

The expressive dimension*

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Abstract

Expressives like damn and bastard have, when uttered, an immediate and powerful impact on the context. They are performative, often destructively so. They are revealing of the perspective from which the utterance is made, and they can have a dramatic impact on how current and future utterances are perceived. This, despite the fact that speakers are invariably hard-pressed to articulate what they mean. I develop a general theory of these volatile, indispensable meanings. The theory is built around a class of expressive indices. These determine the expressive setting of the context of interpretation. Expressive morphemes act on that context, actively changing its expressive setting. The theory is multidimensional in the sense that descriptives and expressives are fundamentally different but receive a unified logical treatment.

it seems to me quite possible to extend semantic methods [...] to a range of expressions that have been regarded as falling outside semantics, and perhaps even as being unsusceptible to formalization.

Kaplan (1999)

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1. Two cautionary tales

Let's begin with two tales about the power and uniqueness of expressive language:

- (1) A hapless new school superintendent attempts to “make his stand against racism clear” by saying, in a speech, “Niggers come in all colors. To me, a nigger is someone who doesn't respect themselves or others”. His intentions are good, but the community is outraged. He is lucky to keep his job.¹
- (2) In March 2004, Bono, the lead singer of the rock band U2, uses the phrase *really fucking brilliant* during the televised Golden Globe Awards. Originally, this passes muster with the FCC, since he isn't describing a sexual act, but rather using *fucking* as a kind of emphatic (expressive!) modifier. But the FCC chairman eventually sides with the special interest groups and issues a formal ruling denouncing the broadcast's “obscene and indecent material”.²

This paper explores the linguistic issues surrounding these cases. I identify the following characteristics of expressive content and seek to show that they flow from a common source:

1. *Independence*: Expressive content contributes a dimension of meaning that is separate from the regular descriptive content.
2. *Nondisplaceability*: Expressives predicate something of the utterance situation.
3. *Perspective dependence*: Expressive content is evaluated from a particular perspective. In general, the perspective is the speaker's, but there can be deviations if conditions are right.
4. *Descriptive ineffability*: Speakers are never fully satisfied when they paraphrase expressive content using descriptive, i.e., nonexpressive, terms.

¹ Garcia's epithet creates outrage. Lisa Kim Bach and Natalie Patton. Las Vegas Review-Journal, July 27, 2000. <http://www.reviewjournal.com/lvrj_home/2000/Jul-27-Thu-2000/news/14052406.html>.

² FCC File #EB-03-IH-0110, released March 18, 2004. <<http://www.fcc.gov/eb/Orders/2004/FCC-04-43A1.html>>

5. *Immediacy*: Like performatives, expressives achieve their intended act simply by being uttered; they do not offer content so much as inflict it.
6. *Repeatability*: If a speaker repeatedly uses an expressive item, the effect is generally one of strengthening the emotive content, rather than one of redundancy.

Section 3 articulates a formal theory of expressive content. The theory reveals the underlying unity of these six properties. The theory is multidimensional, but in a deeper sense than that of Potts (2005), because the descriptive and expressive realms are, in the present paper, distinguished not only syntactically (in the semantic types), but also model-theoretically. Building on the work of Schlenker (2003), Anand and Nevins (2004), and Sharvit (2004), I define expressives as operators that actively change the context in specific ways.

In section 4, I apply the tools of section 3 to a slightly new domain: formal and familiar second-person pronouns in languages like German and French. The case study illustrates some of the diversity attested within the expressive domain, and it establishes a connection between expressives and the *fake indexicals* studied by Rullmann (2004), Heim (2005), Kratzer (2005), and others.

The paper closes with a look at some other expressives, as well as some clear nonexpressives and some borderline cases.

2. Central properties of expressives

The following six subsections explore the properties of expressives listed and briefly articulated in the introduction. The discussion is mainly descriptive, but this paper is as much about specifying a formal system as it is about exploring a factual domain, so I propose technical details as well. Section 3 develops those technical details more fully and shows how they work to reveal the underlying unity of the descriptive properties.

2.1. Independence

Kaplan (1999) announces that “Truth is immune to epithetical color”. It’s an observation that we find throughout discussions of expressive

content, both theoretical and traditional (Frege 1979; Cruse 1986; Kikuchi 1994; Sells and Kim 2006; Corazza 2005; Williamson 2007). This is the *independence* property. It says that we can change or remove the expressive content of a phrase without affecting its descriptive content (Potts 2005: §3.6.3).

For example, one can assent to the descriptive content of (3) – the proposition that Kresge is famous – without thereby assenting to the characterization of Kresge expressed by *that bastard*.

(3) That bastard Kresge is famous.

At a technical level, this means that the expressive and descriptive meanings that (3) can convey should not be combined into a single unit of meaning. We are closer to the meaning of (3) with (4) than we are with a simple conjunction of a descriptive meaning with an expressive one.

- (4) a. Descriptive: Kresge is famous
 b. Expressive: Kresge is a {bastard/bad in the speaker's opinion}

The expressive meaning here is a very rough approximation. We will improve on it in section 2.4 and also in the formal treatment of section 3.

Closer inspection of the independence property reveals an important subtlety. It is not quite true that the two dimensions of meaning operate independently of each other. They interact in one limited but vital sense: expressive operators can reach into the descriptive realm to find their arguments. For instance, in (5) the meaning of the Japanese antihonorific *chimau-* takes, as its semantic argument, the proposition that the speaker overslept, though that proposition belongs to the descriptive domain.

- (5) Nesugoshi-**chimat**-ta. (Potts and Kawahara 2004)
 overslept-**antihon**-PAST
 1. 'I overslept.'
 2. 'It sucks that I overslept'

Thus, we do not have the complete independence of dimensions that we find with, for instance, the ordinary and focus dimensions of Rooth (1985, 1992). Some expressive meanings act as bridges between the two realms, by mapping descriptive content to expressive content.

I capture these limited interactions by dividing the class of semantic types into the *descriptive types* and the *expressive types*. The full definition

is given in section 3.1. It has just two noteworthy features: (i) it introduces the new basic expressive type ε ; and (ii) it allows ε to enter into the very limited class of functional types specified with this clause:

(6) If σ is a descriptive type, then $\langle \sigma, \varepsilon \rangle$ is an expressive type.

That clause is noteworthy because it defines ε as strictly an output type. Though we have complex types like $\langle \langle \langle e, t \rangle, t \rangle, \varepsilon \rangle$, they are all of the form $\langle \sigma, \varepsilon \rangle$, where ε is the basic expressive type. Thus, our space of potential semantic objects is defined so as to capture the limited interactions between descriptive and expressive meanings.

The next section further motivates the decision to exclude all types that map expressive content to descriptive content.

2.2. *Nondisplaceability*

Expressives cannot (outside of direct quotation) be used to report on past events, attitudes, or emotions, nor can they express mere possibilities, conjectures, or suppositions. They always tell us something about the utterance situation itself. This is the *nondisplaceability* property. The term and an initial formulation date to Cruse (1986):

(7) “Another characteristic distinguishing expressive meaning from propositional meaning is that it is valid only for the utterer, at the time and place of utterance. This limitation it shares with, for instance, a smile, a frown, a gesture of impatience [. . .]” (Cruse 1986: 272)

For some classes of lexical item, nondisplaceability is so strong that even syntactic embedding is impossible (Potts and Roeper 2006). But syntactic embedding is often unproblematic, and such cases are particularly striking, because the semantic content of those morphemes remains unembedded. Such mismatches between syntactic position and semantic scope are well attested with, e.g., definite descriptions and quantifiers. But the expressive mismatches contrast with those more familiar phenomena, as discussed below.

To illustrate, I first track the content of *bastard* in the following paradigm:

- (8) a. That bastard Kresge isn't late for work. (#He's a good guy.)
 b. It's just false that that bastard Kresge is late for work. (#He's a good guy.)
 c. #If that bastard Kresge arrives on time, he should be fired for being so mean.
 d. Maybe that bastard Kresge will be late again. (#Then again, maybe he's not a bastard.)

These involve some of the standard presupposition *holes* – operators that cannot cancel or modify the presuppositions triggered by items in their scope (Karttunen 1973). As the infelicitous continuations indicate, the expressive content of *bastard* cannot be interpreted in the scope of these holes. The effect is striking in (8c), where a sensible interpretation would be obtained if *bastard* were conditionalized. But such a reading is absent.

This behavior has suggested to some that expressives are presuppositional (Schlenker 2003; Macià 2002). But a look at the presupposition *plugs* reveals an important contrast between presuppositional and expressive content. Propositional attitude predicates are plugs: the presuppositions in their scope are typically cancelled or modified by these operators, as we see in (9).

- (9) Sue believes that Ed realizes that ultraviolet rays invigorate the mind.

On one prominent reading of this example, the presuppositions engendered by *realize* can be satisfied by Sue's belief state. We can optionally evaluate the presupposition of *realize* in the matrix clause, but the important thing for our purposes is the availability of the embedded evaluation. Such embedded evaluations are unattested with expressives. This feature of expressive content is widely recognized (Quang 1971; Cruse 1986; Kaplan 1989, 1999; Soames 2002; Potts 2005). For instance, in (10), the speaker is committed to the characterization of Kresge as a bastard, hence the infelicity of the continuation.

- (10) Sue believes that that bastard Kresge should be fired. (#I think he's a good guy.)

We can make the same point with German expressive nominal *Köter*; the example in (11b) is based on one in Zimmermann (1991: 165), itself modeled on examples due to Frege (1979):

- (11) a. Hermann glaubt, dass Hella's Hund gestorben ist.
Hermann believes that Hella's dog dead is
'Herman believes that Hella's dog is dead.'
- b. Hermann glaubt, dass Hella's Köter gestorben ist.
Hermann believes that Hella's damn-dog dead is
'Herman believes that Hella's damn dog is dead.'

Both examples assert that Hermann stands in the belief relation to the proposition that Hella's dog is dead, but the second example also conveys that the speaker of the sentence holds Hella's dog in low regard (or something to that effect; see section 2.4).

Adverbial quantification is another important testing ground for nondisplaceability:

- (12) Whenever I pour wine, the damn bottle drips.
(Florian Schwarz, p.c.)

The bottles can vary with the choice of pouring events. One might expect the meaning of *damn* to vary as well, so that the example would assert that in all situations *s* such that the speaker pours wine in *s*, the bottle in *s* drip in *s* and the speaker is in a heightened emotional state in *s*. But that paraphrase is consistent with the speaker feeling no special expressive attitude in the context of utterance, but rather only in wine-pouring situations. That is not what we intuit, though. Rather, we infer from the speaker's use of *damn* that he is in a heightened emotional state *right this minute*.

The nondisplaceability of expressives holds even in the scope of tense operators. Tense operators can plug presuppositions, but they can also show hole-like behavior. In striking contrast, expressive content is never interpreted in their scope. For example, (13) cannot be read as conveying that the speaker disliked Kresge only in the past.

- (13) That bastard Kresge was late for work yesterday. (#But he's no bastard today, because today he was on time.)

While we might sense a conversational implicature that the speaker did dislike him in the past, this flows from the nonnegotiable meaning that the speaker dislikes him at the time of utterance. Cruse's generalization (7) makes immediate sense of this: locating the expressive

content in the past would displace it to that past situation, violating nondisplaceability.

At this point, one might object to my singling out of expressive content according to these tests. The content of definite descriptions can also escape up through holes, plugs, and tense operators. For example, both of the following can be read as involving a speaker commitment to the content of *hero* at the time of utterance:

- (14) a. Sue believes that the hero is a coward/firefighter.
 b. Today, the hero was discovered to be a coward/firefighter.

In these examples, the content of *hero* can be interpreted outside the scope of the relevant operator (the attitude predicate in (14a), the past-tense morpheme in (14b)). Importantly, though, these widest-scope readings are not forced. They are merely available, alongside embedded readings. If we embed the descriptions under additional operators, additional readings arise. Not so with expressive content. As we have seen, essentially no kind of syntactic embedding delivers the possibility of a semantically embedded interpretation. It is this invariance that accounts for much of what is special about expressive content.

In limiting the expressive functional types to those specified by (6), we ensure this scopal invariance with no stipulation about scope-taking properties. In order to displace meaning M there must be a function f that applies to M – a tense morpheme denotation, a quantifier, etc. But if M is expressive, then there can be no such function. Such a function would have to be one that mapped expressive meanings into something else, and we simply don't have such things.

The above considerations tell against an assimilation of expressives to presuppositions. The case is strengthened by section 2.4, where I argue that expressives are not even propositional, hence not even contenders for presuppositions on most approaches (see, e.g., Beaver 1997; Kratzer 2004; Roberts 2006).

I close this section with some challenges to nondisplaceability. Kratzer argues that the epithet *that bastard* indicates a negative emotion of the speaker's father in (15), rather than the speaker herself.

- (15) My father screamed that he would never allow me to marry that bastard Webster. (Kratzer 1999)

Similarly, Schlenker (2003) offers the following contrast:

- (16) a. #I am not prejudiced against Caucasians. But if I were, you would be the worst honky I know.
 b. I am not prejudiced against Caucasians. But John, who is, thinks/claims that you are the worst honky he knows.
 (Schlenker 2003: (109a,b))

The judgments seem sound. But I think they do not challenge the nondisplaceability property. Rather, they highlight the important *perspective dependence* of expressives, to which I turn now.

2.3. *Perspective dependence*

Almost invariably, a speaker's expressives indicate that she is in a heightened emotional state.³ They can tell us that she is angry or elated, frustrated or at ease, powerful or subordinated. Sometimes the emotion is directed at a specific individual, as with honorification. Sometimes it is directed at some specific feature of the current state of affairs. And sometimes it is just general, undirected emotion. The present section is devoted to understanding this *perspective dependence*. Where does it come from? What are its limitations? What notion of perspective is at work in (15) and (16)?

It is tempting to assume that the perspective encoded in the expressive aspects of an utterance is always the speaker's (Potts 2005; Potts and Kawahara 2004). This is arguably the default, but examples (15) and (16) challenge this simple view, as do some of the data discussed below. So I instead adopt Lasersohn's (2005) notion of a contextual *judge*.

The judge c_J for a context c is an individual, another element in the contextual tuple consisting of a speaker c_A , a time c_T , a location c_L , and a world c_W .

Lasersohn considers and rejects many potential uses for the judge before settling on a suitable logic for predicates of personal taste. One of the approaches he rejects defines predicate denotations using the judge

³ I'm grateful to Bill Ladusaw (p.c.) for this characterization.

parameter, in roughly the way that Kaplan uses the speaker parameter to define first-person pronoun meanings. Here is a sketch:

- (17) a. $\llbracket me \rrbracket^{w,t,c} = c_A$ (c_A is the speaker/agent of c)
 b. $\llbracket fun \rrbracket^{w,t,c}$ = the set of things that c_J finds fun in world w at time t

Lasersohn rejects (17b) based on examples like (18).

- (18) John thinks that roller coasters are fun, but Mary thinks that roller coasters are not fun.

This example reports a disagreement between John and Mary about the pleasures of roller coasters. Lasersohn captures this disagreement with the analysis he advocates. If we assume the semantics in (17b), we can't achieve the result, at least not if we maintain Kaplan's conservative view of the place of the parameter c in the interpretive system. On that account, c is fixed throughout the semantic computation of a sentence. In particular, c_J is fixed throughout the interpretation of (18). This constrains us in an unhappy way: we can interpret *fun* according to a context in which c_J is Mary, or a context in which c_J is John. But we can't do both.

Of course, as Lasersohn points out, we could be more liberal with the context parameter, as in Schlenker (2003), Anand and Nevins (2004), and Sharvit (2004). We could allow c to change during semantic computation, at the behest of certain operators. This would be fine. But it would so fully integrate the judge into the semantics that it would be another semantic parameter, i.e., a part of semantic content in the same way that worlds and times are. This is just what Lasersohn sets out to convince us of when he argues that disagreements concerning predicates of personal taste are disagreements about content.

I should stress that I do not intend criticism of the context-shifting idea in general. I propose a limited form of context-shifting myself, in section 2.5. I mean only to indicate that the kind and degree of context shifting that would ultimately be demanded by examples like (18) is so great that it effectively sets it on par with the usual sort of functor–argument combinations we find in semantic computations.

Moreover, it would leave us without a way to capture an important contrast between (18) and comparable examples involving expressives.

For instance, in example (10), repeated in (19), we try and fail to shift the judge from Sue to the speaker in mid-utterance.

- (19) Sue believes that that bastard Kresge should be fired. (#I think he's a good guy.)

This is typical of expressives: they do not shift perspective mid-computation. For this reason, I propose that we hardwire the judge argument directly into the denotations of expressives, in the manner suggested by the (rejected) denotation for *fun* in (17b). I have yet to introduce some of the details required to specify such meanings in full (see section 3), but we are moving towards a picture like (20).

- (20) In a context c , an utterance of *damn* with the entity d as its semantic argument creates a context c' that is just like c except that it registers that c_J regards d negatively somehow.

We can now return to the examples in (15) and (16) to see what they tell us about the role of the judge and its relationship to the speaker.

As a pragmatic default, the judge is the speaker. But Lasersohn discusses many cases in which predicates of personal taste have another salient entity as their judge. The above indicate that such shifting can happen with expressives as well. In (16b), John is salient enough to be the contextual judge, and thus *honky* is evaluated from his perspective. Similarly, *my father* picks out an agent that is so salient and so powerful in the context of the sentence that he becomes not only the attitudinal and deontic judge but also the contextual one.

Once one starts looking for cases in which speaker and judge are distinct, one finds that they are common and, in some cases, quite dramatic. Consider, for instance, example (21), in which a weblog writer's general level of sarcasm is sufficiently high to shift the content of *that vicious bastard* away from her and onto her opponents (the authors of the CPJ report, of which she is skeptical):

- (21) "A CPJ report on Venezuela tells us how problems have 'escalated' in Venezuela under Chavez, i.e. the physical attacks against journalists under previous presidents have 'escalated' to Chavez calling the opposition, which includes the media, names. This is very, very serious, but I don't think another coup attempt is called for until Chavez resorts to dramatic irony or sarcasm. But if that vicious

bastard uses litotes, then there's no other rational choice than an immediate invasion."⁴

It's the possibility of variation in the judge that accounts for the variation one finds among researchers with regard to the embeddability of expressive content. For the most part, researchers argue that their meanings are not embeddable (see Quang 1971; Cruse 1986; Kaplan 1989; Zimmermann 1991; Kaplan 1999; Soames 2002; Potts 2003, 2005). But others have taken exception, as I noted above in connection with (15) and (16). It appears to be a marked option to evaluate expressives with a judge who is not also the speaker, but we need to allow for the possibility.

One might suspect that we should connect variation in this regard with attitude predications. Perhaps attitude verbs can shift the judge in important ways. This would make an important prediction: attitude predicates would not merely facilitate an evaluation in which the judge is not the speaker, they would be a necessary condition for it. Examples like (21) suggest already that this is not correct. There, we see richly expressive language shifted away from the speaker even though there is no attitude predicate in the sentence.

2.4. *Descriptive ineffability*

Blakemore (2001: 56, 82–82) observes that speakers are generally unable to articulate meanings for a wide range of discourse particles. When pressed for definitions, they resort to illustrating where the words would be appropriately used. Expressives in general manifest this *descriptive ineffability*. My research has taken me to many articles and grammar books on honorifics and similar pronouns of address in a variety of languages, and I have interviewed speakers of dozens of languages about expressives (see Potts and Roeper 2006 for some of the data this uncovered). I've only once been told that an uncontroversial expressive had an accurate paraphrase in descriptive terms: *bastard* was claimed to mean 'vile contemptible person'. But this paraphrase misses its wide range of affectionate uses

⁴ <http://stommel.tamu.edu/~baum/ethel/2002_08_11_ethel-archive.html#80150281>

(22a), it wrongly restricts to humans (22b), and it is, in any event, much too strong in general for this particular lexical item.

- (22) a. “Here’s To You, Ya Bastard!”⁵
 b. “So my story begins with my X-Box [...] Unfortunately, the bastard won’t open. This is a problem.”⁶

The facts suggest that expressive content is not propositional, that it is distinct from the meanings we typically assign to sentences. This is why speakers hem and haw when asked for propositional paraphrases, and it is corroborated by Jay (2000: §5), who reports on numerous cases, dating as far back as the earliest research on aphasia, in which patients with severe damage to the left hemisphere of the brain are nonetheless able to curse well and curse often. He characterizes this expressive language as nonpropositional, and he argues that it is lateralized in the brain’s right hemisphere.

Thus, adapting the proposal of Potts and Kawahara (2004), my treatment of expressive morphemes centers around a class of *expressive indices*, as defined in (23). These entities have some internal structure, so that they can encode the degree of expressivity as well as the orientation of the expressive (who is expressive towards whom or what).⁷

- (23) An *expressive index* is a triple $\langle a \mathbf{I} b \rangle$, where a and b are in the domain of entities and $\mathbf{I} \sqsubseteq [-1, 1]$.

The relation $x \sqsubseteq y$ holds iff x is a subinterval of the interval y , i.e., if every number in x is also in y .

We can read $\langle a \mathbf{I} b \rangle$ as conveying that individual a is at expressive level \mathbf{I} for individual b . We can say furthermore that if $\mathbf{I} = [-1, 1]$, then a has no feelings towards b . As we narrow to proper subintervals of $[-1, 1]$, emotive relationships emerge: the more positive the numbers, the more positive the expressive relationship, and conversely:

⁵ The ad continues “You’ve been such a good friend to me through the years. I’m so grateful.” (http://www.noisebot.com/heres_to_you_you_bastard_t-shirt)

⁶ May 24, 2005, posting at (<http://blog.myspace.com/lovesleen>)

⁷ Barbara Partee (p.c.) suggested this use of intervals.

- (24) a. $\langle \llbracket tom \rrbracket[-.5, 0] \llbracket jerry \rrbracket \rangle$ [Tom feels negatively toward Jerry]
 b. $\langle \llbracket ali \rrbracket[-.8, 1] \llbracket jerry \rrbracket \rangle$ [Ali essentially indifferent to Jerry]
 c. $\langle \llbracket kevin \rrbracket[.9, 1] \llbracket jerry \rrbracket \rangle$ [Kevin wild about Jerry]
 d. $\langle \llbracket tom \rrbracket[-1, -.5] \llbracket jerry \rrbracket \rangle$ [Tom and Sam basically agree
 $\langle \llbracket sam \rrbracket[-1, -.52] \llbracket jerry \rrbracket \rangle$ about Jerry]

The definition and examples highlight two important things. First, expressive indices are just entities. This is a positive step, in the sense that it means a demand for a paraphrase of, say, *damn* is nonsensical – conceptually equivalent to asking for a paraphrase of *Chris Potts* or the space–time location $\langle 2006-06-21\ 09:46:07\ EDT, lat = 42.3895944444, lon = -72.5288154317 \rangle$. Second, these expressive indices can have propositional implications. For instance, we tend to infer from objects like $\langle \llbracket tom \rrbracket[-.5, 0] \llbracket jerry \rrbracket \rangle$ that Tom feels negatively towards Jerry, and in turn, that he wishes not to be around him, that he might act meanly towards him, and so forth. This is the kind of information that speakers volunteer when asked what expressives mean. But it is information in flux, present in one discourse but absent or augmented in another, just as we expect from conversational inferences.

Including the real-number intervals is a big step theoretically. One would like to see it motivated or else replaced with something more computationally tractable. For clearly expressive items like swear words, this potential for infinite gradability seems correct. We can make comparative judgments about speakers’ expressivity, and we even have intuitions that certain expressives are more negative or positive than others. What’s more, the judgments can be extremely fine-tuned, as Cruse (1986: 272) observes:

- (25) “presented meaning is for the most part coded digitally – that is to say, it can vary only in discrete jumps; expressive meaning, on the other hand, at least in respect of intensity, can be varied continuously, and is therefore analogically coded.”

It is possible, I think, to get a feel for this nondiscreteness by considering all the ways that one can convey one’s expressive attitudes: with facial gestures, hand gestures, posture, tone of voice, pitch, and so forth. The interval component of an expressive index explicitly allows for this infinite variability. In section 2.6, I further motivate the ordering we inherit from the reals and the logic of interval relations on them.

I expect the domain of expressives eventually to reveal itself to be more complex than these indices allow. For instance, racial epithets and curses are incomparable in their expressivity. We can generalize the theory of expressive indices to allow for this: the real intervals can be multidimensional, or we can, as I do in section 4, put entirely new objects in their place when giving certain meanings. As the model theory for semantics gets closer to the theory of cognition, we might seek to deal directly with emotions (however realized) in this position.

Expressive indices provide the final element of our contexts. The full definition for contexts is given in section 3.3, below. For now, suffice it to say that a context is a Kaplanian tuple extended with a judge argument, as described in section 2.3, as well as a parameter c_e . (So we have made two additions to the usual view of contexts; we'll make no more.) c_e represents the expressive setting of the context. I place the following constraint on admissible contexts:

(26) Expressive consistency

A context c is admissible only if c_e contains at most one expressive object $\langle a \mathbf{I} b \rangle$ for every salient pair of entities a and b .

So, for example, there cannot be a context that contains both $\langle a [-\mathbf{.5}, \mathbf{0}] b \rangle$ and $\langle a [\mathbf{.8}, \mathbf{1}] b \rangle$. In such a context, a would both honor and dishonor b . Such mixtures would be conceptually strange, and, moreover, the language works to block them: we saw already in example (19) that mixing expressive settings is impossible (see also (52)–(53) below). Comparable facts hold for honorifics, epithets, and so forth.

In the next section, I seek to justify the claim that when Tom utters the phrase *that bastard Jerry*, he replaces any expressive object of the form $\langle \llbracket \mathbf{tom} \rrbracket \mathbf{I} \llbracket \mathbf{jerry} \rrbracket \rangle$ in the input context with a new object like (24a). Once the change occurs, it places restrictions on the kind of expressive language that Tom can use felicitously.

2.5. Immediacy

Tsujimura (1978) identifies a connection between honorifics and speech-acts:

- (27) “expressions such as commands, prohibitions, or wishes clearly establish a relationship with the interlocutor, and hence should be treated from the attitudinal viewpoint [just like honorifics]” (Tsujimura 1978: 223)

I claim that this *immediacy* property generalizes to the full class of expressives. Like performatives, the act of uttering an expressive morpheme is sufficient for conveying its content.

For example, if I utter (28), then I have ipso facto placed myself under the obligation to wash the dishes (an example of Searle’s (1969: 3) ‘essential condition’ on sincere promises).

- (28) I promise that I will wash the dishes.

Expressive content is performative in this sense: quite generally, the act of uttering an expressive *is* the emotive performance. Epithets provide an especially clear example of this. Here is (13) again:

- (29) That bastard Kresge was late for work yesterday. (#But he’s no bastard today, because today he was on time.)

Just saying *that bastard Kresge* expresses hostility towards Kresge. This partly explains why the continuation *But he’s no bastard today* is infelicitous: the speaker has indicated that he regards Kresge negatively and then denied this without any explicit indication that he has changed his mind, that Kresge has changed, etc. The facts for performatives like *promise* are analogous:

- (30) I promise that I’ll wash the dishes later.
 a. #But I refuse to wash the dishes later.
 b. #But I make no promises that I’ll do it.

These limitations extend beyond self-denials. If I promise to wash the dishes, my addressee cannot deny that I have made the promise. The same is true of assertions, requests, demands, exclamatives (see especially Zanuttini and Portner 2003) and so forth; in (31), I illustrate with an assertion.

- (31) Ed is a werewolf.
 a. No, he is not.
 b. #No, you didn’t just assert that.

It is a testament to the strength of this restriction that (31b) is commonly heard but means roughly “I am amazed (shocked) that you asserted that”. The literal interpretation – “it is false that we are in a context in which you asserted that Ed is a werewolf” – is absurd.

I capture the performative nature of expressives by allowing them to act directly on the c_e element of the context. I provide the complete definitions in section 3.5, along with the rest of the technical details. For now, it suffices just to convey the intuitive consequences of those definitions:

- (32) To utter an expressive is to alter the current context of interpretation c by inserting a new expressive index into c_e or replacing one of the expressive indices $i \in c_e$ with an index i' that is just like i except that its interval (middle) component is at least as narrow as that of i .

Thus, if individual a is using a lot of expressive language to describe individual b , then the context of interpretation might change in the following way:

$$(33) \quad \begin{array}{c|ccc} c_e^1 & a & [-1 & 1] & b \\ c_e^2 & a & [-.4 & .4] & b \\ c_e^3 & a & [-.4 & .2] & b \\ \vdots & \vdots & & \vdots & \vdots \\ c_e^n & a & [-.2 & 0] & b \end{array}$$

The interval component shrinks in a downward monotonic fashion, yielding an analogue of the classical update property of dynamic semantics (Groenendijk 1999). We can also conceptualize these changes as overwriting of the interval component: $\langle a[-1, 1] b \rangle \Rightarrow \langle a[-.4, .4] b \rangle$, and the like.

So expressives do not change the descriptive content at all. They function solely at the contextual level, by actively changing the context. This directly encodes the immediacy property, and it makes good on the parallels with performatives observed above.

The immediacy property gives the study of expressives pressing social significance. The story in (1) provides a striking illustration. The school superintendent tries, in that example, to redefine the epithet *nigger* for his own purposes. But the immediacy property ensures that the damage is done as soon as *nigger* escapes his lips. The post-hoc attempt to clarify his intended meaning is thus futile.

2.6. *Repeatability*

The contrast between descriptive and expressive content is dramatic when we look at what happens in discourses in which items of this type are used repeatedly. For expressives, the basic observation is that repetition leads to strengthening rather than redundancy. For example, in the following group of sentences, we find a heightening of the emotional state of the judge (speaker) as we move down the list:

- (34) a. Damn, I left my keys in the car.
 b. Damn, I left my damn keys in the car.
 c. Damn, I left my damn keys in the damn car.

Regular descriptive content is generally unlike this. The descriptive ineffability property, discussed just above, makes it hard or impossible to construct minimal pairs with examples like (34) that involve no expressive language, but the following seems telling nonetheless:

- (35) #I'm angry! I forgot my keys. I'm angry! They are in the car. I'm angry!

Apparent exceptions to this pattern such as *big big big apple* make sense compositionally, since the second *big* can modify *big apple*, and so forth. (More problematic are examples like *salad salad* (Ghomeshi et al. 2004), which picks out a stereotypical salad, thereby excluding fruit salad in way that merely *salad* does not.)⁸

In multiclausal Japanese utterances, the speaker might be given a range of chances in which to direct honorifics at a single individual. One walks a fine line in such cases: too few honorifics, and one can appear disrespectful; too many, and the effect is one of sarcasm or irony.

The theory of context changing outlined in the previous section positions us well to model the strengthening that flows from the repeated use of expressives. According to (32), when an expressive is uttered, an expressive index is changed. When an expressive index is changed in this way, its interval must stay the same or shrink. Intuitively, either the expressivity didn't change, or it became more concentrated.

⁸ My thanks to Manfred Krifka (p.c.) for bringing these examples to my attention.

Thus, we see that the real-number component of expressive indices is crucial for capturing not only the extreme variability of expressives (see (25) and the surrounding discussion), but also the ways in which they can and cannot build throughout a discourse.

3. A formal theory of expressives

This section gathers together the central formal concepts from the above discussion and makes them precise where they were previously left informal. I also discuss how the descriptive properties follow from the formal system.

3.1. *Types*

The semantic types organize the semantic lexicon (section 3.6), and they index the denotation domains (section 3.4).

- (36)
- a. e and t are descriptive types.
 - b. ε is an expressive type.
 - c. If σ and τ are descriptive types, then $\langle \sigma, \tau \rangle$ is a descriptive type.
 - d. If σ is a descriptive type, then $\langle \sigma, \varepsilon \rangle$ is an expressive type.
 - e. The set of types is the union of the descriptive and expressive types.

This definition alone is enough to ensure the independence and nondisplaceability properties, as discussed in the sections 2.1 and 2.2. It is just the first step in defining the expressive dimension and its place in the system as a whole.

3.2. *Expressive indices*

Expressive indices are the main objects manipulated by expressive denotations. I repeat definition (23) here:

- (37) An *expressive index* is a triple $\langle a \mathbf{I} b \rangle$, where $a, b \in D_e$ and $\mathbf{I} \subseteq [-1, 1]$.

Expressive indices are the foundation for expressive domains and, in turn, for the meanings of expressive morphemes. The fact that they are not propositional in any sense accounts for the descriptive ineffability property. Moreover, the semantics goes a step further: even the denotation domains are just mappings from one context tuple to another (section 3.4), so even there we do not find propositional material. (As discussed in section 2.4, this does not prevent expressives from having propositional implications conversationally.)

As discussed in section 2.4, we are very likely to require a generalization of (37) that allows more than just real intervals as the middle coordinate. Similarly, as our understanding of expressive content deepens, we might see this very abstract sort of definition replaced by one closer to the theory of cognition.

3.3. *Contexts*

- (38) A context is a tuple $c = \langle c_A, c_T, c_W, c_J, c_e \rangle$, where c_A is the agent (speaker) of c , c_T is the time of c , c_W is the world of c , c_J is the judge of c , and c_e is a set of expressive indices.

The judge c_J is important to the semantics for specific expressive morphemes, in the sense that we define the lexical entries for expressives so that they affect only expressive indices with the judge as the first entity (section 3.6).

The set c_e is the expressive setting. It is the only element that expressives can alter.

Speakers must be consistent with their expressive morphemes, else their behavior is infelicitous. We achieve this with the following constraint on contexts (repeated from (26)):

- (39) Expressive consistency
A context c is admissible only if c_e contains at most one expressive object $\langle a \mathbf{I} b \rangle$ for every salient pair of entities a and b .

Expressive denotations (section 3.6) effect changes to the expressive setting of the context in which they are interpreted. As long as we begin

with a context that respects (39), we are guaranteed to maintain (39) as we update. This is due to (41) and the role it plays in those denotations.

3.4. Domains

In this definition, σ and ρ range over all types:

- (40) a. The domain of type e is D_e , a set of entities.
 b. The domain of type t is D_t , the set of propositions.
 c. The domain of type ε is D_ε , the set of all functions from contexts into contexts.
 d. The domain of type $\langle \sigma, \rho \rangle$ is $D_{\langle \sigma, \rho \rangle}$, the set of all functions from D_σ into D_ρ .

3.5. Context shifting

In section 2.5, I described the intuitions behind the way that expressives alter the contextual parameter c . It's time to make that fully precise. The first step is the following relation between sets of expressive indices:

- (41) $c_\varepsilon \approx_{a,b}^{I'} c'_\varepsilon$ iff c_ε and c'_ε differ at most in that
 a. $\langle a \mathbf{I}' b \rangle \in c'_\varepsilon$; and
 b. if c_ε contains an expressive index $\langle a \mathbf{I} b \rangle$, where $\mathbf{I} \neq \mathbf{I}'$, then $\langle a \mathbf{I} b \rangle \notin c'_\varepsilon$ and $\mathbf{I}' \sqsubseteq \mathbf{I}$.

The notation is somewhat cumbersome, but the underlying idea is straightforward. Here is a small example that invokes (41b) to ensure that a specific index in the lefthand set is replaced by an appropriate index in the righthand set:

$$(42) \quad \left\{ \langle a \mathbf{I} b \rangle \right\}_{\langle \llbracket \mathbf{tom} \rrbracket [-1, 1] \llbracket \mathbf{jerry} \rrbracket \rangle} \approx_{\llbracket \mathbf{tom} \rrbracket, \llbracket \mathbf{jerry} \rrbracket}^{[-.5, 0]} \left\{ \langle a \mathbf{I} b \rangle \right\}_{\langle \llbracket \mathbf{tom} \rrbracket [-.5, 0] \llbracket \mathbf{jerry} \rrbracket \rangle}$$

This might partially represent a situation in which we learn from Tom's utterance of *that bastard Jerry* that Tom feels negatively towards Jerry. Intuitively, we replace the index $\langle \llbracket \mathbf{tom} \rrbracket [-1, 1] \llbracket \mathbf{jerry} \rrbracket \rangle$ in the first set with the index $\langle \llbracket \mathbf{tom} \rrbracket [-.5, 0] \llbracket \mathbf{jerry} \rrbracket \rangle$ in the second.

Here is an example in which the affected index is not present in the input context, and thus the set of expressive indices grows:

$$(43) \quad \{\langle a\mathbf{I}b \rangle\} \approx_{\llbracket tom \rrbracket, \llbracket jerry \rrbracket}^{[-.5, -.2]} \left\{ \langle a\mathbf{I}b \rangle \right\}$$

The final clause of (41) (“ $\mathbf{I}' \sqsubseteq \mathbf{I}$ ”) ensures downward monotonicity: when intervals change, they always shrink or stay the same, as depicted in (33).

If we further articulate expressive indices to allow for different intervals (different kinds of incomparable expressivity), in the manner suggested at the end of the section 3.2, then we need to modify (41) accordingly, so that if \mathbf{I} and \mathbf{J} are two different kinds of expressive interval, then $\langle a\mathbf{I}b \rangle$ and $\langle a\mathbf{J}b \rangle$ can coexist in the same context.

The family of relations picked out by (44) determines a useful family of relations between contexts, via the following minor extension of the notation:

$$(44) \quad c \approx_{a,b}^{\mathbf{I}} c' \text{ iff } c_\varepsilon \approx_{a,b}^{\mathbf{I}} c'_\varepsilon$$

With definitions (41) and (44), we capture, via relations on sets of expressive indices, the intuition that an index can have its interval \mathbf{I} replaced with a subinterval of \mathbf{I} during the course of a semantic computation.

3.6. Denotations

Kaplan (1999) argues persuasively that the meanings of expressives are best given in terms of conditions on use. The present theory allows us to enforce such conditions in a very general way, using denotations like (45).

- (45) a. $damn : \langle e, \varepsilon \rangle$
 b. $\llbracket damn \rrbracket^c =$ the function f such that $f(\llbracket a \rrbracket^c)(c) = c'$, where
- i. $c \approx_{c_j, \llbracket a \rrbracket^c}^{\mathbf{I}} c'$;
 - ii. the length of \mathbf{I} is not more than .5; and
 - iii. $\mathbf{I} \sqsubseteq [-1, 0]$

The length of an interval $[i, j]$ is $j - i$. (I assume that $[i, j]$ is an interval only if $i \leq j$.)

The output of this computation is just a new context. This is the central component in the performative nature of the theory. But it is not quite

enough for us to achieve a working logic of semantic composition. When $\llbracket damn \rrbracket$ combines with $\llbracket the\ dog \rrbracket$, the result is an altered context, but it is not only that. We also retain access to $\llbracket the\ dog \rrbracket$ for later computation: it could be the argument to a verb meaning, it could be conjoined, etc. To capture this, I introduce a special composition operator \bullet , one that we can think of as a kind of expressive glue (This definition is revised in (1) of my reply to the commentaries):

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

$$\llbracket \alpha \rrbracket^c \bullet \llbracket \beta \rrbracket^c = \llbracket \beta \rrbracket^{\llbracket \alpha \rrbracket^c(\llbracket \beta \rrbracket^c)(c)}$$

In short, we interpret the logical expression β in its original form, but with respect to a modified context. There are in this rule clear echoes of the conventional-implicature application rule of Potts (2005), in which conventional-implicature types determine changes in their dimension while passing on the descriptive content unchanged. Here, β is passed on untouched, but its context of interpretation is altered.

The meaning in (45) also specifies that the output interval is at least .5 long. This makes *damn* a mild expressive. It is this clause that differentiates *damn* from stronger expressives like *fucking*:

- (47) a. *fucking* : $\langle e, \varepsilon \rangle$
 b. $\llbracket fucking \rrbracket^c =$ the function f such that $f(\llbracket a \rrbracket^c)(c) = c'$,
 i. $c \approx_{c', \llbracket a \rrbracket^c}^{\mathbf{I}} c'$;
 ii. the length of \mathbf{I} is not more than .2; and
 iii. $\mathbf{I} \sqsubseteq [-1, 0]$

Denotations (45) and (47) are identical except for the fact that *fucking* must define a narrower interval. This means that it will, in general, deliver larger expressive changes, and its overall effect will be one of greater expressivity than that of (45), though both are capable of being extremely expressive, as neither specifies a minimal interval length. Thus, the intervals are the primary means of differentiating various expressive denotations, and they yield a rough analogue, in the expressive realm, of Searle and Vanderveken's (1985) *degree of strength* component to illocutionary meanings.

Conditions (45b.iii) and (47b.iii) ensure that *damn* and *fucking* are negative expressives. These negativity conditions might be more flexible than the other two. It is certainly true that these items are characteristically

negative. But they are not always negative. If I am speaking affectionately about Sam, then my use of *damn* in connection with him will probably be construed as affectionate. If I am speaking negatively of him, my expressives will work in kind. If we remove (45b.iii) and (47b.iii), then the nature of this contextual conditioning derives from the subinterval condition that we ensure in (41): if it is clear that I am positive about Sam, then I have excluded all intervals below 0, so the only available construal is positive.

However, as Manfred Krikfa points out (p.c.), we admit too much if we simply remove these negativity conditions. No matter how clear I make it that I feel positive and respectful of my dean, I cannot refer to him with *bastard* and expect it to heighten my positive expressivity. I do not at present see a way to formulate these denotations in a way that allows for carefully controlled positive uses. But the negativity conditions (45b.iii) and (47b.iii) at least pinpoint the problem.

Those conditions are noteworthy for one additional reason: they constitute the only nontrivial preconditions that expressives can place on the context in which they are uttered. If I use comparable positive and negative expressives with the same argument, I specify an incoherent set of contextual updates, as there will no way to move from context to context in a way that respects both (44) and the denotations for the morphemes involved.

Denotations like (45) (and (47)) might more properly be thought of as families of denotations, since they are underspecified with regard to how they change the expressive setting of the context. (We can think of **I** as a free variable.) The change is partly limited by the nature of the input context, but there is still considerable freedom concerning the context they produce.

Expressive denotations bear important similarities to the context-shifting operators of Schlenker (2003), Anand and Nevins (2004), and Sharvit (2004). Conceptually, it is important to keep in mind that they are quite fundamentally different from the usual denotations in semantics, in that they have access to the context parameter, which normal denotations cannot manipulate. In this specific sense, they are metalinguistic. I regard this move as necessary to doing justice to the immediacy property. It is possible to give expressive denotations in a way that more closely resembles the denotations of the above-cited authors, but I have chosen

the current path because it better reveals the underlying logic of these (in a sense) metalinguistic morphemes.

3.7. Compositional interpretation

There is not space here to develop a full theory of composition. However, it seems clear that interpretation should proceed from left to right if possible. The context of interpretation changes after each expressive is encountered, and these changes can build through a sentence. For interpretive schemes along these lines, I refer to Heim (1983), Bittner (2001), and, more abstractly, Shan and Barker (2006).

3.8. In sum

In (48)–(49), I summarize the central components of the above theory and illustrate how the pieces fit together in a simple example

- (48) The central components of the theory of expressives
- a. The expressive type ε
 - b. Context elements: the judge c_J and the set of expressive indices c_ε

- (49) Modifying the expressive setting

$$\begin{aligned} & \llbracket \text{damn} \rrbracket \left\langle c_A, c_T, c_W, c_J, \left\{ \langle c_J \mathbf{I} \llbracket \text{the dog} \rrbracket \rangle \right\} \right\rangle \bullet \llbracket \text{the dog} \rrbracket \left\langle c_A, c_T, c_W, c_J, \left\{ \langle c_J \mathbf{I} \llbracket \text{the dog} \rrbracket \rangle \right\} \right\rangle \\ & = \llbracket \text{the dog} \rrbracket \left\langle c_A, c_T, c_W, c_J, \left\{ \langle c_J \mathbf{I}' \llbracket \text{the dog} \rrbracket \rangle \right\} \right\rangle \\ & \text{where } \mathbf{I}' \sqsubseteq \mathbf{I} \end{aligned}$$

This example nicely highlights the pressing need for a theory of how the syntax does, or does not, constrain the possibilities for expressive function–argument structures (Potts 2005: §5.3.2).

4. Case study: Formal and familiar pronouns

This section explores the nature of formal and familiar pronouns in languages like German, Russian, and French. I use German data throughout to keep the discussion streamlined. The analysis is intended to extend without substantive modification to other languages with this distinction in their pronominal systems. In places, I draw on material in Asudeh and Potts 2004.

4.1. *A quick run through the properties*

I begin by arguing that the formal and familiar features of pronouns count as expressive by the criteria outlined in section 2.

The independence property is evident in pairs of examples like (50), in which the propositional content is the same in each case but the expressive setting – the indicated relationship between speaker and addressee – is different.

- (50) a. Ich ruf' dich an.
 I call you.FAMILIAR on
 'I'll give you a call.'
- b. Ich rufe Sie an.
 I call you.FORMAL on
 'I'll give you a call.'

Moreover, one can agree or disagree with these claims without thereby adopting the expressive content inherent in the pronoun.

The nondisplaceability and perspective-dependence properties are also easily illustrated. For instance, the expressive relations in (51) do not shift as the attitude holder shifts. Rather, they remain relativized to the judge, who we can, in these cases, identify with the speaker.

- (51) a. [School teacher to a waiting parent]
 Das Kind sagt, dass Sie seine Mutter sind.
 the child says that you.FORMAL its mother are
- b. [Son to his father, a school teacher]
 Karl behauptet, dass du seine Hausaufgabe verloren hast.
 Karl maintains that you his homework lost have

To what extent do these pronouns satisfy the descriptive ineffability property? This is a difficult question. It is generally accepted that pronouns of address are governed by a complex system of conditions on their use. Grammar textbooks give examples of such conditions. But they rarely if ever aspire to be comprehensive (though the lists often grow long), and it is often unclear how stated rules generalize to new situations. I am at present unsure whether all this amounts to descriptive ineffability on par with that of *damm*, but it nonetheless seems worth pressing the case that these pronouns are best handled in the terms laid out in section 3.

Despite the artificiality of some uses of these pronouns, it is easy to offend people by using the wrong pronouns of address. One can, in fact, shock a room into silence if one uses familiar pronouns where formal ones are expected.⁹ Conversely, Wittgenstein was viewed as strange in the extreme for using formal pronouns with his fellow soldiers (Monk 1991). These are the hallmarks of immediacy, and they suggest that these pronouns have the ability to change the expressive setting of a context, in the manner of the denotations in section 3.6.

The repeatability property is challenging from the point of view of the proposed characteristics of expressives. A speaker is of course required to repeat these pronouns, and in turn to repeat their expressive content, at least as often as he refers directly to his addressee. And, in fact, deviations from this repetition, as in (52) and (53), are violations of expressive consistency (see (26)).

(52) *Sie haben gesagt, dass du uns helfen würdest.
 you.FORMAL have said that you.FAMILIAR us help would
 ‘You said that you would help us.’

(53) *Du hast gesagt, dass Sie uns helfen würden.
 you.FAMILIAR have said that you.FORMAL us help would
 ‘You said that you would help us.’

However, repeated use of the familiar feature does not deepen the sense of familiarity, nor does repeated use of the formal feature iteratively humble the speaker while elevating the addressee. This is a point of

⁹ My thanks to Philippa Cook for her harrowing expatriate’s tales.

contrast with Japanese honorifics, where repeated use does strengthen in the manner discussed in section 2.6 (Harada 1976).

My explanation for this point of contrast is functional: unlike Japanese honorifics, expressive modifiers, epithets, and the like, speakers of German do not have the option of leaving out the expressive content when referring to their addressees. The language provides just two classes of form for this: the formal and the familiar. Both encode some kind of attitude. Expressive consistency prevents mixing and matching, so speakers are forced to repetition.

4.2. Analysis

With the above pieces in place, the analysis is fairly automatic: formal and familiar pronouns modify expressive indices in a particular way. It seems clear that these expressive indices are different from the infinitely variable ones proposed above: there is only a binary distinction here, and, moreover, it doesn't correlate with, for example, one's use of expressive modifiers. Thus, I employ two new objects in place of the real-number intervals in the expressive indices: the formal object \dagger and the familiar object ℓ . (The first is meant to look like a necktie, the second like something intertwined in friendship.)

The features' denotations are as follows:

- (54) a. $\llbracket \text{FORMAL}(a) \rrbracket^c = c'$, where $c \approx_{c', \llbracket \text{you} \rrbracket}^\dagger c'$ (FORMAL is of type $\langle e, \varepsilon \rangle$)
 b. $\llbracket \text{FAMILIAR}(a) \rrbracket^c = c'$, where $c \approx_{c', \llbracket \text{you} \rrbracket}^\ell c'$ (FAMILIAR is of type $\langle e, \varepsilon \rangle$)

Since \dagger is not a subinterval of ℓ , nor the reverse, it is impossible to have both $\langle a \dagger b \rangle$ and $\langle a \ell b \rangle$ in the same context. Thus, the treatment ensures the expressive consistency indicated by (52) and (53).

Importantly, these meanings take an entity as their argument, but they don't do anything with it except pass it into the new interpretative context determined by c' . I assume that they appear in feature structures that determine full pronoun realizations, and that other aspects of these feature structures serve to provide nominal arguments, achieve reference, determine number, and so forth.

The division is necessary to account for instances in which pronouns of address are involved in (something like) bound variable readings. These are often called *fake indexicals*; I provide a representative sample in (55), with informal logical representations of the bound readings:

- (55) a. I'm the only one around here who will admit that I could be wrong. (Partee 1989: fn. 3; Partee 1984: 170)
 [I am the unique x such that x will admit that x could be wrong]
- b. Only you did your homework. (Heim 2005)
 [you are the unique x such that x did x 's homework]
- c. We each/all think we're the smartest person in the world. (Rullmann 2004)
 [for each $x \in WE$, x thinks x is the smartest person in the world]

The work on this topic to date concentrates largely on the ramifications for person and number features (see, in particular, Rullmann 2004; Heim 2005; Kratzer 2005). But the same issues arise with expressive content. The generalization is that, when a pronoun of address is bound, its expressive content remains untouched – unbound by the relevant operator, steadfastly signaling a relationship between the speaker and his addressee. Here is a simple example modelled on (55b).

- (56) Nur du hast deine Hausaufgabe gemacht.
 only you.FAMILIAR have your.FAMILIAR homework done
 'Only you did your homework.'

The familiar feature is completely missed by the quantifier. It does not partialize the domain to entities with whom the speaker is on familiar terms, nor does it convey that the speaker is on familiar terms with everyone in the domain.

This result is easy to achieve if these pronouns simply have, as one component of their meanings, the expressive indices in (54). These objects can appear, in feature structures, with bindable variables as well as genuine second-person features, as required. Kratzer (2005) provides a comprehensive overview of the facts as well as a detailed analysis of them. As far as I can tell, the present proposal for handling the expressive aspect of the meanings of pronouns such as these could easily be added to her formalism.

5. Extensions, borderline cases, challenges

I have only scratched the surface of the expressive domain. If I am right that it represents a separate dimension of meaning, then we should expect that dimension to display all of the richness and variety of the descriptive realm.

The definition developed in section 2 has real bite to it. It defines some things as clearly expressive. It also defines some things as clearly non-expressive. These exclusions can be surprising. To take just two quick examples: it has sometimes been suggested that the predicate *lurk* has an expressive component (Harnish 1975 provides data and references). But it fails all of the tests for expressivity identified here. Similarly, Keenan and Stavi (1986: 258) suggest that the determiner *few* might express an inherently subjective value-judgment by the speaker. This anticipates the language I use for expressives, but, like *lurk*, this item simply fails to count as expressive. (This is not to say that the analyses of *lurk* and *few* are mistaken. I point out only that they don't count as expressive on the present view.)

All predicates that appear in copular position must necessarily fail to be expressive, because they provide no argument for the copular verb (nor a functor that could apply to it). They simply alter the context parameter. (See also Potts 2005: §5.3.2.)

More interesting are the borderline cases. For instance, Kratzer (1999) identifies the German particle *ja* as a kind of expressive item, and she presents evidence that its content is not semantically embeddable outside of a few clearly defined environments:

- (57) Jeder von diesen Arbeitern hat seinen Job verloren, weil er
 Each of those workers has his job lost because he
 (*ja) in der Gewerkschaft war.
 JA in the union was

But Kaufmann (2004) claims that the above is well-formed “if it is common knowledge that all workers were in the union”. He offers additional examples suggesting that *ja* might not be completely independent from the descriptive content. Might we bring these observations in harmony with each other using the perspective-dependence property, or does this constitute a fatal blow to an expressive analysis of *ja* (and, perhaps by

extension, other discourse particles in German)? I cannot, at present, answer this challenging question.

It is also tempting to look to evidential morphemes. Evidentials are generally characterized as perspective-dependent particles that convey something about the speaker's attitude towards the content she is offering. What exactly they convey can be difficult to specify using language not drawn from the evidential system itself (descriptive ineffability; see Faller 2002: 3).

But to what extent do they manifest the independence property? It is generally hard to determine whether a sentence containing a hedging evidential counts as an assertion of its core propositional content. This judgment can vary from language to language, even from morpheme to morpheme; see Faller (2002) and Garrett (2001) for descriptions that are well attuned to the difficulty of this issue.

So this paper is by no means the final word on the expressive dimension. It's my hope that it provides a useful initial description and an adaptable formalism, one that can facilitate close empirical work on the ways in which natural languages access expressive domains.

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