not allow such interpretations. You may object then that we should in principle be free to assign words to things – e.g. to call a table *Löffel* ('spoon'). Of course, you are. But if you do so, this is no longer German.

Given a particular language, the range of possible interpretations is apparently limited. What, then, about worlds? One might think that with worlds one can do all sorts of things – introduce unicorns, take away gravity and reverse time – and the result is still a world. We are not sure though. Given the standard interpretation of German words, it does not make sense to say *Das Feuer hat die Steine eher abgekühlt als zerrieben* ('The fire cooled the stones rather than grind them.') because it contradicts physical nature and, as in the case of a given language, we might not want to abandon physics. However, it would be a mistake to regard the relationship between language and world as symmetrical – language is the tool to describe the world.

One issue at the top of the list of future work is the nature of constraints on possible interpretations within a given language. Another top issue would be extending the modality framework such that dynamic interaction of interpretations and worlds can be captured. There is also more to say about the combination of *eher* with overt modals and with modal particles. Finally, we have discussed other cases of comparative elements cross-linguistically that have some or all of the same readings as *eher*. Whether the present unified analysis of *eher* might be extended to these is a question we think is well worth exploring.

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