The centrality of expressive indices[*]

Christopher Potts
UMass Amherst

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1 Introduction

Without exception, the commentaries on my paper help further develop and refine the theory of expressives. They approach the expressive dimension from diverse theoretical perspectives, and they leave us with important new data. There is not space in this reply to do justice to all the points raised, so I instead highlight and reexamine the main themes.

This reply is structured around *expressive indices*. All the descriptive properties discussed in section 2 of my paper are explained in terms of these objects and their contextual roles. All the important denotations manipulate them, and all the supplementary definitions work primarily to ensure that they behave in an intuitively correct way. Because these indices are so much in the spotlight, the commentaries largely emerge as commentaries on them, and we see a range of reactions: calls to enrich them, calls to handle them differently, calls to reject them.

Thus, I use this reply to clarify the role of expressive indices, to defend them against their detractors, and to further articulate their place in meaning composition. I suggest that they might play a role in theories of presupposition and quotation, and I use them to help explicate why judgments about expressives are subject to so much variation and uncertainty. I close by articulating some of the pressing questions that remain unanswered and suggesting paths towards resolving them.

2   Expressive indices

Expressive indices are triples $\langle a \; \mathbf{r} \; b \rangle$, where a and b are individuals and $\mathbf{r}$ is an interval in [-1, 1] registering the intensity of expressive feeling that a has towards b as well as its degree of positivity or negativity. The narrower the interval, the more intense the feelings; the more negative the interval, the more negative the feelings (and conversely). The set of indices that makes its way into the context provides that context's expressive setting, and new language can heighten emotions by narrowing the current indices' intervals or introducing new ones.

Manipulating these indices turns out to be, as I say in the paper, a delicate matter, and my commentators are justified in expecting that we might eventually find a more elegant treatment. But we should not, in that process, lose sight of the simplicity of the indices themselves. They are built from individuals and reals — objects found throughout the landscape of semantics and pragmatics. Their structure is equally mundane: ordered triples.

In section 2.4 of the paper, I suggest some potential enrichments to the middle coordinate (see also section 4). In his commentary, Zimmermann focuses on the final coordinate: the object of elation or displeasure in the eyes of the individual in position 1. He observes that we can have emotive attitudes towards events and states-of-affairs as well, and he argues from examples like *the damn Republicans* to the conclusion that even properties might have to occupy position 3. The discussion culminates in "the question of how to restrict the range of semantic types permitted for b" in $\langle a \; \mathbf{r} \; b \rangle$.

I have an answer to this question: we would do well to say that a and b are *situations* in $\langle a \; \mathbf{r} \; b \rangle$. For this to work, we must construe situations broadly, as in Kratzer (1989). In particular, individuals and kind-level properties must be situations. In such a setting, the range of variation attested by Zimmermann (see also Potts 2005b:§5) is expected. It also helps us to understand Geurts's observation, near the end of his commentary, that *damn* and its ilk can appear at the sentence-level as well as inside nominals. They can presumably find situations in either position.[1]

Geurts too scrutinizes the indices on their own terms. He urges us to look again at the descriptive ineffability property, expressing doubts that it is real (see section 7 below), but he also wonders whether these indices could suffice to capture it. He writes, "As far as I can tell, Potts's expressive indices are simply type t objects in disguise". The idea seems

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[1]Zimmermann suggests improvements in another area as well. He correctly observes that, at present, we can have indices like $\langle a \; [\mathbf{0}, \mathbf{0}] \; b \rangle$. Such indices characterize extremely intense ambivalence, and the prediction — incorrect as far as I know — is that we will have language to indicate such feelings. Zimmermann's (10) enforces the needed restriction. His observations suggest to me that we should further explore the topology of the middle coordinate.

to be this: we can systematically related objects of the form $\langle a \; \mathbf{r} \; b \rangle$ to the proposition that individual a is at expressive level $\mathbf{r}$ with regard to individual b, and this in turns means that we can't distinguish index from proposition.

However, there are also systematic connections between entities and the singleton sets containing them, between entities and their quantifier denotations, between properties and their kind-level denotations, and so forth (Chierchia 1984; Partee 1987). It would be strange to conclude from this that we cannot distinguish properties from entities (for example). Our standards for expressive indices should be the same. The fact is that no index $\langle a \; \mathbf{r} \; b \rangle$ is a member of the set of propositions.

Nonetheless, the relationship that Geurts highlights might prove useful. Entities, properties, and quantifiers are sometimes interchangeable, subject to the logic of type-shifting. We might we find similar fluidity with expressive indices. This could be the key to understanding examples like Geurts's (2) and the array of data in Zimmermann's section 2. The richer type theory of Potts (2005b) provides us with the meaning-space needed to define functors that map, for example, the descriptive property of being a bastard to its expressive correlate. This is at least part of a theory of expressive type-shifting.

Geurts also wonders about repeatability. Is it really the purview of expressives alone? He goes on to observe that definite descriptions and other reference-tracking devices can also be freely repeated. This is of course true, and highly relevant. But it is not a challenge to the proposal. It bolsters the decision to ground expressives in indices, rather than propositions. Indices are, in a formal and intuitive sense, the stuff of reference tracking devices. Potts and Kawahara (2004) use this parallel to argue for an index-based treatment of Japanese honorifics. We do not lose this connection even if we take steps toward connecting indices with descriptive meanings. Entity-level expressions have their privileges in a theory of reference tracking even if they can move into non-entity domains at the behest of other functors.

I close this section with a look at some phenomena I did not address in the paper but that turn out to be a nice advertisement for expressive indices. Anand and Lasersohn separately call attention to disputes concerning the appropriateness of certain expressive language. The requisite measurements of agreement and disagreement can be taken in terms of expressive indices. To determine how much a and b differ in their view of some entity d, we simply look to see if there are indices $\langle a \; \mathbf{r} \; d \rangle$ and $\langle a \; \mathbf{r'} \; d \rangle$ in the context, and then determine how well $\mathbf{r}$ and $\mathbf{r'}$ match up. If they are disjoint, then we have clear-cut disagreement. If one is a superset of the other, then the two differ in intensity but perhaps not in kind. And so forth.

3   Expressive correctness

Lasersohn expresses a technical concern about definition (46) of my paper, and I think he is right to do this. As stated, that definition enforces an undesirable identity condition on the context parameters of the items being combined. The requisite fix involves adding a prime to the context parameter for the expressive item α:

(1)   Where α is of type $\langle \sigma, \varepsilon \rangle$ and β is of type σ,

$$[\![\alpha]\!]^{c'} \bullet [\![\beta]\!]^{c} = [\![\beta]\!]^{[\![\alpha]\!]^{c'}([\![\beta]\!]^{c})(c)}$$

With this revised definition, we can answer Lasersohn's call for a theory of composition. I did not offer such a theory (see section 3.7), because the facts demand a subsentential dynamics, and there wasn't space to formulate such a theory. I must again postpone that formulation. But, to clarify the role of (1), I offer in (2)–(4) a bare-bones theory of *expressive correctness* (Kaplan 1999). It is defined in terms of pairings of lexical items and contexts, and its chief concern is the proper handling of expressive indices.[2]

(2)   If α is a lexical item, then $\langle \alpha, c \rangle$ is expressively correct iff $c_\varepsilon = \emptyset$.

(3)   Where α and β are descriptively typed, $\langle \alpha(\beta), c \rangle$ is expressively correct iff c is expressively consistent[3] and there are contexts c' and c'' such that $\langle \alpha, c' \rangle$ and $\langle \beta, c'' \rangle$ are expressively correct and $c'_\varepsilon \,\overline{\cup}\, c''_\varepsilon = c_\varepsilon$.[4]

(4)   Where α is expressively typed and β is descriptively typed, $\langle \alpha(\beta), c \rangle$ is expressively correct iff c is expressively consistent and there are contexts c' and c'' such that $\langle \alpha, c' \rangle$ and $\langle \beta, c'' \rangle$ are expressively correct and $c = [\![\alpha]\!]^{c'}([\![\beta]\!]^{c''})(c'')$.

This recursive specification has four central features. First, it does not allow the contexts involved to contain any indices not introduced by expressives. We might relax this to allow for linguistically unexpressed emotions to be help determine the expressive setting. Second, the definition is given, not in terms of denotations, but rather in terms of expressions-in-context. Third, the context-shifting operation implicit in (4) reflects the

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[2]I thank Peter Lasersohn for helping me see how important it is to define this notion in terms of the language rather than its denotations, given my other assumptions.

[3]Expressive consistency is defined in (39) of my paper.

[4]The union-like operator $\overline{\cup}$ resolves conflicts between expressive indices in favor of the more expressive ones:

$$c_\varepsilon \,\overline{\cup}\, c'_\varepsilon = c_\varepsilon \cup c'_\varepsilon - \{\langle a \mathbf{\,I\,} b \rangle \mid \exists \langle a \mathbf{\,I'\,} b \rangle \in c_\varepsilon \cup c'_\varepsilon : \mathbf{I'} \sqsubset \mathbf{I}\}$$

dual nature of definition (46) in my paper (as revised in (1) above): the expressive serves to shift the context, not to alter descriptive meanings. Fourth, this definition is separate from any definedness conditions we might enforce in the interest of capturing presuppositional behavior. A phrase can be expressively correct but undefined in the privileged sense of presupposition theory, and the reverse is also possible. Expressive correctness is similarly distinct from semantic content. A sentence could, for example, be tautologous but expressively correct only in some contexts, or the reverse (Kaplan 1999).

Both Lasersohn and Schlenker emphasize that these definitions should be situated in a dynamic theory of information change. Definitions (2)–(4) provide a basis for such elaborations. They pass the contextual information up to the sentence level. We can then carry that information through the discourse. The following would suffice: an information state is a pair (W, c), where W is a set of worlds and c is a context tuple. Where S is a declarative sentence meaning, $(W, c) + \langle S, c' \rangle$ is $(W \cap [\![S]\!], c \mathbin{\overline{\cup}} c')$, subject to definedness conditions on $[\![S]\!]$ relative to W and c' relative to c.

This shouldn't stand as the final word on expressive correctness and its combinatorics. We can look to example (1) in the paper to see why it is inadequate: superintendent Garcia goes wrong as soon as he utters the racial epithet. It is irrelevant that he tries to redefine it in that very same utterance. The context changed — the damage was done — literally as soon as he uttered his first word. In postponing the impact of expressives to the sentence-level, the above theory fails to explain this immediate impact. Nonetheless, it is a useful starting point.

4   Presupposition

Expressive indices are the main stuff of expressive content, and the definitions for expressive correctness (section 3) help us to see better how these indices affect the information state. I emphasized above that they are handled by the formal system in a way that is distinct from the treatment of presuppositions. This seems obviously correct. Expressivity is not contingent upon definedness. In fact, it is not contingent upon much of anything at all, save perhaps for the whims of the audience. Witness, for instance, the case of the Washington, D. C., mayoral aide who resigned following an uproar over his use of the word *niggardly*.[5] It didn't matter that he intended nothing expressive with his utterance. It didn't even matter that there are no semantic or historical connections between this word and the caustic racial epithet with which it shares some phonology. His listeners were offended, and, by his own account, he understood why. Thus, the notion that an expressive might stand or fall on the issue of semantic definedness is not plausible, even if we seek to

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[5] 'Williams aide resigns in language dispute'. The Washington Post, January 27, 1999.

relativize that definedness to the epistemic state of the speaker.

Nonetheless, there are deep connections between presuppositions and expressives. Notions like *expressive consistency* (definition (26) of my paper) bring this to the fore, as do the subtleties I discuss at the end of section 3.6 in connection with expressive denotations. Lasersohn, Sauerland, and Schlenker argue for additional and more substantive connections between the two classes of phenomena. This section addresses some of their arguments. My primary goal is to show that many of these theoretical insights can be reconciled.

Let's begin by emphasizing the similarities between my theory and those of Sauerland and Schlenker. First, we all rely on Kaplanian contexts to model the projection behavior of expressive meanings. Second, at least Sauerland and I have an explicit degree component to our meanings, with the degree itself left open, and Schlenker seems amenable to this move. Third, at least Sauerland and I give denotations that are actually families of denotations, in virtue of the free variables they contain, and it seems that Schlenker will be led to a similar move once the degree-component is factored in. (We can all eliminate these free variables, by feeding them directly to the context, as in Jacobson 1999.)

Of course, my list of similarities hides important differences. I turn to those next. But it is worth pausing here to address the issue of theoretical parsimony, with which both Sauerland and Schlenker frame their commentaries. In light of the points of overlap just reviewed, it is surprising to find my theory characterized as "extreme", with Schlenker's deemed the "conservative" option, the one that works harder to reduce the phenomena to "the complex interaction of some of its [the theory's —CP] existing components". As a field, we have apparently rejected or neglected all established methods for determining complexity and assessing trade-offs between simplicity and power (test-beds, metalogical results, correspondence with psychological tests, etc.), so "complexity" tends to be in the eye of the beholder. But, even at this level, I would have guessed that my theory would fare better, since it borrows so heavily from what's already out there.

There are differences, though. I am not sure whether they are differences that influence the complexity measures, but they are vital. An important one is found in the role of indexicality. For Sauerland, expressives are evaluated from the perspective of the *utterer*. For Schlenker, the *agent* fills this role. I separate out the role of the agent/utterer from the expressive perspective, by calling on Lasersohn's contextual *judge*. Because speaker and judge are distinct for me, I can make immediate sense of examples in which expressives seem to be evaluated from a perspective other than the speaker's. Schlenker is explicit about how he would handle such cases: context-shifting, on the model of Schlenker 2003. I am sure this can be made to work, but it seems clear that it will call for important changes to that theory. As I pointed out in connection with example (21) of my paper, and as we see with Anand's example (8), shifting is not governed by specific predicates. It is free,

presumably governed only by constraints on where conversational participants are willing to treat speaker and judge as different entities. This is a point of contrast with the shifting indexicals of Schlenker (2003), Anand and Nevins (2004), and Sharvit (2004), all of which shift only under specific grammatical conditions.

But, of course, nothing is stopping Sauerland and Schlenker from employing the judge, which is not around solely for capturing expressive perspectives, but rather seems integral to a proper analysis of predicates of personal taste.

We find a second difference in the output meanings. Sauerland and Schlenker reduce presuppositions to propositional content. It is presupposed content, but it is nonetheless propositional. We are thus left without an account of the descriptive ineffability property. Schlenker's response (like Geurts's) is to dismiss it. For now, I will just register that I think this is a mistake; section 7 takes up the issue in somewhat greater detail. I wish only to emphasize that, once again, I see nothing stopping Sauerland and Schlenker from adjusting their output meanings. Though I say in my paper that presuppositions are invariably propositional, this is perhaps an unwise definitional move. We see from these commentaries that the defining characteristic is perhaps simply that of *precondition*, which finds its formal counterpart in the notion of *partiality*. There can be many kinds of precondition. They needn't all be logical entailments grounded in the subset relation on sets of worlds. As far as I can tell, changes here would not disrupt Sauerland's investigations into the ways in which expressives can impact scope-taking possibilities, nor would they rob us of the ability to draw connections between expressives and presupposition triggers with propositional orientations.

This brings us, though, to what might be the only major difference between my account and those of Sauerland and Schlenker: the status of the independence property. Schlenker argues that employing presuppositional denotations alone suffices to capture the independence property. He writes, "on any account, presuppositions are a dimension of meaning that is separate from the 'regular' content of the utterance". However, theories of presupposition are not homogeneous on this point. For Karttunen and Peters (1979) and Dekker (2002), we have dimensional independence of approximately the sort that I define for expressives. But the denotations that Schlenker gives in his commentary are not of this form. Those denotations make the regular descriptive content contingent upon the definedness of the presuppositions. Thus, these dimensions of meanings are independent in the same sense that the second floor of a house is independent of its first. But expressives manifest something much more subtle (section 2.1 of my paper and section 2 above).

5   Quotation

Anand draws useful connections between expressives and quotation. From the perspective of expressive correctness as defined in section 3, it is easy to see why these two classes of phenomena might converge. Both are concerned foremost with how we use the language and only indirectly (if at all; von Fintel 2004) with the semantics of that language.

In my paper, I argue that apparently embedded readings of expressives are the result of a division between the speaker and the judge, the latter notion adapted from Lasersohn 2005. Anand offers an alternative approach to these examples that is based in the idea that embedded readings of expressives are a species of subclausal quotation. In Potts (2005b), I entertained a similar approach to embedded readings of expressives, and I continue to regard it as viable for some cases. Does a quotative alternative call into question my use of the judge for expressive content? I think it does not. Quotations have a special prosody (Potts 2005a) and, arguably, their own form of multidimensionality (Potts 2007). It seems to me that not all speaker-independent expressives have these properties, and thus that there is still a place for the account of shifting that I gave. It should sit alongside a theory of subclausal quotation.

6   Nondisplaceability revisited

There is one important meta-theoretical lesson that we can draw from my paper and the commentaries: it is extremely difficult to determine what the factual situation regarding expressives is. We see this most clearly in the diverse, contradictory range of reactions to embedded cases of expressives, but the problem is more general.

I was aware of this problem at the time of writing Potts 2005b. Section 5.3 of that book ended up being, in large part, about the split in the literature concerning expressives in the scope of attitude predicates. The commentaries on my paper expand the range of environments in which we might find shifting, and I myself offered evidence that it can be contextual conditioned, i.e., not traceable to any specific fact about structure or meaning composition.

I'll limit what I say about these examples, because it seems clear that the situation calls for more than just judgment and counter-judgment. I will say, though, that the potential counterexamples always strike me as expressively powerful. I can easily say (5a) without sounding like an eschatologist, and I can say (5b) without asserting, presupposing, or even implicating that my dog, actual or potential, has peed on the couch. But with (5c), I can expect dog lovers to bristle.

(5)   a.   If the world ends tomorrow, then I won't ever finish this paper.

      b.   If I bought a dog, then I would worry about it peeing on the couch.

      c.   If I had a dog I disliked, then I'd find a new owner for the damn thing.

Perhaps the examples in, for example, Geurts's (10) are different, but my recommendation is: utter with care. This is especially pressing for examples like Anand's (8), which I repeat here:

(6)   If the black Ford had cut in front of my father, he might have tried to run the dumb jerk off the road. (Then again, he might not have been bothered by those kinds of things at all and just continued on his way.)

Anand contends that the speaker is able to reduce or remove the power of the expressive via the parenthetical continuation. However, the example is close in form (though with tamer expressives) to example (1) of my paper, in which an inexperienced school superintendent tried to refine the epithet *nigger* in the course of his utterance. The public outcry registers the opposite of Anand's judgment, based on his example, that the expressibity is "defeasible". Garcia worked harder than the speaker of (6) does to defeat the power of the expressive, and he failed.

    The overarching lesson is, it seems to me, that we should reduce the load placed on individuals' judgments about speaker commitment and the like, turning instead to new techniques for probing where expressive content arises and who it is attributed to.

7   Ineffability revisited

Let's pause to reflect on the title of Geurts's commentary: 'Really fucking brilliant'. In his opening, Geurts says that it is meant to strike a balance. But it fails in this; there is nothing balanced about such a phrase, and it seems that no amount of description can ensure a particular interpretation for it. (The superintendent in my (1) seems to have learned this the hard way.) I cannot, of course, *show* that no amount of description would do justice to the content of such a title. I can just observe, as I did in my paper for other examples, that there seems no obvious and satisfactory way to do this, and that all existing attempts fail.

    What is the utility of such phrases? Jay and Janschewitz's characterization of *Fuck you!* seems apt for all expressive content, positive or negative:

> *Fuck you!* tells you immediately that I am frustrated or angry and permits me to vent my anger at the same time. There is no other way to say *fuck you* and convey the same level of contempt in polite language.

It's a power that transcends the descriptive realm. However, I agree with my commentators that, as a theoretical notion, descriptive ineffability needs a clearer statement. I am not yet positioned intellectually to offer one, but the commentaries help point us in the right direction.

Jay and Janeschwitz provide broad support for descriptive ineffability, as we see from the above quotation. But, later in their commentary, they emphasize that "we do not agree that all speakers are 'hard pressed to articulate what they mean' when they use expressives". This point is well-taken, but I question whether it contradicts my position. Jay and Janeschwitz observe that some speakers will volunteer information about their motivations for using expressive language. That is to say, for specific instances of use, they have a strong sense for why they used the language that they did. But this is quite different from being able to articulate what the words themselves mean in the general case. In fact, this is exactly the sort of response that Kaplan (1989) describes for indexicals, and it is close to the characterizations that Kaplan (1999) gives for expressives. We can pool all this evidence together to support the conclusion that expressive meanings are better given in terms of conditions on use, and we might appeal to *procedural meanings* as well (Blakemore 2001). It seems to me that my denotations come close to capturing this.

Lasersohn's comments reveal another sense in which expressives are special. He writes that my proposal "produces what seems to me to be an undesirable side effect, namely that expressives express different contents relative to different individuals." But this is a *desirable* consequence for expressives. When lesbian and gay activists use the word *queer*, its meaning (its expressive content) differs dramatically from when it is used on conservative talk radio. Similarly, a racial epithet can be a term of endearment from one person but a term of utmost hatred from another. We see this sort of variation in more mundane ways as well. It is more serious for my father to swear than my high-school friends. This begins as a fact about those speakers, and it manifests itself in different expressive settings for the resulting contexts.

8   Outstanding issues

There remain many outstanding issues concerning expressives and their place in theoretical linguistics. I close this reply by addressing three of them.

The syntax–semantics interface   Zimmermann, Geurts, and Schlenker call attention to my paper's openly limited treatment of the syntax of expressives. The topic is covered in more detail in Potts 2005b:§5, but that is just the beginning. For some of the issues identified in the commentaries, the current theory has much to say. For instance, Geurts

questions whether it allows *really* to do its intensifying work in *really fucking brilliant*. The answer is that it does, in virtue of the fact that the descriptive content of *fucking brilliant* is equivalent to that of *brilliant*, which can of course be an argument to the meaning of *really*. Similarly, if we follow Zimmermann's lead and generalize the theory of indices, then the extreme syntactic freedom of many expressives is explicable.

But my theory still predicts that the *damn the dog* should surface instead of *the damn dog*. I also have no account of Jay and Janeschwitz's observation that expressives tend to sit at the outer edge of the modifier domain, and that they in turn take on literal meanings if they are placed closer to the noun than unambiguously descriptive modifiers. It is also difficult, in the current terms, to analyze expressions that seem to have both descriptive and expressive content: *Redskins* and *Commie*, for instance (cf. Potts 2005b:§2).

Diversity of the expressive realm   Jay and Janschewitz emphasize that "taboo words, cursing, and expressives overlap but they are not identical". We can enrich the theory of expressive indices to capture these categories, but that is merely a starting point. As I say in the paper, I think we can expect as much diversity in the expressive realm as we find in the descriptive realm.

Pragmatics   Finally, I want to emphasize that, though tied in with the context in various ways, the theory in my paper is essentially semantic, both in its techniques and in its outlook. Jay and Janschewitz urge us to pay more attention to why "why and how people use emotional and offensive language", and Geurts makes an even more forceful call for a deeper pragmatic understanding: "An explanation [. . .] will require more than semantic interpretation alone: it will have to rely on world knowledge and pragmatic inference". This seems within reach at this point.

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