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Evaluative propositions and subjective judgments[1]

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This paper addresses evaluative predicates like *tasty* and *beautiful*. According to the prevailing accounts of evaluative predicates their meaning is relative to a judge/experiencer giving rise to so-called faultless disagreement. Starting from the puzzle of the competent speaker, it is argued in this paper that disagreement about matters of taste is genuine disagreement. An analysis is provided separating semantic and pragmatic aspects of evaluativity. Semantically, evaluativity is traced back to two different sources, (i) the possibility of metalinguistic usage negotiating the standard for satisfaction of the predicate and (ii) the use of multiple criteria in order to compensate for the lack of a fixed denotation. Metalinguistic usage is detailed along the lines of Barker (2002). The idea of evaluative predicates making use of multiple context-dependent criteria while relating to a constant meaning component of, e.g., commending, has been suggested by Hare (1952). Pragmatically, the analysis starts from the observation that the attitude verb *finden* in German can be used to block denial. While unembedded evaluative propositions license genuine denial, when occurring as a complement of first person *finden* they are presented as mere subjective judgments allowing only indirect forms of expressing disagreement. Pragmatics will be spelt out making use of the notion of individual discourse commitments in Farkas & Bruce (2009).

1 Introduction

It has been claimed by various authors that predicates like *tasty* and *fun* give rise to so-called *faultless disagreement* such that participants in a dialog assert contradictory propositions without one of them being wrong. In the dialog in (1) Ann asserts that licorice is tasty and Ben denies her assertion claiming that it tastes terrible. Although the assertions of Ann and Ben are clearly contradictory, their disagreement in (1) appears less severe than their disagreement in (2), because in (2) either Ann or Ben must be wrong while in (1) it is intuitively possible that both are in some sense right. This intuition is commonly described as faultless disagreement.

[1] I presented this paper in various stages at the DGfS in Berlin in 2010 and at linguistic colloquia in Aarhus, Berlin, Bielefeld, Frankfurt, St. Peterburg and Tezpur. The final version differs considerably from previous ones – I'm grateful to the audiences for their valuable comments and criticism. I would also like to thank the students in my seminars on evaluative predicates in Osnabrück and in Stuttgart for lively discussion and empirical support. I'm particularly grateful to Louise McNally, Stephanie Solt, Isidora Stojanovic, Marga Reis, the editors of this volume Cecile Meier and Janneke van Wijnbergen-Huitink and two anonymous reviewers for constructive and sophisticated criticism and support. This paper is based upon work supported by the Deutsche Forschungsgemeinschaft DFG (UM 100/1-1).

(1) a. Ann: Lakritze ist lecker.
'Licorice is tasty.'
b. Ben: Nein! Lakritze schmeckt eklig.
'No, it isn't! It tastes terrible.'

(2) a. Ann: 'Osnabrück liegt in Dänemark.'
'Osnabrück is in Denmark.'
b. Ben: Nein! Es liegt in Deutschland.
'No, it isn't! It's in Germany.'

The intuition of faultless disagreement in cases like (1) is usually accounted for in semantics by assuming that predicates of personal taste introduce a judge parameter determining the truth value of the propositions they occur in. The judge mostly corresponds to the speaker, e.g., Ann and Ben in (1), and is implemented either as an implicit argument provided by the context, or as an evaluation parameter in addition to world and time (Stephenson 2007a; Lasersohn 2005, 2009).

None of these accounts, however, is suited to explain the puzzle of the competent speaker: A competent speaker of a language will know if a word involves an implicit argument or judge parameter. So why should he bother to express a denial in the first place? For example, if Ben would interpret Ann's assertion in (1a) as saying that licorice is tasty to her, or by her judgment, why should he deny her assertion by asserting that licorice is not tasty to himself? (cf. Stojanovic 2007; Moltmann 2010). This puzzle casts doubt on any account involving an implicit argument or a judge parameter, and in fact it casts doubt on the very idea of faultless disagreement – why not accept the denial expressed by Ben in (1b) as genuine disagreement?

In this paper, I will follow Stojanovic (2007) in considering the idea of faultless disagreement a misconception due to a bird's eye perspective which is not available to either Ann or Ben. From the local perspective of the discourse participants Ann claims that licorice is tasty *tout court* and Ben denies this claim expressing genuine disagreement. Still, there is a clear difference between (1) and (2) since the latter describes a matter of fact while the former relates to a matter of taste. The difference between matters of fact and matters of taste is linguistically reflected in German by constraints on the attitude verb *finden* which combines with evaluative propositions, but not with factual propositions.[2] This is why (3) is not acceptable but (4a) is. By embedding an evaluative proposition under first person *finden* the speaker can (i) make his claim immune against denial and, (ii), convey dissent with a previous claim without directly denying it. If, for example, Ann expresses her position embedded under *finden*, Ben cannot deny it, cf. (4), and if Ben counters Ann's assertion in (5) by embedding his own position under *finden*, he will convey that he doesn't agree without directly denying it.

(3) a. *Ich finde, Osnabrück liegt in Deutschland.
'I think Osnabrück to be in Germany.'

[2]German *finden* is close in meaning to English *find*, but the latter is much more restricted in distribution. For this reason, German *finden* will sometimes be glossed as *think* or *consider* in this paper, although this might not be the best translation.

(4) a. Ann: Ich finde Lakritze lecker.
'I find licorice tasty.'
b. Ben: # Nein! Lakritze ist eklig.
'No! Licorice tastes terrible.'

(5) a. Ann: Lakritze ist lecker.
'Licorice is tasty.'
b. Ben: Ich finde Lakritze eklig.
'I find licorice terrible.'

The literature on faultless disagreement focuses on more or less two predicates of personal taste, namely *tasty* and *fun*. Lasersohn explicitly rejects the idea of taking other predicates into account in order to avoid issues of aesthetics (cf. Lasersohn 2005, p.645). In the present paper, basic insights will be taken from aesthetic theory, and the scope of predicates under consideration will be extended including predicates like *schön* 'beautiful', *gut* 'good' and dimensional predicates like *groß* 'big'.

Dimensional adjectives like *groß* are known to diverge in semantic behavior from evaluative adjectives like *schön* with respect to *Normbezug*[3] (Bierwisch 1987) and with respect to combination with measure phrases (cf. Sassoon 2011). Surprisingly, when considering propositions embedded under *finden*, (unmodified) dimensional adjectives go together with evaluative adjectives – *groß* as well as *schön* are licensed in (6a). The picture changes though when considering comparative forms: *schöner* 'more beautiful' is licensed in *finden* complements whereas *größer* 'bigger' is not, cf. (6b).[4]

(6) a. Ich finde die neue Wohnung schön / groß / *100 qm groß.
'I think the new apartment is beautiful / large / lit.: 100 sqm large.'

b. Ich finde die alte Wohnung schöner / *größer als die neue.
'I think the old apartment is more beautiful / larger than the new one.'

In this paper, an analysis of evaluative propositions – propositions with *lecker/tasty*, *schön/beautiful*, *groß/big* and also *schöner/more beautiful* as their main predicates – will be proposed in which semantic aspects of evaluativity are separated from pragmatic aspects.

As for semantics, it will be argued that there are two reasons for a proposition to be evaluative. Either it is used in a metalinguistic way affecting the denotational borderline of the predicate or it is used in a descriptive way exploiting commonly agreed on criteria for satisfaction of the predicate (depending on comparison class, speaker community, context etc.). The distinction between metalinguistic and descriptive usage is taken from Barker (2002). The idea of criteria for satisfaction of evaluative predicates was proposed by Hare (1952). A semantics of evaluative predicates based on criteria is sketched making use of generalized measure functions, cf. Umbach &

[3] While the sentence *A ist größer als B* 'A is bigger than B' is neutral as to whether A or Bare big, the sentence *A ist schöner als B* 'A is more beautiful than B' entails (in most contexts) that both A and Bare beautiful; see also Rett (2008) who calls this effect *evaluativity*.

[4] There is an evaluative reading of *größer* 'larger' which is licensed in *finden* complements: *Ich finde die alte Wohnung größer als die neue – das muss an den kleineren Fenstern liegen* 'I find the old apartment larger than the new one which is possibly due to the small windows.' – Many thanks to Marga Reis for providing this example.

Gust (2014). Update will be implemented based on Krifka's enriched notion of a common ground consisting of a pair of worlds and interpretations (cf. Krifka 2012).

As for pragmatics, evaluative propositions may – but need not – be relativized to express the speaker's subjective position, e.g. by embedding under first person *finden*. (First person is mandatory, as with performative verbs.) Pragmatics will be spelt out in the discourse framework devised in Farkas & Bruce (2010) which includes, in addition to the common ground, sets of individual discourse commitments for each discourse participant.

The paper is structured as follows: In Section 2, the current approaches to evaluative predicates will be summarized and the notion of taste judgment proposed by Kant (1878 [1790]) will be outlined. A two-by-two classification inspired by Kant will be suggested distinguishing semantic and pragmatic aspects of evaluative propositions. Section 3 is about the semantics of evaluative propositions distinguishing between descriptive and interpretational, i.e. metalinguistic, usage of propositions. In Section 4, the difference in pragmatics between general judgments (licensing denial) and subjective judgments (blocking denial) will be spelt out in the discourse framework in Farkas & Bruce (2010).

2 The idea of faultless disagreement

2.1 Current positions in the literature

The interpretation of evaluative predicates has been a topic of debate for the last decade in linguistics as well as philosophy. In this section, prominent positions in the literature will be reviewed focusing on two questions: (i) Does the account include an experiencer or judge, and if so, who can take that role? (ii) Is faultless disagreement acknowledged to exist? Contextualist and relativist positions will be grouped together and contrasted with metalinguistics positions. For details on the contextualism/ relativism debate see the introduction to this volume by Janneke van Wijnbergen-Huitink.

Lasersohn (2005) starts from the intuition that what we find in dialogs like (1) is *faultless disagreement*[5], that is, Ben denies the proposition asserted by Ann and, at the same time, neither Ann nor Ben are wrong. Lasersohn rejects the option that predicates of personal taste involve an implicit argument such that *tasty* means *tasty for some salient individual* because the contents (in a Kaplanian framework) of Ann's and Ben's assertions would be different (Licorice is tasty to Ann / Licorice is tasty to Ben) thereby not accounting for the fact that Ben's reply is a denial.

In view of this problem, Lasersohn suggests assuming that the content of Ann's and Ben's utterances in (1) is in fact the same (modulo negation) and considering the truth of propositions involving taste predicates as being relative to a judge index, in addition to the world index. His approach is implemented in a Kaplanian framework, treating the content of a sentence as a set of world-individuals pairs (instead of a set of worlds). Thus the truth or falsity of propositions involving taste predicates depends not only on the world of evaluation but also on a "standard of taste" or judge. Technically, taste predicates are one-place predicates and differ from regular predicates only in

[5] The notion of faultless disagreement was coined by Kölbel (2002).

their judge-dependent valuation. There are three possibilities for the judge index corresponding to three perspectives: (i) The autocentric perspective is the perspective of the one assessing the sentence, i.e. speaker or hearer – this is the default case; (ii) the exocentric perspective results from the speaker taking the perspective of some other individual, e.g., in free indirect discourse and in questions; (iii) the acentric perspective is like a bird's eye view. If a sentence is assessed from an acentric perspective, there is no judge and thus no determinate truth value. There is an interesting remark about the acentric perspective in Lasersohn's (2009) paper: "It is perhaps worth noting that it is only when we adopt an acentric stance that 'faultless disagreement' really seems faultless." (p.6) This implies that, from the perspective of the discourse participants, disagreement is not faultless, which is the position in the present paper.

Stephenson (2007a) presents another judge-dependent account. She starts from the observation that taste predicates are close to epistemic modals (e.g. *It might be raining*): While predicates of personal taste raise the question of whose taste is relevant, epistemic modals raise the question of whose knowledge is expressed. Stephenson makes use of Lasersohn's system allowing, however, for an implicit argument interpretation in addition to the judge-as-index interpretation.[6]

In addition to the semantic interpretation of taste predicates, Stephenson gives a pragmatic account of taste judgments in dialog. She posits a common ground which represents the mutual beliefs of the discourse participants and is updated in the course of the communication (Stalnaker 1978, 2002). The common ground consists of a set of pairs of worlds and judges (instead of a set of worlds). Judgments of taste are handled by two principles, "actual judge" and "norm of assertion". The actual judge represents the group of participants in the conversation and is the judge for all world-judge pairs in the common ground. Thus there must be consensus concerning matters of taste throughout the common ground. The norm of assertion, on the other hand, allows the speaker to assert a sentence even if he does not believe that the sentence is true as judged by the group of conversational participants. He is only required to believe that the sentence is true as judged by himself. If the assertion is accepted by the group and added to the common ground, the judge parameter of the proposition will be shifted to the "actual judge". Judge parameters are implemented like world parameters: For every conversation, there is an actual world and an actual judge. Judges that differ from the actual one occur only temporarily and disappear as soon as the common ground is established, thereby preserving consensus.

Moltmann (2010) also accepts the existence of faultless disagreement. However, she suggests accounting for this intuition not by relativizing the truth value of the proposition to a judge/ experiencer but by "grasping the propositional content in a first-personal way, namely by applying the predicate to everyone in the domain as if to oneself" (Moltmann 2010, p.1). This idea is based on her account of *first-person-based-genericity* where sentences involving generic *one* are understood such that the speaker identifies himself with each individual in the quantified domain. Simplifying

[6] Since Stephenson postulates that the autocentric perspective is obligatory, the implicit argument interpretation is required to account for examples where the agent differs from the individual whose taste is under consideration:

(i) Mary: How's that new brand of cat food you bought?
Sam: I think it's tasty, because the cat has eaten a lot of it.

At first sight the option of an implicit argument interpretation appears to address a home-made problem, which does not occur in Lasersohn's system – he simply argues for an exocentric perspective of the agent of the attitude in cases like (i). Still, including both an implicit argument and a judge parameter makes it possible to implement judge-dependence in a centered-world account, the judge being the center, cf. Stephenson (2010).

considerably, Moltmann's approach can be said to interpret the sentence *Licorice is tasty* such that it means *One considers/finds licorice tasty*. This sentence in itself has absolute truth conditions, is either true or false. But since different speakers may attribute different properties to the individuals he/she identifies with, truth values may differ between speakers, which is, following Moltmann, the reason for the intuition of faultless disagreement.

Another first person genericity account is presented in Pearson (2013) linking it to the semantics of attitudes *de se*. In Pearson's account first person indexicals (implicit experiencer arguments) and the judge parameter, which are distinct ways of representing subjectivity in relativist semantics, are conflated. This leads to a different view on identification: While in Moltmann's account the speaker simulates the individual he/she identifies with, in Pearson's account the speaker empathizes with that individual. Similar to Moltman and Pearson, Anand (2008) claims that propositions involving taste predicates are in some sense generic. According to Anand, they require universal quantification over normal individuals. Cohen (2010) argues that this leads to a number of problems and replaces the notion of normal individuals by the notion of competent perceivers, where perceivers are assigned different weights in determining the probability that the proposition is true. So when John and Mary disagree on a judgment of taste, they disagree on what counts as a competent perceiver and what the appropriate weights are, which is genuine disagreement. The intuition of faultlessness is explained by the fact that John and Mary are, of course, entitled to have different assessments of perceivers. John's reason for contradicting Mary in a dialog like (1) is to make her correct her assessment of competent perceivers. He does not want to "to convince her that she likes roller coasters [or licorice] but that she ought to like them" (Cohen 2010, p.2), since this is what the majority of competent perceivers do. Note that this is a normative position (see also Wolf 2016).

Analyses that reject the idea that judgements of taste involve an implicit experiencer or perceiver or judge mainly refer to some dispute about the interpretation of the predicates. This possibility is, e.g., entertained by Egan (2010) although he finally dismisses this option in favor of a *de se* account of propositional attitudes, and by Sundell (2011). Sundell distinguishes between *character disagreement* (about the character of the expression), *content disagreement* (about the truth of the content) and *context disagreement* (about the relevant context). It is suggested that disagreement about matters of taste is not about the content of the asserted propositions, and not about the character of the predicates, but about the context, that is, about the contextual standards of *tasty*, *fun* etc.

Another analysis rejecting judge-dependence is Barker (2013). Barker considers disagreement about matters of taste to be disagreement about "the discourse". This includes contextual standards of the predicates. But it also includes includes norms saying which aspects are relevant in determining whether a predicate applies. The intuition of faultlessness is explained by the fact that none of the participants has privileged authority over the discourse. Barker implements this analysis making use of the distinction between descriptive usage and metalinguistic usage of a proposition proposed in Barker (2002). To distinguish between these two usages, a notion of common ground is required that consists of worlds and discourses, and update may affect either one. The analysis in the current paper will be based on the distinction between the two usages without, however, adopting Barker's claim that disagreement about matters of taste is restricted to "the discourse", i.e., is always metalinguistic. Metalinguistic usage will be called “interpretational” in this paper (cf. Section 3.1).

Let us finally consider Stojanovic (2007; 2012). She rejects the idea of faultless disagreement arguing that discourse participants either genuinely disagree, or they are both right but their disagreement

boils down to a misunderstanding. This is demonstrated in (7). When Ben denies her assertion, Ann has two ways to reply. In (7c) she insists on her original claim, while in (7d) she retreats to a weaker position.[7] Ann's reply in (7c) makes it obvious that she considers their disagreement to be genuine, in that one of them has to be wrong, while her reply in (d) indicates a misunderstanding: What Ann meant to say is just that licorice is tasty to her.

(7) a. Ann: Licorice is tasty.
b. Ben: No, it isn't, it tastes terrible.
c. Ann2: It is tasty. And it's not just that I find it tasty; it's tasty *tout court*.
d. Ann2': OK. To my taste, licorice is tasty; that's all I'm saying.

Stojanovic furthermore argues that, even if there were faultless disagreement, relativism would fail to account for it, since semantically competent speakers of English would be aware that taste predicates are judge-dependent, and thus not bother to deny the assertion. (This is the puzzle of the competent speaker, cf. Section 1). In her (2012) paper, Stojanovic focuses on expressions of emotion (*sad,* as in *It is sad that…*), which are similar to predicates of taste in giving rise to the intuition of faultlessness. While still rejecting the idea that disagreement may be faultless, she elaborates her position, combining contextualist and metalinguistic features so that the lexical meaning of the expressions is underspecified with respect to experiencer, respects, comparison class and threshold. In addition, the concepts associated with emotion predicates (as well as taste predicates) are open-ended. So even if discourse participants specify the required parameters, there may be residual disagreement which is metalinguistic in nature.

2.2 Kant's notion of judgments of taste

In his *Kritik der Urteilskraft* (1878 [1790]) Kant characterizes judgments of taste – about beauty (*das Schöne*) – and judgments of agreeableness – about pleasure (*das Angenehme*) in a way surprisingly relevant for linguistic interpretation.[8,9] In Kant's system, first, judgments of taste and agreeableness are distinguished from judgments about factual matters. The latter are about properties of objects, whereas the former are about properties the subject ascribes to the object. Next, judgments of taste (in Kant's terminology) are distinguished from judgments of agreeableness. (In linguistics, there is a tendency to narrow down the notion of taste to gustatory taste which, in Kant's terminology, is a matter of agreeableness, see below.)Judgments of agreeableness don't claim to be generally valid – others need not share our judgment:

> "In Ansehung des *Angenehmen* bescheidet sich ein jeder: daß sein Urteil, welches er auf ein Privatgefühl gründet, und wodurch er von einem Gegenstande sagt, daß er ihm gefalle, sich auch bloß auf seine Person einschränke. Daher ist er es gern zufrieden, daß, wenn er sagt: der Kanariensekt ist angenehm, ihm ein anderer den Ausdruck verbessere und ihn erinnere, er solle sagen: er ist *mir* angenehm; […] Darüber in der Absicht zu streiten und das Urteil anderer,

[7] The wording of Ann's replies is directly adopted from Stojanovic's (2007) examples (5) and (3).
[8] Very many thanks to Peter Bosch for bringing Kant's theory on aesthetics judgments to my attention.
[9] In presenting Kant's ideas, extensive use will be made of the clear and comprehensible article on aesthetic judgment by Zangwill (2014) in the *Stanford Encyclopedia of Philosophy*.

welches von dem unsrigen verschieden ist, gleich als ob es diesem logisch entgegengesetzt wäre, für unrichtig zu schelten, wäre Torheit; und in Ansehung des Angenehmen gilt also der Grundsatz: *Ein jeder hat seinen besonderen Geschmack.*" (Kant, 1878 [1790], p. 54) "[10]

In contrast, judgments of taste demand, following Kant, general validity and thus come with a normative claim – we insist on others agreeing with our taste:

"Mit dem Schönen ist es ganz anders bewandt. Es wäre […] lächerlich, wenn jemand, der sich auf seinen Geschmack etwas einbildete, sich damit zu rechtfertigen gedächte: dieser Gegenstand (das Gebäude, was wir sehen, das Kleid, was jener trägt, das Konzert, was wir hören, das Gedicht, welches zur Beurteilung aufgestellt ist) ist *für mich* schön. […] Reiz und Annehmlichkeit mag für ihn vieles haben, darum bekümmert sich niemand; wenn er aber etwas für schön ausgibt, so mutet er andern eben dasselbe Wohlgefallen zu: er urteilt nicht bloß für sich, sondern für jedermann, und spricht alsdann von der Schönheit, als wäre sie eine Eigenschaft der Dinge. Er sagt daher, die Sache ist schön, und rechnet nicht etwa darum auf Anderer Einstimmung in sein Urteil des Wohlgefallens, weil er sie mehrmalen mit dem seinigen einstimmig befunden hat, sondern fordert es von ihnen. Er tadelt sie, wenn sie anders urteilen, und spricht ihnen den Geschmack ab […] und sofern kann man nicht sagen: *Ein jeder hat seinen besonderen Geschmack*." (p. 55)" [11]

Kant's characterization of the two types of judgments is strikingly close to linguistic form. His judgments of the agreeableness come with an implicit experiencer argument ("… he does not take it amiss if, […] [another] reminds him that he ought to say: *It is agreeable to me.*") and they don't license denial. In contrast his judgments of taste do not allow for an experiencer argument ("… be ridiculous if any one […] were to think of justifying himself by saying: *This object* […] *is beautiful for me*.") and they do license denial. Kant's characterization seems to suggest that this is a lexical distinction: There are predicate like *schön* 'beautiful' that give rise to general judgments and there are predicates like *angenehm* 'pleasant' expressing mere personal feelings. In the recent literature it has, in fact, been pointed out that in the case of predicates reporting internal experience subjects cannot be mistaken, for example *I am freezing* or *I am in pain*. It may be suspected that the paradigm example *tasty* belongs to that category justifying a judge-dependent analysis à la Lasersohn (2005) or Stephenson

[10] "As regards the Agreeable, everyone concedes that his judgment, which he bases on a subjective feeling, and in which he declares that an object pleases him, is restricted merely to himself personally. Thus he does not take it amiss if, when he says that Canary wine is agreeable, another corrects the expression and reminds him that he ought to say: *It is agreeable to me.* […] To quarrel over such points with the idea of condemning another's judgment as incorrect when it differs from our own, as if the opposition between the two judgments were logical, would be folly. With the Agreeable, therefore, the axiom holds good: *Everyone has his own taste"* (Translation by J. C. Meredith, http://en.wikisource.org/wiki/The_Critique_of_judgement).

[11] "The Beautiful stands on quite a different footing. It would, on the contrary, be ridiculous if any one who prides himself on his taste were to think of justifying himself by saying: This object (the building we see, the dress that person has on, the concert we hear, the poem submitted to our criticism) is beautiful for me. […] Many things may for him possess charm and agreeableness – no one cares about that; but when he puts a thing on a pedestal and calls it beautiful, he demands the same delight from others. He judges not merely for himself, but for all men, and then speaks of beauty as if it were a property of things. Thus he says that the thing is beautiful; and it is not as if he counts on others agreeing with him in his judgment of liking owing to his having found them in such agreement on a number of occasions, but he demands this agreement of them. He blames them if they judge differently, and denies them taste, which he still requires of them as something they ought to have; and to this extent it is not open to men to say: *Everyone has his own taste*." (Translation by J. C. Meredith, (Translation by J.C. Meredith, http://en.wikisource.org/wiki/The_Critique_of_Judgement)

(2007a; 2007b). But since people fight about matters of gustatory taste as they fight about matters of beauty it may also be of the type of judgments claiming general validity (note that German *lecker* 'tasty' does not license an experiencer argument). We will leave this question for further research (see, e.g., the experimental study by Meier 2012) and focus on predicates like *schön* 'beautiful' in this paper.

There is no room for something akin to faultless disagreement in Kant's system. When denying a judgment of taste (in the sense of Kant) that claims general validity, the speaker expresses genuine disagreement. But since this judgment is not about of matters of fact, it is essentially normative ("when he puts a thing on a pedestal and calls it beautiful, he demands the same delight from others."). According to Kant, normativity is a core characteristic of taste judgments explaining the possibility of genuine denial (for the notion of normativity and its role in Kant's system see Zangwill 2014). Thus, an analysis of taste judgments (in the sense of Kant) has to refer to normativity with respect to language use.[12]

2.3 Semantic vs. pragmatic aspects of evaluativity

In this paper it will be assumed that there is no faultless disagreement and no misunderstanding – if you claim that licorice is tasty and I say no, this is genuine disagreement. The idea of faultless disagreement presupposes a bird's eye perspective, but for participants in a discourse there is no bird's eye perspective. Still, there is the intuition that judgments concerning matters of taste are in some sense weaker than judgments concerning matters of fact. The reason for this intuition is – as argued in this paper – that judgments about matters of taste can be presented as being merely subjective, for example, in German by embedding the proposition in question under the attitude verb *finden* ('find'/ 'consider'/ 'think') (cf. Section 4). Judgments presented in this way by the speaker (first person) are immune against denial, as shown by the infelicity of denial in (4) in the introduction. However, in contrast to what is claimed in relativist accounts, judgments about matters of taste can also claim general validity, and in that case license genuine denial. Therefore, from a pragmatic point of view, general judgments (licensing denial) will be distinguished from subjective judgments (blocking denial). From a semantic point of view, being licensed as a complement of the attitude verb *finden* appears, at first sight, suited to separate propositions about matters of taste from those about matters of fact. This was in fact suggested in earlier versions of this paper. It proved wrong for two reasons: First, the characteristic German *finden* is sensitive to is not evaluativity but instead interpretational (metalinguistic) usage of the proposition (cf. Section 3.1). Secondly, it became evident that evaluative propositions have not only an interpretational usage but also a descriptive one. These two insights led to an analysis that emphasizes the opposition between descriptive and interpretational usage of propositions instead of that between propositions about matters of fact and propositions about matters of taste.

The hypothesis in this paper is shown in the two-by-two classification schema in Table 1. The horizontal dimension is semantic relating to the usage of the propositions. Propositions with (the

[12] In the approach in Stephenson (2007a), normativity is not explicitly mentioned. However, in her account the judge-dependent evaluation loses relativity as soon as the proposition enters the common ground since for a judge-dependent statement to enter the common ground the judge must be substituted by the actual judge of the conversation. Thus a competent speaker will intend that his statement be adopted by the overall group of discourse participants, which is a normative intention.

positive form of) evaluative predicates like *schön/beautiful* can be used either way. Propositions with (the positive form of) dimensional predicates, like *tall*, can also be used either way but only the interpretational usage appears evaluative (and can be embedded under *finden*). The descriptive usage expresses a factual matter presupposing a given standard for satisfaction of the predicate. Considering comparative forms, propositions with evaluative predicates can again be used either way. Comparatives of dimensional predicates, in contrast, do not license an interpretational usage. This picture entails that a proposition can be evaluative for two different reasons: It can be evaluative in the sense of having an interpretational usage manipulating standards, but it can also be evaluative when having a descriptive usage, provided the predicate is lexically evaluative (gradable but non-dimensional). Surprisingly, these two reasons for being evaluative partition the data similarly to the two kinds of subjectivity suggested by Kennedy (2016) even if his explanation is completely different (Section 4.1)

Distinguishing descriptive usage and interpretational usage leads to different modes of updating the common ground: While the former leads to updating worlds, the latter leads to updating interpretations (or "discourses" in the sense of Barker). Implementing this distinction requires a notion of common ground including interpretations in addition to worlds. The semantic dimension will be detailed in Section 3.

The vertical dimension in Table 1 is pragmatic relating to the nature of the judgment made by the speaker. When making a general judgment, the speaker demands that the proposition in question is included in the common ground of the conversation. In contrast, when making a subjective judgment, the speaker does not demand that the proposition is included in the common ground. It may instead stay a mere individual discourse commitment. This will explain for the blocking of denial effect. Details of the pragmatic dimension will be discussed in section 4.

<table>
<tr><th></th><th colspan="2">descriptive usage</th><th>interpretational usage</th></tr>
<tr><td rowspan="4">general judgments</td><td rowspan="3"></td><td colspan="2">evaluative propositions</td></tr>
<tr><td>A ist schön.
'A is beautiful.'

A ist schöner als B.
'A is more beautiful than B.'</td><td>A ist schön.
'A is beautiful.'

A ist schöner als B.
'A is more beautiful than B.'</td></tr>
<tr><td>A ist groß.
'A is tall.'

A ist größer als B.
'A is taller than B.'</td><td></td><td>A ist groß.
'A is tall.'

--</td></tr>
<tr><td>subjective judgments</td><td colspan="2">[?]</td><td>Ich finde A schön.
'I think A is beautiful.'

Ich finde A schöner als B.
'I think A is more beautiful than B.'

Ich finde A groß.
'I think A is tall.'</td></tr>
</table>

Table 1 Descriptive vs. interpretational usage – general vs. subjective judgments

Finally, the classification in Table 1 raises the question of whether descriptively used propositions can be presented as subjective judgments, that is, is the left lower cell inhabited? We will leave this question for future research and focus on the instances shown in the table.

3 The semantic dimension

In this section, the semantic dimension of evaluativity will be investigated. We will start with the difference between descriptive and interpretational usages of propositions (3.1). Four dialogs will be considered, involving descriptive and interpretational uses of propositions with dimensional and evaluative predicates. It will be proven that dimensional as well as evaluative predicates license descriptive and interpretational usages (3.2). The puzzle of how to explain descriptive usages of evaluative propositions without postulating a judge or experiencer is solved along the lines of Hare (1952) (Section 3.3). In section 3.4 a brief sketch is presented of how Hare's notion of criteria can be implemented in a formal framework. In Section 3.5 evaluative update is defined based on Krifka (2012). Throughout this section we will assume a degree based analysis of gradability such that the positive form relates to a standard defining the borderline of the predicate (e.g. Kennedy 1999).

3.1 Descriptive vs. interpretational usage of propositions

In Barker (2002) it is shown that propositions based on gradable predicates have two types of uses, a descriptive and a metalinguistic (called *interpretational* in this paper) one. In its descriptive use the sentence *Feynman is tall* provides information about Feynman's height by asserting that he exceeds a contextually given standard of tallness. In its metalinguistic use the sentence provides information about what counts as tall in that context with asserting that Feynman does. As Barker points out,

> "Asserting and accepting a token of the sentence *Feynman is tall* can resolve some portion of the mutual uncertainty associated with the applicability of the predicate *tall*. More specifically, it eliminates from further consideration the possibility that the vague standard of absolute tallness might be greater than the maximal degree of Feynman's height." (p.1)

The analysis is implemented in a dynamic framework such that the common ground consists of pairs of worlds and discourses and update may affect both. Barker's distinction of a descriptive and a metalinguistic/ interpretational usage aims at gradable predicates. But it also applies to non-gradable ones. Imagine that in a context of delivery of goods the speaker points at a bulky package. In this situation the proposition in (8) is used descriptively. In contrast, in the context of Max Black's chair museum (Black, 1937) the speaker pointing to a borderline case in between chairs and non-chairs the proposition is used in an interpretational way.

(8) This is a chair.

It is generally assumed that the distinction between the two usages correlates with the distinction between topic and comment (see, e.g., Krifka 2012). In its descriptive usage the sentence *Feynman is tall* is about Feynman, and thus Feynman is the topic of the proposition. In its interpretational usage

the sentence is about the standard of comparison of tallness in the context and thus the standard of tallness is the topic of the proposition. This is demonstrated in (9)/(10) where the comment part is marked as being accented (which is a useful indicator for comments in this type of sentences).

(9) A: What about Feynman?
B: Feynman is TALL.

(10) A: What about the standard of height in this community?
B: FEYNMAN is tall.

There are, however, clear cases of interpretational usages of sentences that are not about an expression but about an individual. Consider the sentences in (11). In the context of delivery of goods the bulky package the speaker points at is most naturally the topic of the sentence, cf. (11a). In the context of the chair museum it can be either way. If the denotation of *chair* is under debate, then the object pointed at is the comment, cf. (11b). If the names of the objects in the museum are under debate then the object pointed at is the topic, (11c). In (a) the proposition is used descriptively informing the hearer about the contents of the bulky package. In (b), the proposition is used interpretationally providing an example of the denotation of *chair*. In (c) the proposition is also used interpretationally, the speaker asserting that the name of the object is *chair*.

(11) a. A: (pointing to a bulky package) What about this?
B: This is a CHAIR.

b. A: What about the meaning of *chair*? Which objects count as chairs?
B: (pointing to a borderline chair) THIS is a chair.

c. A: (pointing to a borderline chair) What about this object? What is it called?
B: This is a CHAIR.

Interpretational usage of propositions is not acceptable in normal conversation because speakers know the meaning of the words in their language. In fact, (11b,c) require a situation with borderline cases, like the chair museum, or a learning context. In the case of gradable expressions, however, the interpretational usage is unmarked since the denotation is not fixed in advance in the language and instead varies depending on context and comparison class.

The observation concerning the predicate *chair* in (11) can straightforwardly be carried over to gradable expressions. Suppose the secretary has to order shirts for the school's soccer team and there are only two sizes available. She doesn't know Feynman personally and thus asks the trainer *What about Feynman?*. In this context the answer *Feynman is tall* has a descriptive usage. Suppose, on the other hand, that the teacher has to split students into two groups and asks the trainer for advice. If her question is *Who counts as tall on the school soccer team?*, the answer *Feynman is tall* has an interpretational usage and the intonation is as in (10). Likewise, if her question is *What about Feynman*?, the answer *Feynman is tall* has an interpretational usage the reason being that the teacher knows Feynman personally and thus does not ask what his actual height is but instead asks for advice

whether he should be considered as tall. In this situation she negotiates the standard of tallness while still talking about Feynman.
The soccer team example is evidence again that the distinction between descriptive and interpretational usage need not correlate with the distinction between topic and comment. Even if used interpretationally, the proposition may be about Feynman the speaker requesting that the standard of tallness is such that Feynman is included. This is a normative claim about the denotation of a predicate of the language. For non-gradable predicates like *chair* it would be acceptable only in borderline cases. For gradable adjectives like *tall* normative claims are a common means of negotiating the standard of comparison.

Anticipating the discussion of the German attitude verb *finden* in Section 4.1, *finden* does not embed propositions about matters of fact, (12a). Complements of *finden* may be evaluative propositions, cf. (12b), but also definitional sentences and normative sentences, even if clearly not evaluative as in (12c, d), cf. Saebø (2009) and Reis (2013).

(12) a. *Ich finde, Osnabrück liegt in Dänemark.
'I consider Osnabrück to be in Denmark.'

b. Ich finde, das Bild ist schön.
'I find the picture beautiful.'

c. Ich finde, das ist ein Stuhl.
'I consider this a chair.'

d. Ich finde, indirekte Steuern sollen abgeschafft werden.
'I think indirect taxes should be abolished.'

In order to account for the range of *finden* complements Reis (2013) (referring to Ducrot 1980) suggests that *finden* induces a reading of the complement proposition such that it represents one of a number of alternative interpretations of a given (presupposed) state of affairs (for details see Section 4.1). Reis is sceptical as to whether her interpretational account of *finden* complements relates to Barker's interpretational usage of propositions. It can be observed, however, that when embedded under *finden* complements must be used interpretationally. This is demonstrated by the fact that contexts inducing the descriptive usage block embedding under *finden*, while contexts inducing the interpretational usage license embedding under *finden*, cf. (13).

(13) a. (Speaker pointing to a bulky package in a delivery of goods)
Ich finde, das ist ein Stuhl.
'I consider this as a chair.'

b. (speaker pointing to a borderline case in Black's chair museum)
Ich finde, das ist ein Stuhl.[13]
'I consider this as a chair.'

c. (speaker asked which size Feynman's shirt has to be)
Ich finde Feynman groß.
'I think Feynman is tall.'

d. (speaker asked whether Feynman should be counted as tall)
Ich finde Feynman groß.[14]
'I think Feynman is tall.'

To conclude, following Barker (2002) we will distinguish between a descriptive and an interpretational usage of propositions without, however, assuming that this distinction correlates with the distinction between the topic and the comment of a proposition. While descriptive uses concern the way the world is, interpretational uses concern the way expressions are used. But even then one can talk about an expression claiming that it applies to some individual, and one can talk about an individual claiming that it should count as an instance of a certain expression. So the notion of interpretational usage in this paper is slightly broader than what is commonly considered as metalinguistic, including propositions where the topic is not (the meaning of) an expression.

3.2 Four dialogs

Let us compare the four dialogs in (14) – (17). They take place in two different situations. In the first situation, Ann informs Ben on the phone about a sculpture she saw in an exhibition, and Ben has not seen it himself. To avoid complications it will be assumed that the definite NP *the sculpture* is anaphoric, that is, Ann and Ben have been talking about the sculpture before. In the second situation, both Ann and Ben are in the exhibition standing vis-à-vis the sculpture. In each of these situations Ann and Ben have a dispute involving a dimensional adjective and a dispute involving an evaluative adjective.

(14) Dialog 1: phone / *tall*

a. Ann: Die Skulptur ist groß.
'The sculpture is tall.'

b. Ben: ?? Nein, ist sie nicht.
'No, it is not.'

c. Ben': Nein, sie kann nicht groß sein. Sie hätte sonst nicht durch die Tür gepasst.
'No, it can't be tall. Otherwise it wouldn't have passed through the door.'

[13] Many thanks to Markus Kracht for providing me with this example.

[14] Note by the way that the variant where the topic is the standard (instead of Feynman) is not good when embedded under *finden*:

A: What about the standard of height in this community?

B: ? Ich finde FEYNMAN groß.
'I think Feynman is tall.'

(15) Dialog 2: vis-à-vis / *tall*

a. Ann: Die Skulptur ist groß.
'The sculpture is tall.'

b. Ben: Nein, ist sie nicht. (Ich finde sie klein.)
'No, it is not. (I think it is small.)

(16) Dialog 3: phone / *beautiful*

a. Ann: Die Skulptur ist schön.
'The sculpture is beautiful.'

b. Ben: ?? Nein, ist sie nicht.
'No, it is not.'

c. Ben': Nein, sie kann nicht schön sein, sonst hätte meine Tante sie nicht verkauft.
'No, it can't be beautiful. Otherwise my aunt wouldn't have sold it.'

(17) Dialog 4: vis-à-vis / *beautiful*

a. Ann: Die Skulptur ist schön.
'The sculpture is beautiful.'

b. Ben: Nein, ist sie nicht. (Ich finde sie hässlich.)
'No, it is not. (I find it ugly.)'

Consider the phone/*tall* dialog in (14). To strengthen the case, assume that Ben needs to know the height of the sculpture because he has to transport it back to the studio. In using the dimensional adjective *groß* ('tall'), Ann informs Ben about a property of the sculpture: Its height exceeds the standard height of sculptures presented in an art gallery. This is a descriptive use of the proposition *Die Skulptur ist groß* 'The sculpture is tall.' Since Ben cannot see the sculpture, he can deny her assertion only by citing indirect evidence, for example by arguing that the sculpture must be smaller than the height of the door of the exhibition hall.

In contrast, in the vis-à-vis/*tall* dialog in (15), Ann cannot reasonably try to inform Ben about the height of the sculpture when using the dimensional adjective *groß* ('tall'). Instead, she asserts that the sculpture is included in what should be considered as tall for a sculpture in this context. Accordingly, when denying her assertion, Ben does not question her measuring skills but her assessment of what counts as tall for a sculpture in that context. This is what we refer to as interpretational usage.

Now consider the dialogs with the evaluative adjective *beautiful*. In the vis-à-vis situation in (17) there seems to be no difference between the dimensional adjective and the evaluative one. Since their sensory experience will be the same (more or less), Ann's assertion can only address the question of what the adequate standard of comparison for the beauty of sculptures in this context is.[15] Direct

[15] The assumption that the sensory experience of Ann and Ben is more or less the same is controversial. One of the reviewers pointed out that, at least, it does not generalize to judgments of gustatory taste – the sensory experience of licorice may change from one subject to another. Another reviewer referred to statements like *I am freezing* reporting the internal experience of the speaker and suggested handling *beautiful* in the same way, that is, reporting the internal experience of the speaker in view of the sculpture. However, *I am freezing* differs from *The sculpture is beautiful* in not licensing denial, not even if faultless. Moreover, the focus in this paper is on predicates like *schön* which cannot be a matter of internal experience of the speaker. Otherwise, any aesthetic debate would be pointless.

denial is fine but, as in the dimensional case, Ben doesn't question Ann's perception of the sculpture but her assessment of what counts as beautiful for a sculpture in that particular context. So (17) is a case of interpretational usage, analogous to (15).

Finally, what is Ann doing in (16) when using the evaluative adjective on the phone? Is she conveying the information that the sculpture has some property that makes it exceed a contextually fixed standard of beauty? If so, her assertion should be paraphrased as saying "The beauty of the sculpture is n beauty-units, which is above the generally accepted standard of comparison for the beauty of sculptures in this context". But there are no beauty units inherent to the sculpture. Unlike a certain degree of height, a certain degree of beauty is not a property of an object and instead a property ascribed by the subject – this is what we learned from Kant.

The absence of a measurable beauty property seems to suggest that the proposition in (16) cannot have a descriptive usage because it cannot convey information about the world, that is, the sculpture. Still, we feel uneasy with the conclusion that Ann in (16) discusses the standard of beauty. Doesn't she at least inform Ben about certain characteristics of the sculpture? Suppose Ann and Ben firmly agree in disliking sculptures with a rusty surface. Doesn't Ben then learn from Ann that the sculpture under debate does not have a rusty surface?[16]

From the point of view that beauty is not a property of the object, a descriptive usage of evaluative propositions is at first sight puzzling. The puzzle will be solved with the help of Hare's (1952) notion of criteria in the next section. It will be explained why propositions with *schön/beautiful* may license a descriptive usage in addition to the interpretational one and, moreover, why the comparative *schöner / more beautiful* also licenses both usages, while the comparative *größer/taller* does not.

3.3 Descriptive usage of evaluative propositions

In his book *The Language of Morals* Hare investigates prescriptive language including imperatives and value judgments (Hare 1952).[17] His prime example is the predicate *good*. There is no property shared by good things – a good motor car and a good picture and a good meal have nothing in common apart from being good. So there is no denotational meaning of *good*. But there is what Hare calls the commending function of *good*: calling a motor car or a picture or a meal good means commending it.

The commending function is called the evaluative meaning component of *good*. In addition to the evaluative meaning component there is, following Hare, a descriptive meaning component. We will call it *quasi-denotational* to avoid confusion with the notion of descriptive usage of a proposition. Although there is no property denoted by *good* there are criteria, relative to comparison class, speaker community, time etc., establishing a standard for something to be called *good*. The criteria relate to factual properties thereby creating a – highly context-dependent – quasi-denotational meaning. This is why value judgments may provide factual information.

Hare's example is *good motor car*. Suppose someone has been told that a particular car M is a good motor car. Suppose, moreover, this person knows nothing about M, but he knows what the accepted standard of goodness in motor cars is:

[16] Very many thanks to my colleagues from ZAS, and in particular Stephanie Solt, for convincing me that evaluative propositions can convey descriptive information.

[17] Very many thanks also to Vera Hoffmann-Kolss who brought this book to my attention.

> "He will complain that I have misled him, if he subsequently discovers that M will not go over 30 m.p.h., or uses as much oil as petrol, or is covered with rust, or has large holes in the roof. His reason for complaining will be the same as it would have been if I had said that the car was red and he subsequently discovered that it was black. I should have led him to expect the motor-car to be of a certain description when in fact it was of a quite different description." (Hare 1952, p.113).

One consequence of the lack of a regular denotation is that the predicate *good*, in contrast to *red*, cannot be taught by ostension – there is no common property to infer from examples as diverse as good motor cars, good pictures and good meals. Restricting the domain to motor cars someone may be taught by ostension to distinguish good motor cars from bad ones. Still, he will not have learned that calling something good means commending it. Another consequence of the lack of a regular denotation is the fact that the predicate *good*, in contrast to *red*, cannot be redefined in the sense of changing the denotation.

> "It may happen that motor-cars will in the near future change considerably in design […]. It may be that then we shall cease giving the name 'a good motor-car' to a car that now would rightly and with the concurrence of all be allowed that name. […] we may begin to say 'No cars of the nineteen-fifties were really good; there weren't any good ones till 1960'." (Hare, 1952, 113)

Such a shift in meaning is not a redefinition but a change of standard and makes essential use of the fact that the evaluative meaning of *good*, that is, the commending function, stays constant.

> "[…] we are doing what would be called, if 'good' were a purely descriptive word, redefining it. But we cannot call it that, for the evaluative meaning remains constant; we are rather altering the standard." (Hare, 1952, p.119).

Consider the sentence in (18). Suppose the addressee is familiar with Honda Civics. But he knows nothing about criteria for good motor cars. Then (18) provides information on which criteria count as good-making criteria, that is, it provides information about the standard of *good* in the context of motor cars (plus speaker community, time, etc.) – being a good motor car is being like a Honda Civic . This is what we call an interpretational usage of a proposition. Now suppose that the addressee is not familiar with Honda Civics. But he agrees with the speaker on what criteria for good motor cars are. Then (18) provides information on Honda Civics, namely that they satisfy the agreed-on criteria for good motor cars. This is the descriptive usage of a proposition. So even for evaluative propositions there is a descriptive usage in addition to the interpretational usage.

(18) A Honda Civic is a good motor car.

Transferring Hare's analysis of *good* to our prime example *beautiful* let us assume that the evaluative meaning component is, as before, given by commending, maybe commending as to appearance. There is no denotation but there are, for example, criteria for what counts as a beautiful apartment and criteria for what counts as a beautiful sculpture (depending on speaker community, time etc.). Criteria may directly be related to factual properties. Let us assume that for an apartment to count as beautiful it has to be provided with a parquet floor, stucco ceilings and an unobstructed view over the roofs of the city. Such criteria directly establish a quasi-denotational meaning. Criteria may also be related to evaluative properties, so that the quasi-denotational meaning is only indirectly established,

for example *stylish furnishing*. Grounding criteria in factual properties may even fail in some cases because criteria relate to subjective perceptual experience, like sensation of cold. Let us nevertheless assume for ease of exposition that criteria are sufficiently grounded to establish a quasi-denotational meaning.

Coming back to the phone/*beautiful* dialog in (16), Hare's notion of criteria establishing a quasi-denotational meaning explains the puzzle of why evaluative propositions may convey factual information. Suppose in (16) that Ann and Ben agree on the criteria for a sculpture to count as beautiful, say, a sparkling surface and well-balanced proportions. Then Ann in (16) conveys the information that these criteria apply to the sculpture and if not, Ben is entitled to complain that Anna mislead him.

Let us briefly compare the evaluative predicate *beautiful* to the dimensional predicate *tall*. Hare does not mention dimensional predicates, but the connection is obvious. As in the case of *good* and *beautiful*, there is no denotation of *tall* independent of comparison class and context. And as in the case of *good* and *beautiful* a change of standard, e.g., what counts as tall for a 12 year old girl, cannot be considered as a redefinition since it makes use of a fixed meaning component, say, outstanding in height (see the notion of 'standing out' in Kennedy 2007). The difference between *tall* on the one hand and *beautiful* on the other is located in the nature of the criteria. For *tall*, the criterion is 'exceed a certain degree of height'. It is fixed by the lexical meaning of the word in so far as the dimension has to be the dimension of height which comes with a ratio scale. Otherwise it depends on comparison class and context. For *beautiful* there are multiple criteria and none of it is fixed by the lexical meaning of the word. Criteria can be viewed as features with certain values, e.g., <surface: sparkling>. Features can be viewed as dimensions coming with scales of various types – ratio, ordinal, or even nominal. From this point of view criteria are (sets of) feature value pairs or (sets of) points in multiple dimensions. So while in the case of *tall* there is only dimension and it is linked to a ratio scale, there are multiple dimensions in the case of *beautiful* linked to scales of various types (cf. Section 3.4).

From this point of view, evaluative predicates like *beautiful* and dimensional predicates like *tall* are not that different. Both allow for an interpretational usage of the proposition they occur in, thereby facilitating standards to be negotiated. Both allow for a descriptive usage relying on context-dependent criteria, thereby allowing them to convey factual information. In the case of *beautiful* the interpretational as well as the descriptive usage count as evaluative although for different reasons – the former is evaluative in the sense of manipulating standards and the latter is evaluative in the sense of lacking a regular denotation and thus relating to multiple criteria. In the case of *tall*, the interpretational usage counts as evaluative in the sense of manipulating standards, as in the case of *beautiful*. The descriptive usage of *tall*, however, is not evaluative since there is only one dimension and it is fixed by the lexical meaning – it has to be height.

Up to now, only positive forms of the adjectives have been considered. As for comparatives, the comparative of *beautiful* appears evaluative and the comparative of *tall* does not, cf. (19a, b). This effect can be explained by the difference between evaluative and dimensional predicates suggested above: The proposition in (19a) has a descriptive as well as an interpretational usage. The descriptive usage refers to an order established by the criteria of what counts as beautiful in the given context (for a sketch of how the order can be established see Section 3.4). The interpretational usage facilitates negotiation of criteria. As in the case of the positive form, the descriptive usage of (19a) is intuitively evaluative because it has to take recourse to varying criteria and the interpretational usage of (19a) counts as evaluative because criteria (and the order itself) are negotiated. The proposition in (19b),

however, has a descriptive usage only, and the descriptive usage is not is intuitively evaluative because there is a single ratio scale dimension fixed by the lexical meaning. An interpretational usage of the proposition in (19b) is impossible because neither the dimension nor the order on a ratio scale are negotiable. Anticipating the discussion in Section 4.1 again, the fact that the positive but not the comparative form of dimensional adjectives license an interpretational usage is reflected by the fact that the positive but not the comparative can occur in a complement of the German attitude verb *finden*, cf. (20).

(19) a. Diese Skultur ist schöner als die, die wir gestern gesehen haben.
'This sculpture is more beautiful than the one we saw yesterday.'

b. Diese Skultur ist größer als die, die wir gestern gesehen haben.
'This sculpture is taller than the one we saw yesterday.'

(20) a. Ich finde diese Skulptur groß.
'I think this sculpture is tall.'

b. * Ich finde diese Skulptur größer als die, die wir gestern gesehen haben.
'I think this sculpture is taller than the one we saw yesterday.'

3.4 Generalized measure functions and multi-dimensional spaces

In this section a brief sketch will be provided of how Hare's idea of criteria can be implemented in formal semantics. The starting point is the notion of multi-dimensional attribute spaces and generalized measure functions proposed in Umbach & Gust (2014) in order to account for the meaning of similarity expressions (*such, like this, similar* etc.). A well-known instance of multi-dimensional spaces are conceptual spaces as suggested by Gärdenfors (2000). Unlike Gärdenfors' conceptual spaces, which employ a quantitative similarity measure (geometrical distance), we employ a qualitative notion such that similarity is understood as indistinguishability with respect to classification functions defined on dimensions. Another fundamental difference lies in the fact that Gärdenfors' conceptual spaces form a stand-alone system, independent of truth-conditional semantics while in Umbach & Gust (2014) attribute spaces are integrated into truth-conditional semantics.

Integration makes use of a generalized version of the notion of measure functions known in degree semantics (cf. Kennedy 1999). In the case of dimensional adjectives like *large*, there is a single dimension fixed by the adjective's lexical meaning that relates to a ratio scale. In the case of evaluative adjectives there are, following Hare's analysis, multiple criteria to be taken into account. Criteria can be seen as points on dimensions with scales of various types (ratio, ordinal, nominal). This suggests a straightforward generalization of the notion of measure functions: While common measure functions map individuals to degrees in a single ratio scale dimension, generalized measure functions map individuals pointwise into multi-dimensional spaces, where dimensions are of various types. This is shown in (21) for *large* and *beautiful* (attributed to apartments). The common measure function μ_{SIZE} associated with the adjective *large* in (21a) takes individuals to points in the size dimension, say, real numbers. The generalized measure function μ_{BEAUTy} associated with the adjective *beautiful* in (21b) takes individuals to points in a multi-dimensional space spanned by a floor dimension, a ceiling dimension, a size dimension etc. where the former two have nominal scales and the latter has a ratio scale as in (21a).

(21) a. μ_{SIZE}: $U \rightarrow \Re$

b. μ_{BEAUTY}: $U \rightarrow$ <FLOOR, CEILING, SIZE, … >, where $\mu_{BEAUTY}(x) = <\mu_{FLOOR}(x), \mu_{CEILING}(x), \mu_{SIZE}(x), \ldots>$
and $\mu_{FLOOR}(x) \in$ {parquet, marble, carpeting, …},
$\mu_{CEILING}(x) \in$ {stucco, suspended, plasterboard, …},
$\mu_{SIZE} \in \Re$, etc.

Multi-dimensional attribute spaces are given by a set *F* of dimensions. Dimensions are associated with a set *C*(*F*) of classification functions defined on their points. Classification functions approximate natural language predicates on a conceptual level yielding corresponding truth values (modulo fuzzy membership). The role of classification functions is twofold. First, while generalized measure functions take individuals to points in attribute spaces, classification functions link points to regular predicates. Secondly, classification functions determine the level of granularity: Similarity is defined such that two individuals are similar with respect to a set of dimensions *F* and an associated set of classification functions C(*F*) iff all classification functions $p^* \in C(F)$ yield the same result when applied to corresponding points in the attribute space, cf. (22). This corresponds (for fixed *F* and C(*F*)) to the indistinguishability notion of similarity in rough set theory (Pawlak 1998). In order to implement a gradable notion of similarity the sets of classification functions associated with an attribute space *F* are assumed to be (partially) ordered with respect to the granularity they allow for. The definition of "more similar" in (23) is such that *x* is more similar than *y* to *z* iff there is a more fine-grained set of classification functions according to which *x* is similar to *z* but *y* is not.

(22) $sim(x, y, F, C(F))$ iff $\forall\, p^* \in C(F): p^*(\mu_F(x)) = p^*(\mu_F(y))$

(23) $more\text{-}sim(x, y, z, F, C(F))$ iff $\exists\, C'.\ sim(x, z, F, C'(F)) \,\&\, \neg sim(y, z, F, C'(F)) \,\&\, C'(F) < C(F)$

Evaluative adjectives, like *beautiful*, can be interpreted in multi-dimensional spaces analogous to dimensional adjectives. The interpretation of the positive form is relative to a standard of beauty in a set of relevant dimensions associated with a set of classifications. An individual *x* is beautiful iff it is sufficiently similar to the standard (that is, similar according to the granularity of the set of classifications), cf. (24). The interpretation of the comparative form in (25) makes use of the gradable notion of similarity: *x* is more beautiful than *y* iff *x* is more similar to the standard than *y*, that is iff there is a classification set *C'*(*F*) such that *x* is beautiful according to *C'*(*F*) but *y* is not, where *C'*(*F*) is more fine-grained than *C*(*F*).[18] (Note that this is analogous to the interpretation of comparative forms in Klein 1980).

(24) $beautiful(x)_{F,C,STD}$ iff $sim(x, std, F, C(F))$ [19]

(25) $more\text{-}beautiful(x,y)_{F,C,STD}$ iff $more\text{-}sim(x, y, std, F, C(F))$

[18] Note that the standard cannot be dropped in the interpretation of the comparative because dimensions need not relate to ordinal/ratio scales. The standard provides the 'direction' of the comparative. Since classification sets can be arbitrarily fine-grained the standard will never be 'reached', that is, beauty is still 'open-scale'.
Note also that the comparative as defined above entails that x is beautiful in C'(F) and both x and y are beautiful in C(F). This might provide an explanation for the puzzling findings on Normbezug in Bierwisch (1987).

[19] To be precise, it should be $sim(x, \mu^{-1}(std), F, C(F))$ because the first two arguments of the sim relation are individuals and *std* is a point in the attribute space. The problem is technically fixed by postulating a unique urbild.

This sketch of evaluative adjectives in multi-dimensional spaces, although very brief, shows how Hare's idea of criteria can be implemented such that it corresponds to the idea of dimensions and standards known in degree semantics while supporting the affinity of dimensional and evaluative adjectives pointed out in the previous section. It has to be kept in mind, however, that the implementation in multi-dimensional spaces does not capture the evaluative meaning component, that is, the commending function in the case of *good* and *beautiful*, which is, following Hare, the primary meaning of these expressions.

3.5 Evaluative update

Barker's (2002) distinction between a descriptive and a metalinguistic use of propositions is taken up in Krifka (2012) in order to provide an analysis for definitional generic sentences, which differ from descriptive generic sentences in restricting the language instead of making generalizations about the world (*Madrigals are polyphonic* is a definitional generic sentence whereas *Madrigals are popular* is a descriptive one).

Krifka introduces an interpretation index in addition to the world index and defines the common ground as a pair of sets of interpretations and worlds <*I*, *W*>. The meaning of an expression α is relative to interpretation and world, $[\![\alpha]\!]^{i,w}$. While the world index targets factual matters, the interpretation index targets the metalinguistic contributions of the expressions. The difference between descriptive propositions (*Madrigals are popular*) and definitional propositions (*Madrigals are polyphonic*) is accounted for by providing separate update rules, cf. (26a,b). The first one implements update of descriptive propositions, reducing the set of possible worlds without affecting the set of interpretations. The second one implements update of definitional propositions, reducing the set of interpretations without affecting the set of worlds. Note that the rules are asymmetric: a world *w* is excluded if the proposition to be updated, $[\![\varphi]\!]$, is false in *w* under all possible interpretations, cf. (26a), whereas an interpretation *i* is excluded if there is a world *w* such that $[\![\varphi]\!]$ is false in *w* under *i*, cf. (26b). Krifka explains the asymmetry as follows:

> "The existential meaning rule [=26a] reflects the idea that it is not determined yet which interpretation is the one that the participants will ultimately settle on, and so all the options have to be kept open. We interpret a sentence as if it were in the scope of a possibility operator: Under the interpretations that are to be considered, $[\![\varphi]\!]$ might be true. If a proposition $[\![\varphi]\!]$ is accepted definitionally at a common ground ⟨I,W⟩, as in (15) [=26b], then the set of possible worlds stays the same, but only such interpretations *i* remain admissible for which the proposition $[\![\varphi]\!]$ is true in all possible worlds of the common ground." (Krifka, 2012,p. 377)

(26) a. $\langle I,W\rangle + DES([\![\varphi]\!]) = \langle I, \{w\in W \mid \exists i\in I.\ [\![\varphi]\!]^{i,w}\}\rangle$ (= 14 and 15 in Krifka 2012)[20]

b. $\langle I,W\rangle + INT([\![\varphi]\!]) = \langle \{i\in I \mid \forall w\in W.\ [\![\varphi]\!]^{i,w}\}, W\rangle$

We will adopt Krifka's system in order to account for the distinction between the descriptive and the interpretational usage of propositions (cf. Section 3.1). The rule in (26a) will be called *descriptive update* (DES) and the one in (26b) *interpretational update* (INT). While the world component of the

[20] In Krifka (2012) the name in the second rule is DEF instead of INT: $\langle I,W\rangle + DEF([\![\varphi]\!]) = \langle \{i\in I \forall w\in W\ [\![\varphi]\!]^{i,w}\}, W\rangle$. It is changed here to highlight the connection to the descriptive and interpretational usage of propositions.

common ground restricts possible worlds, the interpretation component restricts possible interpretations. This includes the interpretation of non-gradable predicates like *chair* and *madrigal* and also the interpretation of gradable predicates, dimensionals like *tall* as well as evaluatives like *beautiful*. Considering evaluative predicates, possible interpretations provide criteria, i.e. dimensions plus standard values, determining whether an individual counts as an instance of the predicate. For dimensional predicates possible interpretations provide standard values for the single lexically fixed dimension (cf. section 3.3).

The rules in (26) are such that update is either descriptive or interpretational. This is plausible in the case of descriptive sentences as opposed to definitional ones, as considered in Krifka (2012). Definitional sentences involve only interpretational update while descriptive sentences require only descriptive update. However, in the case of gradable predicates, we want to account for the distinction between descriptive usage and interpretational usage of the propositions they occur in. In section 3.1/3.2 this distinction was presented as a categorical one – propositions are used either descriptively or interpretationally. This clear-cut division was helpful in the analysis but it is presumably too strict. According to Barker (2002) propositions with gradable predicates generally provide descriptive as well as interpretational information. Moreover, the two-steps analysis of disagreement about evaluative propositions in Stojanovic (2012) – first, disagreement about contextual parameters has to be settled but then there may still be residual disagreement about the meaning of the predicates – seems to go against a clear-cut division of descriptive and interpretational usage. This suggests that in the case of gradable predicates update should be considered as including both descriptive and interpretational parts.

In (27) a rule is presented combining descriptive and interpretational update such that descriptive update precedes interpretational update. The reason for that can easily be seen. Consider a common ground $<\{w_1, w_2\}, \{i_1, i_2\}>$. Suppose $[\![\varphi]\!]^{i1,\, w1}$, $[\![\varphi]\!]^{i2,\, w1}$ and $[\![\varphi]\!]^{i2,\, w2}$ are false while $[\![\varphi]\!]^{i1,\, w2}$ is true. Applying INT subsequent to DES will yield a common ground $<\{i_1\}, \{w_2\}>$. In contrast, applying DES subsequent to INT will yield an empty common ground <{}, {}>, which appears inadequate. We thus take it that aligning descriptive information among discourse participants is prior to aligning interpretations, as implemented in (27).

(27) Evaluative update

$$<I,W> + \mathrm{DES} \circ \mathrm{INT}([\![\varphi]\!])> = \ (<I,W> + \mathrm{DES}([\![\varphi]\!])) + \mathrm{INT}([\![\varphi]\!])$$

4. The pragmatics of subjective judgments

The horizontal dimension in the classification proposed in Section 2.3 relates to the semantic difference between descriptive and interpretational usage of propositions, as discussed in the previous section. The vertical dimension relates to the difference between general and subjective judgments, which is a pragmatic difference addressing the role of judgments in conversation. In this section we will first have a brief look at the meaning of *finden*. Next, the discourse framework of Farkas & Bruce (2010) will be presented and the pragmatics of subjective judgments will be spelt out in this framework.

4.1 The meaning of *finden*

The German attitude verb *finden* as well as the English attitude verb *find* block complement propositions about factual matters. This is why (3), repeated below as (28), is not acceptable. Complements of German *finden* have long been assumed to be restricted to evaluative propositions, as in the case of English *find*. In Saebø (2009) an analysis is presented summarizing Norwegian *synes*, Swedish *tycka*, French *trouver*, English *find* and German *finden* under the notion of subjective attitude verbs. Saebø focusses on the observation that these verbs require a *subjective predicate* (subsuming taste and dimensional adjectives and also deontic modals). Following his analysis, the sole function of subjective attitude verbs consists in shifting the judge such that it is identical to the agent of the attitude verb. The semantics of subjective attitude verbs is spelt out in a relativist framework, with a judge index, and also in a contextualist framework, with an implicit experiencer argument. This yields two different explanations for the incompatibility of subjective attitude verbs with judge-invariant (i.e. non-evaluative) propositions: In the relativist framework their combination would be redundant, mapping judge-invariant propositions onto themselves, and in the contextualist framework their combination would lead to a type clash.

(28) a. *Ich finde, Osnabrück liegt in Dänemark.
'I consider Osnabrück to be in Denmark.'

Saebø's analysis predicts that embedding a proposition under first person subjective attitude verbs has no effect at all thereby failing to account for the data in (4), repeated below in (29). If embedding under first person *finden* has no effect, how can it then be explained that it makes the proposition immune against denial?

(29) a. Ann: Ich finde Lakritze lecker.
'I think licorice is tasty.'
b. Ben: # Nein! Lakritze ist eklig.
'No! Licorice tastes terrible.'

In the manuscript in Nouwen (2007) an "impersonal approach" to taste predicates is advocated dispensing with judges as well as implicit experiencer arguments. Attitude reports with *to find* (as a subjective attitude verb) are analyzed analogously to belief reports, by means of a particular set of worlds constituting the agent's *find*-worlds. An agent's *find*-worlds are a subset of his belief worlds selected "based on subjective experience of the world." (Nouwen 2007, 6), which is taken to explain why the cat food example (cf. footnote 6) presupposes information from personal experience – if Sam finds cat food tasty he must have tried it. The idea of *find*-worlds as a particular subset of belief worlds does not, however, explain the fact that *finden / to find* cannot embed factual propositions (you can have personal access to facts of the world). More importantly, like Saebø's account, Nouwen's account fails to explain the immunizing effect of first person *finden*.

In Reis (2013) an in-depth analysis of German *finden* is given. Extending what is generally known about *finden* complements (see the data in (12) in Section 3.1), Reis presents a number of examples

from corpora showing that complement propositions need not be judge-dependent.[21] What is more, in the case of judge-dependent propositions the judge position can be occupied by an agent different from the agent of the attitude verb, cf. (30c,d). Only when focusing on small clause complements is Saebo's analysis of *finden* as a judge shifter consistent with the data.

As for the meaning of *finden*, Reis does not resort to some form of judge-dependence but instead proposes an analysis in which the complement proposition represents one of a number of alternative interpretations:

> "*finden […]* projects (i) the *presupposition* that there is an eventuality known to the *finden* subject, which is under debate and open to interpretation, (ii) a reading of the complement proposition as an *interpretation* of this eventuality selected by the *finden* subject from a set of interpretational alternatives; it is with this selection process that the *finden* specific subjectivity is to be identified." (Reis 2013, p.389)

Relating her analysis to the notion of interpretation in Krifka (2012) / Barker (2002), Reis is sceptical as to whether it covers her idea of interpretational alternatives arguing that in some cases interpretational alternatives intuitively appear descriptive, such as the examples in (30). She leaves this question for further research, not commenting on the nature of descriptive interpretational alternatives.

(30) a. Ich finde, Berta schnarcht. (Reis' example 37c)
'I think Berta snores.'

b. Ich finde, der Bezug ergibt sich aus der Überschrift ... […] (Reis' example 38c)
'I think the reference is provided by the title.'

c. Fandest du auch, dass (für) Max das Verhalten seiner Frau peinlich war? (Reis' example 39b)
'Did you also think that for Max the behavior of his wife was embarrassing?'

d. Ich finde für ihn war es super, denn er hat viel gelernt […], aber ich bin mit dem Kindergarten sehr unzufrieden. (Reis' example 40c)
'I think it was super for him because he learned a lot, but I am not satisfied with this kindergarten.'

The analysis in Reis (2013) is closely related to a proposal made for French *trouver* 'find' in Ducrot (1980). Ducrot speaks of value judgments, however the majority of his examples are not about evaluative predicates, but instead about describing a given state of affairs in one of a number of possible ways, as in (31). Ducrot posits a distinction between primary and secondary predication which is reminiscent of the descriptive / interpretational distinction used in this paper. He points out that French *trouver* is restricted to interpretational uses (his primary predication) and compares *trouver* to a number of other attitude verbs.[22]

[21] German *finden* may embed complement propositions, *dass*-complements (a) as well as V2 complements (b), and also small clauses (c).
a. Ich finde, dass das Bild schön ist.
'I think that the picture is beautiful.'
b. Ich finde, das Bild ist schön. 'I think the picture is beautiful.'
c. Ich finde das Bild schön. Lit: 'I think the picture beautiful.'

[22] I'm very grateful to Renate Hoffmann who generously provided me with a translation of Ducrot's paper.

(31) Je trouve que (c'est) la Grèce (qui) a (en réalité) conquis Rome.
'I think that it was Greece that in fact conquered Rome.'

Kennedy (2016) claims that there are two kinds of subjectivity induced by gradable predicates. One is attributed to the fact that the positive form of gradables requires a context-dependent standard. The other one is attributed to the lexical meaning of evaluative predicates and is found for positive as well as comparative forms. The first kind of subjectivity is diagnosed with the help of faultless disagreement and occurs with dimensional as well as evaluative predicates. The second kind of subjectivity is diagnosed with the help of compatibility with the attitude verb *find* in English, and is restricted to evaluative predicates. Thus, in contrast to German *finden,* English *find* only licenses complements with evaluative predicates like *tasty* and *beautiful* but not complements with dimensional predicates like *tall*.

The difference between descriptive and interpretational usages is not considered in Kennedy's paper. Still, it would be interesting to see how English *find* behaves in that respect. It was argued for German *finden* that complement propositions have to be used interpretationally. Coming back to the phone/*beautiful* dialog in (16), Ann cannot use a proposition embedded under *finden* when she wants to convey descriptive information relating to agreed-on criteria (e.g. that the sculpture does not have a rusty surface, cf. section 3.2). Can she use a proposition embedded under English *find* in this case?

In explaining the difference between the two kinds of subjectivity Kennedy refers to the difference between quantitative and qualitative interpretations described for color terms in Kennedy & McNally (2010). Dimensional predicates are said to have a quantitative interpretation, whereas evaluative predicates have a qualitative one. It seems plausible to align dimensional predicates with quantitative interpretations – after all, dimensional predicates express a measurable degree of some property. However, in the case of color terms both the quantitative and the qualitative interpretation express a measurable degree of a property, just that the former concerns the area covered by the color and the latter concerns the color value. By aligning evaluative predicates with qualitative interpretations, it is predicted that qualitative interpretations of color words are judge-dependent (Kennedy makes use of a judge-dependent account of evaluativity). However, color values are clearly not judge-dependent but instead measured in hue, saturation, and brightness. It is also predicted that qualitative interpretations of color words can occur in complements of *find* which goes against the data.

Still, the line Kennedy draws between the two kinds of subjectivity seems to match with the line drawn in this paper between propositions that are evaluative because they are used interpretationally and propositions that are evaluative because the predicate has no regular denotation (i.e. descriptive usages of propositions with *beautiful* etc.). Thus although the explanation for the two kinds of subjectivity given by Kennedy is not convincing, the distinction itself is supported by the findings in this paper.

Coming back to German *finden*, it will be assumed in this paper at the risk of oversimplification that German *finden* is sensitive to interpretational usage of the embedded proposition. As shown in Section 3.1 and 3.3 complements of *finden* include propositions with:[23]

[23] One way to spell out the semantics of *finden* would be this: Assume a particular type *<s, <i,t>>* where *i* stands for *interpretation* (recall that propositions are evaluated with respect to a world and an interpretation). Assume, moreover, that the doxastic alternatives of an attitude holder mirror the separation of interpretations and

(i) the positive form of gradable predicates – *groß* 'tall' as well as *schön* 'beautiful';
(ii) the comparative form of evaluative predicates but not that of dimensional ones – *schöner* 'more beautiful' but not *größer* 'taller'
(iii) non-gradable predicates like *chair*;
where (i) and (ii) but not (iii) license small clause complements.

In the remainder of this paper the focus will be on the speech act capacity of *finden*, that is, on the blocking of denial effect of first person *finden*. If Ann uses first person *finden*, Ben cannot directly deny her assertion (32a). He can only make it obvious that he doesn't agree by using *finden* himself, (32b). Direct confirmation is marked, while confirmation using *finden* again is perfect, (32c, d).[24] To avoid misunderstandings: The blocking effect of *finden* does not occur with second/third person and past/future tense. Ann's utterance in (33) is a plain assertion licensing plain denial.

(32) Ann: Ich finde die Skulptur schön.
'I think that the sculpture is beautiful.'

Ben: a. # Nein, sie ist nicht schön.
'No, it is not.'

b. Ich finde sie nicht schön.
'I don't think it is beautiful.'

c. ? Ja, sie ist schön.
'Yes, it is.'

d. Ich finde sie auch schön.
'I also think it is beautiful.'

(33) Ann: Sue findet die Skulptur schön.
'Sue thinks that the sculpture is beautiful.'

Ben: Nein, das tut sie nicht. Wir haben gerade darüber gesprochen.
'No, she doesn't. We talked about it recently.

In the remainder of this paper the focus will be on the speech act capacity of *finden*, that is, on the blocking of denial effect of first person *finden*. It is considered as evidence that *finden* sentences do not express general judgments, i.e. regular assertions meant to enter the common ground of the conversation. They instead express subjective judgments indicating mere individual discourse

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worlds postulated for the common ground. The meaning of *finden* can then be spelt out analogous to the interpretational update in section 3.5 such that an agent x *findet* φ iff φ is true in every world under each interpretation maintained by the agent:

$[\![\textit{finden}]\!] = \lambda x_e.\, \lambda\varphi_{<s,<i,t>>}.\, \forall i \in \pi_1(DOX_x),\, \forall w \in \pi_2(DOX_x).\ [\![\varphi]\!]^{i,w}$ where $\pi_1<I,W> = I$, $\pi_2<I,W> = W$

This semantics accounts for the fact that *finden* complements must be interpretational usages. It does not, however, account for the subjective experience constraint discussed in the literature.

[24] Agreement can be expressed without relativization, as shown below. But note that the confirmation particle is not licensed and verum focus or a verum particle like *tatsächlich* is required.

Ann Ich finde die Skulptur schön.
'I think the sculpture is beautiful.'
Ben: Sie ist tatsächlich schön.
'It is in fact beautiful.'

commitments.[25] The discourse framework of Farkas & Bruce (2010) makes it possible to spell out the difference between general and subjective judgments thereby accounting for the blocking of denial effect of first person finden. This is shown in the next section.

4.2 The framework of Farkas & Bruce

Farkas & Bruce (2010) investigate the use of polarity particles in reacting to assertions and polar questions and suggest a discourse structure extending Stalnaker's common ground by individual – but public! – discourse commitments. While the common ground includes the discourse commitments shared by the participants, individuals discourse commitments are not, or not yet, mutually shared. Assertions are understood as proposals addressing the question under discussion and are added to the common ground only after confirmation by the other discourse participants. Farkas & Bruce define a discourse structure K such that it contains

- a (possibly empty) set of propositions DC_X for each participant *X* – propositions that *X* is publicly committed to, which are not shared by the participants of the conversation;
- a set of propositions *cg* – common ground – shared by the participants of the conversation;
- the *table* representing the issues to be resolved, implemented as a stack of pairs of syntactic objects and their denotations;
- a projected set *ps* comprising future common grounds projected by the elements of the table.

For ease of exposition, the table will be simplified in the remainder of this section omitting the syntactic objects, and we will ignore the projected set.

Update rules operating on such discourse structures are specified for polar questions, assertion, confirmation and denial. For example, an assertion is given as an operator turning an input structure K_i into an output structure K_o such that the asserted proposition *p* is pushed onto the table and is added to the individual discourse commitments of the speaker, cf. (34a) (see Farkas & Bruce's example (9)). Confirming an assertion *p* is done by an operator turning an input structure K_i into an output structure K_o such that p is added to the individual discourse commitments of the confirming participant, cf. (34b) (see Farkas & Bruce's example (16)). If *p* is confirmed by each discourse participant, it will be an element of every individual discourse commitment set and trigger a *common ground increasing operation* moving *p* from the individuals commitment sets into the common ground, and removing it from the table, cf. (34c) (see Farkas & Bruce's example (17)). Finally, (total) denial of an assertion *p* is done by an operator pushing $\neg p$ on top of the table and adding $\neg p$ to the individual discourse commitments of the denying participant, cf. (34d) (see Farkas & Bruce's example (22)). Denial ends in a *crisis* because neither *p* nor $\neg p$ can become common ground and be removed from the table. A way out of the crisis is for participants to *agree to disagree*, removing the controversial propositions from

[25] One might wonder how the semantics of *finden* complements brings about the pragmatic effect of blocking denial. Although a fully specified explanation cannot be given in this paper, it appears plausible that a proposition representing an interpretation of a given state of affairs – recall that complement propositions of *finden* are restricted to evaluative uses – may remain an individual discourse commitment. In contrast, propositions used descriptively convey information about the world and thus have to enter the common ground.

the table while leaving them in the individual discourse commitments, cf. (34e) (see Farkas & Bruce's example (23)).

(34) a. Assertion (p, a, K_i) = K_o such that $DC_{a,o} = DC_{a,i} \cup \{p\}$, and T_o = push(p, T_i)
b. Assertion_Confirmation (b, K_i) = K_o such that $DC_{b,o} = DC_{b,i} \cup \{p\}$, where p=top($T_i$) and $p \in DC_{a,i}$
c. Common_Ground_Increasing: if $DC_{X,o} = DC_{X,i} \cup \{p\}$ for all participants X, then
(i) $cg_o = cg_i \cup \{p\}$,
(ii) $DC_{X,o} = DC_{X,i} - \{p\}$ for all participants X, and
(iii) T_o = pop(p, T_i)[26]
d. Total_Denial (b, K_i) = K_o such that $DC_{b,o} := DC_{b,i} \cup \{\neg p\}$, where p=top($T_i$) and $p \in DC_{a,i}$
e. Agree_To_Disagree (K_i) = K_o such that T_o = pop(p, T_i) where $p \in DC_{X,I}$ and $\neg p \in DC_{Y,I}$
for at least one X and Y

The distinctive feature of the Farkas & Bruce model consists in the representation of the individual discourse commitments of the participants. This idea accounts for the fact that an assertion involves a public commitment of the speaker even if it is not accepted by the other discourse participants, which was already pointed out in Gunlogson (2001). Individual discourse commitments have a twofold task in the Farkas & Bruce system. First they serve as a temporary parking position for propositions waiting for confirmation, and secondly they serve as a representation of controversial information. The latter role is exploited by the agree-to-disagree rule in (34e). We will slightly extend the task of individual discourse commitments using them as representation of propositions conveyed in subjective judgments, e.g. embedded under first person *finden*.

4.3 General and subjective judgments in the Farkas & Bruce framework

In order to account for the semantic distinction between descriptive and evaluative propositions such that the former reduces possible worlds and the latter reduces possible interpretations, the common ground as well as the individual discourse commitments will be assumed to consist of pairs of interpretations and worlds, <*I*,*W*>. Update will be done according to the rules in Section 3.5.

The distinction between general and subjective judgments is a pragmatic distinction reflecting different intentions of the speaker. General judgments – with descriptive as well as evaluative propositions – are regular assertions waiting for confirmation or denial. If confirmed the propositions are included in the common ground. If denied the conversation is in a crisis and the issue under debate (on the table) remains unresolved, unless the participants "agree to disagree".

Subjective judgments present their propositions as mere opinions, not intended to enter the common ground. This is what makes them immune against denial, cf. (32a). The other discourse participant can express agreement and disagreement by using subjective judgments again, cf. (32b) and (32d). In the case of agreement the common-ground-increasing-rule in (34c) will shift the proposition from the individual commitments sets to the common ground, as it does when general

[26] This is a simplification again. The original rules says: "pop off the table all items that have as an element of their denotation an item q that is entailed by cg_o " (Farkas & Bruce, 2010, 19).

judgments are confirmed. Once the proposition is in the common ground it cannot be distinguished from propositions that entered the common ground via a general judgment. In the case of disagreement the controversial propositions remain individual commitments. Since subjective judgments are not intended to enter the common ground, we will assume that they don't affect the table. This accounts for the impossibility of denial. At the same time it accounts for the intuition that there is no unresolved issue regardless of whether the participants agree or disagree with a subjective judgment.

In order to extend the Farkas & Bruce system such that it covers subjective judgments a rule must be added which is analogous to the assertion rule in (34a) without, however, placing the proposition at the top of the table. This rule will be called *opinion* and is given in (35). Denial and confirmation are ruled out as reactions because there is no suitable proposition on the table. Agreement and disagreement are expressed by uttering another opinion.

(35) Opinion (p, a, K_i) = K_o such that $DC_{a,o} = DC_{a,i} \cup \{p\}$, and $T_o = T_i$
where p is the complement of first person present tense *finden*[26]

Let us finally consider the agree-to-disagree rule again. The sequence it was meant to cover in the original system is shown in (36). The crisis which would result from total denial is avoided by taking the issue from the table while leaving the individual commitments unchanged, $p \in DC_A$, $\neg p \in DC_B$. In (37), a controversy is shown addressing a matter of taste. In this case the crisis which would result from denial is most naturally avoided by rephrasing the controversial proposition as an opinion. Let us call this type of discourse move *retreat to opinion*. As before the controversial issue is removed from the table while leaving the individual commitments unchanged.[27]

(36) *agree to disagree*

Ann: Osnabrück liegt in Dänemark.
'Osnabrück is in Denmark.'
Ben: Nein! Es liegt in Deutschland.
'No, it is in Germany.'
Ann: Reden wir über was anderes.
'Let's not pursue this further.'
Ben: O.k.

[26] Subjective attitude verbs in other languages will presumably block denial in the same way as German *finden,* even if they differ in distribution.

[27] One reviewer argued that (37) can be continued by Ann saying O.K., let us discuss our criteria of beauty again, indicating that the controversial issue is not removed frorn the table. It has to be noted, however, that such a continuation, although possible, is not necessary. Ann might as well start a completely unrelated topic directly after the exchange in (37). This is evidence that when continuing (37) by a request to discuss the criteria of beauty a novel issue is placed on the table which can be picked up or denied by Ben.A more principled way to handle this sequence would consist in adding a precondition to the opinion rule saying that whenever *p* is on top of the table uttering the opinion *p* removes it from the table – if p=top(T_i) then T_o=pop(T_i) else T_o=T_i.)

(37) *retreat to opinion*

Ann: Die Skulptur ist schön.
'The sculpture is beautiful.'
Ben: Nein! Sie ist nicht schön.
'No, it is not beautiful.'
Ann: Ich finde sie jedenfalls schön.
'Anyway, I think it is beautiful.'
Ben: Ich nicht.
'I don't.'

Summarizing the handling of general and subjective judgments in the extension of the Farkas & Bruce framework suggested above, general judgments (descriptive uses as well as interpretational uses of propositions) constitute issues to be confirmed or denied. If confirmed, the proposition expressed in the judgment enters the common ground, which in the case of interpretational uses has the effect of narrowing down the set of interpretations instead of narrowing down the set of worlds. If a general judgment is denied, the controversy can be resolved either by agreeing to disagree or by retreat to opinion (provided the proposition is licensed as a complement of *finden*).

Subjective judgments express propositions not intended to enter the common ground and are represented as individual discourse commitments without being placed on the table. This is implemented by the opinion rule in (35) which is the only deviation from the Farkas & Bruce system. Not being on the table, subjective judgments cannot be confirmed or denied. Agreement and disagreement can be expressed by using subjective judgments again.

If discourse participants agree with respect to an individual commitment, it will be moved to the common ground. This is the same in the case of general judgments and of subjective judgments. So participants in a conversation can achieve compliance in two different ways: Either they make a general judgment thereby demanding acceptance, or they make a subjective judgment and wait for agreement. Subjective judgments thus provide a by-pass strategy to hopefully achieve compliance without risking denial.

5. Conclusion

Summing up, we started out from the hypothesis that faultless disagreement is a misconception: Denial of evaluative propositions is genuine disagreement. However, evaluative propositions can be presented as a mere subjective judgment, making the proposition immune against denial. A semantic and a pragmatic dimension of the problem of evaluativity and faultless disagreement were considered.

Semantically, descriptive uses have been distinguished from interpretational (metalinguistic) uses of propositions (cf. Barker 2002). It was shown that if a proposition occurs as a complement of the German attitude verb *finden*, it has an interpretational use. Four dialogs were examined involving descriptive and interpretational uses of propositions with dimensional and evaluative predicates. Dimensional predicates license, as well-known, descriptive as well as interpretational uses. Evaluative predicate license interpretational uses, which was expected. Surprisingly, however, evaluative predicate also license descriptive uses, thereby raising the question of how an evaluative proposition can be descriptive, given that there is no judge.

The puzzle was solved with the help of Hare's (1952) account of evaluative predicates. Hare combines a primary commending meaning component with criteria dependent on comparison class, context and speaker community which yield a quasi-denotation even if evaluative predicates do not have a regular denotation. A proposal was made on how to capture the idea of criteria in formal semantics using generalized measure functions and multi-dimensional spaces. Update was defined taking the common ground to include worlds as well as interpretations (cf. Krifka 2012).

Pragmatically, general judgments have been distinguished from subjective judgments, which are marked by, e.g., the first person present tense of *finden*. When using a general judgment, regardless of whether it's about a descriptive proposition or about an evaluative one, the speaker demands that his statement is included in the common ground of the conversation. When using a subjective judgment the speaker does not demand that it enters the common ground. It presents a mere opinion that may stay an individual discourse commitments in the sense of Farkas & Bruce (2010). This implies that subjective judgments are immune against direct denial and allow only for disagreement in the form of other subjective judgments.

The approach presented here does away with the notion of faultless disagreement. Denial in disputes about matters of taste is accepted as genuine denial thereby accounting for the puzzle of the competent speaker. On the other hand, judgments concerning matters of taste can be presented as subjective judgments thereby allowing discourse participants to disagree without one of them being wrong. This possibility might explain the intuition of faultless disagreement.

The positions in the literature on evaluative predicates and the intuition of faultless disagreement divide in relativist and contextualist accounts on the one side and metalinguistic account on the other. Hare's theory is not a relativist/contextualist account but at the same time not a purely metalinguistic account. His idea of a primary meaning component, e.g. commending in the case of *good*, provides a perspective on gradability highlighting the fact that contextual variability is possible only if there is a constant component. Although Hare doesn't mention dimensional predicates, this perspective strongly suggests that dimensional predicates are a special case of evaluatives in relating to only one dimension which is, moreover, lexically fixed.

There is a large number of open issues. As for semantics, the sketch of how to implement Hare's criteria has to be detailed. This includes the question of how criteria are grounded, which will hopefully lead to overdue distinctions in the field of evaluative predicates – *painful* and *tasty* are clearly different in many respects from *good* and *beautiful* (and one might come back to Kant's distinction of the Beauty and the Agreeable). Another open issue concerns evaluative predicates in attributive positions, which allow for a restrictive and a non-restrictive interpretation. It has been observed that the majority of non-restrictive attributive adjectives are evaluative (Umbach 2006), raising the question of why evaluative adjectives are more susceptible to non-restrictive interpretation than others. As for pragmatics, disputes about matters of taste have been reduced in this paper to overly simple cases. Gathering data on more realistic disputes is a top priority issue. Finally, there is the puzzle of the nature of the primary meaning component of evaluative predicates, that is, the commending function in the case of *good* and *beautiful*. It appears to be beyond the scope of denotational semantics and instead gives the impression of a speech-act-like element. But then, can there be adjectives with a speech act capacity?

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