

# Composure and composition\*

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**Abstract** In this paper, I argue that non-truth-conditional affective meanings (i.e., expressive meanings) are architecturally (i.e., cognitively) distinct from truth-conditional affective and affect-related meanings—in ways that warrant complete separation of the two types of meaning in our formal semantic theories. In particular, I show that expressive meanings do not have to interact semantically with their syntactic surroundings, but truth-conditional meanings do even when they are affect-related and not-at-issue. This contrast holds even when the two types of meaning are contributed by uncontroversially the same type of morphosyntactic objects, as is the case for affection-expressing diminutive suffixes (non-truth-conditional) vs. derogatory/pejorative suffixes (truth-conditional) in Russian. I, thus, propose that, while modeling expression of immediate affect as direct altering of the expressive parameter of the context in Potts 2007b is already a good way to capture its performative and non-truth-based nature, we should furthermore abandon the attempt to establish a compositional link between such performative context-altering effects of producing the form of a given item and the meaning contribution said item makes in its syntactic context. In addition, I demonstrate that we observe some of the same typology of affective and affect-related meanings as conveyed through “secondary” channels, such as prosody, facial expressions, and non-face gesture, as we do for fully conventionalized segmental morphemes (i.e., “words”). I furthermore show that we routinely make use of a productive mechanism of going from performative, non-truth-conditional expression of affect to demonstrations of such expression within pieces of truth-conditional meaning of the general form ‘(such that) it would make me/one go “DEMONSTRATION”’, which we can then combine as supplements or modifiers with other truth-conditional content. We observe this process at work both for “words” (e.g., in at least some instances of spoken word expressives used for degree intensification) and for other types of meaning–form mappings (e.g., facial expressions and/or prosody conveying some form of surprise-related or negative affect)—and we can, thus, apply the same formal analysis to all these cases.

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# 1. Introduction

There is a fundamental difference between expressing one’s feelings and talking about them. For instance, if you drop something heavy on your foot, you might yell something like (1) to express your frustration, which is intuitively very different from asserting something like (2).

- (1) {Ouch! / Damn! / Fuck!} *non-truth-conditional meaning*  
 (2) {I am frustrated. / I am in pain. / I don’t like this.} *truth-conditional meaning*

In both cases you end up conveying something that I will refer to as *affective meaning* (and occasionally I will be using a more hedgy term *affect-related meaning*). However, in the first case, you seem to be performatively expressing your feelings, while in the second case you seem to be communicating some factual information about them. Throughout this paper, I will be referring to the meaning conveyed in the first case as *non-truth-conditional meaning*, and, in particular, in relation to affective non-truth-conditional meaning, which this paper will mostly focus on, I will be using the term *expressive meaning*. As for the the meaning conveyed in the second case, I will be referring to is as (affective or affect-related) *truth-conditional meaning*.

In this paper, I make two main claims regarding this distinction. First, based on how these two types of meaning integrate into larger utterances, I argue that this distinction is cognitively real in a way that should be properly reflected in our formal semantic theories. In particular, I propose that we need to completely separate performative context-altering effects of producing a given form from the compositional meaning associated with this form. The most critical empirical evidence for this claim comes from Russian examples like (3) (featuring affection-expressing diminutive suffixes) and (4) (featuring derogatory/pejorative suffixes), which show that non-truth-conditional expressive meanings do not have to semantically interact with their syntactic surroundings while truth-conditional meanings do, even when (i) the latter are not-at-issue; (ii) both are contributed by suffixes, i.e., bound morphemes that are uncontroversially integrated into the morphosyntactic structure of the utterance.

- (3) *Context: The speaker is talking to their dog.*

Ja seĭčas nal’ju tebe svež-en’k-oj vod-ičk-i v  
 I.NOM now pour.1SG.FUT you.DAT fresh-EXPR-PTV.SG.F water-EXPR-PTV.SG in  
 mis-očk-u, a potom my bystr-en’k-o pojdëm  
 bowl-EXPR-ACC.SG, and then we quick-EXPR-ADV go.FUT.1PL  
 guljat-en’k-i.  
 walk.INF-EXPR-INF

≈‘I will now pour fresh water into a bowl for you, and then we will quickly go for a walk; also, I am expressing me being overwhelmed by my dog’s cuteness.’

The speaker’s affect is caused by and/or directed at the dog (or, more broadly, the extralinguistic situation), not the denotations of the hosts of the diminutive suffixes.

- (4) Vpusti ètogo (starik-an-a / starik-ašk-u)  
 let-in.IMP.SG/T this.ACC.SG.M (old.man-DEROG-ACC.SG / old.man-PEJOR-ACC.SG)

i ego ⟨sobač-ar-u / sobač-enc-iju⟩.  
 and his ⟨dog-DEROG-ACC.SG / dog-PEJOR-ACC.SG⟩  
 ≈‘Let in this ⟨stupid / pathetic⟩ old man and his ⟨stupid / pathetic⟩ dog.’  
 The speaker’s attitude is necessarily towards the old man and his dog.

Second, I show that this truth-conditional vs. non-truth-conditional distinction also holds for affective meaning conveyed through various “secondary” channels, such as prosody, facial expressions, and gesture. Moreover, we observe the same mechanism of going from non-truth-conditional to truth-conditional meanings at work across channels, whereby we take something that is originally performative expression of affect and turn it into a demonstration of such expression within a truth-conditional property. I take this as a reason to go against the common tendency to label any instances of affect-related meaning conveyed through “secondary” channels as “paralinguistic” and, thus, something that we as formal linguists shouldn’t concern ourselves with.

This paper is organized as follows. Section 2 sets the stage by laying out the intuitive differences between truth-conditional and non-truth-conditional meanings and discussing how they have been captured or ignored before. While this is not the core argument of the paper, here I point out the conceptual superiority of the expressive semantics in Potts 2007b, which treats expressives as expressions that directly alter a special, expressive parameter of the context—in comparison to the conventional-implicature-based analysis of expressives in Potts 2005, which treats expressives in the same way as appositives and sentence-level adverbs, and the reductionist response to Potts 2007b in Schlenker 2007, which treats expressive contributions as a type of presuppositions. While I take the core theoretical insight in Potts 2007b to be an ingenious way to capture the performative and non-truth-based nature of non-truth-conditional meanings, I also point out that the combinatorics posited there undermine this insight, and propose that we should not be trying to establish a compositional link between the immediate context-altering effects of producing the form of a given item and the effect of said item composing with its syntactic surroundings.

In section 3, I present the empirical evidence in favor of a clear formal divide between truth-conditional and non-truth-conditional meanings. First, in subsection 3.1, I talk about how truth-conditional meanings can be in principle at-issue or not-at-issue, while non-truth-conditional meanings are not meant to address any issues, thus, this distinction doesn’t apply to them (I primarily focus on the differences between truth-conditional evaluative modifiers like *lovely* or *disgusting* and expressive items like *fucking*). This is already evidence against attempts to reduce non-truth-conditional meanings to some type or other of not-at-issue meanings (as in Potts 2005 or Schlenker 2007). Next, in subsection 3.2, I present the core argument of this paper: based on data from both English and Russian, I show that non-truth-conditional meanings do not have to interact compositionally with their surroundings in the same way that truth-conditional meanings do. This is further evidence against formally treating non-truth-conditional meanings in the same way as truth-conditional, but not-at-issue meanings. Furthermore, this is an argument in favor of the more radical version of Potts’ (2007b) semantics anticipated in section 2 that gets rid of the compositional link between performative context-altering effects and truth-conditional, compositional meaning.

In section 4, I show that in various “secondary” channels through which we can convey meaning, such as prosody, facial expressions, and non-face gesture (basically, anything that

we cannot describe in terms of phonemic segmental and suprasegmental features in speech), we, too, have both instances of purely performative, often less conscious, and often less regularized expression of immediate affect, i.e., non-truth-conditional meanings, as well as instances of non-purely-performative, more deliberate, more regularized, and more linguistically integrated communication of non-immediate affect, i.e., truth-conditional meanings. We also have instances of even more complex meanings thus conveyed, namely, degree modification, which is not only truth-conditional, but typically at-issue—something that we also see with words. Thus, we observe the same typology of affective and affect-related meanings across channels, and we should, thus, be aiming to analyze it in a uniform way. Moreover, studying this typology of affective meanings across various channels highlights some of the common pathways from non-truth-conditional to truth-conditional meanings and mechanisms of executing these pathways—an issue pertinent to questions of language evolution and development. In this paper, I focus specifically on the mechanism of turning expressive acts into pieces of truth-conditional meaning containing quotations, or, more broadly, demonstrations of such expressive acts. By doing so, I expand on Davidson’s (2015) work on how demonstrations can be compositionally integrated into larger utterances, showing that in addition to a *resemblance-based* integration (i.e., as part of a property of events/individuals that resemble the demonstration) discussed by Davidson, we routinely make use of *reaction-based* integration (i.e., as part of a property of individuals/events/degrees/propositions such that their instantiations would make one react in the demonstrated way). Finally, in this section, I also discuss some examples of structured cross-channel surface integration of expressions carrying pieces of meaning that don’t interact with one another compositionally. I conclude that studying such cross-channel integration can further inform us about how different types of meaning co-exist architecturally.

In section 5, I briefly talk about some outstanding issues, in particular, cases when non-truth-conditional meanings appear to interact semantically with their surroundings; non-truth-conditional meanings and speaker-orientedness; non-truth-conditional meanings beyond expression of affect (e.g., those associated with various social and ritualistic goals); and expressive meaning in non-linguistic systems.

Section 6 briefly summarizes the main points of the paper and formulates desiderata for future research.

## **2. Truth-conditional vs. non-truth-conditional meanings: overview**

### **2.1. The intuition behind the distinction**

There has been a long-standing tradition in formal semantics and pragmatics to predominantly focus on linguistic utterances whose goals are associated with cooperative information exchange. We assert things in order to communicate our beliefs about the world—and possibly to eventually change our addressee’s beliefs. We ask questions to find out something about the world. We utter commands and requests to communicate how we want the world to be—and possibly eventually to bring the world in line with our desires. However, these are not the only goals associated with linguistic behavior. For instance, we can produce linguistic expressions to express our immediate emotions, to achieve a variety of social effects (e.g., to perform aspects of our identity or to build rapport with the addressee), or to perform a ritual of some sort (e.g., by uttering an apotropaic expression, i.e., one that is meant to

deflect harm, out of superstition—or simply habit). This difference in goals leads to some fundamental differences in the very nature of the meaning of these expressions.

Let’s once again look at the utterances in (1) vs. (2), repeated below.

- (1) {Ouch! / Damn! / Fuck!} *non-truth-conditional meaning*  
(2) {I am frustrated. / I am in pain. / I don’t like this.} *truth-conditional meaning*

The utterances in (2) are intended to pursue goals of the “traditional” kind, i.e., those associated with cooperative information exchange. Consequently, the assertions in (2) can be true or false and can, thus, be contested, despite their highly subjective nature. It is, thus, unsurprising that in formal semantics, we usually model such utterances that can be true or false, as well as utterances that can be linked to something that can be true or false (namely, questions, which can be linked to their possible answers, and, somewhat more controversially, imperatives, which can be thought of in terms of what the speaker would like to be true), in terms of truth conditions, hence the term “truth-conditional meaning”. Similarly, it is quite natural to model the part of discourse concerned with cooperative information exchange as an interactive endeavor that trades in questions under discussion, proposals that can be accepted or rejected, etc.

Meanwhile, in (1), the speaker is not trying to communicate anything that can be true or false (in fact, they probably aren’t trying to communicate anything to anyone at all in this case, as they likely don’t produce this utterance with any addressee in mind, not even themselves). Consequently, non-truth-conditional meanings are non-negotiable and, at the discourse level, do not lend themselves to modeling in terms of questions under discussion, proposals, and the like. Furthermore, since they are not intended to be part of the information exchange process, expressions carrying non-truth-conditional meanings can be repeated without sounding redundant (e.g., you can keep expressing your affect as long as you have affect to express)—while asserting things that already are in the common ground is typically a marked discourse move.

Relatedly, non-truth-conditional meanings are *performative*. Now, the notion of performativity has been used in many ways in and outside linguistics; here I simply mean that we aim to achieve our expressive, social, or ritualistic goals associated with a certain form by virtue of producing said form, and cannot achieve these goals without doing so. In other words: if we want to, for instance, relieve our internal tension caused by, say, anger or pain via swearing, we have to actually swear.<sup>1</sup> One immediate consequence of this is that all purely performative meaning effects are necessarily ignored during the process of anaphora/ellipsis resolution, because anaphora and ellipsis crucially rely on not producing the antecedent form, replacing it with silence or a proform.<sup>2</sup> The ellipsis/anaphora facts have already been used to build an architecture-based argument for properly separating expressive meanings from

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<sup>1</sup>This doesn’t mean, of course, that we will actually feel relief after yelling a bunch of swear words, build rapport with the addressee after performatively expressing our friendliness, say, through prosody, or ward off the evil eye after knocking on wood—but such expressions are *intended* to achieve these goals performatively.

<sup>2</sup>Of course, the entailment only goes in one direction here: some types of truth-conditional, but not-at-issue meanings can also be ignored during ellipsis/anaphora resolution, including non-restricting modifiers discussed in subsection 3.1 (see Esipova 2019b; Sailor & Colasanti 2020). Besides, we can, of course, anaphorically refer to forms (including in a maximally explicit fashion, like *I didn’t use this word* or *I didn’t say it in this way*), which further complicates the discussion of performativity and anaphora.

truth-conditional meanings in our formal theories in Saab 2020 (see also Esipova 2022a). This paper, thus, complements this architecture-oriented discussion by focusing on compositionality or lack thereof.

Now, of course, in all cases, the act of producing a certain form immediately results in the context changing to one in which this form has been produced—and achieving that is the first step in achieving the more complex goals, such as making someone else change their beliefs or do something, or getting the answer to a question. However, purely expressive meanings don't go beyond this first step.

Non-truth-conditional meanings are, thus, much more basic and are, thus, potentially more likely to emerge first in non-human animals and early stages of language development in human children. One interesting endeavor pertaining to language evolution and development in this respect is then identifying the common pathways from non-truth-conditional to truth-conditional meanings, and, more generally, from performative acts to performances, from direct action to acting out. For instance, there is a clear connection between gestures we use to ask someone to give us something or to depict someone giving something to us (non-performative), further conventionalized in signed languages as verbs meaning 'give' or 'take', and actually attempting to take it from them (performative), or between gestures we use to tell someone to move in a certain direction (non-performative) and actually pushing them into that direction (performative). In subsection 3.2.3 and section 4, I will talk about one relevant productive mechanism of going from performative expression of immediate affect to more regularized communication of non-immediate affect and affective degree modification, which we see at work across channels.

Now, before we proceed to talking about how all these intuitions have been captured—or ignored—in formal semantic theories before, let me add two more caveats.

First, when someone utters an expression, this can have various immediate conversational effects on external observers—for instance, they can get offended. Furthermore, an external observer can draw all sorts of inferences about the person who uttered this expression, which can be true or false—in the same way that we can draw an inference, rightly or wrongly, that it is raining outside when someone comes in in wet clothes. This doesn't mean that we should be modeling the primary meaning of the expression uttered in terms of such external conversational effects, immediate or inferential. This is not to say, of course, that we should ignore them either. The disconnect between the meaning intended by the speaker and such conversational effects can be drastic (for example, in the case of slurs), and variation in such effects can be furthermore intentionally exploited by an aware speaker (for example, in the case of dogwhistles)—thus, such effects should absolutely be modeled. We should just be very clear about what we are modeling.

Second, the truth-conditional vs. non-truth-conditional distinction is one between pieces of meaning, not items that carry them. A single lexical item can very well carry both truth-conditional and non-truth-conditional meanings, and we will look at a specific sub-case of this in subsection 3.2.3, but it is important to make this clear as early as possible.

## 2.2. Modeling the distinction

### 2.2.1. The conceptual superiority of the expressive semantics in Potts 2007

The facts discussed in the previous subsection, among other things, have led Potts (2007b) to formally analyze expressives like English *fucking* as expressions that directly alter a specific parameter of the context of interpretation instead of contributing to the truth conditions of the utterance hosting the expressive, thus, capturing both the non-truth-based nature of expressive meaning and its performativity. When composing with other expressions, expressives pass the truth-conditional meaning<sup>3</sup> of the expression they compose with unchanged, but alter the expressive parameter  $c_\varepsilon$ . The expressive parameter  $c_\varepsilon$  is essentially a ledger that tracks the emotional states of the conversation participants of the input context of interpretation  $c$  (which is modeled as a tuple that also includes at least the speaker, time, world, and judge). Expressives alter  $c_\varepsilon$ , outputting a new context  $c''$ , which is just like  $c$ , except the speaker  $c'_s$  is experiencing the relevant feeling in  $c''_\varepsilon$ , which I write below as  $\text{feels}(c''_s, c''_\varepsilon)$ . The context-altering effect of an expressive is linked to the rest of the utterance compositionally by the bullet operator  $\bullet$  (an “expressive glue” in Potts’ words), which I will furnish with an expressive subscript,  $\bullet_\varepsilon$ , to distinguish it from the bullet notation in Potts 2005. In (5), I provide the simplified gist of this expressive semantics and the result it derives for *fucking dog* (as in *Lea might bring her fucking dog*).<sup>4</sup>

(5) Expressive semantics in Potts 2007b (simplified)<sup>5</sup>

- a.  $\llbracket \text{expr}_{\langle \sigma, \varepsilon \rangle} \rrbracket^{c'} (\llbracket \alpha_\sigma \rrbracket^c)(c) = c''$ , where  $c''$  is just like  $c$ , except  $\text{feels}(c''_s, c''_\varepsilon)$ ;  $\sigma$  is a truth-conditional type; and  $\varepsilon$  is an expressive type
- b.  $\llbracket \alpha_{\langle \sigma, \varepsilon \rangle} \rrbracket^{c'} \bullet_\varepsilon \llbracket \beta_\sigma \rrbracket^c = \llbracket \beta \rrbracket^{\llbracket \alpha \rrbracket^{c'} (\llbracket \beta \rrbracket^c)}(c)$
- c.  $\llbracket \text{fucking}_{\langle \text{et}, \varepsilon \rangle} \rrbracket^{c'} \bullet_\varepsilon \llbracket \text{dog}_{\text{et}} \rrbracket^c = \llbracket \text{dog} \rrbracket^{c''}$ , where  $c''$  is just like  $c$ , except  $\text{feels}(c''_s, c''_\varepsilon)$

Now, in Potts 2007b, the expressive parameter  $c_\varepsilon$  consists of *expressive indices* that are actually modeled as triples containing two individuals and a numeric value on an interval  $[-1, 1]$ , reflecting the attitude of the judge<sup>6</sup> towards another individual, which is stipulated to be the referent of the expression the expressive composes with. This part of the analysis is much less appealing than what I take to be the core insight of Potts’ semantics.<sup>7</sup> For one

<sup>3</sup>Potts (2007b) uses terms “descriptive meaning” and “propositional meaning/content” to refer to what I call truth-conditional meaning.

<sup>4</sup>Presumably following his earlier assumptions in Potts 2005, Potts (2007b) assumes that in *her fucking dog*, *fucking* composes with *her dog* rather than *dog*. This is not necessary under the semantics in Potts 2007b, however—and certainly not in the version of this semantics that I will propose—so I will not make such gratuitous assumptions.

<sup>5</sup>Here I am also incorporating the small adjustment made in Potts 2007a regarding the names of the context variables.

<sup>6</sup>Not the speaker, as assumed in this paper; I briefly come back to the speaker vs. judge distinction in subsection 5.2.

<sup>7</sup>Potts himself acknowledges that this way of modeling the expressive parameter is rather crude: “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.”

thing, feelings expressed by expressives obviously don't have to be "about" (i.e., caused by or directed at) an individual at all; for instance, they can be "about" an event or a fact or even undirected. And those feelings most certainly don't have to be "about" the denotation of the expression the expressive seemingly composes with, as we will see in section 3.2.

Now, while trying to develop a fully cognitively realistic structure for the expressive parameter is beyond the scope of this paper, I will assume that the entries listed in the expressive parameter instead pair up individual experiencers with numeric values on the various scales representing the various basic types of affect humans can experience.  $\text{feels}(c_s, c_\varepsilon)$  is then a shortcut for saying that the value on the scale for the relevant affect for  $c_s$  shifts to whatever the threshold for expressing this affect is in this context. The details, however, are immaterial to the purposes of this paper. The only thing that truly matters is that we will not be trying to establish any compositional link between the expressive and the denotation of the expression it combines with in the syntax (if any).

What is crucial for the purposes of this paper, however, is that Potts (2007b) departs in a major way from his own earlier work in Potts 2005, where he analyzed expressives as expressions that contribute *conventional implicatures* (CIs), which is also how he analyzed *supplements* (i.e., appositive relative clauses, nominal appositives, sentence-level adverbs, and parentheticals) and non-restricting evaluative modifiers. CIs are essentially propositions that end in a truth value of a special, CI type. Confusingly enough, Potts (2005) also uses the bullet notation, but only as a metalogical device, to separate the "at-issue" and the CI terms (e.g., Potts 2005, p. 223: "The bullet,  $\bullet$ , is a metalogical device for separating independent terms of  $\mathcal{L}_{\text{CI}}$ . It has no interpretation.").

The fact that in Potts 2005 expressives contribute truth-based meaning, albeit of a special kind, as well as the fact that they are lumped together with expressions that do intuitively make informative contributions, albeit in a "sidelined"<sup>8</sup> way, already runs against our intuitions about expressive meanings. There is, once again, an intuitive fundamental difference between (6a) and (6b), as in the first case the speaker is expressing their (immediate) feelings, while in the second case they are communicating some information about their (immediate or non-immediate) feelings in a sidelined way—a distinction that the CI-based analysis in Potts 2005 erases.

- (6) a. {Fuck / damn}, Mia left!  
 b. {Much to my dismay / unfortunately}, Mia left.

The same is true for Schlenker's (2007) response to Potts 2007b, where he suggests that expressives contribute "indexical presuppositions", i.e., "ordinary" presuppositions<sup>9</sup> that are linked to something in the context of interpretation, in this case, to the speaker. He further maintains that these are "informative" presuppositions, which are, furthermore, easy to

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<sup>8</sup>Potts (2005) uses the word "deemphasized", but I want to avoid associations with prosodic prominence.

<sup>9</sup>Let me note here that the term "presupposition" has been used very widely in the literature, and the various pieces of meaning that have been labeled "presuppositions" are not at all heterogeneous with respect to how they are triggered, how they project, and various other phenomena, such as behavior under ellipsis and in attitude reports. Thus, even if there is exists a natural, homogeneous class of inferences that can be called "presuppositions", not all things that have been labeled as such belong in that class. Of course, the term can be used as a descriptive umbrella term, but in this case, saying that something is a presupposition is not particularly theoretically informative.

globally accommodate due to the speaker being “an authority on [their] own mental states”. Once again, this runs completely against our intuitions about what presuppositions are. Presuppositions in the classical, Stalnakerian sense of the word (which is independent of Stalnaker’s specific analysis thereof, e.g., in Stalnaker 1974) are pieces of meaning that can actually be, well, presupposed, i.e., taken for granted, which makes them truth-conditional meanings. There is no intuitive sense in which a performative act of expressing one’s feelings can be presupposed—and, once again, this act is distinct from whatever inferences external observers might be drawing about the mental state of the individual producing said act. Formally, too, we model presuppositions as objects that can be true or false, and whose truth is, furthermore, somehow crucial for the felicity of our utterances. Thus, we are once again dealing with erasure of intuitive distinctions—this time explicitly for the sake of formal reductionism.

To my mind, this alone would justify a formal analysis of expressive meanings that treats them distinctly from truth-conditional meanings, even those that are sidelined or presupposed. However, the goal of this paper is to provide further, empirical arguments against such reductionism, which I discuss in section 3.

At this point, let me add a note that the conceptual difference between Potts 2005 and Potts 2007b, reflected in the formal differences between the two systems, seemingly goes underappreciated in much of subsequent literature on expressives. For instance, Gutzmann (2011) uses the CI semantics from Potts 2005 for expressives, and while he swaps the  $t^c$  variables used for CI truth values in Potts 2005 for  $\varepsilon$  variables for expressive types from Potts 2007b, he also writes, “In Potts’ later work (Potts 2007b), expressives receive a different interpretation than supplements, but from a type theoretic perspective and combinatorial perspective, the analysis remains essentially the same” (p. 124). That’s incorrect, as the difference between the two systems runs much deeper than variable names or some inconsequential differences in lexical semantics. For instance, Gutzmann uses the term “expressive proposition” to refer to the output of composing an expressive with its sister, which is correct in the CI-based system—as I said above, these CI outputs are in fact propositions of a special kind—but which is incorrect in the Potts 2007b system (there Potts deliberately models expressive content as non-propositional, again, following the intuition that expressives don’t contribute content that can be true or false). Gutzmann also explicitly equates expressive application in Potts 2007b with CI application in Potts 2005 and calls the bullet operator in Potts 2007b “metalogical” (p. 126), which is also incorrect, as shown above in (5). By adopting the CI semantics, Gutzmann, thus, inherits the conceptual problems of Potts 2005, reflected in the formal system therein. Note also that McCready (2010), who Gutzmann partially follows in her formal treatment of *mixed expressives* (i.e., items that contain both expressive and non-expressive content), seems to be aware of the difference between Potts 2005 and Potts 2007b (see fn. 15 of McCready 2010), but still relies on the former.

### 2.2.2. The problem with the combinatorics in Potts 2007

Now, while the core insight behind the formal analysis in Potts 2007b, i.e., that expressives directly alter a certain parameter of the context, is an ingenious way to capture performativity, the compositional combinatorics posited there is less so. Note that in (5) the expressive ends up altering the context of the expression it combines with—and *by virtue* of combining with it. Now, by Potts’ (2007b) own admission, his analysis is conceived of as a dynamic one,

but is not properly dynamicized formally, i.e., he doesn't lay out the rules of how the  $c$  variable is passed on and altered throughout and across utterances. This seems to be the reason for the combinatorial awkwardness in (5), as the rule of expressive composition in (5b) seems to be conceived of as a way to pass on the context variable, but ends up being a bit like a time travel loop: the expressive takes the original context for interpreting  $\alpha$  as part of its input and outputs a new context for interpreting  $\alpha$ . Even more importantly for our purposes, the context-altering potential of expressives, thus, ends up being tied to them composing with another expression, which doesn't strike me as a good way to capture the immediate nature of performative meaning contributions, especially considering that expressives can be standalone utterances.

So, even at this point, one could argue that a conceptually (and formally) cleaner system would be a properly dynamicized one<sup>10</sup> that, furthermore—and crucially for the purposes of this paper, separates any immediate, performative effects a given expression has on the context by virtue of being uttered from the effects of this expression composing with its syntactic surroundings. This idea is represented in (7). Here, the underlying assumption is that each expression has both its immediate context-altering effect (which is non-truth-conditional) and the effect of it composing with its syntactic surroundings (which is truth-conditional) specified as part of its meaning, and either one can in principle be vacuous (of course, the two can be further sewn together within a larger system of dynamic updates, where a “context” can be an even more complex object that carries both truth-conditional and non-truth-conditional content, updated independently of one another—as well as referent stacks and any other things one might want to keep track of). Thus, (7a) specifies the context-altering effect of uttering the expressive  *fucking* ; (7b) specifies the effect of it composing with its sister (in this case, vacuous). Here, the only difference between  *Fuck!*  and  *fucking*  would be that the former doesn't compose with anything. However, since the latter does compose with something, it can in principle make a non-vacuous compositional contribution, as well.

- (7) Expressive semantics in a version of Potts 2007b that separates immediate context-altering effects of an expression from its compositional contribution (adopted in this paper)
- a. Context-altering effect of producing  *expr* :  
 $c \rightarrow c'$ , where  $c'$  is just like  $c$ , except  $\text{feels}(c'_s, c'_e)$
  - b. (Possible) effect of composing  *expr*  with its sister:<sup>11</sup>  
 $\llbracket \text{expr}_{\langle \sigma, \sigma \rangle} \rrbracket^c(\llbracket \alpha_\sigma \rrbracket^c) = \llbracket \alpha_\sigma \rrbracket^c$

As we will see in subsection 3.2, separating immediate context-altering effects of an expression from its compositional contribution also offers a straight-forward way to capture the “parasitic” behavior of non-truth-conditional meanings, whereby they don't have to interact semantically with the meanings of their surroundings. It would also allow for a given expression

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<sup>10</sup>Just like Potts himself, I will not attempt to work out the details of such a dynamicized system, as the main goal of this paper is to demonstrate the need for a system that properly separates non-truth-conditional meanings from truth-conditional ones, which can be accomplished by simply dropping the compositional “glue” component of Potts 2007b—not to improve on the system in Potts 2007b beyond that.

<sup>11</sup>My use of the same  $c$  variable here and in similar cases later shouldn't be taken to imply that the context of interpretation stays the same when interpreting this structure, only that no changes to the context are introduced as part of this composition.

to make both a truth-conditional contribution compositionally and a non-truth-conditional contribution that is still independent of what this expression composes with—instances of which we will see in subsection 3.2.3. However, note that such a radical separation, whereby all performative context altering is done with no direct interaction with the expression’s syntactic surroundings, constrains the ways in which we can model cases when there is an apparent interaction between a given non-truth-conditional meaning and the meanings of its surroundings. I will briefly come back to this issue in subsection 5.1, ultimately suggesting that this is, in fact, a welcome consequence.

Before I proceed to discussing the empirical arguments in favor of such a divide, let me add a few clarifications. The only major change I am introducing to the expressive semantics in Potts 2007b is getting rid of any compositional link between expressive and truth-conditional contributions—in view of the arguments presented in subsection 3.2; I do not change the rest of the system. However, one might argue that the expressive semantics in Potts 2007b still does not properly capture the performative nature of expressive meanings. Indeed, what Pottsian expressives ultimately do is make a record in the tally of the emotional states of the conversation participants, which, one could argue, is still too information-transfer-oriented, contra the intuitive goals of purely expressive utterances as discussed in subsection 2.1 (in their core use, we don’t utter expressives to make a record, we utter them to relieve internal tension).<sup>12</sup>

In my opinion, what this ultimately highlights is the limitations of our current model-theoretic approaches to meaning. To overcome these limitations, we would seemingly need to completely revamp our approach to modeling meaning formally—which is well beyond the scope of this paper. That said, I believe that a potentially promising direction could be to adopt a goal-based conception of meaning, where the architectural distinction between “truth-conditional” and “non-truth-conditional” meanings discussed in subsection 3.2 would be cashed out in terms of drastically different types of goals that don’t interfere with one another. For instance, we could model the meanings that participate in information exchange in terms of goals of evoking concepts, constructing more complex concepts with more complex linguistic expressions and eventually building up to assertable content—going in the direction of the non-truth-based framework of meaning composition pursued in Pietroski 2018. These goals need to be kept track of at least until the assertable content is fully built. In contrast, expressive meanings would be modeled in terms of expressive goals, such as tension relief, checked off as soon as the relevant form is uttered.<sup>13</sup>

For the purposes of this paper, however, the (altered) system in Potts 2007b is sufficient: even if it might not be perfect for capturing performative meaning effects, it is still superior to CI or presupposition-based approaches, because it (i) treats expressive meanings as non-truth-based; (ii) explicitly sets apart expressive meanings from truth-conditional, but not-at-issue types of content, such as appositives, sentence-level adverbs, lexical presuppositions, or non-restricting modifiers. This makes it both more appropriate to capture the fact that expressive meanings do not factor into the proposal exchange part of a conversation (even if the expressive parameter still contains “epistemic objects” in the words of an any-

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<sup>12</sup>A similar point was made by an anonymous reviewer.

<sup>13</sup>See also Esipova 2022b on how a goal-based approach to meaning can be applied both to meaning in language and near-language as well as to meaning in obviously non-linguistic systems of generating complex behavioural outputs.

mous reviewer)<sup>14</sup> and, crucially for the goals of this paper, formally institutes the distinct architectural status of expressive meanings, the key empirical evidence for which is discussed in subsection 3.2.

### 3. Motivating the truth-conditional vs. non-truth-conditional divide

The main point of this paper is that we need to formally separate truth-conditional vs. non-truth-conditional meanings on architectural (i.e., cognitive) grounds. Now, we do have some psycho- and neurolinguistic evidence suggesting that non-truth-conditional meanings are cognitively distinct from truth-conditional ones (see, for instance, Donahoo & Lai 2020 for some recent evidence that swear words are cognitively distinct from non-swear words, including those with “negative” meanings, as well as an overview of relevant prior research). But this evidence, while important for the general argument that non-truth-conditional meanings are distinct from truth-conditional ones, is restricted to differences between lexical items. However, formal semantic and pragmatic analyses typically aim to model the contribution of a given lexical item to the meaning of larger utterances. And while we can study differences in integration of truth-conditional vs. non-truth-conditional meanings into larger utterances using psycho- and neurolinguistic methods as well, in this section, I will show you that we can obtain some relevant evidence using exclusively introspection-based data.

First, in subsection 3.1, I show that attempts to reduce non-truth-conditional meanings to some existing type of not-at-issue meanings (e.g., Potts 2005; Schlenker 2007) are misguided, as the at-issue vs. not-at-issue distinction simply doesn’t apply to non-truth-conditional meanings. Then, in subsection 3.2, I present the main argument of this paper by showing that non-truth-conditional meanings can “parasitize” on the utterances they integrate into in ways that even not-at-issue truth-conditional meanings cannot. This is also evidence against treating non-truth-conditional meanings as some type or other of not-at-issue truth-conditional meanings (contra Potts 2005; Schlenker 2007), but it furthermore suggests that we need to completely separate performative context-altering effects of producing a given form from the compositional meaning contribution associated with that form (in favor of the more radical version of Potts 2007b in (7)).

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<sup>14</sup>To elaborate some more on this point: my understanding of Potts’ system is that the updates to the expressive parameter of the context are done automatically, i.e., expressive contributions do not in and of themselves involve felicity conditions on context updates (in contrast to, e.g., presupposed material). The only felicity condition Potts introduces is that of expressive consistency, which is an overarching condition that is essentially meant to rule out inconsistent emotional states (it is not important for the purposes of this paper, but let me note that it could and probably should be very relaxed—in particular, by being very time-sensitive). Here, a comparison could also be made to the analysis of appositives as “impositions”, i.e., a special type of context updates, in AnderBois et al. 2015. Appositives as impositions are still treated as propositional content, just as propositional content that the speaker tries to “sneak in”, impose on the context set without negotiation (but, of course, other conversation participants can still challenge those impositions). Crucially, both regular, at-issue proposals and appositive impositions update the same object, i.e., the context set. As far as this paper is concerned, having a separate, non-truth-based expressive parameter as part of the context tuple that gets updated every time an expressive form is produced is enough to formally institute the distinct architectural (i.e., cognitive) status of expressive updates.

### 3.1. The inapplicability of the at-issue vs. not-at-issue distinction to non-truth-conditional meanings

One of the claims commonly made in the literature is that expressives such as *fucking* make *not-at-issue* contributions. This has, in particular, led to the occasional conceptualization of the question about the semantics of expressives as the question about what type of not-at-issue content they are, e.g., are they “conventional implicatures”, as in Potts 2005, or are they “presuppositions”, as in Schlenker 2007? Furthermore, this apparently resulted in the tendency to characterize any affect-related not-at-issue content as expressive. The claim that expressives contribute not-at-issue content is, however, misleading.

The *at-issue* vs. *not-at-issue* distinction has been conceptualized in various ways in the literature (see, e.g., Koev 2018 for an overview), but at the intuitive level, it is ultimately about whether or not a given piece of meaning has non-trivial consequences for any of the issues that the utterance is meant to raise or address. This further correlates (albeit not always perfectly) with various properties of said piece of meaning, such as its potential to answer questions, potential to be targeted by various responses in the discourse, potential to interact with the semantic operators in whose syntactic scope it appears to be, etc.

However, asking whether a given piece of content addresses any issues (and can, therefore, in principle, answer a question, be targeted by a direct denial, interact with semantic operators, etc.) only makes sense for truth-conditional content. Performative utterances that pursue goals other than collaborative information exchange are never meant to address any issues, so, while, indeed, technically, the meaning they contribute is never at-issue, a more accurate claim would be that the at-issue vs. not-at-issue distinction does not apply to them.

This distinction isn’t just intuitive (although, once again, I do not want to dismiss the validity of conceptual arguments), it also has empirical consequences. The truth-conditional content of an utterance can be packaged in various ways; in particular, some of it can be sidelined (as is typically the case with supplements) or presupposed (in the classical sense of the word)—both of which will make it not-at-issue, with some or all empirical consequences listed above. Yet, sidelined or presupposed content remains truth-conditional (which is, once again, reflected in the existing formal analyses thereof) and can demonstrate various deviations from the expected not-at-issue behavior profile.

For instance, many inferences labeled “presuppositions” can be to a varied extent interpreted locally under semantic operators under certain circumstances (a phenomenon often referred to as *local accommodation*, following Heim 1983). Similarly, appositives have been argued to be able to interact with semantic operators, address questions under discussion, and be targeted by direct denials under various circumstances (see, e.g., Koev 2013; AnderBois et al. 2015; Syrett & Koev 2015; Esipova 2018).<sup>15</sup>

In contrast, the invisibility of non-truth-conditional meanings to truth-conditional semantic operators and the unfaltering non-negotiability of their contributions (modulo, of course, metalinguistic discourse) is absolute.<sup>16</sup> As a case in point, let’s take a look at the contrasts between true expressive items like *fucking* and truth-conditional evaluative adjectives.

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<sup>15</sup>Ironically, Potts’s (2005) CIs are too strong as formulated for appositives, precisely due to the complete impenetrability of the CI dimension for semantic operators.

<sup>16</sup>This should not be taken to mean that non-truth-conditional meanings cannot be sensitive to full or partial perspective shifts. I come back to this issue in subsection 5.2.

tives like *lovely* or *disgusting*. The latter have been claimed to make CI contributions when they are non-restricting in Potts 2005. Similarly, Schlenker (2007) compared expressive items to non-restricting instances of evaluative modifiers, proposing that both trigger informative “self-fulfilling” presuppositions, but the former do so lexically while the latter do so “compositionally” (which, as far as I can tell, is intended to mean that they do so when they are inside definite descriptions that are known to hold of exactly one individual without that modifier—but, as we will see shortly, non-restricting readings of modifiers obtain in a broader range of cases).

First, let me introduce some relevant notions. Throughout this paper I use the term *modifier* from the point of view of semantic composition, i.e., to refer to any compositionally independent expression that combines with another expression of type  $\tau$  with the result of this composition also having the type  $\tau$ . The syntactic status of said modifier is mostly irrelevant, with the caveat that if we allow for intersective modification, we need access to syntactic information to determine which of the two expressions is the modifier and which one is the expression being modified, since their semantic types will be the same. Next, *subsective modifiers* are modifiers such that the result of modification entails the expression being modified (via generalized entailment). For instance, *obnoxious* is a subsective modifier, because *obnoxious N* entails *N*.

The *restricting* vs. *non-restricting* distinction arises for subsective modifiers and is illustrated in (8). Under the restricting reading, *obnoxious* is intended to affect the truth conditions of the sentence, i.e., (8) isn’t contextually truth-conditionally equivalent to the version of itself without *obnoxious*. Instead, *obnoxious* is meant to pick out a potentially smaller subpart of the denotation of the expression it composes with. Under the non-restricting reading, however, *obnoxious* is meant to be contextually truth-conditionally vacuous, i.e., the sentence is meant to be contextually truth-conditionally equivalent to the version of itself without *obnoxious*. Instead, *obnoxious* is meant to contribute additional information about the denotation of the expression it composes with.

- (8) I don’t want any obnoxious semanticists at my talk.
- a. Restricting reading:
    - $\neq$  I don’t want any semanticists at my talk.
    - $\nrightarrow$  All semanticists are obnoxious.
  - b. Non-restricting reading:
    - $=$  I don’t want any semanticists at my talk.
    - $\rightarrow$  All semanticists are obnoxious.

This contextual truth-conditional non-vacuity of restricting modifiers allows us to characterize them as at-issue. Similarly, contextual truth-conditional vacuity of non-restricting modifiers characterizes them as not-at-issue.

As is argued in Esipova 2019b,c, the difference between the two readings isn’t due to lexical ambiguity or different compositional structures, but is entirely pragmatic. Thus, under both readings of (8), *obnoxious* composes with its sister like a regular subsective modifier; it is just that in the second case the subset it returns happens to be contextually equivalent to the input set.

When we interpret sentences like (8), we are trying to figure out which reading was

intended by the speaker, and many factors will come into play. These factors include, but are not limited to: our prior knowledge about the speaker’s beliefs and other contextual information; lexical semantics of the modifier (e.g., evaluative/subjective modifiers are often more likely to be non-restricting, because they, on the one hand, don’t make good restricting modifiers, and, on the other, are typically licensed by relevance considerations);<sup>17</sup> focus (which tends to signal relevance for the question under discussion and, thus, correlates with the at-issue interpretation); and even the surface configuration (e.g., gestural subjective modifiers co-occurring with the spoken expressions they modify tend to be non-restricting).

For instance, in (8), we might decide that the non-restricting interpretation is more likely if we have some preexisting reasons to believe that the speaker considers all semanticists obnoxious. Or we might have no such prior beliefs, but might still entertain the non-restricting interpretation because of the evaluative and subjective nature of the adjective *obnoxious*. In the latter case, we would further reason about what would make (8) contextually truth-conditionally equivalent to the version of itself without *obnoxious*, and one obvious way in which that could be true is if the speaker thinks that all semanticists are obnoxious.

This distinction, however, is very general and does not only apply to evaluative modifiers. Any modifier can be, in principle, non-restricting, as long as it is somehow relevant, as shown in (9) (here the non-restricting interpretation is enforced by the DP *my girlfriend* having only one potential referent, so that the modifier cannot perform any further restriction):

- (9) *Context: I only have one girlfriend.*  
 I am very short, so I always have to ask my tall girlfriend to get things from top shelves for me.  
 = I am very short, so I always have to ask my girlfriend to get things from top shelves for me.  
 → My girlfriend is tall.

The reader is referred to Esipova 2019b,c for further, more in-depth discussion of the restricting vs. non-restricting distinction, the various less obvious cases where it arises, and why the pragmatic analysis of this distinction is preferable to the alternatives.

Crucially, expressive items like *fucking* can never have restricting interpretations (the result is either ungrammatical or has the non-affective interpretation, e.g., *bloody* can only mean ‘covered in blood’ in (10)):

- (10) A: Which of her dogs is Lea bringing?  
 B: The {lovely / awesome / obnoxious / disgusting / #fucking, #bloody / \*(god)-damn} one.
- (11) a. If Lea brings a(n) {lovely / awesome / obnoxious / disgusting} dog, Mia will be happy.  
 Restricting interpretation possible:  
 ≠ If Lea brings a dog, Mia will be happy.  
 ≈ If Lea brings a dog that some salient judge finds {lovely / awesome / obnoxious / disgusting}, Mia will be happy.

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<sup>17</sup>See, e.g., Schlenker 2005; Leffel 2014 for discussion of the relevance constraint on non-restricting modifiers.

- b. If Lea brings a {fucking, bloody, (god)damn} dog, Mia will be happy.  
No restricting interpretation possible.

Relatedly, unlike truth-conditional items like *lovely*, expressive items like *fucking* cannot have predicative uses:

- (12)
- a. Lea’s dog is {lovely / awesome / obnoxious / disgusting / #fucking, #bloody / \*(god)damn}.
  - b. Mia finds Lea’s dog {lovely / awesome / obnoxious / disgusting / #fucking / #bloody / \*(god)damn}.

All this is, of course, entirely expected if items like *lovely* are just regular truth-conditional modifiers that encode someone’s (general or situational) attitude towards the denotation of the expression they combine with and can be pragmatically restricting (and, thus, at-issue) or non-restricting (and, thus, not-at-issue), with further ability to easily get non-restricting interpretations due to their evaluative nature, which enhances their relevance. In contrast, items like *fucking* are true expressives that performatively express one’s immediate feelings, with the at-issue vs. not-at-issue distinction inapplicable to them.

Now, at this point one could still argue that items like *lovely* can shift between expressive and non-expressive uses (while still preserving their core affective meaning), while items like *fucking* cannot. This doesn’t strike me as a good alternative to analyzing items like *lovely*, however, as the restricting vs. non-restricting distinction, which exists for all subjective modifiers, not just evaluative ones, already perfectly captures their behavior. Now, it is in principle possible that for some other items we might want to adopt the expressive–non-expressive ambiguity analysis, but I don’t believe it is appropriate for items like *lovely*, and in the next subsection we will see even more evidence to this effect.

Similarly, words like *bastard* or *idiot* used in epithets have also been analyzed as expressives. Gutzmann (2011) furthermore uses examples like (13) to argue that expressives can be modified by other expressives.

- (13) That fucking bastard Burns got promoted! (Gutzmann 2011, (3))

Now, is it in principle possible that expressive meanings can modify other expressive meanings at the level of compositional semantics? The existence of such modification would be incompatible with the view I propose in this paper whereby the expressive meaning of an expression (i.e., its performative effect on the expressive dimension of the context) is separate from its compositional contribution—under this view, expressive meanings can’t modify anything at all compositionally. Note, however, that meaningful modification of one expressive meaning by another would be distinct from formation of complex morphosyntactic objects using expressions that carry expressive meanings with no compositional interaction between these meanings—which can most certainly be done, especially, in languages with a rich functional morphology and a rich inventory of morphemes carrying expressive meanings like Russian, and which I briefly come back to at the end of subsection 3.2.1. It would also be distinct from an expression that carries both an expressive meaning component and a truth-conditional one (e.g., an expressive degree modifier, which I discuss in subsection 3.2.3) modifying another such expression, but with only the truth-conditional meaning components

interacting. Finally, it would be distinct from any meaning correspondences between two expressive meanings established non-compositionally (see subsection 5.1 for a brief discussion).

Of course, the question of whether such meaningful expressive-on-expressive modification does, in fact, exist is an empirical one. Crucially, I do not believe that cases like (13) are instances of such meaningful modification. First, I don't think that  *fucking*  in (13) actually modifies  *bastard*  semantically—an issue that I discuss in the next subsection. Second, I am skeptical about characterizing the attitudinal component of items like  *bastard*  as expressive. The reason why people seem to want to assimilate it to expressives is because they typically look at examples with definite descriptions like (13), in which the attitudinal component of  *bastard*  is bound to be not-at-issue. But, as we have already seen, not all not-at-issue affect-related meaning is expressive.

Now, it is not clear to me what the exact compositional structure of expressions like  *that bastard Burns*  should be:  *[that [bastard Burns]]*  or  *[[that bastard] Burns]* . Gutzmann (2011) assumes the former, with  *bastard*  modifying  *Burns* ; I think the latter is more likely. Whatever the case, however, we only have one salient Burns. The attitudinal component of  *bastard* , however, can be at-issue (without enforcing the non-affective interpretation of 'illegitimate child') in other configurations:

- (14) a. If you bring some bastard to my party, I will be upset.  
         Possible interpretation:  
         ≈ If you bring some despicable person to my party, I will be upset.
- b. Burns is a bastard.  
         Possible interpretation:  
         ≈ Burns is a despicable person.

Therefore, as with  *lovely* -like items, I believe that the attitudinal component of the word  *bastard*  is, in fact, truth-conditional. In cases like  *that bastard Burns*  we are then either dealing with non-restricting modification, if  *[that [bastard Burns]]*  is the structure,<sup>18</sup> or  *bastard*  is the head noun with the attitudinal component being sublexical ( *bastard*  ≈ 'despicable person') and ending up being not-at-issue in definite descriptions in the same way as other descriptive content in definite descriptions, as shown in (15b), where what's at-issue is whether the relevant individual entered the room, not whether or not they are a woman.

- (15) a. If a woman enters the room, press the left button.  
         ≠ If a person enters the room, press the left button. (under the non-specific interpretation of  *a woman* )
- b. [The woman]<sub>i</sub> entered the room.  
         = [The person]<sub>i</sub> entered the room.

Now, I do also believe that we might be more likely to use such non-neutral items as  *bastard*  in contexts in which we experience certain feelings (including contexts in which said feelings were caused by the person who we are referring to as  *that bastard* ). For one thing, such contexts are also ones which will eagerly license evaluative non-restricting modifiers.

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<sup>18</sup>Gutzmann (2011) assumes  *Burns*  is of type  *e* ; I believe a property-based analysis of names along the lines of Matsushansky 2008 is more plausible, making modification of names compositionally equivalent to that of regular nominals, however this is orthogonal to the current discussion.

Similarly, the utterance-external situation, including who the potential external observers are, will affect the overall style of our speech and how much we are willing to both express our emotions in a non-truth-conditional fashion as well as convey them truth-conditionally. However, all these issues are separate from the status of the attitudinal component of items like *bastard*. It is also entirely possible that words like *bastard* carry an expressive potential on top of their truth-conditional evaluative component, i.e., when we use the word *bastard*, we both communicate the evaluative component truth-conditionally and performatively derive some satisfaction from uttering a “strong” word. But there still doesn’t seem to be any sense in which this purported expressive component of *bastard* would be actually meaningfully modified by the expressive meaning of *fucking* in *fucking bastard*—the two would just make their expressive context-altering contributions independently.

The ultimate take-home point of this subsection is that not all affect-related meanings that fail to affect the truth conditions of a given utterance are expressive. They can be expressive, in which case they are non-truth-conditional and the at-issue vs. not-at-issue distinction simply doesn’t apply to them. But they can also be, for instance, truth-conditional modifiers that happen to be non-restricting, i.e., contextually truth-conditionally vacuous and, thus, not-at-issue, in this given utterance (and might even have a tendency to often be such due to their affect-related nature).

### 3.2. The “parasitic” behavior of non-truth-conditional meanings

In this subsection, I present the core argument of this paper by showing that truth-conditional and non-truth-conditional meanings are architecturally (i.e., cognitively) distinct. In particular, I demonstrate that non-truth-conditional meanings can “parasitize” on otherwise truth-conditional utterances without interacting with their hosts semantically—in ways that truth-conditional meanings cannot even if they are not-at-issue. I take this to be a strong indicator that not only do we need to properly separate truth-conditional and non-truth-conditional meanings in our formal theories (contra Potts 2005; Schlenker 2007), but also that we should not attempt to model the latter as compositional contributions at all (in favor of the more radical version of Potts 2007b in (7)).

The ability of expressives to convey the speaker’s feelings about things other than the denotation of their syntactic sister has been known for a while. For instance, Potts (2005) discusses examples like (16) and proposes that (unlike supplements) expressives can compose with any constituent at LF, regardless of their position in the syntax. He claims that specifically in (16), *damn* actually composes with the proposition that the machine didn’t come with an electric plug.

- (16) Nowhere did the instructions say that the damn machine didn’t come with an electric plug! (Potts 2005, (5.10a))

Setting aside the obvious point that this kind of LF promiscuity is suspicious, and it is, furthermore, unclear why expressives are different from the other things that Potts (2005) analyzes as CIs, the LF-based story in Potts 2005 is still too compositional, as expressives can be used to express feelings caused by and/or directed at something utterance-external rather than anything inside the utterance that hosts them.

For instance, if you see that someone is apparently about to hurt your dog, you can

yell (17a), where the expressive doesn't convey your attitude towards your dog or anything within the utterance, but rather serves as an outlet for your immediate heightened emotions caused by the utterance-external situation. Truth-conditional evaluative items like *lovely*, however, cannot be used in the same way—they have to convey the speaker's attitude about the denotation of their syntactic sister, even when they are not-at-issue (as is the case in (17b), where there is only one relevant dog of the speaker's).

- (17) a. Step away from my {fucking / bloody / (god)damn} dog!  
 ↗ The speaker has a certain attitude towards their dog.  
 b. Step away from my {lovely, awesome, obnoxious, disgusting} dog!  
 → The speaker has a certain attitude towards their dog.

A naturally occurring example illustrating the same point as (17a) is given in (18), where the speaker is producing an utterance from the perspective of an outraged parent, with the source/target of their heightened emotions clearly being utterance-external.

- (18) *Context: The speaker has previously established that they consider Jimmy Savile despicable. They are now entertaining the following hypothetical scenario.*  
 This is your babysitter showing up in a Jimmy Savile T-shirt. I don't care what you think that represents, you are not staying home with my fucking kid tonight.  
 ('Last Week Tonight with John Oliver', HBO, S4E26)

Furthermore, even though people sometimes call English items like *fucking* adjectives, they can integrate into larger utterances in ways other adjectives, including those truth-conditional evaluative adjectives like *lovely*, cannot. For instance, if one is annoyed by some loud unpleasant music and wants it to stop—or, conversely, if one is hearing some extremely pleasant music, and they are overwhelmed by this aesthetic experience and want it to never stop—they can utter (19) with one of the expressive items, but none of the truth-conditional evaluative adjectives.

- (19) I hope this music (never) {fucking / bloody / goddamn / \*lovely / \*awesome / \*obnoxious / \*disgusting} stops!

Now, in cases like (19), it's not even obvious that the expressives are part of the same syntactic structure as their hosts. It is possible that they are parasitizing on the prosodic structure of the host utterance, but don't integrate with it syntactically, at least not locally. But, of course, once we allow for this, we can also say that this is also the case in examples like (17a). English, however, is not the most user-friendly language to try to establish this with enough certainty, due to the scarcity of its visible morphology. Thus, I will now turn to Russian to show that expressives can exhibit both syntactic and prosodic parasitism.

### 3.2.1. Syntactic “parasites”

Russian has a range of affective suffixes, whose morphosyntactic properties are discussed, for example, in Steriopolo 2008. I provide some examples in (20), with all the affective suffixes glossed as AFF for now; the typical affect associated with the (given instance of the) relevant suffix(es) is given in parentheses, although the specific flavor and degree of the affect will

vary across suffixes, expressions they combine with, speakers, contexts of use, etc.<sup>19</sup> Many of Russian affectionate suffixes also have diminutive uses, but the diminutive component doesn't have to be preserved in affective uses (unlike in the suffixes labeled 'augmentative + derogatory'). Similarly, some of the pejorative suffixes can have a diminutive component, but it isn't always there.

- |   |   |
|---|---|
| <p>(20) a. mam-očk-a<br/>mother-AFF-NOM.SG<br/>(affectionate)</p> <p>b. mam-ul'-a<br/>mother-AFF-NOM.SG<br/>(affectionate)</p> <p>c. mam-ul'-ečk-a<br/>mother-AFF-AFF-NOM.SG<br/>(affectionate)</p> <p>d. mam-ul'-en'k-a<br/>mother-AFF-AFF-NOM.SG<br/>(affectionate)</p> <p>e. kot-ik<br/>cat-AFF<br/>(affectionate)</p> <p>f. kot-ič-ek<br/>cat-AFF-AFF<br/>(affectionate)</p> <p>g. kot-in'k-a<br/>cat-AFF-NOM.SG<br/>(affectionate)</p> <p>h. koš-ak<br/>cat-AFF<br/>(derogatory)</p> <p>i. sobač-k-a<br/>dog-AFF-NOM.SG<br/>(affectionate)</p> | <p>j. sobač-en'k-a<br/>dog-AFF-NOM.SG<br/>(affectionate)</p> <p>k. sobač-ar-a<br/>dog-AFF-NOM.SG<br/>(augmentative + derogatory)</p> <p>l. sobač-enci-ja<br/>dog-AFF-NOM.SG<br/>(pejorative)</p> <p>m. starič-ok<br/>old.man-AFF<br/>'old man' (affectionate)</p> <p>n. starik-an<br/>old.man-AFF<br/>'old man' (derogatory)</p> <p>o. starik-ašk-a<br/>old.man-AFF-NOM.SG<br/>'old man' (pejorative)</p> <p>p. zver'-ug-a<br/>animal-AFF-NOM.SG<br/>(augmentative + derogatory)</p> <p>q. zmej-uk-a<br/>snake-AFF-NOM.SG<br/>(derogatory)</p> <p>r. dev-ax-a<br/>girl-AFF-NOM.SG<br/>(augmentative + derogatory)</p> |
|---|---|

Steriopolo (2008) claims that all Russian affective suffixes are Pottian expressives (she doesn't discuss the specifics of the formalisms in Potts 2005 vs. Potts 2007b, but relies on Potts 2007b descriptively). However, some Russian affective suffixes do have the ability to serve as outlets for the speaker's immediate emotions caused by and/or targeting something utterance-external without semantically interacting with their syntactic surroundings, which we previously observed for English expressives in (17a) and (18), while others don't.

Thus, in (21), the speaker is overwhelmed by their dog's cuteness and generously sprinkles affectionate suffixes all over their utterance—in a way that is very common in pet- or

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<sup>19</sup>Many of the suffixes in (20) are, in fact, morphologically complex. For instance, in *-Vč-k-*, the two parts *-Vč-* and *-k-* are allomorphs of the same diminutive suffix. However, I only split such suffix clusters in cases when I believe that the parts contribute meaning independently in a transparent way.

child-directed speech—without, of course, intending to convey any affection for fresh things, water, the bowl, quick events, or walking events. In contrast, in (22), the speaker has to be conveying their attitude towards the old man and his dog, i.e., the derogatory/pejorative attitude cannot be, for instance, targeting the addressee. Relatedly, only suffixes that can express affection in this non-truth-conditional way (-*Vn'k-*, -*Vn'-Včk-*) can go on non-nominal categories (productively on adjectives and adverbs, less productively on infinitives).

(21) *Context: The speaker is talking to their dog.*

Ja sečas nal'ju tebe svež-en'k-oj vod-ičk-i v  
 I.NOM now pour.1SG.FUT you.DAT fresh-EXPR-PTV.SG.F water-EXPR-PTV.SG in  
 mis-očk-u, a potom my bystr-en'k-o pojdëm  
 bowl-EXPR-ACC.SG, and then we quick-EXPR-ADV go.FUT.1PL  
 guljat-en'k-i.  
 walk.INF-EXPR-INF

≈‘I will now pour fresh water into a bowl for you, and then we will quickly go for a walk; also, I am expressing me being overwhelmed by my dog’s cuteness.’

(22) Vpusti ètogo ⟨starik-an-a /  
 let-in.IMP.SG/T this.ACC.SG.M ⟨old.man-DEROG-ACC.SG /  
 starik-ašk-u) i ego ⟨sobač-ar-u / sobač-enc-iju⟩.  
 old.man-PEJOR-ACC.SG) and his ⟨dog-DEROG-ACC.SG / dog-PEJOR-ACC.SG⟩  
 ≈‘Let in this ⟨stupid / pathetic⟩ old man and his ⟨stupid / pathetic⟩ dog.’

Thus, Russian affectionate suffixes behave like true expressives while derogatory suffixes behave like truth-conditional items with an attitudinal component like *lovely*. But, of course, both are suffixes: they are bound morphemes, which are fully morphosyntactically integrated into the host word (they are subject to strict ordering constraints, exhibit lexical idiosyncrasy, trigger and are subject to allomorphy, etc.) and cannot be standalone utterances (no matter how cute your dog is, you cannot just yell *En'k!* at it).

Note also that Russian diminutive suffixes can be used in a non-truth-conditional fashion not only to express the feeling of being overwhelmed by cuteness, but also to perform the social function of expressing friendliness (these two non-truth-conditional uses are related, of course). For instance, in (23b), the speaker adds a diminutive suffix on ‘window’ not because the window is small or because they are feeling particularly affectionate towards anything utterance-internal or utterance-external, but simply to “soften” their request.

(23) a. Otkroj, požalujsta, okno.  
 open.IMP.SG/T please window  
 ‘Open the window, please.’  
 b. Otkroj, požalujsta, ok-ošk-o.  
 open.IMP.SG/T please window-EXPR-NOM.SG  
 ≈‘Open the window, please; also, I am being friendly.’

These data on Russian affective suffixes clearly show that non-truth-conditional meanings can be syntactically parasitic, i.e., that they don’t have to semantically interact with their host utterance even when the expressions carrying them are fully integrated into the syntactic

structure of said utterance in a regular way. In contrast, truth-conditional meanings must interact with their syntactic surroundings semantically. In particular, we cannot have items like *lovely*' in (24) that (i) integrate syntactically with their surface surroundings, (ii) make a potentially truth-conditionally non-vacuous contribution, but (iii) do not have to interact semantically with their syntactic context.

- (24) Hypothetical item *lovely*' (unattested):  
 If Lea brings a lovely' dog, Mia will be happy.  
 = If (Lea brings a dog and the speaker or some salient judge has certain unrelated feelings or attitudes), Mia will be happy.

This suggests that truth-conditional and non-truth-conditional meanings are processed using distinct cognitive resources. Processing two independent meanings, one truth-conditional and the other non-truth-conditional, within a single syntactic structure doesn't cause a cognitive overload, but trying to process two independent truth-conditional meanings within the same syntactic structure does. In other words, semantics does care about the truth-conditional vs. non-truth-conditional distinction, even if syntax is oblivious to it. Therefore, we must properly reflect this distinction in our formal semantic theories and should not be trying to assimilate expressive meanings to some type or other of truth-conditional, but not-at-issue meanings (contra Potts 2005; Schlenker 2007).

Now, either the original system in Potts 2007b presented in (5) or a version thereof that separates performative context-altering effects of a given expression from its compositional contribution in (7) could in principle be used to capture the semantics of Russian expressive suffixes. However, in the latter case, the lack of compositional interaction of their expressive meanings with their syntactic surroundings is entirely expected—in fact, it is obligatory. The (cognitively motivated) ban on items like *lovely*' needs to be posited independently either way. Russian truth-conditional affective suffixes, in turn, should be treated as regular modifiers with a strong propensity to being non-restricting. For concreteness, the lexical entries for an expressive diminutive *-očk-* and a derogatory suffix *-an-* are provided in (25) and (26), respectively (here, *affectionate* is a more specific version of the placeholder *feels* label in (7) and is an approximation of the kind of affect that can be expressed by such diminutives).

- (25) a. Context-altering effect of producing *-očk-*:  
 $c \rightarrow c'$ , where  $c'$  is just like  $c$ , except  $\text{affectionate}(c'_s, c'_\varepsilon)$   
 b. Effect of composing *-očk-* with its sister:  
 $\llbracket -V\check{k}k_{\langle et, et \rangle} \rrbracket^c = \lambda P_{et} \lambda x_e. P(x)$
- (26) a. Context-altering effect of producing *-an-*: none ( $c \rightarrow c$ )  
 b. Effect of composing *-an-* with its sister:  
 $\llbracket -an_{\langle et, et \rangle} \rrbracket^c = \lambda P_{et} \lambda x_e. P(x) \wedge c_s \text{ has a derogatory attitude towards } x$

At this point, one might ask if Russian truth-conditional affective suffixes can ever be restricting. One thing that complicates the empirical picture is that these suffixes often come with an additional augmentative (derogatory) or diminutive (pejorative) meaning component, which is clearly truth-conditional and is often hard to fully suppress. Thus, if we try to force restricting uses of derogatory/pejorative suffixes, it's hard to be sure that we are

not getting a restricting reading of the non-attitudinal component of their meaning, with the attitudinal one coming along for the ride but remaining truth-conditionally vacuous. Also, natural equivalents of fragment responses like (10) in Russian involve fronting the focused element and eliding the rest of the utterance, which is, of course, impossible in the case of suffixes. That said, it seems to be possible to have, for instance, pejorative suffixes make truth-conditionally non-vacuous contributions like (27), which has a reading where the speaker specifically doesn't like people who only write one poor quality, insignificant book and start thinking of themselves as great writers, not all people who only write one book and start doing so.

- (27) Ja ne ljublju ljudej, kotorye napišut odnu kniž-enci-ju i sčitajut  
 I not like people who write.FUT.3PL one book-PEJOR-ACC and consider  
 sebja velikimi pisateljami.  
 themselves great writers  
 'I don't like people who write a single pathetic book and start thinking of themselves  
 as great writers.'  
 Possible interpretation:  
 ≠ 'I don't like people who write a single book and start thinking of themselves as  
 great writers.'  
 ↗ When people write a single book, that book is pathetic.

To wrap up this subsection, I would also like to bring up the case of ultimate syntactic parasitism that is morphosyntactically complex utterances that are purely expressive, with no meaningful internal semantic composition. When overwhelmed with particularly strong emotions, we could just produce a string of standalone expressive interjections, but we could also stitch together expressive roots using our morphosyntax, including functional morphemes, but without any meaningful semantic composition—in a way that could on occasion pack an arguably more powerful expressive punch than a string of unconnected interjections, possibly due to its prosodic connectedness. Thus, in utterances like in (28), we are not trying to meaningfully predicate *bloody* or *fucking* of *shit* or the truth-conditionally meaningless compound adjective of the truth-conditionally meaningless compound noun in (28b).

- (28) a. Bloody fucking shit!  
 b. Xu-e-bljad-sk-aja govno-mud-o-pizd-iš-a!  
 cock-LV-whore-ADJ-ADJ.FEM.SG.NOM shit-LV-balls-LV-cunt-N-FEM.SG.NOM  
 A very strong expressive utterance.

The potential for generating such expressive Jabberwockies in English appears to be fairly limited, and utterances like (28a) could be argued to be idiomatized,<sup>20</sup> but in Russian, with its richer functional morphology, the potential for generating completely novel utterances like (28b) is quite high. This really drives home the point of architectural independence of expressive meaning from semantic composition.

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<sup>20</sup>See also Progovac 2022 for a discussion of idiomatized expressive compounds like *shitface*.

### 3.2.2. Prosodic “parasites”

Russian also has expressive particles, of varying degrees of obscenity, that only seem to integrate with their hosts prosodically without integrating with them syntactically and most certainly don’t have to interact with their surface surroundings semantically. I give some examples of these in (29).

- (29) a. *bljad’* — lit. ‘whore’  
 b. *blja* — truncation of *bljad’*, with less expressive power  
 c. *blin* — lit. ‘blin’ (a type of pancake), euphemism of *bljad’* in its expressive use  
 d. *suka* — lit. ‘bitch’  
 e. *sukabljad’* — idiomatized compound of *suka* and *bljad’*  
 f. *mat’-tvoju*<sup>21</sup> — lit. ‘mother.ACC-your.SG/T.ACC’  
 g. *mat’-vašu* — lit. ‘mother.ACC-your.PL/V.ACC’

These particles are completely morphosyntactically inert; they can appear in any prosodically appropriate position within the host utterance;<sup>22</sup> and they can be standalone utterances:

- (30) a. Gde ((*blja(d’)* / *blin*)) moja ((*blja(d’)* / *blin*)) ručka ((*blja(d’)* / *blin*))?!  
 where ((*EXPR* / *EXPR*)) my ((*EXPR* / *EXPR*)) pen ((*EXPR* / *EXPR*))  
 ≈ ‘Where is my ⟨fucking / freaking⟩ pen?!’  
 b. ⟨*Blja(d’)* / *Blin*⟩!  
 ≈ ‘⟨Fuck / Shoot⟩!’

Thus, it makes sense to treat instances of expressive particles in (30a) in the same way as those in (30b), i.e., as independent utterances that only make expressive contributions. The former just happen to prosodically parasitize on other utterances. Since these utterances are compositionally independent, we only need to specify their context-altering effect (as before, **angry** is an approximation of the kind of affect *bljad’* can express):

- (31) a. Context-altering effect of producing *bljad’*:  
 $c \rightarrow c'$ , where  $c'$  is just like  $c$ , except **angry**( $c'_s, c'_e$ )  
 b. Compositional effect of *bljad’*: none (doesn’t compose with anything)

Now, one could posit that Russian expressive particles (or even suffixes) expone an abstract object that is still technically part of the same compositional structure as the rest of the utterance, for instance, some sort of speech act modifier that overwrites the context to indicate that this speech act is produced by a speaker experiencing such and such feelings.

<sup>21</sup>I write *mat’tvoju* and *mat’vašu* as a single orthographic word to reflect the fact that in the target pronunciation they form a single prosodic word; this spelling can also be sometimes found in the wild, especially in online communication (cf. uninverted, two-prosodic-word versions *tvoju mat’* and *vašu mat’*). Also, despite the apparent internal composition of these expressives, they don’t have to be directed at the addressee (see also the end of subsection 3.2.1).

<sup>22</sup>In general, prosodification of expressive particles in Russian seems to be quite variable. They can attach as clitics on the preceding word carrying a pitch accent, but they can also carry pitch accents themselves. Combined with the possibility of choppy meter, discussed in 4.2, and the fact that Russian is in general much more liberal than, say, English when it comes to meter, this results in many licit prosodic structures for utterances with expressive particles. A proper investigation of those, as well as any potential meaning differences associated with different prosodic structures, is beyond the scope of this paper.

However, I don't see why such an analysis is needed, and, more importantly, I find it less conceptually appealing than an analysis in which expressives make their contributions locally, i.e., where the expressions that carry them appear in the surface structure—or even more precisely, when these expressions are uttered, which reflects the performative nature of non-truth-conditional meanings much better. This also allows us to explain why repeating expressives creates a stronger expressive effect (in contrast to treating such repeated instances as essentially concord, with no additional meaning effect) and to capture changes in the speaker's emotional state throughout the utterance (see also subsection 5.1).

### 3.2.3. Sublexical “parasites”

As I already anticipated at the end of subsection 2.1, a single lexical item can very well carry both truth-conditional and non-truth-conditional meanings. A prime example of such items are expressive degree modifiers, such as in (32), which encode both a degree meaning and an expressive meaning.

- (32) The movie's {fucking / (god)damn / bloody} good!  
 ≈‘The movie is very good; also, I am expressing some feelings.’

Since such items typically encode high degree meanings, they are often called *expressive intensifiers*. I will primarily use this term in this subsection, as well, as it is descriptive and doesn't presume that expressive degree intensification is always done as modification, i.e., going from an expression of a certain semantic type to an expression of the same type (for instance, Russian expressive intensification in (37) might not be modification in this sense). Note, however, that degree modification isn't always intensifying; it can be, for instance, attenuating, or convey more nuanced information about the degree than simply ‘high’ or ‘low’—as I will ultimately end up proposing for a range of degree modifying expressions in this paper. Various properties of expressive intensifiers are discussed, for instance, in Esipova 2019d; Gutzmann 2019. Here I will focus on the potential for parasitic behavior of their expressive component.

As observed in Esipova 2019d and illustrated in (33), the degree meaning component of expressive intensifiers is not only truth-conditional, but is typically truth-conditionally non-vacuous, i.e., at-issue (and, thus, interacts with semantic operators and gets preserved during ellipsis/anaphora resolution), which is typically the case for all degree modifiers.

- (33) a. If the movie's {very / extremely / fucking / (god)damn / bloody} good, I'll stay till the end of the credits.  
       ≠ If the movie's good, I'll stay till the end of the credits.  
 b. A: This car is {very / extremely / fucking / (god)damn / bloody} fast.  
       B: So is this one. #Although this one is only moderately fast.

However, the expressive component of expressive intensifiers can still serve as an outlet for the speaker's emotions caused by and/or targeted at something utterance-external. For instance, in the naturally occurring example in (34), the two instances of *fucking* seem to simultaneously make a truth-conditional contribution compositionally (indicating the high degree of the adjacent predicate) and serve as an outlet for the speaker's anger caused by the journalist's question (the latter is particularly obvious for the second instance, where the

speaker’s anger clearly isn’t directed at great things, nor anything else in the sentence).

- (34) *Context: Daniel Craig, in an interview, when asked if Phoebe Waller-Bridge was a “diversity hire” for ‘Bond’:*

Look, we’re having a conversation about Phoebe’s gender here, which is fucking ridiculous. She’s a great writer. Why shouldn’t we get Phoebe onto Bond? (...) I know where you’re going, but I don’t actually want to have that conversation. I know what you’re trying to do, but it’s wrong. It’s absolutely wrong. She’s a fucking great writer. One of the best English writers around.

(‘Daniel Craig Says It’s ‘Fucking Ridiculous’ to Ask if Phoebe Waller-Bridge Was a Bond Diversity Hire’, Esquire, 11/5/2019, <https://www.esquire.com/entertainment/movies/a29696991/daniel-craig-phoebe-waller-bridge-james-bond-diversity-hire/>)

A similar example is given in (35), where the speaker is having an emotional breakdown caused by a range of utterance-external circumstances (including the fact that they had to quit their job), with both instances of *fucking* serving as outlets for their general distress, but the former also arguably acting as a degree intensifier.

- (35) I was a fucking great detective who loved her fucking job.  
(‘Dexter’, Showtime, S6E4)

To properly analyze items that carry both truth-conditional and non-truth-conditional meanings in the original system from Potts 2007b, we would need to enrich its combinatorics, for instance, by allowing two expressions to compose via both expressive and regular composition. But this only highlights the conceptual inadequacy of “expressive composition” in the first place: we simply don’t need this notion to capture the performative effect of expressive intensifiers—what we need is a system of rules for incremental context updates, with performative ones being done as soon as the relevant expression is uttered and with no regard for its compositional context.

In contrast, in a system that explicitly separates performative context altering from compositional contributions, as in (7), the two meaning components of expressive intensifiers will be specified separately, e.g. ((36b) is adapted from the type-flexible degree modification in Esipova 2019d):

- (36) Expressive degree intensifiers within a version of Potts 2007b from (7)
- a. Context-altering effect of producing  $expr_{deg}$ :  
 $c \rightarrow c'$ , where  $c'$  is just like  $c$ , except  $feels(c'_s, c'_e)$
  - b. Effect of composing  $expr_{deg}$  with its sister:  

$$\llbracket expr_{deg} \rrbracket^c (\llbracket \alpha_{\langle d, \langle \tau_1 \dots \tau_n, t \rangle} \rangle \rrbracket^c) =$$

$$\lambda d \lambda X_{\tau_1}^1 \dots X_{\tau_n}^n. \llbracket \alpha \rrbracket^c(d)(X^1) \dots (X^n) \wedge \text{react}_{\llbracket \alpha \rrbracket^c}(\text{“expr”}, d),$$
 where  $\text{react}_{\llbracket \alpha \rrbracket^c}(\text{“expr”}, d)$  means that  $d$  meets the  $\alpha$ -specific standard for reacting to an instantiation of  $d$  with  $expr$

Now, I could have simply written something like  $\text{high}_{\llbracket \alpha \rrbracket^c}(d)$  in (36b) to characterize the degree as modified by a given expressive, as in prior literature on the phenomenon, but there is value in pursuing a quotation-based analysis that makes reference to the surface form.

The intuition behind this analysis might seem more obvious in the case of Russian expressive degree intensification as in (37a) and (37b), where, morphosyntactically, the original expressive items are a noun and an imperative, respectively. However, both can be used as standalone expressive utterances, and it appears that we can build additional compositional structure around these expressive utterances, turning them into truth-conditional properties along the lines of ‘such that it would make me/one go “Pizdec / Pipec / Zaebis’ / Zašibis’!’’, which in this case characterize the degree.<sup>23</sup>

- (37) a. Ona {pizdec / pipec} (kakaja) umnaja.  
 she {EXPR / EXPR} (what.ADJ) smart  
 ≈‘She is the “Pizdec / Pipec!” degree of smart.’  
*Pizdec*: N ‘bad situation’; obscene; can be a standalone utterance meaning ≈‘Fuck!’.  
*Pipec*: a euphemism of *pizdec*.
- b. Mne {zaebis’ / zašibis’} kak xorošo.  
 me.DAT {EXPR / EXPR} how well  
 ≈‘I am feeling the “Zaebis’ / Zašibis’!” degree of good.’  
*Zaebis’*: IMP.SG of *zaebat’sja* ‘get tired’; obscene; most typically used as a standalone interjection meaning ≈‘Great!’, which can be sarcastic.  
*Zašibis’*: a euphemism of *zaebis’*.

This quotation-based approach, thus, casts cases of expressive degree intensification as ones in which the expressive item is (or at least has the potential to be) both “mentioned and used”: we mention it in our truth-conditional description of the degree (this degree is such that it would make me/one go “expr”), and we can still use it performatively as an expressive outlet for our immediate emotions by virtue of uttering it (I do actually go “expr”). Note that, as things stand, the connection between the two is purely pragmatic: it is quite possible that the degree is also the thing that causes the speaker’s emotions, but, as we have seen above in (34) and (35), it doesn’t have to be. Note also that the requirement in (36b) would need to be tweaked a bit to apply to items that cannot be standalone utterances, such as English *fucking* or *bloody*; for these, we could, for instance, formulate the requirement along the lines of ‘*d* meets the  $\alpha$ -specific standard for reacting to it with affect associated with using *expr*’.

Note also that we could extend this quotation-based approach (with some adjustments, of course) to the cases of expressive interjections taking *with*-PP and *that*-clause complements discussed in Zyman 2018 and illustrated in (38) (all these are naturally occurring examples), which are grammatical for some English speakers.

- (38) a. ...wow with the level of idiocy the Angel baserunners have shown...  
 b. ...wow that they already have copies...  
 c. ...Damn with your fucking fly ass...  
 d. Also, damn that I missed it.  
 e. ...yuck with the Amber Rose pictures...

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<sup>23</sup>The *wh*-clauses in (37) appear to be relative clauses within degree descriptions; see Esipova 2021c for further details and for a discussion of the connection between these constructions and *wh*-exclamatives.

- f. Cool that you have deer, yuck that they poop.  
(Zyman 2018)

In the next section, we will see that this quotation-based approach also gives us a very natural way of thinking about truth-conditional affect-related meanings (including degree modification) conveyed through “secondary” channels, thus, highlighting the cross-channel productivity of this mechanism of making pieces of truth-conditional meaning out of originally purely performative acts. The difference seems to be that for fully lexicalized items like the spoken expressives above, there are more constraints on when such quotation-based uses can emerge, i.e., such uses also need to be properly conventionalized. As we will see in the next section, there are apparently less constraints on such uses for less conventionalized items like facial expressions and prosodic modulations.

#### 4. Truth-conditional and non-truth-conditional meanings conveyed through “secondary” channels

In this section, I look at how affect-related meanings are expressed through “secondary” channels, such as prosody, facial expressions, and non-face gesture.

There exists an unfortunate tendency in formal linguistics to uniformly label instances of affect-related meaning conveyed through such “secondary” channels as “paralinguistic” and, thus, something that we shouldn’t be attempting to model as part of our formal theories. This tendency is exacerbated by the fact that many meaning–form mappings in this domain are thought of as “gradient”, in the sense that they do not rely on fully conventionalized categorical distinctions,<sup>24</sup> and gradient meaning–form mappings have routinely been labeled “non-linguistic” since Hockett 1959. This way of thinking is problematic in multiple ways, which I will not be able to properly cover in this paper. However, let me add a quick general note to situate the discussion in this section within a bigger picture.

The mere juxtaposition of “linguistic” and “non-linguistic” aspects of communication seems to presuppose the existence of a monolithic language module in human mind. Yet, language is a complex interconnected system that brings together multiple types of representations. We might be looking up some meaning–form mappings in a mental dictionary (these seem to always be categorical) and establish others via some iconic module (these can, but don’t have to be gradient), but both types of meaning–form mappings can come together within a single coherent compositional structure in a systematic, predictable way. Calling conventionalized meaning–form mappings “linguistic” and non-conventionalized ones “non-linguistic” is essentially equating language with lexical semantics, but, of course, there is much more to language than that.

In particular, one way of integrating conventionalized or non-conventionalized (or not fully conventionalized) meaning–form mappings into larger compositional structures is treating them as quotations—or, more broadly, *demonstrations* in the sense of Davidson 2015—and then turning them into pieces of truth-conditional meaning of the form ‘(such that) it

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<sup>24</sup>Although, of course, whether or not these mappings are, in fact, gradient is an empirical issue, which might not get to be addressed if one has a pre-existing bias to think that all expression of affect-related meaning, say, through prosody relies on gradient meaning–form mappings, and, thus, any specific meaning–form mappings associated with affect are gradient.

would make me/one go “DEMONSTRATION”, evoked at the end of the previous section for expressive intensifiers. In subsection 4.1, we will see how this mechanism can be used to turn performative expression of affect in “secondary” channels into pieces of truth-conditional meaning that can then combine as supplements or modifiers with other truth-conditional content. The cross-channel productivity of this mechanism and its ability to apply to demonstrations that contain meaning–form mappings of varying degrees of conventionalization is, thus, a testament to how complex and productive our linguistic ability is.

Another benefit of looking at affect-related meaning conveyed via “secondary” channels is that we can then observe phenomena that we would not be able to observe if we focused solely on phonemic segmental material. Thus, in subsection 4.2, I look at some instances of parasitic meanings in multi-channel utterances, discovering further parasitic configurations beyond what we have seen in subsection 3.2. In particular, we will see that pieces of apparently truth-conditional meaning can sometimes be sneaked in as part of prosodic parasites.

#### 4.1. From performatives to performances

First, let’s look at two case studies showing how facial expressions and prosody used to performatively express one’s immediate emotions, often without much conscious control, can be used in a much more controlled and targeted way to express non-immediate attitudes about denotations of sub-parts of spoken utterances. I propose to analyze such instances of going “from performatives to performances” using the same quotation—or rather, more generally, demonstration—based approach as for expressive degree modification discussed in subsection 3.2.3. Here I am using the term *demonstration* in the sense of Clark & Gerrig 1990; Davidson 2015, as an iconic performance of any kind, treated in Davidson’s work as an ontological primitive. Davidson discusses some of the ways in which demonstrations can be integrated compositionally into larger utterances, crucially, relying on the *resemblance* relation between the demonstration and the event being depicted. This works well for cases like (39), where the *SNOGGING* demonstration is integrated as part of a property of events that resemble this demonstration.

(39) Still can’t stop with the romance in these medical shows. With the making out

and the  SNOGGING. Just... Medicine is fun, we don’t need the  
 SNOGGING. Just sayin.

(makingout.mp4; ‘Doctor Mike’ YouTube channel, ‘Real Doctor Reacts to ROYAL PAINS | Medical Drama Review’: <https://youtu.be/1LIZAgv7OgU?t=258>)

In this paper, I show that there is another productive, cross-channel way of compositionally integrating demonstrations into larger utterances, whereby the demonstration isn’t meant to depict events (individuals, instantiations of degrees, witnesses of propositions, etc.) themselves, but rather a common/appropriate *reaction* to said events (individuals, instantiations of degrees, witnesses of propositions, etc.). For instance, in (40), the *EW* demonstration isn’t

meant to depict any properties of Pepé Le Pew himself, but rather what the speaker considers a common or appropriate reaction to Pepé Le Pew. In other words, we take something that is normally used to performatively express one’s immediate affect in reaction to something and produce a demonstration of such expression within a truth-conditional property of (in this case) individuals that warrant such a reaction.

(40) Although I do think maybe we should keep Pepé Le Pew out of this movie. That



character is now kinda EW.

(ew.mp4; ‘Screen Rant’ YouTube channel, ‘Space Jam 2: A New Legacy Pitch Meeting’: [https://youtu.be/Zk\\_YKmtOYyI?t=408](https://youtu.be/Zk_YKmtOYyI?t=408))

Before I proceed to looking at the case studies, let me add a quick note about depiction and performativity (see, e.g., Dingemans 2015; Clark 2016; Davidson 2022 for a general discussion of depiction vs. description). What is relevant for the purposes of this paper is that depiction can be argued to always have a non-vacuous performative component, as its goal is to give the experiencer a direct sensory experience. However, the reverse doesn’t seem to be true: arbitrary meaning–form mappings can still have strong performative effects, as is the case with lexicalized expressives like *fucking* or slurs. See, however, Lev-Ari & McKay 2022 for some recent work on potentially non-arbitrary sources of swear words cross-linguistically.

#### 4.1.1. Case study 1: surprise

In spoken language, we have conventionalized ways of encoding a continuum of surprise-related meanings: interjections expressing active surprise as a reaction to some new information in a non-truth-conditional way, as in (41a); supplements conveying one’s non-reactive surprised attitude in a truth-conditional way, but as a sidelined comment on the propositional content of the primary speech act,<sup>25</sup> as in (41b); and degree modifiers with a surprise-related attitudinal component, as in (41c), where it is the degree of Mia’s drunkenness that the speaker finds surprising/shocking/astonishing, not the fact that she got drunk (as with other degree modifier meanings, this one is typically at-issue).

- (41) a. *Non-truth-conditional reactive expression of surprise*  
*Context: The speaker sees that Mia appears to be very drunk, which comes as a surprise to them.*  
 {Wow! / Whoa!} What are we going to do now?!  
 (I am reacting to the new information that Mia got drunk.)
- b. *Truth-conditional (but sidelined) non-reactive communication of surprise*  
 Yesterday, there was a party, and, {surprisingly / shockingly / astonishingly / to my surprise}, Mia got drunk.  
 (I am asserting my non-immediate attitude towards the fact that Mia got drunk, but in a sidelined way.)
- c. *Truth-conditional (and at-issue) degree modifier meaning*

<sup>25</sup>Of course, we can also have primary speech acts about non-reactive surprised attitudes, e.g., *I am {surprised / shocked / astonished} that...*

Yesterday, there was a party, and Mia got {surprisingly / shockingly / astonishingly} drunk.  
 (I am asserting that Mia got drunk to a {surprising / shocking / astonishing} degree.)

All these three types of meaning can be expressed via (versions of) the same facial expression, whose core component is eyes wide open and which I will label as *OO*.<sup>26</sup> Thus, (42) replicates (41) with *OO*.<sup>27</sup> The degree modifier use of *OO* is that of intensification, like in the cases discussed in subsection 3.2.3, and was previously discussed in greater detail in Esipova 2019d.

- (42) a. *Non-truth-conditional reactive expression of surprise*  
*Context: The speaker sees that Mia appears to be very drunk, which comes as a shock to them.*  
 $\overline{OO}$  What are we going to do now?!<sup>(OO)</sup>
- b. *Truth-conditional (but sidelined) non-reactive communication of surprise*  
 Yesterday, there was a party, and  $\overline{Mia}$  got drunk<sup>OO</sup>.
- c. *Truth-conditional (and at-issue) degree modifier meaning*  
 Yesterday, there was a party, and Mia got  $\overline{drunk}$ <sup>OO</sup>.

Note that in all three cases, *OO* is accompanied by converging prosody, whose phonetic/phonological properties I will not discuss in any great detail here (see Esipova 2019d for a more in-depth discussion of prosodic degree intensification). *OO*, however, can make its contributions independently of prosody. This is particularly obvious for the expressive *OO*, as it can be used as a standalone reaction with no speech whatsoever. (43) shows that this is also the case for the degree modifier *OO*, when it co-occurs with silent gestures (the gesture *DRUNK* in (43b) is a Russian conventionalized gesture that means ‘drink’ or ‘drunk’ and consists of flicking a finger on one’s neck or tapping one’s neck with the back of a hand).

- (43) a.  The movie was  $\overline{\text{THUMBS-UP}}$ <sup>OO</sup>.  
 ≈ The movie was very good.

<sup>26</sup>The accompanying .zip file contains some video examples of a supplement-like *OO* produced by (non-naïve) native speakers of English for a related project; the speakers were asked to express the target meaning via prosody, but without suppressing their facial expressions. There are many other gestures (broadly construed, i.e., movements of the face, head, upper body, hands, etc.) that can accompany *OO* and add to the surprise-related meaning. For instance, speakers can shake their head in disbelief (e.g., good.mp4), shrug to convey the ‘I don’t know why, but’ message (e.g., loves.mp4), or blink repeatedly (e.g., drove.mp4). Speakers can also add an additional evaluative component—for instance, by pursing their lips and/or shaking their head to convey disapproval, by protruding their lips to convey being positively impressed, by adding a smirk to convey being amused, etc. However, eyes wide open seems to be the most robust and sometimes the only ostensible component of *OO* (lily.mp4).

<sup>27</sup>Labels for facial expressions or other types of gesture are written in ALL CAPS. Labels for facial expressions co-occurring with speech are written as superscripts, with overlining roughly indicating the temporal alignment of the facial expression (for *OO* that’s any time when the speaker’s eyes are open wider than normal). When provided, illustrations are placed at the approximate onset of the target item. In this version of the manuscript, some of the illustrations were omitted or modified for anonymization purposes.

- b. Mia got   $\overline{\text{DRUNK}}^{\text{OO}}$ .  
 ≈ Mia got very drunk.

In (44), I provide a naturally-occurring example containing both degree modifier<sup>28</sup> and expressive uses of *OO* (the latter is inside a larger quotation/demonstration, introduced by *like*, in which the speaker shifts to the perspective of their past self). Note that (44) also contains an attenuating degree modifier expounded as, among other things, a facial expression that I label as *MEH*. The meanings of interest are also conveyed through non-face gesture and prosody, which I ignore in my gloss.

- (44) *Context: The speaker is reminiscing about giving birth to their fourth child.*

And then I have like   $\overline{\text{a contraction}}^{\text{OO}}$ .

If you've ever had a baby, you know, like,   $\overline{\text{there's contractions}}^{\text{MEH}}$ ,

and   $\overline{\text{then there are contractions}}^{\text{OO}}$ . I knew it was real, I was like,

  $\overline{\text{"Oh. My. God. That. Is a. Contraction.}}^{\text{OO}}$ ,  
 (contraction.mp4; 'Mama Doctor Jones' YouTube channel, 'ObGyn Mom's 4th Baby Birth Story | Welcome, Pax! - MamaDoctorJones', [https://youtu.be/dMeiPyuV\\_Y4?t=222](https://youtu.be/dMeiPyuV_Y4?t=222))

In (45), I give another example of a degree modifier *OO*. Note that both (44) and (45) make the at-issue nature of the degree modifier contribution of *OO* obvious due to its contrastive nature. Another thing to note about (45) is that the predicate that gets modified by *OO* is *faster*. Schlenker (2018b) previously discussed what he referred to as “iconic vowel lengthening”<sup>29</sup> used to convey high degree meanings and claimed that it is subject to iconicity-related constraints (e.g., you can say *sloooow* to mean ‘very slow’, but not *faaast* to mean ‘very fast’). However, Esipova (2019d) observed that this only holds for “excessive” segment lengthening, but there exists a more general prosodic degree intensification morpheme that is not subject to the same constraints; (45) corroborates that.

- (45) *Context: The speaker is playing a drinking game while reading a book.*  
 The problem with doing this with vodka is you get drunker faster. The problem

<sup>28</sup>Here the assumption is that *contraction* is coerced into a scalar reading; see Esipova 2019d for details.

<sup>29</sup>In actuality, this kind of segment lengthening also affects the onset of the syllable, not just the vowel/nucleus.



with doing this while you're sick and drinking vodka is you get drunker  
 $\overline{\text{faster}}^{OO}$ .<sup>30</sup>

(faster.mp4; 'Bailey Meyers' YouTube channel, 'GooseDrunks - Say Cheese and Die!',  
<https://youtu.be/LhRWwMHiroE?t=1388>)

Now, in its expressive use, the *OO* facial expression is independent of any potentially co-occurring speech both meaning-wise and form-wise. For instance, in (42a), *OO* can persist and end up co-occurring with the spoken utterance, but there is no direct interaction between the two at the level of meaning, and, consequently, there are no ostensible constraints on the surface configuration and, in particular, on the mutual alignment of the facial expression and the spoken utterance. In contrast, in its truth-conditional uses, the *OO* facial expression does interact semantically with other pieces of truth-conditional content, and is, consequently, more constrained with respect to its alignment. In its degree modifier use, *OO* typically aligns with the predicate it modifies (although, as with other gestures, it can often start early).<sup>31</sup> In its supplement-like use, *OO* can seemingly align with the entire clause it comments on, but, just like spoken supplements like *surprisingly*, the supplement *OO* is focus-sensitive, and it seems to prefer to anchor to its focus associate on the surface, as illustrated in (46).<sup>32</sup>

- (46) a. *Context: Everyone brought something they made themselves to the Friendsgiving party, but it's not always obvious who made what. Lily, who's known to be a terrible cook, made that marmalade everyone liked. A: Who made the marmalade? B:*  
 (i) Surprisingly, Lily made the marmalade.  
 (ii)  $\overline{\text{Lily}}^{OO}$  made the marmalade.
- b. *Context: Everyone brought something they made themselves or bought to the Friendsgiving party. Lily, who's known to be a terrible cook, brought that marmalade everyone liked. A: Where did Lily get the marmalade? B:*  
 (i) Surprisingly, Lily made the marmalade.  
 (ii) Lily  $\overline{\text{made}}^{OO}$  the marmalade.
- c. *Context: Everyone brought something they made themselves to the Friendsgiving*

<sup>30</sup>One way to paraphrase  $\overline{\text{faster}}^{OO}$  here would be *even faster*, which highlights the connection between scale-based meanings and surprise, considering that *even* also has a surprise-related component.

<sup>31</sup>I do wish to add a note of caution here, however, as, in general, one should be careful about taking alignment of various parts of gestures of any kind to precisely and/or straight-forwardly indicate their level of syntactic attachment—or what their antecedents are, in case we assume an anaphoric link between a supplement gesture and its anchor rather than semantic composition. While there has been some insightful work on gesture alignment (e.g., Loehr 2004; Ebert et al. 2011), the principles of mapping from non-linearized syntactic structures to multi-channel surface structures, including mutual alignment of various surface forms, are still far from being fully understood. That said, the main point of this subsection is to establish (i) the existence of the three relevant interpretations of *OO*, (ii) the at-issue nature of its degree modifier uses, and (iii) the focus-sensitivity of its supplement uses—not to explore the effects that the various readings of *OO* can have on surface alignment in great detail.

<sup>32</sup>Nuclear pitch accents are marked by an acute accent on the stressed vowel,  $\acute{V}$ , without indicating the type of the pitch accent or any other prosodic properties of the prominent word.

party, but it's not always obvious who made what. Lily, who always says that she hates sweets, made that marmalade everyone liked. A: What did Lily make?

B:

- (i) Surprisingly, Lily made the marmalade.
- (ii) Lily made the  $\overline{\text{marmalade}}^{\text{OO}}$ .

This case study, thus, shows that we can take something that serves as a performative, spontaneous, often uncontrolled expression of affect ('I am expressing my immediate, reactive surprise by going "OO"') and use it in a controlled and non-performative way to convey truth-conditional—and even at-issue—meanings ('This proposition/degree is such that its witness/instantiation would make me (or anyone) go "OO"'). Thus, we can use the same demonstration-based analysis here that we developed for expressive degree intensification in subsection 3.2.3 (as before, **surprise** is an approximation of the affect that can be performatively expressed by *OO*):

(47) *Expressive OO*

- a. Context-altering effect of producing  $OO_{\text{expr}}$ :  
 $c \rightarrow c'$ , where  $c'$  is just like  $c$ , except **surprise**( $c'_s, c'_e$ )
- b. Compositional effect of  $OO_{\text{expr}}$ : none (doesn't compose with anything)

(48) *Supplement OO*

- a. Context-altering effect of producing  $OO_{\text{sup}}$ :  
 none, or a potentially weaker version of (47a)
- b. Truth-conditional effect of  $OO_{\text{sup}}$  combining with its anchor proposition:  
 $\llbracket OO(p) \rrbracket^c = \text{react}(\text{"OO"}, p)$ , where  $\text{react}(\text{"OO"}, p)$  means that a witness of  $p$  warrants reacting to it with *OO*

(49) *Degree modifier OO*

- a. Context-altering effect of producing  $OO_{\text{deg}}$ :  
 none, or a potentially weaker version of (47a)
- b. Effect of composing  $OO_{\text{deg}}$  with its sister:  
 $\llbracket OO_{\text{deg}} \rrbracket^c (\llbracket \alpha_{\langle d, \langle \tau_1 \dots \tau_n, t \rangle} \rrbracket \rrbracket^c) =$   
 $\lambda d \lambda X_{\tau_1}^1 \dots X_{\tau_n}^n . \llbracket \alpha \rrbracket^c (d)(X^1) \dots (X^n) \wedge \text{react}(\text{"OO"}_{\llbracket \alpha \rrbracket^c}, d)$ ,  
 where  $\text{react}(\text{"OO"}_{\llbracket \alpha \rrbracket^c}, d)$  means that  $d$  meets the  $\alpha$ -specific standard for reacting to an instantiation of  $d$  with *OO*

Note that I remain agnostic as to whether the supplement *OO*—or other supplements of this kind—composes with the proposition it comments on, or this link is established non-compositionally, e.g., anaphorically. Similarly, I remain agnostic about how one assures that contributions of supplements are sidelined or to what extent they have to be linked to the actual speaker of the utterance (beyond Potts 2005, see, e.g., AnderBois et al. 2015; Koev 2013 for a relevant discussion).

Note also that, in contrast to the very strong, obscene expressive intensifiers like the English *fucking* or the Russian *pizdec*, the truth-conditional uses of *OO* don't necessarily seem to preserve a potentially independent expressive component (apart from the general performative effect inherent to any depiction, as discussed in the intro of subsection 4.1).

This is also true for some instances of expressive degree intensification; for instance, in (50), the obscene *oxuet'* still has enough expressive power to serve as a performative outlet for independent affect when you utter it, on top of its mirative-flavored truth-conditional degree intensification component, but the tepid *s uma sojti* doesn't.<sup>33</sup>

- (50) U nix {oxuet' / ofiget' / s uma sojti} skol'ko deneg.  
 at them {EXPR / EXPR / EXPR} how-much money  
 ≈‘They have the “Oxuet' / Ofiget' / S uma sojti!” amount of money.’  
*Oxuet'*: INF, ‘be shocked’ (one of the meanings); obscene; can be used as a standalone interjection meaning ≈‘Fucking wow!’.  
*Ofiget'*: euphemism of *oxuet'*.  
*S uma sojti*: INF, lit. ‘from mind step down’ (≈‘lose one’s mind’); can be used as a standalone interjection meaning ≈‘Wow!’.

#### 4.1.2. Case study 2: negative affect

Another illustration of the productivity of this process of going “from performatives to performances” (i.e., to demonstrations within pieces of truth-conditional meaning) concerns expression of negative affect. We can performatively express our immediate negative affect (anger, annoyance, contempt, disappointment, disapproval, disgust, etc.) through lexicalized interjections or less lexicalized vocalizations, facial expressions, prosody, and various combinations thereof, for instance:

- (51) {Eww! / Ugh! / Tsk! / DISGUST-face / EYEROLL}

We have already seen how a demonstration of such negative affect expression can be integrated into larger utterances as an obligatory syntactic constituent with its own time slot in (40), where it is part of the main predicate.<sup>34</sup> But, of course, expressions of negative affect can also co-occur with spoken utterances. As with *OO*, some of these can temporally co-occur with speech without interacting with it in any ostensible way. However, again, as with *OO*, we can also use some of these in a controlled fashion, targeting specific sub-parts of our utterances to truth-conditionally communicate our negative attitude towards their denotations:

- (52) a. Lea is bringing her dog <sup>EYEROLL</sup> to Kim’s party.  
 → The speaker has a negative attitude towards Lea’s dog.  
 b. Lea is bringing her dog to Kim’s party <sup>EYEROLL</sup>.  
 → The speaker has a negative attitude towards Kim’s party.

The naturally occurring examples in (53)–(55) illustrate this point. In (53), we don’t see the speaker’s face when they say *Morgan family*, but we can very clearly hear their contempt for the Morgan family conveyed suprasegmentally, via at least segment lengthening,<sup>35</sup> hyper-

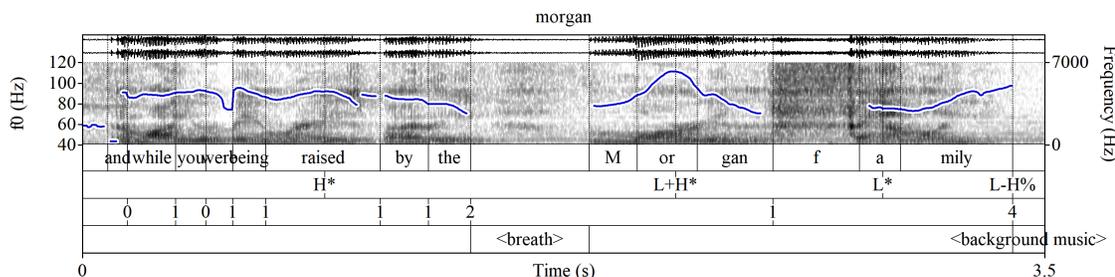
<sup>33</sup>As for euphemistic forms (*pipec*, *zažibis'*, *ofiget'*, etc.), my impression is that how much expressive power they carry to begin with—and, consequently, how much of it can be preserved in degree intensification uses—varies across items and speakers.

<sup>34</sup>Such demonstrations are instances of what is called *pro-speech gesture* (as opposed to *co-speech gesture*) in Schlenker 2018a, more precisely defined in Esipova 2019b and Harris 2020.

<sup>35</sup>Note how the speaker holds onto the onsets of the stressed syllables for especially long before explosively

articulation, less modal phonation, and a relatively large pitch excursion (a bitonal accent rising to the utterance’s highest pitch on *Morgan*).

- (53) And while you were being raised by the Morgan family<sup>CONTEMPT-prosody</sup>, I only had a memory of a family.  
 → The speaker finds Morgan family worthy of contempt.  
 (morgan.mp4; ‘Dexter’, Showtime, S1E12)



We can hear much of the same prosody used to communicate disgust for the notion of friendship in (54), and we can also see it in the speaker’s scrunched up face.



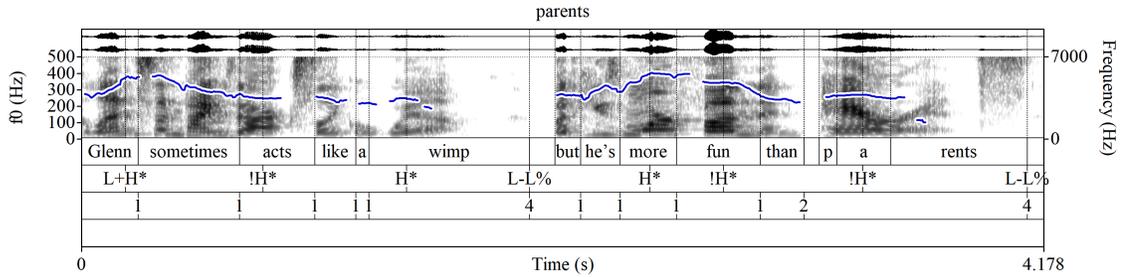
- (54) I don’t have friends<sup>DISGUST-face/prosody</sup>.<sup>36</sup>  
 → The speaker finds the notion of friendship disgusting.  
 (friends.mp4; ‘Sherlock’, BBC, S2E2)

In (55), the speaker assumes the perspective of a pre-teen character and conveys a “not cool” attitude towards parents in general via what can be described as a prosodic eyeroll, which is matched by a fairly subtle facial expression (a sideways glance followed by a stare at the camera rather than an actual eyeroll). Note that, unlike in (53) and (54), there is no substantial onset lengthening in (55) (no “spitting out” effect), but there is vowel lengthening, combined with lower relative intensity and pretty flat, low-ish pitch (a downstepped single high tone), which, again, contrasts with the much higher relative intensity and larger pitch excursion in (53). This “lifeless” prosody on *parents* creates the impression of being bored.

- (55) *Context: The speaker is reading a line from a book from the perspective of a pre-teen protagonist.*  
 Glenn’s a bit of a wimp, but he’s more fun than parents<sup>EYEROLL-face?/prosody</sup>.  
 → The speaker finds parents in general boring, uncool.  
 (parents.mp4; ‘Bailey Meyers’ YouTube channel, ‘GooseDrunks: Ship of Ghouls ft. Jenny Nicholson’, <https://youtu.be/KhO5yvS8sS4?t=124>)

releasing them, which creates the impression of “spitting out” the target words.

<sup>36</sup>I do not provide a Praat drawing for this example, as the audio is very noisy, and the pitch tracker fails to pick up anything.



As before, we can analyze performative expression of negative affect like in (51) as context altering with no truth-conditional content. Since the contributions of negative affect demonstrations in (52)–(55) appear to be not-at-issue, they can be analyzed as demonstrations either within supplements with non-propositional anchors or within non-restricting modifiers (see Esipova 2019b for a discussion of the same choice point for not-at-issue contributions of hand gestures that extends naturally to facial expressions).

A priori, as far as I can tell, there is no reason to prefer one construal over the other. But we might ask whether we can obtain at-issue readings for any of the configurations at hand, which would suggest that the modifier construal is in principle possible for such configurations, and said modifiers can be restricting. This doesn't seem completely impossible, for instance, for *EYEROLL*, although I would expect speakers to vary greatly as to how acceptable they find examples like (56-i), as we do see such variation for restricting modifier construals of co-speech hand gestures, such as in (56-ii) (see Esipova 2019a,c for data on the latter and for possible explanations).<sup>37</sup>

- (56) A: Which of her brothers is Pam bringing?  
 B: You know...  
 (i) The brother<sub>EYEROLL</sub>.  
 ≈ The brother that would make me go “EYEROLL”.  
 (ii) The brother<sub>GLASSES</sub>.  
 ≈ The brother that wears glasses.

Before moving on to the next subsection, let me quickly note that Schlenker (2018b) discusses examples like (57), with a disgusted face targeting a specific sub-part of a spoken utterance.

- (57) Sam went  skiing with his parents<sub>DISGUST-face</sub>.  
 → The speaker finds skiing with one's parents disgusting.

Following his proposal for co-speech gestures, Schlenker proposes to analyze contributions of such co-speech facial expressions as special, assertion-dependent presuppositions he calls “cosuppositions”. Esipova (2019b,c,d) discusses at great length why the notion of “cosupposition” might not be needed and how the “typology of iconic enrichments” proposed in Schlenker

<sup>37</sup>Labels for non-face gestures co-occurring with speech are written as subscripts, with underlining roughly indicating the temporal alignment of the gesture.

2018b might be flawed. I will not rehash this discussion here. For the purposes of this paper, suffice it to say (57) works just like the other examples of demonstration-containing pieces of truth-conditional meaning and should be analyzed as such. Note also that Schlenker predicts that all co-speech facial expressions should be not-at-issue by default, but we have already seen that this is not the case, for instance, for the degree modifier *OO*.

## 4.2. Cross-channel “parasitism”

As I noted in the previous subsection, expression of immediate affect through “secondary” channels can temporally co-occur with speech without directly interacting with it at all, semantically or on the surface—as is the case, for instance, for the *OO* facial expression in (42a). In fact, we can even imagine cases of temporal co-occurrence of independent truth-conditional utterances, such as beckoning someone or sending someone off with a gesture while talking to someone else or acknowledging that you see the sign ‘10 minutes left’ by a nod and/or a thumbs-up gesture directed at the conference chair session without interrupting your talk—although there are probably severe limits on how much information can be transferred in this way due to the high cognitive load for both the speaker and the addressee.

Such simple co-occurrence without interaction at any level of representation does not qualify as parasitism. Now, when it comes to expression of immediate affect through prosody, that, obviously, will affect certain surface aspects of speech, but that will be done across the board, with no structural connections to the affected spoken utterance. For instance, if you’re angry or excited, you might be producing all your speech with higher intensity and pitch throughout a certain stretch of time—this is presumably what people think of when they talk about the “paralinguistic” nature of expression of affect through prosody. So, to the extent that this is parasitism, it is different from instances of parasitic expressions that alter the prosodic structure of the host utterance (phrasing or accents) or anchor to any elements of said prosodic structure.

However, we can also have instances of immediate expression of affect via “secondary” channels that do integrate with the prosodic structure of the spoken utterance they co-occur with much more closely. These are what I will call *expressive beats*. In speech only, these manifest as a choppy meter, which we’ve already seen an instance of in the “oh my god” part of (44); also, producing all the instances of the expressive particles in (30) will similarly result in a choppy meter. In written communication, such choppy meter can be conveyed via choppy punctuation. Spoken utterances produced with a choppy meter can also be accompanied with punctuated gestures—for instance, claps—aligned with the pitch accents (usually slightly preceding them; see Loehr 2004 for more details on alignment of beat co-speech gestures with prosodic events in general). In online written communication, the gestures can be represented as clapping emoji.<sup>38</sup> All these are illustrated in (58), and a naturally occurring example of choppy meter combined with choppy fist-on-palm claps in spoken communication is given in (59).<sup>39</sup>

(58) a. Will<sub>CLAP</sub> yóu<sub>CLAP</sub> pléase<sub>CLAP</sub> stóp<sub>CLAP</sub>?!

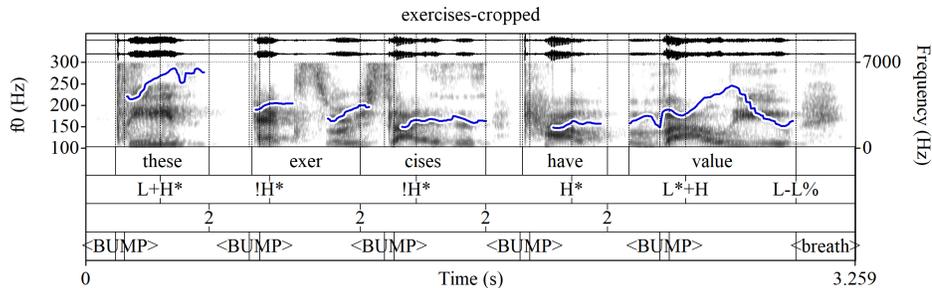
<sup>38</sup>See LaBouvier 2017 for some observations about the sociolinguistics of such gestures and emoji, and Tatman 2017 for some observations about where such emoji go in the linear string.

<sup>39</sup>Here I write the labels of the prosodically docked gestures simply as subscripts on the word whose accented syllable they dock their stroke to.

- b. Will. You. Please. Stop.  
 c. Will 🙌 you 🙌 please 🙌 stop 🙌



- (59) Thése<sub>BUMP</sub>. Éxer<sub>BUMP</sub>. Císes<sub>BUMP</sub>. Háve<sub>BUMP</sub>. Válué<sub>BUMP</sub>.  
 (exercises.mp4; ‘Koboko Fitness’ YouTube channel, ‘5 Home Workout Mistakes - KILLING YOUR RESULTS! - ep2. Butt Workouts’, [https://youtu.be/g\\_oih3yr0Dg?t=173](https://youtu.be/g_oih3yr0Dg?t=173))



The primary meaning of the expressive beat arrangement itself seems to be expressing the speaker’s heightened emotional state, with the more specific flavor of affect conveyed through the nature of the atomic gesture involved (e.g., palm-on-palm, back-of-hand-on-palm, fist-on-palm, etc.), other aspects of prosody, facial expressions, etc. As before, however, expressive beats can be used in a more targeted way, aligning with specific sub-parts of the host utterance, often to emphasize their importance, with more specific effects arising in conjunction with other factors, including, among other things, the medium (for instance, clapping emoji on Twitter seem to often be used to emphasize messages of social importance).

The atoms participating in an expressive beat arrangement can carry more additional meaning. For instance, choppy snapping gestures can be used to express the speaker’s irritated impatience, but also to tell the addressee to hurry up:

- (60) Wé<sub>SNAP</sub> háve<sub>SNAP</sub> fíve<sub>SNAP</sub> mínutés<sub>SNAP</sub>!

It is the snap itself that carries the ‘Hurry up!’ component, which is arguably truth-conditional, as evidenced by the fact that a standalone snapping gesture (usually repeated two or three times) can be used as an imperative with this meaning. In fact, such a snapping gesture can compositionally integrate as a VP meaning ‘hurry up’ into an otherwise spoken utterance, as in the naturally-occurring example in (61) from Harris 2020.

- (61) I’ve got twenty minutes, so can we SNAP-SNAP?  
 (snap.mp4; ‘Drew Lynch’ YouTube channel, ‘Two Dudes Take Off Their Clothes During My Show’, <https://youtu.be/RRwCg2CyaqA?t=171>; cited from Harris 2020)

In other words, in some cases of prosodic parasitism, at least cross-channel one, we can sneak in some truth-conditional meaning as part of the parasitic expression. Whether this is possible for prosodic parasites co-existing with their host within the same channel (such as

the Russian expressive particles in (30)) remains to be seen.

Additional meanings can also be brought into expressive beat sequences by using various non-clap emoji as the atoms, as in (62), where the additional meaning seems to be expressing some sort of patriotic feelings about the USA.

(62) THIS 🇺🇸 IS 🇺🇸 NOT 🇺🇸 A 🇺🇸 FUCKING 🇺🇸 MONARCHY 🇺🇸  
<https://t.co/Vg85LGcaLd>

— Sarah Lerner (@SarahLerner) July 8, 2017  
(cited from Tatman 2017)

Another example of apparent cross-channel parasitism that I would like to briefly mention is modification of typed, handwritten, or drawn text.<sup>40</sup> For instance, typing or writing in ALL CAPS (as in (62)), with *s p a c e d o u t* letters, and/or in **bold** expresses heightened emotions, which, once again, can be used in a more targeted way to emphasize specific sub-parts of one’s message, and can also be accompanied with additional symbols around the target part of the text, such as \*, ~, or various emoji. These modifications can also be used ironically, for instance, to mock someone’s attitude of pretentious reverence for something, in which case it has a shifted, quotative interpretation, as exemplified in (63).<sup>41</sup>

(63)  ...  
Powered by bald eagles and 🇺🇸 F R E E D O M 🇺🇸,  
probably  
#FOS 🇺🇸  
  
4:52 PM · Jul 9, 2021 · Twitter for iPhone

A similar conventionalized text modification used as a quotative is the apparent imitation of someone talking with dramatic pitch excursions via (strictly or erratically) AlTeRnAt- InG uppercase and lowercase letters, which originated as the “Mocking SpongeBob” meme (<https://knowyourmeme.com/memes/mocking-spongebob>) and can be used either to mock someone or as an imitation of a mocking tone.

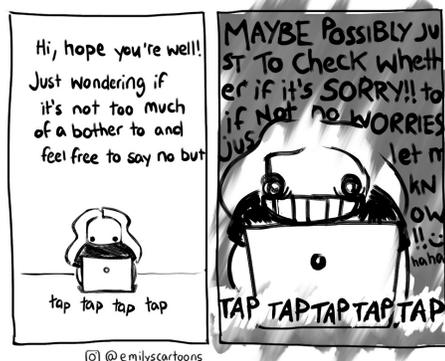
Similarly, in drawn text, such as in comics, the artist can use a wide range of modifications to convey the emotional state of someone. For instance, in (64), the changing geometric properties (letter size, thickness, and spacing) of the text being typed by the character don’t

<sup>40</sup>Here I am talking about expressive modifications of text that otherwise carries potentially non-expressive meaning. However, an interesting phenomenon in online communication worth further detailed investigation is keysmashes. They are a form of text that is inherently expressive itself, as, at their core, they are meant to represent a result of an expressive action, although the strings in keysmashes are not random and can carry various additional meanings (see a recent discussion in Park 2021).

<sup>41</sup>See also the “a e s t h e t i c” meme: <https://knowyourmeme.com/memes/aesthetic>.

directly interact with its content, but express the character's increasing anxiety.<sup>42</sup>

(64)



(comic by Emily McGovern, <https://www.emilymcgovern.com/>)

Note, however, that, unlike expressive beats, such text modifications are more akin to the kind of non-structural prosodic parasitism I mentioned at the beginning of this subsection, where, for instance, the intensity or pitch range is affected throughout a certain stretch of time, with no ostensible interaction with any of the structural prosodic elements.

## 5. Outstanding issues

In this section, I very briefly discuss some outstanding issues that can be investigated in greater detail in future research.

### 5.1. Apparently interactive non-truth-conditional meanings

Throughout this paper, I have argued for complete separation of performative (e.g., expressive) meaning, i.e., meaning effects that arise as a direct result of producing a certain form, from compositional meaning, i.e., meaning that is computed based on an abstract hierarchical structure. However, as I said at the end of subsection 2.2, separating the two constrains our choices when it comes to modeling cases when expressives do appear to target their surroundings. Here I offer some further thoughts on the matter.

First, let me point out that the empirical picture on how much the interpretation of a given instance of an expressive is affected by its linear or structural position is not entirely clear. Of course, there is an ostensible contrast in the default inference about the source/target of the affect between (65a) and (65b), if no further context is provided.

- (65)
- a. The damn philosophers spoke to the linguists.
  - b. The philosophers spoke to the damn linguists.

However, there is a lot of variation in this respect, and, as the recent experimental evidence

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<sup>42</sup>Which, of course, is also conveyed via the character's facial expression, irregular shading, zooming in, and the text now surrounding the character. The text changes are also matched in the onomatopoeic representation of the typing sounds, indicating that the typing is becoming more erratic, which indirectly contributes to our inferences about the character's mental state as well.

in Bross 2021; Ronderos & Domaneschi 2022 suggests, it is unlikely that these variable judgement patterns can be accounted for with purely syntactic constraints.<sup>43</sup>

An account that maintains that (true) expressive contributions are instances of performative context altering, independent of compositional (i.e., “syntactic”) meaning, is well-equipped to handle both the apparent tendencies towards correlation between the position of an item and the likely anchoring of the affect as well as the fluid nature of such tendencies. There is little doubt that the expressive parameter of the context—which, remember, tracks the speaker’s emotional state—is in constant flux even within a single utterance. In particular, one of the things that can further push the speaker’s already heightened emotional state to the point where they might need an expressive outlet is evoking the source of their current affect (i.e., both activating the relevant expression and its denotation in their mind and actually uttering it). It is, thus, unsurprising that we will often place expressive items close to the expressions denoting (or even indirectly evoking) the source of the affect these items serve as an outlet for (of course, we will only be able to place them into syntactically and/or prosodically appropriate positions). This might in turn give rise to inferences about the source/target of our affect in external observers.

Furthermore, knowing this might lead a speaker whose emotional state allows them some amount of control over their use of expressives to avoid placing them into positions that might lead to undesirable inferences (especially those about negative affect)—and, conversely, to place them into positions that are likely to result in desirable inferences. In fact, it’s quite likely that some of the demonstration-based uses of, in particular, facial expressions and prosody we have seen in this paper exploit this phenomenon, i.e., the speaker intends to convey that the mere evocation of the target makes them react in a certain way.

Naturally, all this is highly speculative, and these processes need to be studied much more rigorously, in an interdisciplinary effort that goes beyond both the scope of this paper and my personal competence.

## 5.2. Non-truth-conditional meanings and speaker-orientedness

There has been some discussion in the literature about whether non-truth-conditional—and, in particular, expressive—meanings can be anchored to someone other than the speaker (e.g., Harris & Potts 2009). I will not add a lot of new insights into this topic beyond saying that maintaining that expressive meanings are instances of performative context altering necessarily leads to treating all instances of non-speaker-anchored expressive meanings as instances of perspective shift of some kind—which seems to be very much in line with the actual empirical picture.

The only note I will make in this respect is that these instances of perspective shift should not be confused with grammatical indexical shift induced by specific operators, such as shift of person indexicals in languages like Amharic, Ewe, Zazaki, etc. (see, e.g., Schlenker 2018c for an overview). Empirically, shifted interpretation induced by specific operators appears to be freely available in the presence of these operators, whereby shifted interpretation of

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<sup>43</sup>Note that neither Bross 2021; Ronderos & Domaneschi 2022, nor the work Bross 2021 builds on, such as Frazier et al. 2015 and Gutzmann 2019, discuss cases of syntactic or prosodic parasitism when the source/target of the affect is completely external to the host utterance, like those discussed in this paper, but ultimately these experimental results, as well as those in Frazier et al. 2015, are in line with the proposal put forward in this paper.

expressive meanings seems to have a much more variable nature. Instead, I believe that instances of shifted interpretation of expressive meanings (or any performative meanings for that matter) are always instances of quotation/demonstration or free indirect discourse. We have already seen instances of the former, for example, in (44) (the speaker shifting to the perspective of their past self in an ostensibly quotative way) or in (63) (the reverence is attributed to the owner of the car in the pictures and/or a certain social group, and is being ironized by the author of the tweet).

A shifted expressive meaning within a free indirect discourse is exemplified in (66), where the speaker constructs a hypothetical scenario and partially assumes the perspective of the addressee by using *fucking* to express the addressee’s annoyance in this hypothetical scenario. Yet, this is not a regular quotation, as the speaker still uses second person pronouns to refer to the addressee.

- (66) Imagine you have a house with a lawn. And you really hate mowing that lawn. And one day you wake up, you go stand on your porch, and you realize that you have to mow your fucking lawn again.

This, of course, is highly reminiscent of the examples of mixed perspectives in signed languages, where the signer’s affect-conveying facial expressions can be interpreted as representing someone else’s emotional state, but their manual signs aren’t interpreted as shifted—for instance, they can be representing the body of the experiencer of the affect with a handshape within a classifier construction, i.e., from a third person perspective (Engberg-Pedersen 1993; Sandler & Lillo-Martin 2006). Similarly, we can have examples like (67), where third person pronouns co-exist with a shifted interpretation of the affect-conveying prosody and facial expressions, or the naturalistic example in (68), where the speaker partially shifts to their past self: the past tense is interpreted relative to the actual context, but the speaker’s affect-conveying prosody and facial expressions are meant to convey their past attitude, which, as we can tell from the context, they no longer have.<sup>44</sup>

- (67) Kim’s going through a teenage phase now.  
 She doesn’t like her parents <sup>ANNOYED-face/prosody</sup>, and all that.



- (68) I think ’cause I probably thought <sup>DISGUST-face/prosody</sup> it was for girls.  
 (gurlz.mp4; ‘Drew Gooden’ YouTube channel, ‘So Are They Just Gonna Ruin Every Show We Used to Like?’: <https://youtu.be/817R3ApVFok?t=137>)<sup>45</sup>

### 5.3. Non-truth-conditional meanings beyond affect

In this paper, I have primarily focused on affect-related meanings, but, as I noted multiple times throughout the paper, other types of non-truth-conditional meanings exist. For

<sup>44</sup>See also Hinterwimmer et al. 2021 for a more general discussion of mixing “linguistic” and “gestural” perspectives.

<sup>45</sup>Note also that in the original YouTube video, the non-automatic subtitles use the spelling *gUrLz* to reflect the demonstration.

instance, we have already seen examples of performative signaling of friendliness with a syntactically parasitic diminutive suffix in (23b) or performative expression of patriotism via emoji in (62). Similarly to the latter, one can also think of various conventionalized ways of signaling allegiance to a group or a cause gesturally (the Nazi salute, the “V for victory” gesture, the raised fist as a general resistance gesture, the three-finger salute used as a resistance gesture in the ‘Hunger Games’ franchise, etc.). We can also think of instances of prosodically parasitic social meanings, such as, for example, certain cases of “uptalk” that “hijack” the intonational contour of an utterance for social purposes (see Jeong 2018 for an overview of truth-conditional and non-truth-conditional rising contours in declaratives).

Cases like this should, to my mind, also be modeled as instances of direct context altering, independent of compositional meaning. It remains to be seen to what extent such expressions can be used to target specific sub-parts of spoken or written utterances they co-occur with in a way similar to expressions carrying affect-related meanings ((63) does use the US flag emoji in a targeted way, but the target part of the message is presumably meant as a partial quotation), and whether they can ever have at-issue uses.

I would like to add a word of caution here, though. While many “social meanings” will be similarly performative and will, thus, lend themselves naturally to modeling in terms of direct context altering, the term “social meanings” seems to be an umbrella term for a range of meanings, for some of which this might not be the best analysis.

For instance, Potts (2007b) also extends his analysis of expressives to T–V (“familiar” vs. “formal”) forms (pronouns and agreement) in languages that make this distinction, such as German, French, Russian, etc. (and Schlenker (2007) follows suit in his response to Potts and analyzes T–V features on pronouns as “indexical presuppositions”). I don’t think this extension is fully appropriate, however, as the use of T–V forms is not typically tied to any fluid aspect of the context (e.g., its level of formality), nor are T–V forms normally used to change anything about the context. Instead, the use of T–V forms is highly conventionalized, in the sense that for someone with whom you have an existing convention, you just use the forms you are supposed to use with this person, unless you re-negotiate the convention. This is certainly the case in Russian, although, to my knowledge, the same is true for German and French, with the cross-linguistic/cultural differences primarily concerning what the tendencies are in the relative markedness of the T vs. V forms and in how the relevant conventions are established and re-negotiated. Yes, it is in principle possible to deliberately use the wrong form to achieve certain conversational effects, but I don’t think that our analysis of the primary meaning of T–V forms should be based on such peripheral uses. As I mentioned before in subsection 2.1, various conversational effects can arise on top of the original meaning of a given expression, and a speaker can exploit this by using a certain form to achieve these effects (in a way, going from a truth-conditional to a non-truth-conditional meaning), and we can model this, but we should be careful about what it is that we are modeling. Note also that T–V features are “strictly compositional”, i.e., there is absolutely no way one can use T–V features to express their attitude towards something other than the referent of the host pronoun (or whatever expression the host expression agrees with).

Instead, I think that a more accurate analysis of the T–V distinction is along the lines of what was proposed in Esipova 2021a, where both T–V and (non-grammatical) gender features on pronouns are analyzed as “form indexicals”, contributing the information that the speaker believes that such and such linguistic form is an appropriate way to refer to

the referent of the host pronoun (or whatever expression the host expression agrees with) in the context of the utterance, with the primary source on what is appropriate being simply the speaker’s personal ledger that keeps track of the different forms they use for different individuals.

Rituals is another area where we find non-truth-conditional meanings and, once again, observe a transition “from performatives to performances”. For instance, cross-culturally, apotropaic actions (i.e., actions meant to turn away harm), such as knocking on wood or (in Russia) spitting over one’s shoulder, start out as performatives, with the agent actually believing that by performing the action they achieve its goal (once again, whether this goal is actually achieved is immaterial). However, they can and often do acquire conventionalized truth-conditional uses, where the speaker communicates that they have a certain attitude towards certain propositional content (for instance, they want a certain state of affairs to persist), with the form of the original action simplifying and regularizing as well—to the point where you don’t have to actually knock on wood or spit, you can just say *knock on wood* or *t’fu-t’fu-t’fu*. The same is true about the *FINGERS-CROSSED* gesture and the *fingers crossed* spoken parenthetical, expressions like *thank god*, etc.

#### 5.4. Expressive meanings in non-linguistic systems

I would like to end this section by a brief note on expressive meanings in systems that are very obviously not language (even if they might share some of the cognitive resources with language). There is a growing body of research that applies the toolkit and the mindset that we have as linguists to non-linguistic systems of structured outputs in humans, such as pictures (Abusch 2013, 2019; Rooth & Abusch 2019; Greenberg 2018, 2019; Maier 2019; Maier & Bimpikou 2019; Cohn 2020; Esipova 2021b, a.o.), music (Lerdahl & Jackendoff 1983; Katz & Pesetsky 2011; Schlenker 2019, a.o.), dance (Patel-Grosz et al. 2018; Charnavel 2019; Napoli & Liapis 2019, a.o.), yoga (Hess & Napoli 2008), resistance training (Esipova 2022b), etc. Some of this work has attempted to identify what constitutes meaning in these systems and how we can analyze it formally. And some of the meaning in such systems seems to lend itself quite naturally to modeling in terms of truth conditions (e.g., in the case of pictorial narratives or interpretative dance).

However, it is quite obvious that not all meaning in such systems is truth-conditional. For instance, in resistance training, most form–meaning mappings are strictly performative, in the sense that specific actions are associated with specific muscle-overload goals that the agent achieves by virtue of performing said actions. But we can also have different types of meaning co-existing within the same system. For instance, dance can have multiple functions (further varying across different types of dance), with the expressive function being one of them. Much like language, dance can performatively express one’s immediate emotions as well as constitute a performance, with the dancer creating an image of someone experiencing certain emotions—and we can study these processes in dance with the same rigor as we do in language. Dance can also induce a certain emotional state in the dancer as well as in external observers, which is to some extent true about language, as well. In general, the potential of certain physical actions to induce a certain mental state is deeply ingrained into our physiology. For instance, different forms of exercise make us happy by releasing endorphins (e.g., Harber & Sutton 1984), walking boosts creative thinking (Oppezzo & Schwartz

2014), rhythm can generate pleasure in both music and rowing (Vuoskoski & Reynolds 2019), specific acoustic features can affect one’s emotional response to music (Vuoskoski et al. 2022 and references therein), etc. (see also fn. 35 on onset lengthening and explosive release that could be part of a domain-general expressive potential of building up and releasing tension in any kind of movement). Understanding the underlying principles of such effects might lead to a better understanding of various surface properties of affect expression in language, as well.

While some athletic activities (such as the above-mentioned resistance training) do not leave that much space for expression of affect, at least not within the athletic movement itself (although one can, for instance, perform a certain movement in a more “aggressive” fashion, say, with more acceleration and endpoint accentuation), others, such as parkour, combine athletics and art, with efficiency and expression-related considerations sometimes coming into conflict. Similarly, stage fights in theatre or film can encode a lot of extra meaning, both narrative and expressive—once again, sometimes to the detriment of the efficiency of the movements involved given the presumed goals of the fight itself.

One last domain I will mention here is conducting, which is a complex process of communicating many different types of meaning, including expressive meaning (see, e.g., Luck et al. 2010), simultaneously through multiple channels: the two hands, which operate independently of one another, the face, the rest of the body. Conducting is particularly interesting as it is an instance of cross-modal transfer of meaning, which does rely on convention to some extent, but also taps heavily into cross-modal universals of form–meaning mappings, which makes it another potentially fruitful source of information about said universals, including how different types of meaning can integrate at different levels of representation.

## 6. Conclusion

In this paper, I have argued that non-truth-conditional meanings are architecturally different from truth-conditional meanings in ways that warrant complete separation of the two in our formal semantic theories. In particular, I have proposed that, while modeling expression of immediate affect as direct context altering in Potts 2007b is already a good way to capture its performative and non-truth-based nature (in contrast to Potts 2005 or Schlenker 2007), we should furthermore completely separate such performative context-altering effects of producing a given form from the compositional meaning associated with this form. While I focused primarily on affective and affect-related meanings, I maintain that this principle applies across the board, and all performative effects of producing a given form should be modeled separately from the compositional meaning associated with said form.

I have also demonstrated that we observe some of the same typology of affective and affect-related meanings as conveyed through “secondary” channels, such as prosody, facial expressions, and non-face gesture, as we do for fully conventionalized segmental morphemes (i.e., “words”). I have furthermore shown that we routinely make use of a productive mechanism of going from performative, non-truth-conditional expression of affect to demonstrations of such expression within pieces of truth-conditional meaning of the general form ‘(such that) it would make me/one go “DEMONSTRATION”’, which we can then combine as supplements or modifiers with other truth-conditional content. We observe this process at work both for “words” (e.g., in at least some instances of spoken word expressives used for de-

gree intensification) and for other types of meaning–form mappings (e.g., facial expressions and/or prosody conveying some form of surprise-related or negative affect)—and we can, thus, apply the same formal analysis to all these cases. In other words, I have demonstrated that there is no single “paralinguistic” basket into which we can throw all instances of affect-related meaning conveyed through “secondary” channels, and instead, we should study such meaning–form mappings with the same empirical and theoretical rigor as “words”. In addition, I have suggested that studying structured cross-channel surface integration of expressions carrying different types of meaning can further inform us about how these different types of meaning co-exist architecturally.

Moving forward, I believe it would be beneficial to do more cross-linguistic work with an eye for the distinctions and processes I discussed in this paper. Various expressions in various languages have been claimed to carry non-truth-conditional meanings, expressive and social, in the literature over the years. But do they indeed exhibit such hallmarks of non-truth-conditional meanings as the inapplicability of the at-issue vs. not-at-issue distinction and parasitic behavior? Is performative context altering indeed the best way to model their meaning (or part thereof) conceptually? Are we properly separating their primary meaning from various secondary conversational effects they might have on external observers? And can they provide new insights into how different types of meaning co-exist architecturally?

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