

AG 8 Subjective Meaning

Jeannette Nuessli Guth
jnuessli@ethz.ch

ETH Zurich, Institute for Environmental Decisions, Zurich, Switzerland
Language in food sensory science: methodological considerations
24.02.2010, 14.00–14.30 Uhr, Raum 1.301

Sensory analysis is a scientific discipline dealing with the reactions of the five senses of humans – sight, hearing, smell, taste and touch – to the physicochemical characteristics of food. Sensory science evokes, measures, analyses and interprets responses to physical stimuli objectively and it relates this information to likes and dislikes of consumers. In the domain of food science sensory analysis is used in food quality control, product development and measuring consumer acceptance and it supports marketing efforts.

Applying sensory science in food industry and research involves the assignment of human beings in two different approaches. On the one hand humans are selected based on their sensory performance to objectively judge and describe the characteristics of food products by the means of a defined language after training on physical stimuli. Physiological knowledge on sensory perception helps to develop an objective language to describe sensory responses of food products. This is used in descriptive analysis to describe food samples and to judge several descriptors on scales. Hedonic descriptors expressing the subjective response to food, e.g. liking and emotions, are excluded. Trained people are called panelists and work in groups of about 12 to 30 people depending on their task. Test conditions as for example sample presentation, neutralization between samples, masking color differences are controlled. Statistical data evaluation is used both for panel performance and finding differences in products.

On the other hand, the subjective response to food products is investigated with naïve respondents or consumers who are not trained, but in general users of the food products studied. The investigations focus on likes, dislikes, emotional responses, purchase intent for example to better understand the behavior of the respondents, also called consumer behavior. Consumers are not trained and hence, use no standardized language. Their judgments on foods are not objectified and larger group sizes are needed for profound statements based on statistical evaluations. In contrast to analytical sensory factors influencing perception are not controlled in the same way. By this, thresholds of individuals, age, their personal experiences, cultural background and tasting conditions for example influence their perception and potentially how the people talk about food or their understanding of single descriptors. Extracts of a sensory study on *fresh* will be presented and further examples to illustrate the influence of various factors on sensory perception.

An outlook illustrated with examples is given on conversations about the taste of food. When two people talk about sensory experiences when consuming a product, the dialog partners do not really know what the other really perceives. Talking about beer for example could mean that the two partners agree or disagree on the bitter

taste of the beverage tasted assuming that both have tasted the products. Retasting is usually necessary to obtain agreement or to confirm disagreement. This process is done extensively in panel work to obtain a standardized language.

Dan Zeman
dan_zeman@yahoo.com
LOGOS – Universitat de Barcelona
Contextualism and Disagreement
24.02.2010, 14.30–15.00 Uhr, Raum 1.301

The paper is concerned with one aspect of the recent debate between contextualism and relativism about a series of discourses, such as predicates of personal taste, knowledge attributions, epistemic modals, etc. – namely, the issue of disagreement. One major objection that relativists have raised for contextualist treatments of predicates of personal taste, for example, is that it cannot satisfactorily explain the intuition of disagreement we have in exchanges like the following:

A: Avocado is tasty.
B: No, it is not. It's horrible.

(To be more precise, the allegation has been that contextualism cannot account for “faultless disagreement”, but in the paper I will take the real problem to be that the contextualism cannot account for *disagreement*, period – a problem I will simply call “the disagreement problem”.) One answer to this problem, which I will disregard in the paper, has been to straightforwardly deny that in exchanges like the above the intuition of disagreement exists. Another answer that has emerged in recent contextualist literature, however, is one which accepts that the intuition exists, but claims that contextualism does have the resources to account for disagreement, or that the intuition can be explained away. It is the goal of this paper to closely examine this second response and argue that contextualists proposing it have either (a) disregarded the real problem, giving answers that miss the target or (b) their response involves postulating, in some form or another, semantic blindness on the part of the speakers. In the second case, this extra theoretical cost is not always taken into consideration.

Related to (a), the recent contextualist answer has been to present cases in which the intuition of disagreement is born out, even under the assumption that contextualism is true. The strategy has been to show that there are uses of predicates of personal taste in which the predicate is used exocentrically (when one speaks from a different person's perspective), or group uses (when the predicate is used to speak about what a certain group finds the case), cases in which disagreement can easily be accommodated. After giving a series of representative samples from the contextualist literature (taken from such works as Glanzberg (2007), Stojanovic (2007), Lopez de Sa (2008), Cappelen and Hawthorne (2009)), I point out, however, that there are other cases that contextualism doesn't handle, cases which I take to be crucial for the relativist challenge. I conclude that, insofar the contextualist doesn't say more about these cases, her answer is incomplete. However, and moving now to (b), the traditional contextualist reply (prominently featuring in DeRose's defense of epistemic contextualism) has been to embrace *semantic blindness*. Now, having to posit semantic blindness has been found by

many thinkers (starting perhaps with Schiffer (1996)) to be an unattractive feature of a semantic theory. But, and this is the point I stress in the paper, even if recent contextualists about predicates of personal taste do sometimes mention the contextualist's need to retort to semantic blindness, the consequences of doing so are not always made explicit. For, one of the claimed advantages for the contextualist over the relativist has been that contextualism doesn't incur any extra theoretical costs. But, it seems to me that having to posit semantic blindness is precisely such a theoretical cost, and therefore the contextualist advantage is hard to keep. The argument presented is thus a dilemma: the contextualist answer is either incomplete (by not considering some cases that the relativist takes to be crucial), or her claimed advantage is doubtful (the view incurring extra theoretical costs by postulating semantic blindness). In the last part of the paper I explore a different contextualist view, Lopez de Sa's (2007, 2008) presuppositional account, pointing out that he is committed to what I call "presuppositional blindness".

Kai von Fintel
fintel@mit.edu

Massachusetts Institute of Technology
The subjectivity of conditionals in a new light
24.02.2010, 15.00–16.00 Uhr, Raum 1.301

In this talk, I will explore whether recent advances in the semantics of epistemic modality (Stephenson, von Fintel & Gillies, and others) and in the compositional structure of conditionals (Huitink, Gillies, and others) can shed new light on the semantics and pragmatics of (mostly indicative) conditionals and can deliver us from the specter of radical subjectivity ("no truth-value", "assessment relativity"). Precedents include Stephenson 2007 and Weatherson 2009.

Stephenson, Tamina. 2007. Indicative conditionals have relative truth conditions. *Chicago Linguistic Society* 43. 231–242.

Weatherson, Brian. 2009. Conditionals and indexical relativism. *Synthese* 166. 333–357. doi:10.1007/s11229-007-9283-5.

Carlos Balhana
balhana@isis.georgetown.edu
Georgetown University

The Modal Decomposition of Benefactive Predicates
24.02.2010, 16.30–17.00 Uhr, Raum 1.301

Predicates like *treat*, *grant*, *reward*, etc., which express a benefactive event, are in many ways similar to predicates of personal taste in that they also allow for faultless disagreements, despite initial intuitions. For example, addressee B might object to the speaker A's use of *treat* in (1) on any of the grounds given in (2).

- (1) A: John treated Ellen to front row tickets at the London Symphony Orchestra.
- (2a) B: No, he didn't! John was indebted to Ellen after all she did for him!
- (2b) B: No, he didn't! John had free tickets!
- (2c) B: No, he didn't! Ellen hates classical music!

In this paper, I argue that these disagreements systematically follow from the internal structure of such verbs and their lexical decomposition into a number of underlying modal elements; *treat*, for example, decomposes into a deontic modal which expresses obligation (or the negation thereof, as targeted in (2a)), a dynamic modal (i.e. an opportunity modal; cf. Portner 2009) which expresses effort and means of action (as targeted in (2b)), and a bouletic modal which expresses preferences and desires (as targeted in (2c)). I suggest that benefactive predicates and predicates of personal taste (PPTs) are both subject to faultless disagreements, although they differ in one important regard: Whereas PPTs often generate global disagreements (Lasersohn 2005; Stephenson 2005), benefactive predicates belong to a more complex class of verbs that can generate “local” contextual disagreements. In other words, the faultless disagreements resulting from benefactive predicates arise not on individual-relative or factual grounds, but from determining what relevant contextual information is to be admitted in the evaluation of each modal. Such an analysis allows us to structurally isolate individual sources of disagreement; for instance, perhaps the addressee disagrees with the contextual base of the bouletic modal but not the dynamic modal, etc. It would thus appear as though these disagreements are a product of contextual vagueness, as discussed by von Stechow and Gillies (2008). As a diagnostic, I demonstrate how particular modifiers (e.g. *voluntarily*, *much appreciated*, etc.) can target specific modals and illuminate the decomposed structure. In short, defining a variable context base and employing an ordering source semantics for the modal parts allows us to maintain a contextualist theory over one which instead appeals to relativism.

From the perspective of the syntax-semantics interface, it is worth noting that benefactive predicates denote complex events. For example, (3), (4), (5) and (6) are also normally taken to express “eating”, “purchasing”, “attending” and “telling” events, respectively.

- (3) John treated Ellen to five-course meal.
- (4) John treated Ellen to a diamond necklace.
- (5) John treated Ellen to the opera.
- (6) John treated Ellen to a story about his heroic grandfather.

As such, I also discuss the implications of extending the proposed analysis to a more comprehensive account of event semantics, such that the syntactic position of the underlying modals might also correspond with the (sub)event structure (Parsons 1991; Pustejovski 2001, Ramchand 2008).

Patrick Brandt
pbrandt@uni-koeln.de
Universität zu Köln

Agent wannabes and negative purposes in excess
24.02.2010, 17.00–17.30 Uhr, Raum 1.301

In so-called excessive (more specifically: *too-comparative*) constructions, purposes enter crucially into the construction of the standard of comparison and thus add to truth-conditional variability (cf. Meier 2003). E.g., the sentences in (1-a) and (1-b) may differ in truth value even if the actual temperature of the soup is the same on the occasion of their respective utterance.

- (1) a. The soup is too hot to be eaten.
b. The soup is too hot to be called cold.

In German and many other languages, constructions as in (1) productively license dative arguments. If a dative argument is added, it seems one cannot reject the resulting sentence without denying that the speaker is being untrue, cf. (2).

- (2) Dem Otto ist die Suppe zu heiss (um sie zu essen).
the Otto-DAT is the soup too hot (PRT it to eat).
'Otto finds the soup too hot (to eat).'

A way to explain this 'standard fixing' capacity of the dative argument lies in arguing that the dative is interpreted as ('controls') the agent implicit in the purposive action. (1) would be truth-indeterminate as its interpretation is interest relative (Fara 2000) but interests are not specified, and (2) wouldn't be as it makes the interest-bearing agent explicit.

We argue that the dative argument does indeed 'bind' the purpose clause, but in an ontologically blind fashion. Drawing on parallels to pronouns in the nominal domain, we take elements like *to(o)* (as well as directional PPs more generally) to be instructions to go to a situational index that is different from the current (last-used) one (for (1), this would be speech time). The dative argument supplies such a non-current situational index, and economy dictates that this index is used to hook the propositional content of the purpose clause to the discourse structure.

The intuition that dative arguments are interpreted as some kind of agent is prominent for a construction that we argue is syntactically and semantically parallel to the *too*-comparative, the so-called "unintentional causer construction" (cf. Schäfer 2008):

- (3) Dem Otto ist die Vase (versehentlich/?*absichtlich) zerbrochen.
the Otto-DAT is the vase-NOM (accidentally/intentionally) broken.
'The vase broke on Otto (accidentally/intentionally).'

(3) suggests that the referent of the dative argument acted unintentionally, but is still responsible for the outcome of the expressed event. (4) is structurally parallel and intuitively more "intentional", but there is no responsibility on the part of the dative argument.

- (4) Dem Otto ist der Kuchen (?*versehentlich/*absichtlich) gelungen.
the Otto-DAT is the cake-NOM (accidentally/intentionally) succeeded
'The cake turned out well for Otto (accidentally/intentionally).'

We submit that it is the negativity of the purpose/result clause that pushes us to look for someone accountable, i.e., a kind of agent. The 'agentive' interpretation of the dative arguments in *too*-comparatives and elsewhere is an epiphenomenon.

Fara, D.G. (2000): Shifting sands: an interest-relative theory of vagueness. *Philosophical Topics* 28:45–81.

Meier, C. (2003): The meaning of *too*, *enough* and *so...that*. *Natural Language Semantics* 11: 69–107.

Schäfer, F. (2008): *The syntax of (anti-) causatives. External Arguments in change-of-state contexts*. Amsterdam: Benjamins.

Ariel Cohen
aric@bgu.ac.il
Ben-Gurion University

A Tasty Mixture

24.02.2010, 17.30–18.00 Uhr, Raum 1.301

Anand (2008) considers predicates of personal taste (henceforth POPTs) with *for*-phrases. He points out that faultless disagreement is possible in these cases, and argues that these facts are problematic for theories (e.g. Laserson 2005) that explain faultless disagreement as disagreement about the relevant judge, since in (1) the two interlocutors agree on who the judge is.

- (1) a. X: This is tasty for me. Y: But you're wrong. It's disgusting.
b. X: This is boring for me. Y: But you're wrong. It's not boring.

As an alternative, Anand proposes that POPTs, either with or without *for*-phrases, carry a normative force, and formalizes their meaning using the generic quantifier. Roughly, he interprets “z is tasty” as “all normal perceivers agree that z is tasty.” While I am in sympathy with Anand’s intuitions, I argue that his formalization is problematic for several reasons, and propose an alternative.

I note a similarity between POPTs and, not generics, but the predicate *clear*. Both are gradeable, and allow comparatives and superlatives. Both are based on subjective belief yet carry normative, objective implications (Barker 2009).

Wolf and Cohen (to appear-a) treat the meaning of “it is clear that φ ” roughly as follows: competent reasoners conclude that φ . Correspondingly, I propose that “z is tasty” means that competent perceivers perceive a high level of tastiness with z; unlike Anand’s approach, these perceivers need not be normal, and they do not all have to agree that z is tasty.

Formally, each perceiver i assigns a degree to **tasty**(z), which is a probability measure: $P_i(\mathbf{tasty}(z))$. A “competent” perceiver is one whose taste is respected: not all perceivers carry the same weight. This notion is formalized by a weight w_i , assigned to perceiver i . The truth conditions of “z is tasty” are formalized using a *mixture model*—essentially, a weighted sum of the judgments of all perceivers:

$$(2) \sum_{i=1}^n (w_i \times P_i(\varphi)) > d(\mathbf{tasty})$$

This formula says that the degree assigned by a mixture of all the perceivers is above a contextually determined threshold, $d(\mathbf{tasty})$. If the sum of all weights is 1, this mixture can be shown to be a probability measure itself; in particular, its value does not necessarily increase if the number of perceivers increases.

By default, the weights are assigned to perceivers by the speaker; but they are assigned by X if the sentence is modified by “for X”. Thus, the *for*-phrase does not affect the propositional content, but modifies the speech act.

Faultless disagreement, either with or without a *for*-phrase, is disagreement on what counts as a competent perceiver, i.e. the weights assigned to the perceivers.

I demonstrate how this theory solves the problems with Anand’s approach pointed out above. Moreover, probabilistic mixture models are not restricted to POPTs, but

are independently motivated. In a realistic context update scenario, the hearer needs to decide whether to accept or reject the speaker's statement. As Wolf and Cohen (to appear-b) argue, this decision depends on a mixture of several sources of evidence, including what the hearer perceived directly, what she heard, and what she inferred.

Anand, P. 2008. Predicates of taste: Context-shift, assessment-shift, or something else? Paper presented at the Second International Conference on Quotation and Meaning, ZAS, Berlin.

Barker, C. 2009. Clarity and the grammar of skepticism. *Mind & Language* 24.253–273.

Lasersohn, P. 2005. Context dependence, disagreement, and predicates of personal taste. *Linguistics and Philosophy* 28.643–686.

Wolf, L., and Cohen, A. to appear-a. Clarity as objectivized belief. In *Vagueness and Language Use*, ed. by P. Egré and N. Klinedinst (Palgrave Studies in Pragmatics, Language and Cognition)

Basingstoke. Palgrave Macmillan.

— to appear-b. Modal adverbs as negotiation chips. *Sprache und Datenverarbeitung*.

Galit Weidman Sassoon

galitadar@gmail.com

ILLC, University of Amsterdam

Disagreements about Taste

24.02.2010, 18.00–18.30 Uhr, Raum 1.301

Taste predicates (*tasty*, *fun*, etc.) are vague and gradable. Let truth/ falsity in contexts c be defined by truth/ falsity in the set T_c of completions (classical contexts) consistent with c (Kamp, 1975). Gradable predicates denote in completions t degree functions, $f(P,t) : x$ is *tasty* is true in t iff $f(\text{tasty},t)(x)$ exceeds *tasty's* standard in t , $\text{standard}(\text{tasty},t)$ (Kennedy, 1999). I propose that *To/ for/ in Dan's opinion* and *Dan finds that* phrases **subjectively restrict contexts**, e.g., *the cake is tasty for Dan* is true in c iff *the cake is tasty* is true in any $t \in T_{\text{Dan}} \subseteq T_c$, where $f(\text{tasty},t)$ and $\text{standard}(\text{tasty},t)$ are **consistent with Dan's taste**: The entities' values represent Dan's taste, and so is the cutoff point. As the information these constituents provide is presupposed, not asserted, it tends to be preserved under negation (normally *It is not tasty for Sam* doesn't mean it's tasty, but not for Sam). Finally, grammar includes mechanisms of **implicit domain restriction** (quantification is by default restricted; von Stechow, 1994), e.g., when *if you put sugar, the tea tastes well* is considered true, we disregard completions with oil in the tea. The consequences are straightforward. First, *absence and only absence of an appropriate restriction* renders a conjunction like (1a-b) contradictory (true iff the cake is both above and below *tasty's* standard in any $t \in T_c$ (according to any taste measure conceivable in c ; (2a-b)).

- (1) a. **(Dan:) The cake is tasty.** b. **(Sam:) No it's not.**
- (2) a. $\forall t \in T_c, f(\text{tasty},t)([[\text{the cake}]]_t) > \text{standard}(\text{tasty},t)$.
b. $\forall t \in T_c, f(\text{tasty},t)([[\text{the cake}]]_t) \leq \text{standard}(\text{tasty},t)$.
- (3) a. **The cake is tasty (for Dan).** b. **No it's not (for Sam).**
- (4) a. $\forall t \in T_{\text{Dan}} \subseteq T_c, f(\text{tasty},t)([[\text{the cake}]]_t) > \text{standard}(\text{tasty},t)$.
b. $\forall t \in T_{\text{Sam}} \subseteq T_c, f(\text{tasty},t)([[\text{the cake}]]_t) \leq \text{standard}(\text{tasty},t)$.

Second, context restriction can turn the interpretation equivalent to that of (3a-b). Cooperative discourse participants, striving for a non-contradictory interpretation, are likely to assume that context is thus restricted (cf., (4a-b)). If Dan and Sam's tastes are different (correspond to different functions/ cutoff points), they are represented by non-overlapping sets of indices ($T_{\text{Dan}} \cap T_{\text{Sam}} = \emptyset$). Thus, the cake's taste may exceed

the standard in **every** $t \in T_{\text{Dan}}$ and in **no** $t \in T_{\text{Sam}}$. Still, the speakers may agree that the indices in both sets are consistent with the common ground (*tasty*'s interpretation in each represents a legitimate taste in c : $T_{\text{Dan}} \cup T_{\text{Sam}} \subseteq T_c$).

Third, there is still a natural sense in which the speakers disagree. In uttering (1b), Sam implies that the taste measures and/or cutoff points she presupposes are more plausible than Dan's. Moreover, despite our pluralism regarding taste, we all agree that, say, oil doesn't taste. So Sam's non-use of an explicit restrictor (e.g., '*for Sam*') may also convey that in c we agree that the cake doesn't taste (i.e., that (2b) is true, and (3a) inappropriate: $T_{\text{Dan}} \cap T_c = \emptyset$). Alternatively, Sam may interpret Dan non-restrictively (as conveying (2a)), rejecting this view based on c being pluralistic (consistent with completions in which the cake isn't tasty; cf. (4b); for a similar account of epistemic modals, see von Stechow and Gillies 2008; see also Nouwen, 2007).

Fourth, the verb in, e.g., *I think the cake is tasty*, triggers a shift to completions consistent with the speaker's beliefs, but not necessarily her own taste. In fact, the speaker's partial access to the taste in question suggests that *tasty*'s interpretation is not based on the her taste. That taste depends on mental *facts*, rather than on *belief* or *opinion*, is illustrated also by the contrasts in (5) (inspired by Landau, 2009).

- (5) a. # Reading is fun for Al, but he does not feel fun reading.
b. Al *thinks* reading is fun, but he does not feel fun reading; it's not fun for him.
c. # Al thinks reading is fun, but in his opinion, reading is not fun.

Carla Umbach
cumbach@uni-osnabrueck.de
University of Osnabrück
Evaluative predicates in dialog
25.02.2010, 09.00–09.30 Uhr, Raum 1.301

Evaluative predicates (*wunderbar/wonderful*, *dämlich/stupid*, *lecker/tasty* etc.) differ from regular predicates (*chinesisch/Chinese*, *zwei Tonnen schwer/weighing two tons* etc.) in that they express a subjective judgement of the speaker (or some other agent) which is not subject to general truth conditions. Evaluative predicates give rise to so-called "faultless disagreement": partners in a dialog may contradict each other but neither of them can be said to be wrong (Lasnik 2005).

This paper starts from the observation that evaluative predicates differ from regular predicates in their behavior in dialog. Consider the dialog in (1). In the first version Anne uses the regular predicate *chinesisch/Chinese* in describing the vases. In the second version she uses the evaluative predicate *wunderbar/wonderful*. In his answer Bob repeats Anne's description, which is then backgrounded. In the first version Bob's answer appears a bit long-winded but otherwise unmarked. In the second version Bob's answer gives the impression of quoting (and maybe irony), which is surprising: Why should backgrounded material in a nominal phrase evoke the impression of quoting?

(1) Anne: Guck mal, Chuck hat mir eine seiner chinesischen / wunderbaren Vasen geschenkt.

'Look, Chuck gave me one of his Chinese / wonderful vases.'

Bob: Ich komme sofort. Stell die chinesische / wunderbare Vase schon mal auf das Büffet.

'I'll be with you in a minute. Put the Chinese / wonderful vase on the sideboard.'

The quoting effect is evidence that evaluative statements are not part of the common ground of the discourse participants. Still, they are public – Bob knows that Anne considers the vase to be wonderful, and he can directly relate to her judgment. It will be suggested in the paper to account for evaluative statements in dialog by allowing for a 'semi-common' part of the common ground consisting of public but not mutually acknowledged beliefs of the participants. This technique has been proposed in Gunlogson (2003) for the analysis of rising declaratives. Gunlogson's idea of tracing the commitments sets of the participants separately will be rephrased in the framework of inquisitive semantics (Groenendijk & Roelofsen 2009).

Groenendijk, J.A.G. & F. Roelofsen (2009) Inquisitive Semantics and Pragmatics. Proceedings of SPR-09, ILCLI International Workshop on Semantics, Pragmatics, and Rhetoric.

Gunlogson, Christine. 2003. True to Form: Rising and Falling Declaratives as Questions in English. New York: Routledge.

Lasersohn, P. (2005) Context Dependence, Disagreement, and predicates of Personal Taste. Linguistics and Philosophy 28: 643–686.

Michael Hegarty
mhegar1@lsu.edu

Louisiana State University

Propositional Attitude Ascriptions and Subjective Judgments in Dynamic Semantics

25.02.2010, 09.30–10.00 Uhr, Raum 1.301

This talk argues for parallel interpretation of epistemic modal statements and propositional attitude ascriptions in a framework of Modalized Dynamic Semantics (MDS), and suggests that the apparatus employed can be extended to provide an account of reports of subjective taste or preference. The talk will present more general results than those in the literature for embedding of epistemic modal statements and reports of personal taste or preference under attitude verbs, deriving results of Stephenson (2007), in particular, for special cases of such embeddings.

The report *A believes that S* can be interpreted as expressing a quantified (modalized) context update condition, updating the context attributed to the referent **a3** of *A* in worlds compatible with context update criteria attributed to **a3**. The range of worlds in which this context update condition is asserted to hold also depends on the strength of the predicate: *A imagines that S* (as a weak belief report) asserts this update condition over fewer worlds compatible with **a3**'s update criteria, and *A is convinced that S* over more worlds. Other attitude ascriptions work similarly, with update according to epistemic, bouletic or other criteria, including mixed criteria. An analysis of attitude ascriptions within a relational dynamic semantics for DRT will be presented, and arguments for it briefly summarized.

The results can be applied to the interpretation of main clauses. The speaker **a1**,

upon uttering a main clause *S*, expresses update of the prevailing speaker-addressee context by the Context Change Potential of *S*. But just as with the interpretation of attitude ascriptions, the update condition has an implicit quantifier over possible worlds (unless it has one which is overtly specified by a modal verb or adverb) compatible with the speaker's update criteria.

An epistemic modal statement (following Kratzer 1991) provides an explicit specification of the strength of this quantifier over possible worlds compatible with epistemic criteria. Addressing the extensive literature regarding who or what epistemic modals may be evaluated relative to (cf. Egan 2005, Egan, Hawthorne and Weatherson 2005), the talk will argue that epistemic modals are evaluated with respect to a normative epistemic standard, but one which the speaker presumes his or her epistemic update criteria to be in accord with. The normative epistemic standard is an analog of the exocentric judge of Stephenson (2007), but the present account articulates a relationship between the speaker and that standard.

A statement of subjective taste or preference can be interpreted along formally parallel lines, as expressing update of a context in worlds compatible with criteria of taste or preference. Along the lines explored by Lasersohn (2005) and Stephenson (2007), the context update criteria for this evaluation can constitute a normative standard, or they can be the criteria of a salient individual in the context.

For statements of epistemic modality or subjective taste occurring in complement position to an attitude verb, Stephenson proposes an intrinsic difference: the epistemic modal necessarily shifts from evaluation relative to an exocentric judge to evaluation relative to the higher subject, whereas a predicate of taste or preference can still be evaluated relative to an exocentric judge or a salient individual.

On the present account, embeddings of epistemic modal statements and statements of subjective taste or preference under attitude predicates are formally identical, interpreted with iteration of one interpretation inside the other. But considering a wider range of attitude predicates, a general pattern emerges. When the update criteria for the attitude report and the embedded statement are of the same type (both epistemic, or both according to taste or preference), we derive shift of the reference point to the higher subject, and when, in addition, they are of the same strength, the two conditions can fully collapse into a single update condition. Otherwise, the interpretations remain iterated and unreduced.

Christine Gunlogson / Gregory Carlson
gunlog@ling.rochester.edu / carlson@ling.rochester.edu
University of Rochester
Predicates of Experience
25.02.2010, 10.00–11.00 Uhr, Raum 1.301

In this two-part talk we propose an alternative to Lasersohn's (2005) account of "predicates of taste". Our initial claim is that for a broad class of intuitively subjective predicates, including some of those termed "predicates of taste", the experiencer has unassailable *evidence* as to the truth or falsity of the predication, simply by virtue of being the experiencer. This is not a guarantee that the experiencer's claims are true, but it makes them, in the usual case, immune from criticism as to their justification. We elaborate on the consequences of this view, and arrive at an evidential

conception of the use of predicates of taste and experience that is guided by the dynamics of discourse pragmatics.

Our pragmatic approach, unlike the semantic one, accounts for the contrast between (1) and (2):

<p>1. (just getting off the roller coaster) Mary: That was fun for me. John: # No it wasn't.</p>	<p>2. (about Bill's roller coaster ride) Mary: That was fun for Bill. John: No it wasn't.</p>
--	---

Furthermore, the pragmatic evidential analysis extends to similar phenomena of other cases involving predicates not ordinarily falling into the “taste” category:

3. (John and Mary are on different continents having a phone conversation)
John: It's cold here. Mary: # No it isn't.

The first part concludes with an account of why the use of semantically “strong” epistemic *must* (*The dog must be in the yard*) makes a weakened-sounding claim (cf. *The dog is in the yard*), in support of the analysis provided in von Stechow and Gillies (2009).

In the second part we provide grounds for distinguishing two classes of predicates that give rise to “faultless disagreement”. One we call *predicates of experience* (poe's). We exemplify these by contrasting *tasty* and *fun*, claiming the *fun* class (poe's), in contrast to the *tasty* class, is a predicate applying to experiences. We analyze experiences as a subclass of event types, and locate this within the lexical semantics. Differences emerge in argument structure, where only poe's (5) may take a gerundive argument.

4. # Eating the ice cream cone was tasty.
5. Riding on the rollercoaster was fun.

Subjects not overtly expressing events are understood as such via accommodation.

6. The roller coaster was fun ≈ Riding on the roller coaster was fun
7. That chair is comfortable ≈ Sitting in that chair is comfortable

These predicates include an experience that is being evaluated, and experiences imply experiencers. Where no experiencer is overtly expressed, it is normally taken to be the speaker, but this is a fact about pragmatic principles rather than anything about lexical or sentence semantics: it follows from Gricean Quality that (normally) the speaker making the assertion is understood to be the experiencer.

Chris Kennedy
ck@uchicago.edu
University of Chicago

Where does relativity come from?
25.02.2010, 11.30–12.30 Uhr, Raum 1.301

Focusing on different classes of scalar predicates (dimensional, evaluative, aesthetic, normative), I will explore and document the variable appearance of relativistic behavior (primarily as indicated by the 'faultless disagreement' phenomenon) in different forms of these predicates (positive, comparative, nominal, verbal) in an effort to pinpoint the source of relativity, and address the following questions: What determines whether a predicate is relative or merely context dependent? Is relativity

(in this domain) a uniform phenomenon, or does this class of predicates display different kinds of relativity? Is relativity a semantic phenomenon, a pragmatic one, or something else?

Lavi Wolf
L.Wolf@uva.nl
ILLC, University of Amsterdam
Objective Judgment
25.02.2010, 12.30–13.00 Uhr, Raum 1.301

Statements involving predicates of personal taste (PPTs) give rise to the phenomenon of 'faultless disagreement', in which the hearer may directly contradict the speaker while at the same time neither of them can be accused of speaking falsely:

- (1) a. Suzy: the lobster is tasty.
b. James: no, it's not.

While most theories dealing with this phenomenon concentrate on the subjective meaning of PPTs, there are several reasons why an objective approach, in which the extension of *tasty* is the same regardless of speaker or hearer, is desirable.

A. Disagreement with an autocentric perspective (when each speaker reports her own taste evaluation) is purposeless (cf. Nouwen 2007).

B. Cases in which the meaning of *tasty* doesn't rely on subjective interpretation:

- (2) a. Reports: "Suzy and James have a disagreement whether the lobster is tasty or not".
b. Conditionals: "If the lobster is tasty then the mashed potatoes are also tasty".

C. The validity of logical inference consisting of statements of personal taste:

- (3) a. If the lobster is tasty then the mashed potatoes are tasty.
b. The lobster is tasty.
c. Therefore, the mashed potatoes are tasty.

Drawing a parallel with similar problems that were already dealt with in the philosophy of ethics, we adopt Allan Gibbard's (1990) theory of *Normative Judgment* to the case of PPTs. Specifically, the notion of "a system of norms", which is formalized as a set of propositions that specify how to behave:

- (4) a. A system of norms n is a function from worlds to sets of propositions, such that:
For any world w , $n(w)$ is the set of propositions of the prevailing norms in w .
b. $\cap n(w)$ is the set of worlds in which all the propositions of $n(w)$ are being obeyed.
c. $[[\text{the lobster is tasty}]_w=1$ iff in any w' such that $w' \in \cap n(w)$, liking the lobster is the thing to do.
d. $[[\text{the lobster is tasty}]_w=0$ iff in any w' such that $w' \in \cap n(w)$, *not* liking the lobster is the thing to do.

Suzy's purpose is not to convince James that he *does* like the lobster, but that he *should* like the lobster. The disagreement is explained in the usual manner; both conversational participants assert contradictory propositions. The faultlessness is

explained by the lack of knowledge as to the nature of the actual world, and therefore as to which is the actual system of norms.

Daniel Gutzmann
 danielgutzmann@gmail.com
 Goethe-University Frankfurt

Expressivism is tasty! Towards an expressive account of predicates of personal taste

26.02.2010, 11.30–12.00 Uhr, Raum 1.301

Predicates of personal taste (»PPT«) like *fun* or *tasty* raise the well known problem of *faultless disagreement* (»FD« for short). Even if two subjective utterances may be true relative to the irrelative speaker, they may nevertheless seem to contradict each other. In his influential paper, Lasersohn (2005) suggests a relativistic solution that adds a judge parameter to the ordinary circumstances of evaluation. This allows a taste judgment like *Roller coasters are fun* to express the same content irrespective of the context of utterance, yet it can differ in truth value if the judge parameter changes. Trying to avoid this kind of relativism, I explore an expressive approach by comparing PPT to expressives like *damn*, *hmmm*, or *oops* (cf. e.g. Kaplan 1999; Potts 2007). Expressives and PPT share some crucial properties: They are perspective dependent, i.e. both seem to depend on some kind of judge, and they have an immediate effect, i.e. the speaker attitude they express cannot directly be challenged.

However, Lasersohn (2005: §4.3) dismisses »expressivism« based on three objections: (i) In contrast to PPT-utterances, genuine expressive speech acts like *Whee!* cannot directly be denied. (ii) PPT-sentences can appear embedded under truth-functional connectives and can participate in ordinary schemes of logical reasoning. (iii) Expressivism cannot account for the intuition that two taste judgments may contradict each other.

I argue that these objections are not lethal to an expressive approach to PPT, since they do not show what Lasersohn suggests. First, the »That's not true«-test Lasersohn uses is problematic since there are many instances in which such a phrase can be used even if we are dealing with an arguably non-assertoric speech act like commissives or expressive ones. So either such speech acts are assertions or Lasersohn's objection does not hold. Furthermore, *That's not true* can also be used if only a subpart of an assertion is denied. Hence, it is far from clear that a *That's not true* test is sufficient to establish the truth conditional nature of an utterance.

Regarding (ii), being part of a superficial »logical« deduction does not prove that we are dealing with truth-conditional content since there are many non-assertoric speech acts that can be part of such reasoning. As in *If the roller coaster has a loop, go for it. The roller coaster has a loop. Therefore, go for it.* So either such speech acts are assertions or Lasersohn's objection does not hold. Furthermore, Kaplan (1999) argues that even expressives can be part of logical reasoning.

Regarding (iii), there are non-assertoric speech acts that seem to contradict each other, like conflicting order or the expressives *Hmmm!* and *Ugh!*. So either such speech acts are assertions or Lasersohn's objection does not hold. Furthermore, Lasersohn (2005: 683) himself admits that his notion of contradiction is »somewhat

mysterious« and suggests that two sentences contradict each other if they »cannot both be accommodated under a single perspective«. Of course, this also holds for perspective dependent expressives and other non-assertoric speech acts.

To give an outlook on what an expressive account of PPT may actually look like, I draw on recent work on the treatment of expressive content. The basic idea is that while the semantic content of an ordinary assertive utterance is a set of possible worlds, an expressive speech act denotes a set of contexts. An assertion is true if the actual world is in the set of possible worlds denoted by the semantic content of the sentence. Likewise, an expressive speech act is justified or felicitous if the utterance context is in the set of contexts denoted by the semantic content of the sentence. According to this approach, some utterances are hybrid speech acts as they have both, an assertoric truth-conditional part *and* an expressive use-conditional part. The problem of FD can then be traced back to these two levels: two utterances may be true with respect to their speaker, but may still contradict each other at the expressive layer; it is a conflict about the current context. After all, the analysis I've sketched could be regarded as a mixture of expressivism and a »metacontextual-conflict« account. Of course, this is only a first step towards an expressive account of PPT and there are many open issues to be discussed at the workshop.

Kaplan, David (1999): »The meaning of *ouch* and *oops*«. 2004 version. Ms. L.A.: University of California.

Lasersohn, Peter (2005): »Context dependence, disagreement, and predicates of personal taste«. In: *Linguistics and Philosophy* 28.6, 643–686.

Potts, Christopher (2007): »The expressive dimension«. In: *Theoretical Linguistics* 33.2, 165–197.

Jacques Jayez

jjayez@ens-lsh.fr

ENS de Lyon / L2C2, CNRS

What does semantic subjectivity tells us about inference?

26.02.2010, 12.00–12.30 Uhr, Raum 1.301

Subjective predicates have attracted much attention in recent work in semantics (e.g. Lasersohn, Sæbø, Stephenson). I follow the spirit of leading proposals in the field in assuming that such predicates convey or exploit a judge parameter. In this talk, I will be concerned with the consequences that the existence of subjective phenomena has on our view of inference. More specifically, I will address the issue of how we can distinguish subjective and objective predicates in terms of inference.

If we assume that subjective predicates depend on a judge parameter for their application to entities, this mode of dependence must be distinct from 'ordinary' variation across individuals for objective predicates, see the contrast (1a) vs. (1b). In order to account for such differences, one might postulate that inherently subjective operators, like *find* in some of its constructions and analogous verbs in different languages, combine exclusively with inherently subjective predicates, which, somehow, involve a judge parameter, whereas inherently objective predicates do not. The difference would then be explained at the syntax-semantics interface level (see Sæbø for a detailed proposal along these lines). Some tension remains, however. In view of (1c-e) and similar examples, truth is intuitively neither a judge-invariant nor a crisp property. So, one would like to reconcile the interface and the intuition.

- (1) a. I find this conjecture plausible
 b. ??I find this conjecture true
 c. You wrote that happy endings are very disingenuous, and I find that true
 [Google]
 d. I believe that/In my opinion this conjecture is plausible/true
 e. This is more or less true, almost/hardly/rather true

I propose that this is done by analysing ‘objective’ predicates, like *true*, not as *empirically* judge-invariant but as judge-invariant *in the limit*, that is, as amenable to *stable* proofs. In a non-monotonic deductive system \vdash , a proof $\Sigma \vdash C$, where Σ is a sequence of expressions and C and expression (the ‘conclusion’), is *stable* whenever $\Sigma, \Sigma' \vdash C$ or $\Sigma', \Sigma \vdash C$ for every sequence Σ' . In other terms, with a stable proof, the conclusion is definitely reached at at least one point in the space of possible sequences of premises. A proposition is judge-invariant (in the limit) when it admits of some stable proof.

It is not required that the premises of the proof be actually true or proven, nor even identifiable but only that there be in principle a stable dependency between some premises and the conclusion. For instance, a mathematical conjecture might be unproved or even unprovable, but any mathematical proof of the conjecture would be stable. Perceptual or metaphysical propositions like *Mary was in the house this morning* or *God exists* express *facts*, that is states of affairs that would have stable proofs if they had any proof.

A predicate P is judge-invariant (in the limit) in the domain D whenever every proposition $P(t)$, where t is a term in D , is judge-invariant. For instance, predicates like *true* are judge-invariant in the mathematical or factual domains. In contrast, although *That Michael Jordan is tall is true* is indisputable in our world, there are other terms, for example *That Paul Auster is tall*, for which the resulting proposition is debatable, that is, cannot be the conclusion of a stable proof. In general (see 1c) propositions involving ‘subjective’ predicates, meaning predicates that resist stable proofs, create terms that subjectivize higher-order predicates.

In the talk, I will discuss additional issues, including an alternative account based on the modal pedigree of propositions and the interaction with fictional worlds (novels, films, etc.).

Chloe Chenjie Gu / Tom Roeper
 cgu@linguist.umass.edu / roeper@linguist.umass.edu
 University of Massachusetts, Amherst

Children’s understanding of point of view and subjective meaning
 26.02.2010, 12.30–13.00 Uhr, Raum 1.301

This paper looks at children’s understanding of different types of Point of View (POV) and (non)subjective meaning in English expletives and raising constructions. C. Chomsky (1969) reports that children (aged 5-10) fail to grasp the underlying structure of raising constructions like (1), and assume that the doll is the subject of the predicate. In this study, we refine the research question and separate the acquisition of the general POV, which is imposed by expletives, from the acquisition of a raising structure that requires non-subjective interpretation.

- (1) Question: Is the (blind) doll easy to see or hard to see?
(2) Adult: It is easy to see the doll. / Children: She (the doll) is hard to see.

Moltmann (to appear) shows that the PRO in expletives has a quasi-first-person orientation and delivers *first-person-based genericity*. It is generic/quantificational rather than subjective, and the construction is open to faultless disagreement. We suggest that the expletives force people to take a general POV, and the subjective meaning is associated with *for*-phrase. Expletives like (2A) describes a proposition that is judged true for most people. A 'no' reply is semantically different from a 'not for me' reply. The latter is clarification rather than disagreement.

- (2) A: It is easy (PRO) to jump over the fence.
B: No. / Not for me.

Raising constructions, on the other hand, may ask for subjective interpretations. A predicate like 'sure' can describe the belief state of the speaker (3a) in raising constructions, but in (3b) it takes a complement clause and reveals the point of view specific to the grammatical subject.

- (3) a. John is sure to win. (Speaker POV, subjective meaning: John may not think he will win.)
b. John is sure that he will win. (Subject POV, non-subjective meaning: the speaker may not agree with John.)

In this study we examine L1 English-speaking children's understanding of expletives and 'sure' constructions. Longitudinal data shows that expletive constructions emerge fairly early (2;5-4;1) for most children, and some are clear general POV uses. Less children use 'sure' constructions and most of these utterances have a local person subject. Two experiments are designed to confirm the findings and tease apart subject/speaker POV uses in 'sure' constructions. In the first experiment, 7 stories are told to 10 children from 3;8 to 5;2, and each story is followed by a question in an expletive structure. 80.4% of children's answers are target-like, and they make generalizations according to the content of the story rather than their own subjective opinion. In the second experiment, 40 children from 3;7 to 9;1 listen to 12 stories, and each is followed by a question using a predicate containing 'sure'. The stories describe events where one person has a false belief. The 'X is sure-that' questions look for the subject's POV while other questions target speaker/general POV answers. On average, children under 6 only answer 35% subject POV questions correctly, and no clear sign of improvement is found till age 9. In contrast, 63.6% "X is sure to" questions and above 80% expletive questions have target answers.

These results, when put together, show that children do not blindly apply subjective meaning to every case, and they are able to interpret expletives with target general POV from early on. However, they may have a subjective meaning bias for specific constructions. It is likely that the syntax of these constructions stands as obstacles in acquisition, and children assign a non-target underlying structure to (3b) that lead to a subjective interpretation.

Chomsky, Carol. 1969. *The Acquisition of Syntax in Children from 5 to 10*. Cambridge, Mass.: MIT Press.
Moltmann, Friederike. To appear. Relative Truth and the First Person. *Philosophical Studies*.

Sanna Hirvonen
 sanna.hirvonen.09@ucl.ac.uk
 University College London

Predicates of Taste: Doing Without Judge Dependence

26.02.2010, 13.00–14.00 Uhr, Raum 1.301

Recent discussions in linguistics and philosophy have assumed that a semantics for predicates of taste has to reconcile two alleged facts (Lasersohn 2005):

- (i) *Judge dependence*: the truth of attributions of taste-related properties depends on a judge (an individual or a group), and
- (ii) *Disagreement*: speakers disagree about the truth or correctness of those attributions.

It is well known that reconciling the two creates trouble for standard contextualist semantics (Cappelen & Hawthorne 2009, Glanzberg 2007). This has motivated relativist approaches which posit extra parameters to the index (instead of the propositional content) to account for certain forms of context sensitivity (Lasersohn 2005, Stephenson 2007).

This paper argues that the assumption of judge dependence is false. I offer novel criticism Lasersohn's (2005) "radical" relativism and argue that the problems of the views are due to the assumption of judge dependence. I then propose an invariantist semantics which construes taste predicates as ordinary 1-place predicates. Invariantism would be problematic on the assumption that there are objective properties taste predicates refer to. Instead, the claim is that taste predicates are similar to predicates like *unicorn*; they have a descriptive content to which nothing in the world corresponds, but (unlike *unicorn*) they are useful due to the expressive dimension involved.

The argument against Lasersohn's relativism claims that the theory faces what I call *the Dilemma of Uncharitable Interpretations*. I argue that if speakers are aware of the relativity of predicates of taste, then the relativist owes an explanation for why they do not normally interpret others charitably, taking the speaker to be the judge (instead of using themselves as judges): that is the first horn of the dilemma. Alternatively, the relativist must give up the idea that speakers know the relativity of taste predicates, and that they engage in disagreements accidentally since they are unable to take up the perspective of others. That is the second horn, and implies that speakers are deficient in their mastery of a group of expressions. Neither option is acceptable, and the proposed relativist theories have no answer to the question of uncharitable interpretations.

I then argue that when we look closely at how taste predicates are used, there is no evidence of judge dependence; on the contrary, disagreements and their persistence shows that people take themselves to disagree about genuine properties. However, there cannot be properties which would make those attributions true due to the radical differences in people's taste. It thus seems that the assumption of judge dependence is a mere philosophical prejudice which should have no place in semantic theorizing.

After proposing the alternative invariantist account I discuss the consequences of

assuming that predicates of taste fail to refer to properties. I argue that taste predicates are like non-referring predicates (e.g. *witch*) and claim that reference failure is relatively harmless considering the usefulness of taste predicates in practical life. The conclusion is that in a certain respect taste predicates are like purely expressive predicates (e.g. *awesome*), but the puzzles they create are caused by their apparently objective descriptive dimension, and that is what causes people to disagree about taste.

Lucian Zagan

lucian.zagan@uva.nl

ILLC, University of Amsterdam

On Vagueness, Context Dependence, and Disagreement

The present paper argues for a version of truth contextualism concerning vagueness. When I talk about vague expressions, I mostly look at gradable adjectives like “rich” or “tall”. Such predicates are tolerant, meaning that if someone is rich, then losing one cent will not make that person not rich, or if someone is tall, then a person just one millimetre shorter will also count as tall. There would be hard to find someone who denies that vague predicates are context-dependent. But in which way are they context-dependent it is not easy to tell. First, I go through some general considerations concerning vagueness and context dependence. Then I try to make an inventory of the various ways in which context plays a role in natural language interpretation. I distinguish between minimalist, contextualist, and perspectival views concerning the role of context in interpretation. Further on, I try to detail what I take to be a truth-contextualist view of vagueness. In the end, I present an advantage the present view has in making sense of disagreement intuitions.

We should distinguish two types of context dependence: dependence of *content* on context and dependence of *extension* of context. According to the Kaplanian picture, indexicals are expressions whose content at a context depends on features of the context. In contrast, there are expressions which are context-dependent without being indexicals, in the sense that their extension at a context depends on features of the context. I call this, following MacFarlane (2009), nonindexical context dependence. There is context dependence in determining contents from characters, and there is also context dependence in determining extensions or truth values from contents. And so, we have two types of contextualism: content contextualism and truth contextualism.

The meanings of vague predicates fail to determine precise extensions. For example, the meaning of “rich” does not determine for each object whether it is in the predicate extension or not. The variation in the extension of vague predicates points to a change in context. But arguably it is not the content that varies with the context of use. In terms of framework, I make use of the semantic framework proposed by Predelli (2005a and 2005b). As far as the analysis of vagueness is concerned, I aim it similar to Fara (2000) in the essential points.

A truth-contextualist view accommodates best some features of vague expressions. Most of all, it explains intuitions concerning disagreement. We can make sense of the fact that there is real disagreement between us when I hold that Hanna is rich and you hold the opposite. Claiming that it is the content of a vague expression that

varies with the context of use would make the disagreement not substantive: we would just disagree about the sense of “rich” at issue. But when one holds that Hanna is rich and someone else the opposite we would like to have a substantive disagreement. In fact, we really disagree about Hanna being rich; I take this as a fact of language use.

Eric Kevin Carter
carter.561@gmail.com
The Ohio State University
Incompatibility and Cognitive Fault

Relativism

In relativism debates, there is a well-known constraint on disagreement, namely, that in a strictly cognitive disagreement, there must be at least one person who is confused, inattentive, biased, or otherwise cognitively faulty. When a disagreement over a given subject-matter is strictly cognitive, there is little or no inclination towards relativism about that subject-matter. However, when a disagreement is not strictly cognitive, we are inclined towards relativism. Given the important role in relativism debates assigned to what I call the *cognitive fault* constraint, we should settle questions not only about how to understand the constraint, but also how to apply it. In this paper, I defend the comparative advantages of an alternative to the standard metaphysical interpretation. On the alternative view, cognitive fault talk is sensitive to contextual restrictions, including contextually supplied standard of cognitive fault. In addition, the modal idiom expresses necessity relative to the normal course of events when different people accept mutually inconsistent views. On the standard metaphysical approach, cognitive fault talk is not context-sensitive, and the modal idiom expresses a familiar modality, namely, metaphysical necessity.

Cognitive Fault and Modality

I defend the view that, in the cognitive fault constraint, cognitive fault talk is context-sensitive. For example, there is a similarity between gradable adjectives such as ‘expensive’ and cognitive fault predicates such as ‘confused’. Several factors account for the truth of the sentence ‘the car is expensive’ in a given context, including the car’s cost with respect to a contextually supplied standard of cost. Similarly, if ‘Smith is confused’ is true in a given context, it is due to Smith’s lucidity with respect to a standard of lucidity given by that context.

I draw on Angelika Kratzer’s (see (1977) and (1991)) research on modals to shed light on the modal idiom in the cognitive fault constraint. She argues that the truth-conditions of some modal claims are relative to a range of facts: for instance, given facts about a location’s soil and climate, and facts about hydrangeas, we may truly or falsely say, “Hydrangeas can grow here.” I argue that, in the fault constraint, the modal claim’s truth-conditions are also relative to a range of facts. In particular, the truth-conditions of ‘someone must be cognitively faulty’ are relative to the fact that there are at least two participants that accept mutually inconsistent views. In addition, Kratzer argues that the truth-conditions of some modal claims are relative to how things stand with respect to the normal course of events. Even when a detective’s evidence does not rule out the far-fetched possibility that a space alien murdered Smith, he could truly say, “Jones must be Smith’s murderer,” since an alien murderer is outside the normal course of events. I argue that, in the fault constraint, the modal

incorporates a similar relativity to the normal course of events. The truth-conditions of 'someone must be cognitively faulty' are thus relative to what happens in the normal course of events when two different participants accept mutually inconsistent views.

Science and Reflective Equilibrium

Stewart Shapiro (2007) raises an apparent counter-example to the cognitive fault constraint. He imagines a scenario where, in reflective equilibrium, two different scientists adopt mutually inconsistent scientific views, but neither scientist is—and so, neither must be—cognitively faulty. Since, by hypothesis, scientific subject-matters are not relative, something is amiss with the cognitive fault constraint. Given the standard metaphysical approach, the above scenario is problematic, but it poses no problem for the alternative interpretation that I defend. Scientific disagreement in reflective equilibrium is different from scientific disagreement in the normal course of events. As such, we may truly say about the above scenario, 'someone must be cognitively faulty', even though, in reflective equilibrium, the two scientists faultlessly disagree.