Experiential predicates: metasemantics and metaphysics

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Linguistics and Philosophy Workshop, 5.4.18

1 ‘Bare’ semantics for experiential predicates

‘Experiential predicates’ with no relativization to an experiencer:

(1) $\text{frightening}^w = \lambda x.\text{frightening}'(w)(x)$

As opposed to reference to an experiencer...

(2) a. ...in the intension (cf. Glanzberg 2007):
   $\text{frightening}^w = \lambda x.\lambda y.\text{frightening}''(w)(x)(y)$
   b. ...in the extension only (cf. Lasersohn 2005):
   $\text{frightening}^w,x = \lambda x.\text{frightening}''(w)(x)(y)$

1.1 Metaphysical worries about a bare semantics

(3) The metaphysical assumption:
   There are no monadic experiential properties: e.g., nothing is frightening simpliciter (at a world).

(4) Hirvonen’s dilemma:
   If a bare semantics as in (1) requires commitment to the existence of monadic experiential properties, then given (3), if speakers behave as if experiential predicates have such a semantics, then either:
   a. Blindness: Such predicates do not have a bare semantics – and so speakers systematically use such expressions incorrectly (cf. Stojanovic 2007: §2; Cappelen & Hawthorne 2009: 118; Hirvonen 2014: ch. 14).
   b. Error: Such predicates really do have a bare semantics – and so are always false of everything (cf. Hirvonen 2016).

\footnote{Where $\text{frightening}'(w)(x)$ iff $x$ is frightening in $w$, and $\text{frightening}''(w)(x)(y)$ iff $y$ frightens (is disposed to frighten) $x$ in $w$.}

\footnote{It’s not obvious that this should be accepted, but for present purposes let’s do so, and I think we ultimately ought to.}

\footnote{Cf. Baker (2012: §4); Zeman (2016: §6) for methodological concerns with appealing to semantic blindness.}
Both (4-a) (cf. Stojanovic 2007: 696) and (4-b) (cf. Lasersohn 2005: 650, fn. 4) are sometimes assumed \textit{a priori} to be absurd.

1.2 Reinterpreting ‘\(w\)’

Another option: no experiencers, but ‘\(w\)’ is replaced with something metaphysically neutral, so no commitment to monadic experiential properties.

(5) a. Köbel (2002): Sole ‘perspective’ parameter \(p\), agrees for all individuals at a world w.r.t. ‘factual’ matters, not with respect to ‘opinion-related’ ones, which have conventions on belief adoption relative to believer.

b. Coppock (2018): Sole ‘outlook’ parameter \(o\) that refine possible worlds (and from which possible worlds can be extracted), settle ‘way things are’ in a deflationary, all-encompassing sense, settling ‘matters of fact’ and ‘matters of opinion.’

This isn’t necessary:

(6) \textbf{The basic idea:}

Experiential predicates’ extensions aren’t relativized to experiencers, and they don’t traffic in any non-world parameters in the totally conventional sense. But which property they denote is metasemantically underdetermined in a speaker population.

2 A detour through the metasemantics of predicates

This is completely normal: almost every predicate is in the same situation, and there is no consensus among the speaker population as to which property it denotes.

(7) \textbf{Ludlow’s quandary} (cf. Ludlow 2008: 118):

Is the racehorse Secretariat an athlete? What to make about the debate about this on sports talk radio?\footnote{As far as I can tell, this debate took place on the talk show ‘Mike and the Mad Dog,’ on WFAN Sports Radio, 101.9 FM, in response to the December 27, 1999 issue of \textit{Sports Illustrated}, which included the article, ‘The Master List: The 50 greatest sports figures from each of the 50 states,’ in which Secretariat was listed in third place for Virginia. I’ve been unable to recover the audio, which hasn’t been archived online, and don’t know the exact date of the radio show.}

A bare semantics for \textit{athlete}: shall we add a parameter to it?

(8) \(\llbracket\text{athlete}\rrbracket^w = \lambda x.\text{athlete'}(w)(x)\)

But if not, what is \textit{athlete'} supposed to denote? Does it map \(w_{\alpha}\) and Secretariat to true or not?

2.1 Semantic alternatives

Different speakers may go different ways. They have \textbf{semantic alternatives} as to which property \textit{athlete'} is (where \(P\) is a variable over properties, i.e. objects of type \(\langle s, \langle e, t \rangle \rangle\):
(9) \( Sem_{x,w,\alpha} := \{ P : P \text{ is a candidate for } \alpha \text{ for } x \text{ in } w \} \)

As far as \( x \) is concerned in \( w \), every \( P \) in \( Sem_{x,w,\alpha} \) is a ‘live option’ as to which property \( \alpha \) is. We cash this out in terms of \( x \)’s dispositions at \( w \) to believe that the property \( \alpha \) (whatever it is) holds of individuals, depending on the speaker’s other beliefs.\(^5\)

(10) a. \( \Box \forall w'' \in Dox_{x,w} [\forall P \in Sem_{x,w,\alpha} [P(w'')(y)] \rightarrow \forall w'' \in Dox_{x,w} [\alpha(w'')(y)]] \)

\( \sim \) “If \( x \) believes that \( y \) has every property in \( x \)’s alternatives for \( \alpha \), then ipso facto \( x \) believes that \( \alpha \) is true of \( y \).”

b. \( \Box [\forall w'' \in Dox_{x,w} [\forall P \in Sem_{x,w,\alpha} [\neg P(w'')(y)] \rightarrow \forall w'' \in Dox_{x,w} [\neg \alpha(w'')(y)]] \)

\( \sim \) “If \( x \) believes that \( y \) has no property in \( x \)’s alternatives for \( \alpha \), then ipso facto \( x \) believes that \( \alpha \) is false of \( y \).”

(10-a) and (10-b) are partially constitutive of the notion of a speaker’s semantic alternatives at \( w \). A toy example (in \( w \)), with \textit{athlete}:

(11) Where:

\begin{itemize}
  \item \( P_1(w)(x) \) iff \( x \) is a human that partakes in athletic competitions in \( w \)
  \item \( P_2(w)(x) \) iff \( x \) partakes in athletic competitions in \( w \)
\end{itemize}

...and each of \( x, y, z \) is fully relevantly informed about Secretariat:

a. \( x \): “Racehorses are athletes.”

\( Sem_{x,w,\text{athlete}} = \{ P_2 \} \)

By (10-a): \( \forall w' \in Dox_{x,w} [\text{athlete}'(w')(s)] \)

b. \( y \): “Racehorses are not athletes.”

\( Sem_{y,w,\text{athlete}} = \{ P_1 \} \)

By (10-b): \( \forall w' \in Dox_{y,w} [\neg \text{athlete}'(w')(s)] \)

c. \( z \): “I’m not sure whether racehorses are athletes.”

\( Sem_{z,w,\text{athlete}} = \{ P_1, P_2 \} \)

No commitment to belief regarding \( \lambda w, \text{athlete}'(w)(s) \) follows from (10-a)-(10-b)

Even where \( x, y, z \) have all the same ‘factual’ beliefs about the world, they may disagree as to whether Secretariat is an athlete; their dispositions to form such contrary attitudes are constitutive of what it is for them to have distinct semantic alternatives involving \textit{athlete}'.

(12) Where:

\begin{itemize}
  \item \( u \) is Usain Bolt: human, partakes in athletic competitions
  \item \( m \) is Milton Friedman: human, doesn’t partake in athletic competitions
  \item \( s \) is Secretariat: not human, partakes in athletic competitions
  \item \( k \) is Koko: not human, doesn’t partake in athletic competitions
\end{itemize}

\(^5\) ‘\( \Box \)’ here is to be read as universally quantifying over worlds \( w' \) such that \( w' \) is consistent with \( x \)’s dispositions in \( w \), where the accessibility relation is taken to be reflexive.

\(^6\) Clearly characterizing \( P_1 \) and \( P_2 \) is going to be rough because of the possible indeterminacy of ‘human,’ ‘athletic competition,’ ‘partake,’ \textit{etc.}: here we pretend that these are all uncontroversially defined functions. Wherever we hit disagreement, we move to vocabulary on which we agree as far as the conversation is concerned.
...when fully relevantly informed: are they athletes?

\[
\begin{align*}
x: &\begin{bmatrix}
u & \checkmark \\
m & \, \\
s & \checkmark \\
k & \, \\
\end{bmatrix},
\quad y: &\begin{bmatrix}
u & \checkmark \\
m & \, \\
s & \checkmark \\
k & \checkmark \\
\end{bmatrix},
\quad z: &\begin{bmatrix}
u & \checkmark \\
m & \, \\
s & ? \\
k & \checkmark \\
\end{bmatrix}
\end{align*}
\]

Semantic alternatives constitute an **ordering source**, which imposes an ordering \(\leq_{\text{Sem}_{x,w,\alpha}}\) on individuals, where \(a \leq_{\text{Sem}_{x,w,\alpha}} b\) iff as far as \(x\) is concerned in \(w\), \(a\) is at least as canonical an instance of something that \(\alpha\) is true of as \(b\) is.

\[(13)\]

a. \(a \leq_{\text{Sem}_{x,w,\alpha}} b\) iff \(\forall P \in \text{Sem}_{x,w,\alpha} [P(w)(b) \rightarrow P(w)(a)]\)

b. \(\ldots\) iff \(\Box[\forall w'' \in \text{Dox}_{x,w'}[\alpha(w'')(b)] \rightarrow \forall w'' \in \text{Dox}_{x,w'}[\alpha(w'')(a)]]\)

Roughly: for \(a\) to have as many properties in \(x\)’s semantic alternatives for \(\alpha\) as \(b\) does is for \(x\) to be disposed to believe \(\alpha\) true of \(a\) whenever \(x\) believes \(\alpha\) true of \(b\).

A non-trivial example:

\[(14)\]

Where:

- \(P_3(w)(x)\) iff \(x\) is a human that performs athletic feats in \(w\)
- \(P_4(w)(x)\) iff \(x\) performs athletic feats in \(w\)
- \(h\) is Shamu: not human, performs athletic feats, doesn’t participate in athletic competitions

\[
v : \begin{bmatrix}
u & \checkmark \\
s & ? \\
h & ? \\
\end{bmatrix}
\]

\[
\text{Sem}_{v,w,\text{athlete}}' = \{P_1, P_2, P_3, P_4\}
\]

\[
u <_{\text{Sem}_{v,w,\text{athlete}}'} s <_{\text{Sem}_{v,w,\text{athlete}}'} h
\]

As before, \(u\) is trivially a more canonical athlete (according to \(v\) in \(w\)) than \(s\). But though \(v\) is neither perfectly disposed to think that \(s\) nor \(h\) is an athlete, \(s\) is a more canonical athlete according to \(v\)’s alternatives than \(h\).

### 2.2 Conflict in attitudes: semantics

Where \(x, y\) disagree:

\[(15)\]

a. \(x : \forall w' \in \text{Dox}_{x,w}[\text{athlete}'(w')(s)]\)

b. \(y : \forall w' \in \text{Dox}_{y,w}[^{\neg}\text{athlete}'(w')(s)]\)

Their belief-states are **incompatible** regarding \(\lambda w'.\text{athlete}'(w)(s)\).

\[(16)\]

a. \(a\) disagrees with \(b\) that \(\phi\) at \(w\) iff \(\forall w' \in \text{Dox}_{a,w}[^{\neg}\phi(w')]\) and \(\forall w' \in \text{Dox}_{b,w}[\phi(w')]\).

b. \(\leftrightarrow x\) disagrees with \(y\) at \(w\) that Secretariat isn’t an athlete.

c. \(\leftrightarrow y\) disagrees with \(x\) at \(w\) that Secretariat is an athlete.
This notion of disagreement is completely standard, with no extra parameterization, and no reinterpretation of $w$: regardless of what $\text{athlete}'$ is, $w$ cannot be such that $\text{athlete}'(w)(s)$ and $\neg\text{athlete}'(w)(s)$. Thus $x$ and $y$ represent the world in incompatible ways.

Insofar as $y$ is disposed to treat $\text{athlete}'$ as $P_1$, $x$’s beliefs are taken to be inconsistent: $x$ assents that $\lambda w_x.P_1(w)(s)$, yet denies that $\lambda w_x.\text{athlete}'(w)(s)$, which is inconsistent if $\text{athlete}'$ is $P_1$: a racehorse cannot be (and doesn’t just merely happen not to be) an athlete.

### 2.3 Conflict in attitudes: metasemantics

$x$ and $y$’s dispute hinges on metasemantic differences in a way some disputes don’t. Let $\text{SemDox}_{x,y,w}$ be $x$’s doxastic alternatives semantically aligned with $y$ at $w$.

(17) a. $\text{SemDox}_{x,y,w} := \{w'' : w''$ is compatible with $x$’s beliefs at all worlds $w'$ such that $x$’s beliefs in $w'$ are as they are in $w$, except what results from altering them such that $\text{Sem}_{x,w',x} = \text{Sem}_{y,w,\alpha}$ for all $\alpha$ the denotation of some natural language predicate}$

(18) a. $x$ disagrees descriptively with $y$ that $\phi$ at $w$ iff

$v w' \in \text{SemDox}_{x,y,w}[\neg \phi(w')]$ and $v w' \in \text{Dox}_{y,w}[\phi(w')]$

b. Since $\forall w' \in \text{SemDox}_{x,y,w}[\text{athlete}'(w')(s)]$, $x$ disagrees with $y$ that Secretariat is an athlete at $w$, but does not descriptively disagree with $y$ that...\footnote{Note that I don’t say: ‘insofar as $y$ believes $\text{athlete}'$ to be $P_1’.$ What $y$ believes is that Secretariat is an athlete: the semantic alternatives are not doxastic: they are dispositional toward the formation of beliefs, based on what other beliefs the speaker has. What beliefs one has e.g. about the meaning of words is not strictly relevant: one may be more or less aware of these beliefs, and the machinery works the same way. It isn’t as if for semantic alternatives to conflict, people have to have different ideas about language use: the conflict can potentially be ‘conative’ as well as doxastic.}

Thus while $x$ and $y$ disagree in the perfectly ordinary sense, there is a sense in which their disagreement hinges on nothing about the world, and a sense in which it does: Secretariat cannot both have $\text{athlete}'$ and not, yet resolution of what $\text{athlete}'$ is results in no doxastic conflict.\footnote{Note that descriptive disagreement is not the same as substantive disagreement: the two notions are orthogonal, with the latter hinging on whether something is ‘seriously at stake’ in a disagreement in some intuitive sense. Non-descriptive disagreements can be substantive, where some normative notion is at stake (say, if Secretariat’s being an athlete entitles him to certain rights).}

\footnote{Depending on $y$’s metasemantic competence (see below) and what is normatively at stake, this inconsistency may be taken more or less seriously, and may not be taken to amount to ‘irrationality’ in some stronger sense.}

\footnote{Is this a form of ‘metalinguistic negotiation’ account (cf. Lasersohn 2005: §4.4)? Not really: there is no appeal to a ‘discourse parameter’ (cf. Barker 2013), or a special kind of ‘context disagreement’ (cf. Sundell 2011), or any appeal to a multiplicity of languages or ‘microlanguages’ (cf. Ludlow 2008). These are ordinary disputes with no parameterization at all: such disputes can arise for any number of reasons, including differences in language use, and speakers may explicitly recognize this to a greater or lesser extent, giving them a ‘metalinguistic’ feel. But this is just an artifact of the basic, non-metalinguistic machinery, and it is in an important sense wrong to say that these disputes are ‘about’ what the word $\text{athlete}$ means, rather than about Secretariat being an athlete.}
2.4 The semantics-metasemantics wheel

But which property does athlete' really denote? This is itself a question about how speakers in a speech community are disposed to apply it – where there is no agreement on this, there is no such single property.\footnote{11}

(19) a. **Metasemantics feeds semantics**: What speakers are disposed to treat the relevant property as being is determinative of what it actually is.

b. **Semantics feeds metasemantics**: What the relevant property actually is (to the extent that speakers do agree on it) causally influences what speakers become disposed to treat it as being.

‘Stable instability’ of meaning in the population generally results. Use is indeterminate but constrained, and so meaning is indeterminate but constrained, and vice-versa.

What should the semanticist write?

(20) \[ [\text{athlete}]^w = \lambda x.\text{athlete}'(w)(x) \]

These concerns are irrelevant to the working compositional semanticist. In writing athlete', all of the metasemantic variation is transparently represented in the denotation: we ‘show’ it.

Insofar as the population converges on athlete', this can be reported by the lexical semanticist; insofar as it doesn’t, there is nothing do do but describe the microvariation ‘on the ground,’ if anyone is interested.

Why this variation: predicates are applied to prototypical instances, and the denotation would only converge on a single property if this application were totally uniform, and there’s no reason to expect it should be.

2.5 Metasemantic competence and blindness

Speakers often understand that a dispute isn’t descriptive, due to a dim understanding of the metasemantics of predicates, but this doesn’t extend to knowing the mechanisms by which such disputes are non-descriptive: hence we just pile on more predicates, also metasemantically underdetermined: ‘matter of opinion,’ ‘faultless,’ ‘verbal,’ etc. We cannot agree on what these mean either, so we tend to be ‘semantically locked in’ to disputes about how to characterize these phenomena.

Often, metasemantic blindness is very strong, so that even with ordinary expressions speakers take themselves to be having descriptive disagreements when they are not.\footnote{12}

\footnotetext{11}{Does such unanimous agreement ever occur? Possibly with things like even, predicated of numerals, but this is an extreme exception.}

\footnotetext{12}{An amusing example, regarding whether a fish submerged entirely in water is wet: https://www.youtube.com/watch?v=TPDdRrMVEnA.}
3 Back to experiential predicates

Some terminology:

(21) a. Where \( k \) is an ‘experiential kind,’ (like fear), ‘\( d_k \)’ is a variable over degrees of that kind.
b. \( \delta(w)(d)(x) \) iff at \( w \), \( x \) is disposed to produce \( d \) (simpliciter)
c. \( \delta'(w)(d)(x, w')(y) \) iff at \( w \), \( y \) is disposed to produce \( d \) by the standards of experience set by \( x \) in \( w' \)

We cash out the semantics of frightening in experiential terms, still with no reference to an experiencer:

(22) a. \([\text{frightening}]^w = \lambda x.e.\text{frightening}'(w)(x) \]
b. \( = \lambda x.e.\exists d_{\text{fear}}[\delta(w)(d)(x)] \)
\( \leadsto “\text{frightening} denotes the property of being disposed to produce a degree of fear (simpliciter).” \)

Metaphysically, ‘is there’ such a property? Wrong question: speakers are disposed to treat frightening’ as different (non-metaphysically-contentious) properties, depending on their own experiences.

3.1 Autocentricity

(23) Autocentricity:
\( \Box[\forall w'' \in Dox_{x, w}[\exists d_k[\delta(w'')(d)(y)] \leftrightarrow \exists d_k[\delta'(w'')(d)(x, w')(y)]]] \)
\( \leadsto “x \text{ is disposed to believe that: } y \text{ is disposed to produce a degree of } k \text{ simpliciter} \)
\( \text{iff } y \text{ is disposed to produce a degree of } k \text{ in } x.”^{13} \)

How this cashes out in semantic alternatives:

(24) Where \( \alpha_k \) is the property of being disposed to produce a degree of \( k \) simpliciter:
\( \text{Sem}_{x, w, \alpha_k} = \{ \lambda w'.\lambda y.e.\exists d_k[\delta'(w')(d)(x, w')(y)] \} \)
\( \leadsto “\text{An individual’s sole candidate for an experiential property is the property of being disposed to produce experience of the relevant kind in themselves.”}^{14} \)

(25) a. The contextualist’s mistake: “frightening denotes the property of being frightening to someone (often, the one who utters it).”
\( \leadsto \text{frightening just denotes frightening’}. \) But speakers are typically disposed to treat frightening’ as the property of being frightening to them.
b. The relativist’s mistake: “Variation in truth judgments must be represented semantically.”
\( \leadsto \text{Not so: and the relativist’s parameters are designed to be pretty much semantically idle anyway.} \)

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13 This is simplified in that it presents \( x \)’s beliefs as de re, not de se.
14 This is simplified to assume perfect autocentricity, which is an idealization: speakers are often not perfectly autocentric where they realize their tastes are defective or eccentric.
3.2 Disagreement with experiential predicates

(26) Where:

- $b$ is *The Birds*
- $\exists d_{\text{fear}}[\delta'(w)(d)(x, w)(b)]$
  $\leadsto$ “*The Birds* is disposed to produce fear in $x$”
- $\neg \exists d_{\text{fear}}[\delta'(w)(d)(y, w)(b)]$
  $\leadsto$ “*The Birds* is not disposed to produce fear in $y$”

When $x, y$ are fully informed (have seen the movie):

a. $x : \text{Sem}_{x, w, \text{frightening}'} = \{ \lambda w', \lambda z . \exists d_{\text{fear}}[\delta'(w')(d)(x, w)(z)] \}$ [by (24)]
  $\leadsto$ by (10-a): $\forall w' \in \text{Dox}_{x, w}[\text{frightening}'(w')(x)]$

b. $y : \text{Sem}_{y, w, \text{frightening}'} = \{ \lambda w', \lambda z . \exists d_{\text{fear}}[\delta'(w')(d)(y, w)(z)] \}$ [by (24)]
  $\leadsto$ by (10-b): $\forall w' \in \text{Dox}_{y, w}[\neg \text{frightening}'(w')(y)]$

The disagreement is completely uncomplicated:

(27) By (16-a): $y$ disagrees with $x$ at $w$ that *The Birds* is frightening.

And it is non-descriptive:

(28) $\forall w' \in \text{SemDox}_{y, x, w}[\text{frightening}'(w')(b)]$
  $\leadsto$ where $y$’s doxastic alternatives are semantically aligned with $x$’s, $y$’s candidate for *frightening*’ is the property of being disposed to produce fear in $x$: and so if $y$ were semantically aligned with $x$, $y$ would also believe that *The Birds* is frightening, and a fortiori would not disagree with $x$ that it is frightening.

Note that there is no commitment on the part of either $x$ or $y$ to any property other than the unproblematic, experiencer-relative property of something having a disposition to produce experience in an individual: this sort of property is what they are disposed to treat *frightening*’ as being.

3.3 The grounding question

Pérez Carballo (2014)’s metasemantic distinction:

(29) a. The hermeneutic question: In virtue of what is a semantic theory true (what does it mean to assign an expression a denotation)?

b. The grounding question: What makes it such that this state of affairs holds (what about the world makes it such that the theory is true)?

Above answers (a), but leaves (b) untouched: why are there experiential predicates with semantics like (22), and why should there be default autocentricity?\[^{16}\]

\[^{15}\text{This is not to say, of course, that disagreements involving experiential predicates can’t be descriptive: they can, where speakers’ experiences relevantly align, as you can confirm.}\]

\[^{16}\text{Note that theories that relativize denotations of experiential predicates typically don’t attempt to answer these questions either: but cf. MacFarlane (2014: §12.3), Lasersohn (2017: ch. 11).}\]
The question is in a way backwards: semantics is just a summary of metasemantic behavior. What is the convention for applying these predicates? You do it when an individual causes an experiential reaction of the right sort in you (cf. MacFarlane 2014: 4’s ‘TP’).

If people applied a predicate conventionally in this way, what would its semantics look like? Exactly as we’ve described, with the convention of autocentricity: literally, all the above amounts to is that by convention e.g. you say frightening applies to something when it frightens you (as you can check).

And why not? That’s just as good a convention for applying a predicate as using prototypical instances (cf. §2.4).

(30) The banal upshot:

Experiential predicates are just regular predicates that people are disposed to apply to things that they experience in a certain way (this is the entirety of the explanation).

3.4 Folk superstitions and therapy

Speakers’ metasemantic competence causes them to realize implicitly that experience-related disputes can be non-descriptive, and are tied to differing experiential reactions: but unaware of the mechanisms, there is no coherent way to express this. So folk maxims arise: these are ‘subjective,’ ...non est disputandum, etc. These maxims do loosely track real phenomena, but in a way speakers don’t reflectively understand.

Variety of incoherent beliefs about nature of experiential predicates among speakers and researchers: we are incompetent with our own intuitions, lack vocabulary to describe metasemantic phenomena. Semantic and metasemantic competence are in tension with each other.

The pervasiveness of metasemantic blindness and its therapy: many disputes are taken to be descriptive when they’re not; we don’t really know how our words work, and so are in general unaware of the substance or lack thereof of our disagreements (and their metaphysical import).


b. Linguists beware: “...we are like savages, primitive people, who hear the expressions of civilized men, put a false interpretation on them, and then draw the queerest conclusions...” (PI §194)
References


