Where Does Subjectivity Come From?

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Subjective Meaning: Alternatives to Relativism
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Questions

1. What makes a predicate subjective?
   - What kind of meaning does it have?
   - Is there a representational correlate?
   - Are there different kinds of subjectivity?
2. Is there evidence to decide between a relativist vs. contextualist (vs. something else) account of subjectivity?

Disclaimer: My focus will be on subjectivity in scalar predicates; I won't talk about modals, conditionals, etc.

The players

The words

- **Evaluative GAs:** *tasty*, *fun*, *stimulating*, *lazy*, *salty*, *sweet*, ...
- **Dimensional GAs:** *rich*, *tall*, *heavy*, *old*, *salty*, *sweet*, ...

The hypotheses

- **Relativism:** The character and content of a subjective predicate is fixed, but its extension is judge-dependent.
- **Contextualism:** The character of a subjective predicate is fixed, but its content and extension are judge-dependent.
- (*Metalinguistic uncertainty*, *objectivism*, *expressivism*, ...)

Truth judgments and speech reports

Faultless disagreement

(1) a. Anna: "Trippa alla romana is tasty."
b. Beatrice: "Trippa alla romana is not tasty."

(2) a. Anna: "Trippa alla romana is next."
b. Beatrice: "Trippa alla romana is not next."

This phenomenon, together with object language truth assessments and object language speech reports, appears to argue against a contextualist analysis of subjectivity.

Subjective attitude predicates

Some attitude predicates (e.g., Engl. *finds, considers, feels that, ...*) require their complements to be subjective (Sæbø, to appear):

(3) a. Anna believes trippa alla romana to be tasty.

b. Anna believes trippa alla romana to be vegetarian.

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(3) a. Anna believes trippa alla romana to be tasty.
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(4) a. Anna finds trippa alla romana (to be) tasty.
b. ?? Anna finds trippa alla romana (to be) vegetarian.

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(4) a. Anna finds trippa alla romana (to be) tasty.
b. ?? Anna finds trippa alla romana (to be) vegetarian.

(5) a. Anna believes trippa alla romana to be tasty for me.
b. ?? Anna finds trippa alla romana (to be) tasty for me.
(OK if *finds* $\approx$ *discovers*)

Subjective attitude predicates

Stephenson (2007) proposes that *find* means the same thing as *think*, but has an extra requirement that the doxastic anchor have direct experience of the embedded proposition:

(6) a. Anna thinks the cat food is tasty (because the cat ate it all up).

b. ?? Anna finds the cat food tasty (because the cat ate it all up).

Subjective attitude predicates

Stephenson (2007) proposes that *find* means the same thing as *think*, but has an extra requirement that the doxastic anchor have direct experience of the embedded proposition:

(6) a. Anna thinks the cat food is tasty (because the cat ate it all up).
b. ?? Anna finds the cat food tasty (because the cat ate it all up).

But, Sæbø points out, this doesn't account for (7b), assuming that Homer has direct experience of his sexual orientation.

(7) a. Homer thinks he is gay.
b. ?? Homer finds himself (to be) gay.

Subjective attitude predicates

Sæbø argues that *find* is a radical judge-shifter, and provides both a relativist and a contextualist implementation of the analysis:

- **Relativist:** *find* causes the extension of the embedded predicate to be determined relative to its subject.

  (8) $[\![x\ \mathit{find}\ [y\ \mathit{tasty}]]\!]^{w,t,j} = [\![\mathit{tasty}_{\langle e,t\rangle}]\!]^{w,t,x}(y)$

- **Contextualist:** *find* fixes the value of the judge argument of the embedded predicate to its subject

  (9) $[\![x\ \mathit{find}\ [y\ \mathit{tasty}]]\!]^{w,t} = [\![\mathit{tasty}_{\langle e,et\rangle}]\!]^{w,t}(y)(x)$

Subjective attitude predicates

These two versions of the analysis make different predictions about the unacceptability of *Homer finds himself gay*:

- In the relativist version, adding *finds* is vacuous, since *gay* is not judge-dependent.
- In the contextualist version, there is a type-mismatch, because *gay* does not have a judge argument.

Sæbø provides several pieces of evidence that suggest that the contextualist version of the account is best.

Subjective attitude predicates

(8) HANDSOME, PLEASANT AND UNDER 45

a. She finds him handsome and pleasant.

b. ?? She finds him handsome and under 45.

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(9) a. She finds all smokers unpleasant.

b. ?? She finds all pleasant people to be nonsmokers.

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a. She finds him handsome and pleasant.

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(9) a. She finds all smokers unpleasant.

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(10) a. Jeg synes du er gift med en vakker mann.
I seem you are married with a beautiful man
'I find the man you are married to beautiful.'
('I find you to be married to a beautiful man.')

b. ?? Jeg synes du kjenner en vakker mann.
I seem you know a beautiful man
('??I find you to know a beautiful man.')

Subjective attitude predicates

These facts are not entirely conclusive, but to the extent that they have obvious explanations under the contextualist analysis and non-obvious explanations under the relativist analysis, they speak for the former and against the latter.

Subjectivity and vagueness

Richard (2004) points out that PPTs are not the only kinds of scalar predicates that display faultless disagreement; in fact, most (maybe all) vague predicates can show this effect:

(11) a. Anna: "Carla is rich/thin/heavy/old/young/short."
b. Beatrice: "No she's not!"

This is perhaps not surprising, since a number of researchers have given what is essentially a relativistic semantics for vague predicates (Bogusławski 1975; Fara 2000; maybe even Kennedy 2007).

Description vs. evaluation

However, there is a subtle contrast between dimensional and evaluative vague predicates (including PPTs) under *find*:

(12) a. Anna finds her bowl of pasta tasty/delicous/disgusting.

b. Anna finds Carla stimulating/annoying/boring/tedious.

Description vs. evaluation

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(13) a. ?? Anna finds her bowl of pasta big/large/small/cold.
b. (??) Anna finds Carla rich/thin/heavy/old/young/short.

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b. (??) Anna finds Carla rich/thin/heavy/old/young/short.

(14) a. Anna considers her bowl of pasta big/large/small/cold.
b. Anna considers Carla rich/thin/heavy/old/young/short.

Description vs. evaluation

(15) a. The airline finds this bag ??heavy/unacceptable.

b. The airline considers this bag heavy/unacceptable.

(16) a. A: "We need a tall guy to play center."

b. B: "What about Lee? Is he tall?"

c. – A: "I don't find him tall."

\+ A: "I don't consider him tall."

Description vs. evaluation

(17) a. Anna finds her bowl of pasta {surprisingly, remarkably, unusually} cold.

b. The airline finds this bag {unacceptably, inappropriately} heavy.

c. I don't find him {particularly, all that} tall.

Description vs. evaluation

(18) a. This water is salty.

b. This piece of cake is heavy/light.

c. This cookie is dense.

Description vs. evaluation

(18) a. This water is salty.
b. This piece of cake is heavy/light.
c. This cookie is dense.

(19) a. I find this water salty.
b. I find this piece of cake heavy/light.
c. I find this cookie dense.

Description vs. evaluation

(18) a. This water is salty.
b. This piece of cake is heavy/light.
c. This cookie is dense.

(19) a. I find this water salty.
b. I find this piece of cake heavy/light.
c. I find this cookie dense.

(20) a. This frosting is (2cm) thick.
b. I find this frosting (??2cm) thick.

Description vs. evaluation

(21) a. Anna: "The flight from Rome to Chicago is long."

b. Beatrice: "The flight from Rome to Chicago is not long."

(22) a. Anna finds the flight from Rome to Chicago long.

b. Beatrice does not find the flight from Rome to Chicago long.

Description vs. evaluation

(21) a. Anna: "The flight from Rome to Chicago is long."
b. Beatrice: "The flight from Rome to Chicago is not long."

(22) a. Anna finds the flight from Rome to Chicago long.
b. Beatrice does not find the flight from Rome to Chicago long.

(23) Anna finds the flight from Rome to Chicago long, because she has to fly economy, but she doesn't find the flight from Rome to Los Angeles long, because she gets to fly first class.

Comparison

There is a second difference between the kind of subjectivity manifested by dimensional predicates and the kind manifested by PPTs and other evaluative predicates: only the latter is retained in explicit comparisons.

Faultless disagreement

(24) a. Anna: "The tripe is tastier than the haggis."

b. Beatrice: "No, the haggis is tastier than the tripe."

(25) a. Anna: "Skiing is the most fun!"

b. Beatrice: "No, skating is the most fun!"

(26) a. Anna: "Carla is more stimulating/annoying/boring/tedious than David."

b. Beatrice: "No, David is more stimulating/annoying/boring/tedious than Carla."

No faultless disagreement

(27) a. Anna: "The tripe is colder than the haggis."

b. Beatrice: "No, the haggis is colder than the tripe."

(28) a. Anna: "Skiing is the most expensive!"

b. Beatrice: "No, skating is the most expensive!"

(29) a. Anna: "Carla is richer/taller/heavier/older than David."

b. Beatrice: "No, David is richer/taller/heavier/older than Carla."

Acceptability under *find*

(30) a. Anna finds the tripe tastier than the haggis.

b. Beatrice finds skating the most fun.

c. Anna finds Carla is more stimulating/annoying/boring/tedious than David.

Acceptability under *find*

(30) a. Anna finds the tripe tastier than the haggis.

b. Beatrice finds skating the most fun.

c. Anna finds Carla is more stimulating/annoying/boring/tedious than David.

(31) a. ?? Anna finds the tripe colder than the haggis.

b. ?? Beatrice finds skating the most expensive.

c. ?? Anna finds Carla richer/taller/heavier/older than David.

Saltier

Contexts: Measuring the salt content vs. tasting the dishes.

(32) a. Anna: "The tripe is saltier than the haggis."

b. Beatrice: "No, the haggis is saltier than the tripe."

Saltier

Contexts: Measuring the salt content vs. tasting the dishes.

(32) a. Anna: "The tripe is saltier than the haggis."
b. Beatrice: "No, the haggis is saltier than the tripe."

Context: Measuring the salt content without tasting the dishes.

(33) a. The tripe is saltier than the haggis.
b. ?? Anna finds the tripe saltier than the haggis.

Flying

(34) a. Anna finds the flight from Rome to Chicago longer than the flight from Rome to Los Angeles.

b. Anna thinks that the flight from Rome to Chicago is longer than the flight from Rome to Los Angeles.

c. Anna considers the flight from Rome to Chicago longer than the flight from Rome to Los Angeles.

Summary

- Vague predicates show faultless disagreement effects, which is expected if they have some sort of relativistic semantics. (Though we will revisit this later!)
- However, there is a split in acceptability under *find* between vague dimensional predicates and vague evaluative predicates, including evaluative uses of otherwise dimensional predicates.
- Evaluative predicates in the comparative form are subjective; dimensional predicates are not.
- Some predicates have both dimensional and evaluative uses, with only the latter showing subjectivity.

The question

What would Manfred Bierwisch do?

Gradable adjectives and degree morphology

One version of the standard analysis, without subjectivity:

(35) *Gradable adjectives*

a. $[\![\textit{long}]\!] = \mathbf{long}_{\langle e,d\rangle}$

b. $[\![\textit{old}]\!] = \mathbf{old}_{\langle e,d\rangle}$

c. $[\![\textit{tasty}]\!] = \mathbf{tasty}_{\langle e,d\rangle}$

d. $[\![\textit{fun}]\!] = \mathbf{fun}_{\langle e,d\rangle}$

(36) *Positive and comparative degree morphology*

a. $[\![\text{pos}]\!] = \lambda g_{\langle e,d\rangle}\lambda x.g(x) \succ \mathbf{stnd}(g)$

b. $[\![\text{more}]\!] = \lambda g_{\langle e,d\rangle}\lambda y\lambda x.g(x) \succ g(y)$

Gradable adjectives and degree morphology

To "subjectivize" the standard analysis, we should modify only the lexical categories, because:

- Subjectivity in evaluative predicates involves a difference in how individuals order things.
- The kind of subjectivity introduced by the positive form (if it is even semantically real) should be encoded differently from the kind of subjectivity associated with evaluative predicates, given the SAV selection data.
- Once we have subjectivity at the lexical level, we don't need it in *pos*, given its meaning.
- This just seems like the right way to go.

A relativist version of the standard analysis

(37) *Gradable adjectives*

a. $[\![\textit{long}]\!]^{w,t,j} = \textbf{long}_{\langle e,d\rangle}$

b. $[\![\textit{old}]\!]^{w,t,j} = \textbf{old}_{\langle e,d\rangle}$

c. $[\![\textit{tasty}]\!]^{w,t,j} = \textbf{tasty}^{j}{}_{\langle e,d\rangle}$

d. $[\![\textit{fun}]\!]^{w,t,j} = \textbf{fun}^{j}{}_{\langle e,d\rangle}$

(38) *Positive and comparative degree morphology*

a. $[\![\text{pos}]\!]^{w,t,j} = \lambda g_{\langle e,d\rangle}\lambda x.g(x) \succ \textbf{stnd}(g)$

b. $[\![\text{more}]\!]^{w,t,j} = \lambda g_{\langle e,d\rangle}\lambda y\lambda x.g(x) \succ g(y)$

A contextualst version of the standard analysis

(39) *Gradable adjectives*

a. $[\![\textit{long}]\!] = \textbf{long}_{\langle e,d\rangle}$

b. $[\![\textit{old}]\!] = \textbf{old}_{\langle e,d\rangle}$

c. $[\![\textit{tasty}]\!] = \textbf{tasty}_{\langle e,ed\rangle}$

d. $[\![\textit{fun}]\!] = \textbf{fun}_{\langle e,ed\rangle}$

(40) *Positive and comparative degree morphology*

a. $[\![\text{pos}]\!] = \lambda g_{\langle e,d\rangle}\lambda x.g(x) \succ \textbf{stnd}(g)$

b. $[\![\text{more}]\!] = \lambda g_{\langle e,d\rangle}\lambda y\lambda x.g(x) \succ g(y)$

c. $[\![\text{pos}_{\textit{subj}}]\!] = \lambda g_{\langle e,ed\rangle}\lambda x\lambda j.[\![\text{pos}]\!](g(j))(x)$

d. $[\![\text{more}_{\textit{subj}}]\!] = \lambda g_{\langle e,ed\rangle}\lambda y\lambda x\lambda j.[\![\text{more}]\!](g(j))(y)(x)$

Composition

In the relativist version:

(41) *Positives*

a. $[\![\text{pos } \textit{long}]\!]^{w,t,j} = \lambda x.\mathbf{long}(x) \succ \mathbf{stnd}(\mathbf{long})$

b. $[\![\text{pos } \textit{tasty}]\!]^{w,t,j} = \lambda x.\mathbf{tasty}(x) \succ \mathbf{stnd}(\mathbf{tasty}^j)$

(42) *Comparatives*

a. $[\![\text{comp } \textit{long}]\!]^{w,t,j} = \lambda y \lambda x.\mathbf{long}(x) \succ \mathbf{long}(y)$

b. $[\![\text{comp } \textit{tasty}]\!]^{w,t,j} = \lambda y \lambda x.\mathbf{tasty}^j(x) \succ \mathbf{tasty}^j(y)$

Composition

In the contextualist version:

(43) *Positives*

a. $[\![\text{pos } \textit{long}]\!] = \lambda x.\mathbf{long}(x) \succ \mathbf{stnd}(\mathbf{long})$

b. $[\![\text{pos}_{\textit{subj}} \textit{ tasty}]\!] = \lambda x \lambda j.\mathbf{tasty}(j)(x) \succ \mathbf{stnd}(\mathbf{tasty}(j))$

(44) *Comparatives*

a. $[\![\text{comp } \textit{long}]\!] = \lambda y \lambda x.\mathbf{long}(x) \succ \mathbf{long}(y)$

b. $[\![\text{comp}_{\textit{subj}} \textit{ tasty}]\!] = \lambda y \lambda x \lambda j.\mathbf{tasty}(j)(x) \succ \mathbf{tasty}(j)(y)$

Elements of taste

But where does subjectivity really come from? I think that predicates like *salty* may give us a clue.

(45) The water is salty.

a. The water contains a quantity of salt.

b. The water has a (subjective) salty quality.

(46) This glass of water is saltier than that one.

(47) I find this glass of water saltier than that one.

a. Though in fact that one is saltier than this one.

b. # But I don't find it salty.

Elements of color

Something similar is going on with color terms (Kennedy and McNally, 2009):

(48) The leaf is green.

(49) a. The leaf is completely green.

b. The leaf is perfectly green.

(50) This leaf is greener than that one.

a. More of this leaf is green than that one.

b. This leaf is qualitatively closer to "pure green" than that one.

Being Manfred Bierwisch

Adapting ideas from Bierwisch's (1989) analysis of evaluative adjectives, Kennedy and McNally suggest two semantic representations for gradable color words:

(51) $[\![\mathit{green}_N]\!] = \textbf{green}$, the name of a kind

(52) a. $[\![\mathit{green}_{A1}]\!] = \lambda x.\textbf{quant}(\textbf{green})(x)$, a measure of the quantity of green manifested by x

b. $[\![\mathit{green}_{A2}]\!] = \lambda x.\textbf{qual}(\textbf{green})(x)$, a measure of the quality of green manifested by x

Being Manfred Bierwisch

I'd like to suggest that *salty* be analyzed in the same way...

(56) $[\![salt_N]\!] = \textbf{salt}$, the name of a kind

(57) a. $[\![salty_{A1}]\!] = \lambda x.\textbf{quant}(\textbf{salt})(x)$, a measure of the quantity of salt manifested by x

b. $[\![salty_{A2}]\!] = \lambda x.\textbf{qual}(\textbf{salt})(x)$, a measure of the quality of salt manifested by x

...with the additional hypothesis that **qual** introduces judge-dependence. This is just the hypothesis (or observation?) that qualitative assessment is judge-dependent.

Lexicalized **qual**

(58) a. Skiing is more fun than skating.

b. The fun of skiing surpasses the fun of skating.

(59) a. Cary Grant is more elegant than George Clooney.

b. The elegance of Cary Grant surpasses the elegance of George Clooney.

(60) a. The tripe is tastier than the haggis.

b. (?) The taste of the tripe surpasses the taste of the haggis.

Lexicalized **qual**: Google

Does the taste of the McFlurry justify the unhealthyness?
I think it does, as the taste surpasses the other foods available in McDonalds restaurants, and anything as a matter of fact. Facebook I' 2010 ...

Fiorella's Jack Stack Barbecue: Famous Barbecue of Kansas City
It may sound unusual, and even look like a warped version of a loaded baked potato, but the taste surpasses any loaded potato ever met. ...

What a girl wants
The taste surpasses anything that I could buy and I get to handpick what's in it so that I know its good for us. What more could a girl want? ...

Derived qualitative assessment

(61) a. *salty, sweet, spicy, watery, heavy, dense...*

b. The flight from Rome to Chicago is longer than the flight from Rome to Los Angeles.

c. Carla is as tall as David is short.

d. Anna finds Carla heavy/thin.

Derived qualitative assessment

(61) a. *salty, sweet, spicy, watery, heavy, dense...*

b. The flight from Rome to Chicago is longer than the flight from Rome to Los Angeles.

c. Carla is as tall as David is short.

d. Anna finds Carla heavy/thin.

(62) a. The density of the custard surpasses the density of the cheesecake.

b. The legth of the flight from Rome to Chicago surpasses the length of the flight from Rome to Los Angeles.

c. ?? Anna finds Carla to have a great weight.

Derived qualitative assessment

Bierwisch (1989): Derived evaluative predicates are based on properties, not measure functions, and so are norm-related:

(63) Carla is as tall as David is short, #but she's not tall.

(64) I find the custard denser than the cheesecake, #but I don't find it dense.

(65) Anna finds the flight from Rome to Chicago longer than the flight from Rome to Los Angeles, #but she doesn't find it long.

(cf. Kennedy, 2001; Rett, 2008)

Implementing qualitative assessment

Presumably this hypothesis could be implemented in either a relativist or contextualist way, by saying either that **qual** makes something judge-dependent or that **qual** introduces a judge argument.

But if we accept Sæbø's arguments based on SAVs, we should go for the latter implementation; the disagreement facts can then be handled in whatever way we decide is best after the workshop.

The von Filles Cloud

Evaluative disagreement

(63) a. Trippa alla romana is *pos* tasty.

b. $\lambda j.\textbf{qual(taste)}(j)(c) \succ \textbf{stnd}(\textbf{qual(taste)}(j))$

(64) a. $\textbf{qual(taste)}(me)(c) \succ \textbf{stnd}(\textbf{qual(taste)}(me))$

b. $\textbf{qual(taste)}(you)(c) \succ \textbf{stnd}(\textbf{qual(taste)}(you))$

c. $\textbf{qual(taste)}(us)(c) \succ \textbf{stnd}(\textbf{qual(taste)}(us))$

The von Filles Cloud

Evaluative disagreement

(63) a. Trippa alla romana is *pos* tasty.

b. $\lambda j.\textbf{qual(taste)}(j)(c) \succ \textbf{stnd}(\textbf{qual(taste)}(j))$

(64) a. $\textbf{qual(taste)}(me)(c) \succ \textbf{stnd}(\textbf{qual(taste)}(me))$

b. $\textbf{qual(taste)}(you)(c) \succ \textbf{stnd}(\textbf{qual(taste)}(you))$

c. $\textbf{qual(taste)}(us)(c) \succ \textbf{stnd}(\textbf{qual(taste)}(us))$

Dimensional disagreement

(65) a. Carla is *pos* rich.

b. $\textbf{rich}(c) \succ \textbf{stnd}(\textbf{rich})$

The **stnd** function is already context-dependent, so we don't need a judge to get a cloud of propositions.

References

Bierwisch, Manfred. 1989. The semantics of gradation. In *Dimensional adjectives*, ed. Manfred Bierwisch and Ewald Lang, 71–261. Berlin: Springer-Verlag.

Bogusławski, Andrzej. 1975. Measures are measures: In defence of the diversity of comparatives and positives. *Linguistiche Berichte* 36:1–9.

Fara, Delia Graff. 2000. Shifting sands: An interest-relative theory of vagueness. *Philosophical Topics* 20:45–81.

Kennedy, Christopher. 2001. Polar opposition and the ontology of 'degrees'. *Linguistics and Philosophy* 24:33–70.

Kennedy, Christopher. 2007. Vagueness and grammar: The semantics of relative and absolute gradable predicates. *Linguistics and Philosophy* 30:1–45.

Kennedy, Christopher, and Louise McNally. 2009. Color, context and compositionality. *Synthese* (Online only; not yet in print).

Rett, Jessica. 2008. Degree modification in natural language. Doctoral Dissertation, Rutgers University.

Richard, Mark. 2004. Contextualism and relativism. *Philosophical Studies* 119:215–242.

Sæbø, Kjell Johan. to appear. Judgment ascriptions. *Linguistics and Philosophy* .

Stephenson, Tamina. 2007. Towards a theory of subjective meaning. Doctoral Dissertation, Massachusetts Institute of Technology.