Lexical Semantics for Expressives

Gaurav Kamath
gaurav.kamath@mail.mcgill.ca

TOM 14 • May 28, 2022

NOTE: Lots of foul language. No slurs though.

1 Expressives and Some of their Properties

- At least since Kaplan (1999), much of the literature draws a distinction between *descriptive* and *expressive* language.
- The former is understood vis-à-vis truth-conditions; the latter is better understood in terms of speakers' affective dispositions. Compare:

(1) a. Ann likes Jan. *(Descriptive)*
b. Damn footballers! *(Expressive)*

- *Expressives* are lexical instances of expressive language, including (but not limited to) pejoratives, exclamatives, and adjectives like *damn*.
- Though their semantic content can often be fluid, we can typologically characterize expressives in terms of a few properties:

◇ **Valence:** *Does the expressive convey positive or negative speaker affect?*

(2) Fuck you! (3) Hurray!

◇ **Intensity:** *How powerful a degree of affect does the expressive convey?*

(4) They're a **dumbo**. (5) They're a **dumbfuck**.

◇ **Precision:** *How wide is the range of dispositions it may convey?*

(6) **fucking** American

(7) that American **c**—

◇ **Expressive Polysemy:** *Can the expressive be used to convey both positive and negative affect?*

(8) You stupid **bastard**!

(*Sharpe's Gold*, 1995.)

(9) Kiwis hang on to their D-Max for so long that there's now a shortage of trade-ins for people who want to buy second hand. Be a good **bastard** and trade up to a new Isuzu D-Max.

(Isuzu, 2017.)

◇ **Skew:** *Is one valence more typical than the other when interpreting the expressive?*

(10) Linguists are such **idiots.**
→ *idiot* = NEG

(11) Linguists are such *lovable* **idiots.**
→ *idiot* = POS

◇ **Reducing Marginal Impact:** *More of a general phenomenon—expressives seem to lose their marginal impact as they are used in progressively extreme emotive contexts.*

(12) Fuck you, I won't do what you tell me!
Fuck you, I won't do what you tell me!
Fuck you, I won't do what you tell me!
Fuck you, I won't do what you tell me!
Fuck you, I won't do what you tell me!

(Rage Against the Machine, 1992.)

(13) a. Ann to Jan: You're such an asshole.
b. Context 1: Ann and Jan, acquaintances, have a minor disagreement about what to order for lunch. → high marginal impact
c. Context 2: Ann and Jan, sworn enemies, are deep into a bitter argument. → low *marginal* impact

2 Potts' (2007) Representational System

- If the special semantic content of expressives is non truth-conditional, how can we formally represent it? Potts (2007) provides a basis.
- Expressive meaning is represented in (Potts 2007) in terms of manipulations of the context, through its *expressive setting*.

- The expressive setting is an element of a context that represents all affective dispositions between salient entities of the context.
- Each affective disposition is represented by an *expressive index*, which take the general form in (14).
- a and b are entities of the given context; $\mathbf{I}$, the *expressive interval*, is a numerical interval between $[-1, 1]$ representing a's affective disposition towards b (where -1 represents abolute negativity, and 1 absolute positivity), yielding expressive indices like (15).

(14) $\langle a\ \mathbf{I}\ b\rangle$ (15) $\langle[\![Tom]\!]$ [-1, -.7] $[\![Jerry]\!]\rangle$

- An expressive utterance is represented as a transformation of the expressive setting, as in (16): the interval of the relevant expressive index is updated, capturing the information conveyed by the use of the expressive.

(16)
$$\begin{bmatrix} \langle[\![Tom]\!] \text{ [-1, -.7] } [\![Jerry]\!]\rangle \\ \langle[\![Jerry]\!] \text{ [-.6, 0] } [\![Tom]\!]\rangle \\ \langle[\![\textbf{Tom}]\!] \textbf{ [-1, .6] } [\![\textbf{Spike}]\!]\rangle \\ \langle[\![Spike]\!] \text{ [-1, -.9] } [\![Tom]\!]\rangle \\ \langle[\![Jerry]\!] \text{ [.7, 1] } [\![Spike]\!]\rangle \\ \langle[\![Spike]\!] \text{ [.8, 1] } [\![Jerry]\!]\rangle \end{bmatrix} \longrightarrow \begin{bmatrix} \langle[\![Tom]\!] \text{ [-1, -.7] } [\![Jerry]\!]\rangle \\ \langle[\![Jerry]\!] \text{ [-.6, 0] } [\![Tom]\!]\rangle \\ \langle[\![\textbf{Tom}]\!] \textbf{ [-1, -.5] } [\![\textbf{Spike}]\!]\rangle \\ \langle[\![Spike]\!] \text{ [-1, -.9] } [\![Tom]\!]\rangle \\ \langle[\![Jerry]\!] \text{ [.7, 1] } [\![Spike]\!]\rangle \\ \langle[\![Spike]\!] \text{ [.8, 1] } [\![Jerry]\!]\rangle \end{bmatrix}$$

- This understanding of expressives and their semantic content also allows for expressives to be given denotations that refer to how they may transform a context (again, via its expressive setting):

(17) $[\![damn]\!]^c$ = the function f such that $f([\![a]\!]^c)(c) = c'$, where
  a. $c \approx^{\mathbf{I}}_{C_J, [\![a]\!]^c} c'$;
  b. the length of $\mathbf{I}$ is not more than .5; and
  c. $\mathbf{I} \sqsubseteq [-1, 0]$

(Potts 2007, 186)

- Such denotations, however make no reference to the specific nature of a given input context, and as such cannot account for the context-sensitive properties discussed before, like expressive polysemy, skew and reducing marginal impact.

3 A Lexical Semantics for Expressives

- We introduce the Exp_Update function and its lexically specified parameters, which determine the effect of an expressive on the context, in a manner sensitive to the context and lexicon:

(18) EXP_UPDATE($\mathbf{I}, x \mid i, s, p$) = $\{\mathbf{I}' : \mathbf{I}'$ is a permitted output expressive interval$\}$, where:

a. x is some point within the relevant expressive interval $\mathbf{I}$ to be updated

b. an output expressive interval $\mathbf{I}'$ is permitted if the length of $\mathbf{I}'$ is less than or equal to the length of $\mathbf{I}$, where the length of $[i, j] = j - i$

c. i is the lexically specified parameter for expressive intensity

d. s is the lexically specified parameter for expressive skew

e. p is the lexically specified parameter for expressive precision

- This function is incorporated into denotations in the lexicon. For some expressive ϕ:

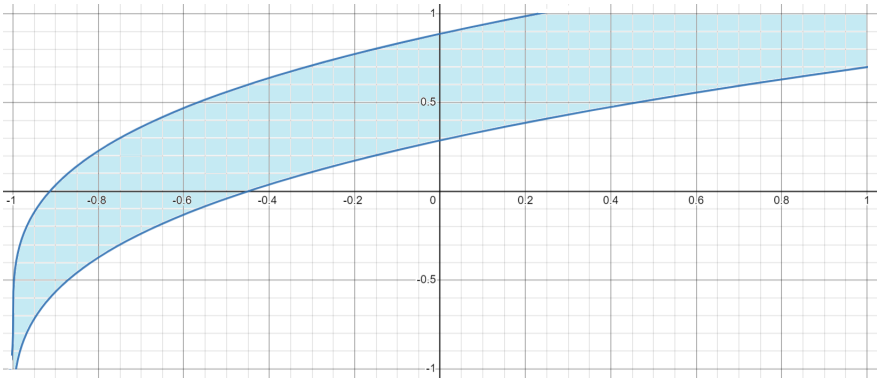
(19) $[\![\phi]\!]^c$ = the function f such that $f([\![a]\!]^c)(c) = c'$, where

a. $c \approx^{\mathbf{I}'}_{C_J, [\![a]\!]^c} c'$;

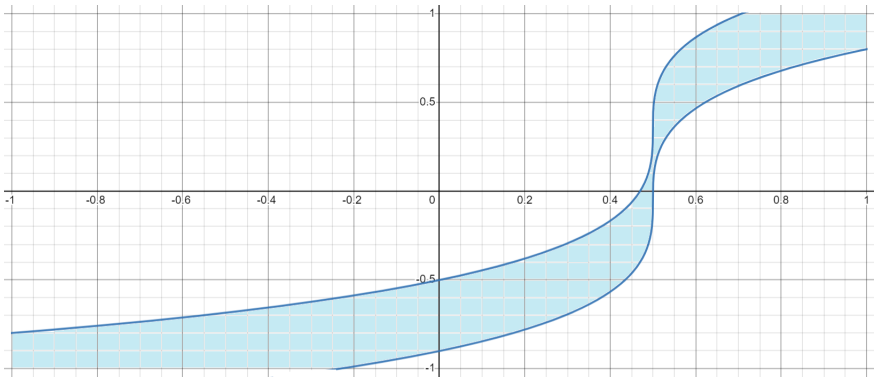
b. $\mathbf{I}'$ is a member of the output set of EXP_UPDATE($\mathbf{I}, x \mid i, s, p$), where:
   x is a point within $\mathbf{I}$ in $\langle C_J\ \mathbf{I}\ [\![a]\!]^c \rangle$
   i = *value of intensity parameter*
   s = *value of skew parameter*
   p = *value of precision parameter*

- The broad form of the function captures the general context-shifting nature of expressives; parameter values in the lexicon capture properties that vary between individual expressives.
- Since it manipulates numerical intervals, the EXP_UPDATE function can also be visualized on a graph to show these mechanisms. Although these needn't be the exact mathematical forms of the function, some mock examples help illustrate its workings:

(20) *hurray*: s = ABS-POS, i = MEDIUM, p = MEDIUM-LOW



(21) *bastard*: s = MEDIUM-NEG, i = MEDIUM-HI, p = MEDIUM-HI



- Shaded areas in (20) and (21) represent mappings of input points to outputs via the EXP_UPDATE function. For each point of the input interval (on the x-axis), we have a range (on the y-axis) of possible outer bounds of the new intervals generated in the output of the function.
- The visualizations help show how the function captures the previously discussed characteristic properties of expressives:

◇ **Valence:** Valence is captured in the direction of input-output transformations, towards more positive ranges (i.e. closer to 1) or more negative ranges (i.e. closer to -1). In (20), any transformation is towards more positive ranges, showing positive valence across all contexts.

◇ **Intensity:** Intensity is captured in the magnitude of transformations. (21), with a higher intensity parameter value, depicts more extreme input-output transformations than (20).

◇ **Precision:** Expressive precision is captured by the range of possible output bounds for a given input. (20), with a lower precision parameter value, shows a wider range of possible outer bounds for each input than (21).

◇ **Expressive Polysemy:** Expressive polysemy is captured in that the direction of input-output transformations can depend on the input interval. In (21), inputs between -1 and 0.5 generally yield transformations towards more negative ranges; inputs between 0.5 and 1 generally yield transformations towards more positive ranges.

◇ **Skew:** Skew is captured in the respective domains of the function that yield transformations in either direction. (20), with a negative skew value, depicts transformations toward -1 for most of the domain. *Bastard* conveys negative affect by default, but positive affect when other information indicates a sufficiently positive affective disposition in the context of utterance.

◇ **Reducing Marginal Impact:** Reducing marginal impact is captured in that transformations towards either extreme end of the domain are less extreme than those in more central regions. Visually, the shaded regions in the graphs 'taper off' towards both extremes.

4 Further Directions

- With the lexical semantics presented here, we have a semantic framework that can better represent the meaning and behaviour of expressives.
- We can:
  - Represent the special semantic content of expressives
  - Formalize many of the differences between expressives, as well as the general phenomena expressives display
  - Provide a formal semantic account of the manners in which we use expressives in different contexts
- But many inadequacies remain:
  - How the EXP_UPDATE function fits into compositionality (although beyond the scope of this work) is left unaddressed
  - Exact interval updates are left underspecified in the denotation format in (19)
  - Social relations (crucial to understanding slurs and some pejoratives) aren't represented
  - Expressive intervals don't provide any qualitative information beyond magnitude and valence
- Nonetheless, this approach shows the capacity of the lexicon to help represent atypical meaning as it relates to the context.
- Despite the shortcomings above, the hope is that a rich enough lexicon and contextual representation can build a formal yet flexible account of non truth-conditional meaning.

References

Clegg, Tom (Director). (1995). Sharpe's Gold. ITV.

De La Rocha, Zack, Tom Morello, Brad Wilk and Tim Commerford (1991). 'Killing in the Name' [Recorded by Rage Against the Machine]. On Rage Against the Machine. Sony Music Entertainment and Epic Records.

Gutzmann, Daniel (2015). Use-Conditional Meaning: Studies in Multidimensional Semantics. *Oxford Studies in Semantics and Pragmatics 6*. Oxford: Oxford University Press.

Isuzu. 'Be a Good Bastard'. Isuzu Utes NZ. Accessed on December 1, 2020. <https://www.isuzuutes.co.nz/simpson-good-bastard>.

Kaplan, David (1999). 'The meaning of ouch and oops: Explorations in the theory of meaning as use', 2004 version. UC Berkeley Graduate Council Series. Transcribed by Elizabeth Coppock. Available online at: <http://eecoppock.info/PragmaticsSoSe2012/kaplan.pdf>.

McCready, Elin (2010). 'Varieties of conventional implicature', *Semantics and Pragmatics 3.8*: 1-57. doi: 10.3765/sp.3.8.

McCready, Elin (2012). 'Emotive Equilibria', *Linguistics and Philosophy 35*: 243-83. doi: 10.1007/s10988-012-9118-9.

Potts, Christopher (2007). 'The expressive dimension', *Theoretical Linguistics 33.2*: 165–97. doi: 10.1515/tl.2007.011