

# The semantics of emotive markers and other illocutionary content

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## Abstract

I coin the term ‘emotive markers’ to describe words like *alas* which encode not-at-issue information about the speaker’s emotive attitude towards the content of the utterances they occur in. I argue that there are important differences emotive markers and other encoders of not-at-issue content, in particular the utterance modifier *frankly* or the evidential adverb *apparently*. In contrast to the latter, emotive markers can result in Moore’s Paradox, and always scope over their local argument. I conclude that the contribution of emotive markers should be treated as ‘illocutionary content’, on par with the sincerity conditions encoded in illocutionary mood. I present a formal analysis of illocutionary content in which it differs from other not-at-issue content in restricting the speaker’s Discourse Commitments (Gunlogson, 2001) rather than the Common Ground.

## 1 Introduction

This paper lies at the intersection of two traditions of meaning distinction. The first – characterized by Speech Act Theorists like Stenius (1967); Searle (1969) as well as recent dynamic adaptations like Farkas and Bruce (2010) and Murray (2014) – distinguishes between the denotation of a sentence (e.g. its propositional content) and how the denotation affects the context of utterance (e.g. the contribution of its illocutionary mood). The second – characterized by Potts (2005) and Simons et al. (2010) but also recent dynamic adaptations like Murray (2010) and AnderBois et al. (2010) – distinguishes between the at-issue or non-projective content of a sentence and its not-at-issue or projective content (e.g. conventional implicatures and some presuppositions).

The goal of this paper is to argue that both of these distinctions are useful. There are two types of content that qualify as not-at-issue: the first type, what we canonically think of as not-at-issue content (encoded in appositives, Pottsian expressives like *bastard*, evidential adverbs, and utterance modifiers like *frankly*), is part of the descriptive content of the sentence. The second type, which I refer to as ‘illocutionary content,’ is also semantically encoded and not-at-issue, but it instead pertains to how the speaker is using the utterance in context.

This distinction loosely parallels one made in Kaplan (1997) (and underscored in Kratzer, 1999), regarding words like *ouch* and *oops*: “A descriptive is an expression which describes something which either is or is not the case. . . . [A]n expressive. . . expresses or displays something which either is or is not the case”. (Kaplan illustrates the distinction by contrasting the descriptive expression *I am in pain* with the expressive expression *Ouch*.)

Emotive markers, the empirical focus of this paper (to be discussed in detail in the next section), are morphemes or prosody that mark a speaker’s emotive attitude towards some descriptive content. The sentence in (1-a) does not contain an emotive marker; the sentences in (1-b) and (1-c) do.

- (1) a. John lost the race.
- b. Alas, John lost the race.
- c. (Wow,) John lost the race!

An utterance of (1-b), with the emotive marker *alas*, indicates that the speaker is disappointed that John lost the race. (1-c), uttered with exclamation intonation (signified by the exclamation point and encouraged by particles like *wow*), indicates that the speaker is surprised that John lost the race.

The semantic contribution of these emotive markers is decidedly not-at-issue: their meaning cannot be targeted by truth-conditional operators, denied in discourse, or used to address the Question Under Discussion, as I will demonstrate below. But emotive markers differ in some notable ways from canonical encoders of not-at-issue content, like utterance modifiers, evidential adverbials, Pottsian expressives and appositives: they are in general unacceptable outside of declarative sentences (§??); they can result in Moore’s Paradox (§3.2); and they must take narrow scope in certain contexts (§??).

In this paper, I’ll argue that emotive markers form a natural subclass of encoders of not-at-issue content, evidenced by the kind of meaning they encode (i.e. the speaker’s emotive attitude) and their linguistic behavior. I will argue that the former partially determines the latter: emotive markers, in contrast to e.g. expressives and appositives, behave the way they do because a) they (necessarily) target propositional content (in contrast to sub-propositional content); and b) the information they encode pertains to the speaker’s emotive attitude. Consequently, emotive markers quite naturally encode their meaning at an illocutionary, rather than descriptive, level: they contribute to the speaker’s Discourse Commitments (Gunlogson, 2001), rather than the Common Ground. Others (Searle and Vanderveken, 1985; Vanderveken, 1990) have proposed a similar treatment; I attempt to better substantiate the claim, and formulate the analysis in a dynamic update semantics, which allows for a particularly natural compositional account of illocutionary mood and related content.

In the next section, I delineate the class of emotive markers by providing several examples and descriptive generalizations. In §3, I will show how emotive markers differ from apparently similar not-at-issue phenomena like evidentials, expressives, and discourse particles.

A quick terminological note: following many, exemplified by Hausser (1980),

I will use the term **illocutionary mood** to refer to the morphosyntactic category marking sentence type. And I will use the term **illocutionary force** to refer to the category of speech act these sentences are used in. To illustrate: Some languages morphologically mark imperative mood; because grammar underdetermines speech acts, imperative mood is consistent with a variety of illocutionary forces, including commands, suggestions, advice, etc.

In what follows, I argue that the existence and behavior of emotive attitude markers requires a particular typology of semantic content, one that differentiates formally between types of not-at-issue content. I will use the term **content** very broadly, to refer to any meaning that is lexically or prosodically encoded. As suggested above, I distinguish between **at-issue** and **not-at-issue content** (as decided by the standard tests of projection outside of a truth-conditional operator, deniability in discourse, and ability to address the Question Under Discussion). I will additionally motivate a distinction between **descriptive** and **illocutionary content**, loosely equivalent to Kaplan’s descriptive and expressive distinction. While descriptive content amounts to what is said, illocutionary content pertains to how the speaker is using the utterance in context.

While the narrow goal of this paper is a characterization and explanatory compositional account of emotive markers, I believe the discussion here sheds light on a few larger issues. It addresses and attempts to delineate – for the first time, to my knowledge – the oft-implied intuition that there is a level of illocutionary content separate from canonical not-at-issue content like conventional implicature (see Frege, 1956; Potts, 2003b; Rett and Murray, 2013, for mentions of such a distinction). And it brings an interesting perspective to a recent debate involving cross-linguistic semantic variation in evidentials (Murray, 2010; Matthewson, 2011; Faller, 2014).

## 2 A profile of emotive markers

I define emotive markers as in (2).

- (2) Emotive markers are morphemes or prosody that encode:
  - a. the speaker’s emotive attitude;
  - b. towards some proposition made salient by the utterance in which they occur;
  - c. in backgrounded, not-at-issue content.

To illustrate this, I focus initially on the emotive markers *alas* and *fortunately* in English because they are lexical (as opposed to prosodic) and unambiguously target propositions. (Bellert, 1977, has referred to words like *fortunately* as ‘evaluative adverbs’). I then turn to prosodic markers and expressives like *damn*, which may but need not target propositions.

I take the minimal pair in (3), repeated from (1), to illustrate the semantic contribution of an emotive marker (in this case, *alas*):

- (3) a. John lost the race.

- b. Alas, John lost the race.
- (4) Fortunately, John lost the race.

While both utterances amount to an assertion that John lost the race, in (3-b) the speaker additionally conveys that she is upset or dismayed that John lost the race. *Fortunately* in (4) generally behaves like the antonym of *alas*; it's used to express that the speaker is pleased or relieved at the descriptive content of the utterance.

Emotive markers do not contribute to the at-issue content of the utterance: their content cannot be targeted by truth-conditional operators (5) and cannot be denied in discourse (6).

- (5) a. Alas, John did not lose the race.
- b. Alas, it is not the case that John lost the race.
- c. It is not the case that John lost the race, alas.
- (6) A: Alas, John lost the race.
- B: That's not true, he won!
- B':#That's not true, you're glad he did!

(5) shows different ways of negating the sentence in (3-b); none can negate the contribution of *alas*: they cannot be used to express that the speaker does not regret that John did not lose the race. In (6), Speaker B's protest that Speaker A's utterance is not true can be justified by the claim that John won; in contrast, the B' protest cannot be justified by the claim that Speaker A was glad that John lost the race.

In contrast, the content encoded in emotive verbs like *be disappointed* or *be surprised* is targetable by truth-conditional operators (e.g. *I am not surprised that John won the race*), and is therefore at-issue. In the rest of this section, I will provide some additional examples of emotive markers, all of which pattern like *alas* and *fortunately* in tests for not-at-issueness. In the following section, I will show how emotive markers form a distinct class from canonical markers of not-at-issue content.

Instead of disappointment or relief, many emotive markers indicate that the speaker is surprised by (or had not expected) the descriptive content of the utterance. This phenomenon is, in some traditions, referred to as 'mirativity' DeLancey (1997, 2001).

In English, speaker surprise can be marked intonationally, by a prosodic emotive marker. This is illustrated by the difference between the assertion in (7-a) and the exclamation in (7-b) (Sadock, 1974; Cruttenden, 1986; Michaelis, 2001; Merin and Nikolaeva, 2008). I take the exclamation point in these examples to model a particular prosody or intonation in English: an L+H\* contour plus extra prominence marker and an expanded pitch range (Sturman and Rett *to appear*). This intonation is brought out especially well by discourse particles like *wow*, although such discourse particles should not be confused with the emotive marker (the intonation) itself: they are optional in exclamatives, and can occur on their own, without descriptive content (Rett, 2009, 2008, 2011).

- (7) a. John arrived on time.  
 b. (Wow,) John arrived on time!

The difference in meaning between (7-a) and (7-b) is the expression of the speaker's emotive attitude: both utterances convey the same descriptive content, but (7-b) additionally expresses that the speaker is surprised by (or had not expected) the descriptive content of the utterance.

Like *alas*, the content encoded in exclamation intonation is not-at-issue. It can't be denied in discourse (8) or targeted by negation: (9) cannot mean 'The speaker is not surprised that John lost the race.'

- (8) A: (Wow,) John lost the race!  
 B: That's not true, he won.  
 B':#That's not true, you knew he would lose.
- (9) (Wow,) John did not lose the race!

While English encodes speaker surprise or mirativity in intonation, other languages encode the meaning lexically. In Finnish, for example, the sentence particle *-pä* expresses speaker surprise (Karlsson, 1999, 20).<sup>1</sup> Like the pair in (7), the pair in (10) differ only in that (10-b) additionally encodes that the speaker finds the propositional content (that there are lots of flowers) surprising. They do not differ in intonation.

- (10) a. Täällä on paljon kukk-ia.  
 here be-3RD.SG a.lot flower-PRT.INDF.PL  
 'There are lots of flowers here.'
- b. Täällä-pä on paljon kukk-ia.  
 here-PA be-3RD.SG a.lot flower-PRT.INDF.PL  
 '(Wow,) There are lots of flowers here!'

Like exclamation intonation, the content encoded by *pä* cannot be directly denied in discourse, and cannot be targeted by negation.

Wu (2008) reports two sentential adverbs in Mandarin that seem to count as emotive markers. As shown in (11), *jingran* is a mirative marker, and the adverb *guoran* is its antonym, used to express that the asserted content was expected by the speaker.

- (11) Zhangsan guoran /jingran lai le.  
 Zhangsan GUORAN /JINGRAN come PST  
 'Zhangsan came (as expected/not expected by the speaker).'

Finally, as detailed in Rett and Murray (2013) and elsewhere, there is a robust crosslinguistic tendency for indirect evidential markers to double as mirative markers. I'll briefly introduce the phenomenon of evidentials and then illustrate mirative evidentials from Tsafiki, a Barbacoan language spoken in

<sup>1</sup>Thanks to Peter Sutton (p.c.) for drawing my attention to *pä*, and to Tuomo Tiisala (p.c.) for his judgments.

Ecuador, as reported in Dickinson (2000).

Tsafiki is an evidential language, which means that all grammatical sentences contain an evidential marker that specifies the type of evidence for their descriptive content (Aikhenvald, 2004). Tsafiki's is a three-way evidential system; it distinguishes between direct physical evidence (12-a), information inferred from direct physical evidence (12-b), and information inferred from general knowledge (12-c) (from Dickinson, 2000, 407-8).<sup>2</sup>

- (12) a. Manuel ano fi-e.  
M food eat-DECL  
'Manuel ate.' (The speaker saw him.)
- b. Manuel anno fi-nu-e.  
M food eat-IND-DECL  
'Manuel ate.' (The speaker sees the dirty dishes.)
- c. Manuel anno fi-n-ki-e.  
M food eat-NOM-INF-DECL  
'Manuel must have eaten.' (He always eats at 8:00; it's now 9:00.)

However, in certain contexts, the indirect evidential *nu* marks mirativity instead of indirect evidence. Dickinson (p411) describes (13) as ambiguous.

- (13) Moto jo-nu-e.  
motorcycle be-IND-DECL  
'It is a motorcycle.' (The speaker hears a motor.)  
'It's a motorcycle!'

In a context in which the speaker has indirect evidence for the proposition – for instance, that she hears rather than sees a motorcycle – the indirect evidential in (13) is licensed. However, it is also licensed in contexts in which the speaker sees the motorcycle, i.e. has direct evidence for the motorcycle, in which case that same evidential functions instead as a mirativity marker, in which case (13) conveys that the speaker is surprised that it is a motorcycle, but not that the speaker has indirect evidence of the proposition.

The polysemy illustrated in (13) – the repurposing of indirect evidentials as mirative markers – happens across languages and language families: in Turkish (Slobin and Aksu, 1982), Tibetan (DeLancey, 1997), and Cheyenne (Rett and Murray, 2013). Important here is the observation that, when these polysemous morphemes receive a mirative interpretation, they are acting as emotive markers.

I'll end by briefly discussing what it means to encode the speaker's emotive attitude in particular, or to be speaker-oriented more generally. Speaker-oriented expressions like emotive markers can reflect the speaker's attitude or – in contexts in which the speaker's attitude is understood to be representative of her interlocutors – a general or community perspective. This means that

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<sup>2</sup>DECL labels the declarative marker, which encodes declarative mood. The direct evidential is null in Tsafiki. I've labelled the second evidential IND for 'indirect' and the third INF for 'inferential'.

an utterance like *Alas, we can't all win the race* is naturally interpreted as reflecting a first-person plural perspective. As Harris and Potts (2009) argue, the ability of speaker-oriented expressions to represent a broader perspective is part of what it means to be speaker-oriented; such utterances do not constitute a counter-example to the empirical generalization that e.g. emotive markers are speaker-oriented. The ability of some speaker-oriented expressions – like *we* – to orient in certain contexts to entities other than the speaker is a pragmatic phenomenon.

This explains the ability of Pottsian expressives – a focus of Harris and Potts (2009) – and emotive markers to orient towards the hearer in certain empathetic scenarios. In a context in which A, an LA Dodgers fan and a fan of Puig, is clearly expressing empathy for B, a Detroit Tigers fan, A can utter any of the sentences in (14).

- (14) a. Uh-oh, that bastard Puig batting next. *Pottsian expressive*  
 b. Unfortunately, Puig is batting next! *emotive marker*

In the next section, I will argue that emotive markers behave differently in principled ways from other encoders of not-at-issue content, including evidentials.

### 3 What distinguishes emotive markers

Kaplan (1997) characterized emotive content as displaying “something about a state or attitude of the speaker” (26:14). But he explicitly equated the sentences *That damn Kaplan was promoted* and *Alas, Kaplan was promoted* (30:54); from the present perspective, the former involves a Pottsian expressive, and the latter involves an emotive marker. In this section, I’ll argue that the two behave slightly differently, and should thus be accorded different treatments in the semantics.

- (15) Emotive markers are morphemes or prosody that encode:  
 a. the speaker’s emotive attitude;  
 b. towards some proposition made salient by the utterance in which they occur;  
 c. in backgrounded, not-at-issue content.

This definition excludes a variety of canonical encoders of not-at-issue content. I’ll first discuss what doesn’t qualify as an emotive marker, and then (in §??) show that emotive markers behave as a distinct subclass of encoders of not-at-issue content.

#### 3.1 What emotive markers aren’t

There are a number of canonical encoders of not-at-issue content: presupposition triggers; Pottsian expressives like *bastard*; and evidential adverbs. These

are illustrated in (16); (17) demonstrate that their meanings, too, cannot be targeted by truth-conditional operators like negation.

- (16) a. Jane’s sisters live in Melbourne. *presupposition trigger*  
 b. Jane met with that bastard Bill. *Pottsian expressive*  
 c. Apparently, Jane owns a horse. *evidential adverb*  
 d. Frankly, Jane won the race. *utterance modifier*
- (17) a. It’s not the case that Jane’s sisters live in Melbourne.  
*not negated: Jane has sisters*  
 b. It’s not the case that Jane met with that bastard Bill.  
*not negated: The speaker thinks that Bill is a bastard*  
 c. It’s not the case that, apparently, Jane owns a horse.  
*not negated: The speaker has indirect evidence that Jane owns a horse.*

Non-presupposed, lexically encoded not-at-issue content is generally characterized as conventional implicature (Potts 2005, though see Bach 1999). Conventional implicature is typically analyzed semantically in one of two ways: statically, on a different tier from at-issue content (Potts, 2003a,b, 2005, 2007; McCready, 2010; Gutzmann, 2015); or dynamically, as an automatic common-ground update (Murray, 2010, 2011, 2014; AnderBois et al., 2010, 2013). I’ll argue that these approaches do not make sufficient distinctions to account for the idiosyncractic behavior of emotive markers.

As suggested by the definition in (15), encoders of not-at-issue content can fail to count as emotive markers for two reasons. Expressives reflect the speaker’s emotive attitude, but towards something sub-propositional, like an individual (thereby failing to satisfy (15-b)). An exception is *damn*, which can modify individuals (e.g. *that damn postman*) or can be used to mark the speaker’s dismay at a proposition (e.g. *Damn, John lost the race!*). When it is used in the latter sense, *damn* qualifies as an emotive marker.<sup>3</sup>

And while many encoders of not-at-issue content target propositions, they do not encode the speaker’s emotive attitude (thereby failing to satisfy (15-a)). Evidentials encode the speaker’s type of evidence for the descriptive content of an utterance, and speaker certainty markers like *of course* encode the speaker’s level of credence in it (see also Ettinger and Malamud, 2015). Utterance modifiers like *frankly* appear to modify the speech act itself, causing Potts (2003b) to analyze them (along with Japanese performative honorifics) as denoting not-at-issue content associated with a null verb *utter*.

The phenomenon of discourse particles (e.g. English *too, even, indeed*, German *toch, doch*) is also relevant; however, because the label ‘discourse particle’ describes a morphosyntactic category, it refers to a semantically heterogeneous class (see Waltereit, 2001, for related discussion). Zimmermann (2011) defines the class of discourse particles as follows (p2012): “Discourse particles in the narrow sense are used in order to organize the discourse by expressing the

<sup>3</sup>Thanks to Kai von Fintel (p.c.) for making this point.



speaker’s epistemic attitude towards the propositional content of an utterance, or to express a speaker’s assumptions about the epistemic states of his or her interlocutors concerning a particular proposition.” Particles that satisfy this first disjunct, like the Finnish *pää*, might qualify as emotive markers according to (15); those that satisfy the second do not.

I’ve characterized the class of emotive markers as encoders of not-at-issue content about the speaker’s emotive attitude towards some proposition made salient by the utterance. In this section, I’ll argue that this identifies a natural subclass of not-at-issue content: emotive markers, but not other encoders of not-at-issue content, can result in Moore’s Paradox. And emotive markers, but not other encoders of not-at-issue content, always scope over their local clausal complement.

### 3.2 One difference: Moore’s Paradox

Denying the content of emotive markers results in Moore’s Paradox, while denying the content of other not-at-issue meaning results in something more like a contradiction. Moore’s Paradox occurs when the assertion of a proposition is coupled with the speaker’s denial that she believes the proposition. The paradoxical result is the judgment of unacceptability, exemplified in (18).

(18) #It’s raining, but I don’t believe it’s raining.

The source of this unacceptability has been the cause of a great deal of debate; in the next section, I will side with Searle (1969) in assuming that Moore’s Paradox occurs when the second conjunct denies a sincerity condition encoded in the illocutionary content of the first.

This test was adapted from Murray’s (2010) work on Cheyenne. Recall that mirative evidentials – like the Cheyenne narrative evidential – receive an evidential interpretation in some contexts and a mirative interpretation in others. When they receive a mirative interpretation, they qualify as emotive markers. Murray reported that the evidential and mirative uses of Cheyenne mirative evidentials differed in Moorean constructions. She presented consultants with a pair of conjoined sentences; the first conjunct in each contained the mirative evidential, the second conjunct denied the content of the mirative evidential. In the first sentence, in (19), the mirative evidential has an evidential interpretation (in Cheyenne, a narrative reading). In the second sentence, (20), the mirative evidential has a mirative interpretation.

(19) #<sub>1</sub>É-hó’tàheva-sèstse Aénohe naa oha hovánee’e  
 3-win-RPT.3SG Hawk but nobody  
 é-sáa-nè-hé-he-∅.  
 3-NEG-that-say-MOD<sub>A</sub>-DIR  
 Intended: ‘Hawk won, it’s said, but nobody said that.’

(20) #É-hoo’kóhó-**neho!** Ná-nèšè-héne’ena tsé-to’sè-hešè-hoo’koho.  
 3-rain-nar.sg.inan 1-continue-know.s.t CNJ-going.to-how-rain

Intended: ‘It’s raining! ... # I *knew* it was going to rain.’

Both sentences sounded unacceptable to Murray’s consultants. But consultants reported a difference in the unacceptability. They claimed that the mirative Moorean sentence in (20) was infelicitous (marked with #), in just the same way they judged traditional Moorean sentences to be. But the evidential Moore’s Paradox sentence in (19) was **contradictory** (marked #<sub>⊥</sub>), distinct from the infelicity of traditional cases like (18) and the mirative construction in (20).

Murray interpreted this as evidence that mirative content differed in kind from evidential content, and in particular that the former patterned with the sincerity conditions of an utterance (and were thus better characterized as illocutionary content than the evidential interpretation of Cheyenne mirative evidentials). I will adopt the same conclusion.

The distinction between two different types of infelicity is appreciably subtle. When I consulted native English speakers about this distinction, presented in the form of a sorting task, about half were unable to recognize a difference between the type of felicity in any of the three sentences below: (21-a) the classic Moore’s Paradox; (21-b) a version with canonical not-at-issue content (an evidential adverb); and (21-c), a version with emotive markers.

- (21) a. #It’s raining, but I don’t believe it’s raining.  
b. #Allegedly, John lost the race, but no one alleged he did.  
c. #Alas, John lost the race, but I’m not disappointed he did.

However, those consultants who did report differences in their judgments all reported that the emotive marker sentence in (21-c) patterned with the classical Moorean sentence in (21-a) to the exclusion of the evidential sentence in (21-b), which is consistent with Murray’s findings.

A clearer test involves the embedding of Moorean sentences in certain epistemic contexts. Standard Moorean sentences like (21-a) become acceptable when embedded in the antecedent of a conditional or under the verb *suppose*, as in (22) (Yalcin 2007, although see Roberts 2015 for a dissenting view).

- (22) a. Suppose that it is raining, but that I do not believe that it is raining.  
b. If it is raining but I don’t believe it, then there is something I do not believe.

Section §?? discusses complications presented by emotive markers in conditional antecedents, so I focus on the *suppose* test in (23).

- (23) a. Suppose that, alas, John lost the race, but that I’m not disappointed he did.  
b. #Suppose that, allegedly, John lost the race, but that no one alleged that he did.

These sentences illustrate a contrast, arguably similar to the one reported by Murray for Cheyenne: denying the content encoded in emotive markers like *alas* results in Moore’s Paradox, which is obviated under *suppose*. As a result, (23-a) is reported to be acceptable. In contrast, similar denial of the content of the evidential *allegedly* in (23-b) sounds relatively unacceptable. Following Murray’s conclusions about Cheyenne evidentiality and mirativity, this is because the evidential adverb *allegedly* encodes a different kind of not-at-issue content than the emotive marker *alas*.

These tests illustrate one way in which the content encoded in emotive markers seems to differ semantically from canonical not-at-issue content, like that encoded in utterance modifiers, evidentials, and some expressives: the content encoded in emotive markers behaves just like the sincerity conditions of declarative utterances in Moorean sentences, while canonical not-at-issue content behaves like other descriptive content in that it leads to contradiction when denied by the speaker. This supports the distinction I characterized in §1 between descriptive and illocutionary content; the latter, encoded in emotive markers, is content about what the speaker is using the utterance.

### 3.3 Another difference: Scope-taking

Emotive markers scope over a single proposition associated with the clause they occur in. In this respect, they behave differently from canonical encoders of not-at-issue content: evidential adverbs like *apparently* and utterance modifiers like *frankly*. I’ll demonstrate this claim by examining the behavior of each of these types of elements with respect to propositional operators like conditionals and modals (§3.3.1) and with respect to illocutionary mood (§3.3.2).

#### 3.3.1 Scope interactions with non-illocutionary content

Canonical encoders of not-at-issue content can occur in the antecedents of conditionals as well as sentence-initially. When they do, they must range over the conditional as a whole. This is illustrated in (24) for the utterance modifier *frankly* and in (25) for the evidential adverb *apparently*.

- (24) a. Frankly, if the mayor is convicted, she must resign from office.  
 b. If, frankly, the mayor is convicted, she must resign from office.
- (25) a. Apparently, if the mayor is convicted, she must resign from office.  
 b. If, apparently, the mayor is convicted, she must resign from office.

The (a) sentences are paraphrasable as the (b) sentences; specifically, in neither can the adverb range over just the antecedent. In (25-b), for instance, this would result in a reading compatible with a situation in which it is apparent that the mayor will be convicted, but it is not apparent that she will have to resign from office as a result. This reading is not available.

This claim is illustrated more clearly in (26-b), in which the antecedent but not the conditional as a whole is compatible with indirect evidence. The result-

ing conditionals are unacceptable, regardless of the position of the evidential, in the absence of contextual information that the speaker doesn't have agency over her decisions.

- (26) a. #Apparently, if the mayor is convicted, I will run for office.  
b. #If, apparently, the mayor is convicted, I will run for office.

Lexically encoded emotive markers have the same syntactic distribution in conditionals, but they receive a different interpretation when embedded in antecedents: they take narrow scope, ranging over only the antecedent. This is illustrated below with *alas*.

- (27) a. Alas, if the mayor is convicted, she must resign from office.  
b. If, alas, the mayor is convicted, she must resign from office.

In (27-a), *alas* can range over the entire conditional, as do the not-at-issue encoders in (24)–(25). But in (27-b), when *alas* is in the antecedent of the conditional, it can only range over the antecedent, not the meaning of the conditional as a whole. This point is illustrated more clearly by the contrast in (28), a conditional in which the consequent is a proposition the speaker would (in a neutral context) not be dismayed by.

- (28) a. #Alas, if the mayor is convicted, at least we'll have the chance of getting a better one.  
b. If, alas, the mayor is convicted, at least we'll have a chance of getting a better one.

Because the content encoded in *alas* is incompatible with the chance of getting a better mayor, and because the sentence-initial *alas* in (28-a) ranges over the conditional as a whole, the conditional in (28-a) is unacceptable. In contrast, since *alas* only ranges over the antecedent when it is embedded in the antecedent, (28-b) is acceptable. This pair forms a direct contrast with the pair in (26).

Other lexical emotive markers, like *fortunately* and *unfortunately*, behave the same way. The relevant generalization is that emotive markers scope over the content of the clause they occur in; other encoders of not-at-issue content, like utterance modifiers and evidential adverbs, scope outside of their clause in certain configurations.<sup>4</sup>

This generalization is bolstered by the interaction of these encoders of not-at-issue content and epistemic modals. In (30), each phrase occurs sentence initially, and is thus unambiguously associated with the content of the matrix clause.

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<sup>4</sup>Interestingly, emotive markers must syntactically precede these other sentential modifiers, demonstrated by the contrast in (29) (Cinque, 1999).

- (29) a. Alas, apparently John died.  
b. \*Apparently, alas John died.

Neither seems to be able to apply to the other's content, however; (29-a) cannot mean the speaker is disappointed that it's apparent that John died.

- (30) a. Reportedly, it's possible that it's raining.  
 b. Frankly, it's possible that it's raining.  
 c. Unfortunately, it's possible that it's raining.

In all of these sentences, the content encoded in the adverbial scopes over the possibility modal. The sentence with the emotive marker, for instance (30-c), is interpreted as reflecting the speaker's dismay that there's a non-trivial possibility of rain. (This sentence is natural in a context in which it's clear that the speaker hates carrying an umbrella, but feels compelled to when there's a chance of rain.)

In contrast, when the adverbs are sentence-final, they can modify the embedded clause (or the matrix clause). Here, too, the behavior of emotive markers differs from the other encoders of not-at-issue content. In (31-a) the evidential adverb can only range over the matrix clause: it can be used to inform someone about a report that it's possibly raining, but not about a possible raining report. In other words, (31-a) cannot be paraphrased as "It's possible that it's reportedly raining." The same goes for (31-b); the utterance modifier can only range over the matrix clause.

- (31) a. It's possible that it's raining, reportedly.  
 b. It's possible that it's raining, frankly.  
 c. It's possible that it's raining, unfortunately.

In contrast, the emotive marker in (31-c) can scope over either the matrix proposition or the embedded proposition, arguably depending on which clause it modifies. It can be used to lament the possibility of rain (appropriate in the umbrella scenario I mentioned in regards to (30-c)), but it can also be used to lament the rainy weather, if it does eventualize.

In sum, there's something different about emotive markers: they scope locally, unlike canonical encoders of not-at-issue content. This generalization applies to all lexically-encoded emotive markers, as these are the only ones that can be embedded.

### 3.3.2 Scope with illocutionary mood

Emotive markers always scope under illocutionary mood. In questions, they still associate with a single proposition: the speaker bias or existential presupposition of a question. In this respect, they contrast clearly with utterance modifiers, which always scope above illocutionary mood. And they also differ subtly from evidential adverbs, which participate in interrogative flip, associating with a question's expected answer.

The fact that emotive markers associate with the bias or existential presupposition of a question makes them unnatural out-of-the-blue. And, as a possible result, a wide variety of miratives and emotive markers are reported to be unacceptable in questions. English exclamation intonation is unacceptable in questions (although this is plausibly for phonological reasons, since questions in English are marked in part prosodically). But the Finnish mirativity marker

*pã* is also unacceptable in questions, across the board, despite being a lexically encoded emotive marker.

Mirative evidentials in Cheyenne are also unacceptable in questions. Recall that mirative evidentials mark evidentiality in some contexts and mirativity (or speaker surprise) in others. In the latter cases, they count as emotive markers. And, as shown in Rett and Murray (2013), this difference in interpretation affects their ability to occur in questions. When the Cheyenne mirative evidential (glossed as NAR for ‘narrative’) occurs in questions, as in (32), it can only receive an evidential interpretation, not a mirative interpretation. (The unavailability of the intended interpretation in (32-b) is marked by %.)

- (32) a. Mó=é-x-hó’ táhevá-**hoo’o** Aénohe?  
*y/n=3-REM.PST-win-NAR.3SG Hawk*  
 ‘Given the stories you heard, did Hawk win?’  
 b. %Mó=é-hó’ táhevá-**hoo’o** Aénohe?  
*y/n=3-win-NAR.3SG Hawk*  
 Intended: ‘Given your surprise, did Hawk win?’ / ‘Did Hawk really win?!’

The English lexical emotive markers I’ve been focusing on vary in their acceptability in questions. They are quite unnatural sentence-initially in *wh*-questions, as in (33-a). But they are relatively acceptable sentence-finally, as in (33-b).

- (33) a. \*Alas/Unfortunately, who is getting kicked out of the program?  
 b. ?Who is getting kicked out of the program, alas/unfortunately?

When questions like (33-b) are acceptable, the emotive marker is intuitively ranging over an existential presupposition associated with the clause: in this case, the proposition that someone is getting kicked out of the program.

English lexical emotive markers are relatively acceptable in polar questions, although there is an intriguing difference in acceptability between *alas* and *unfortunately* that I will have to overlook in what follows.<sup>5</sup>

- (34) a. Alas/?Unfortunately, did Jane get kicked out of the program?  
 b. Did Jane get kicked out of the program, alas/?unfortunately?

The question in (34-a), with an utterance-initial emotive marker, sound relatively unnatural out of the blue, but the sentence-final versions in (34-b) are more acceptable. In them, the emotive marker associates with the bias of the polar question, the proposition that Jane got kicked out of the program. Tag questions, which are associated quite strongly with speaker bias, improve the acceptability of sentence-initial emotive markers in polar questions:<sup>6</sup>

<sup>5</sup>*Alas* is slightly more acceptable than *fortunately/unfortunately* in questions. I have no explanation for this difference, but I suspect it might be tracking the relative grammaticization of *alas*; specifically, that *alas* is more distantly related to its adjectival or adverbial roots than *unfortunately* (e.g. *It was unfortunate/\*alas that Jane lost the race*).

<sup>6</sup>Thanks to Amy Rose Deal (p.c.) for pointing out the significance of these data.

(35) Alas/unfortunately, Jane got kicked out of the program, didn't she?

When lexical emotive markers occur in *wh*-questions, they can be unnatural out of the blue, but they're acceptable when there is a clear proposition, associated with the *wh*-clause, that the speaker is plausibly disappointed about (in the case of *alas* and *unfortunately*).

(36) a. Alas, who got kicked out of the program?  
b. When did the doctor's office close, unfortunately?

In (36), intuitively, the emotive marker is scoping over an existential version of the question: that someone got kicked out of the program, and that the doctor's office closed (at some point).

To summarize, emotive markers are not perfectly natural in questions. But they are generally acceptable utterance-finally, in questions with clear speaker bias or some other plausibly disappointing (or surprising, etc.) question.

In contrast, utterance modifiers appear to scope over the illocutionary content of an interrogative, ranging over the question as opposed to some proposition associated with the question. In fact, they must occur sentence-initially (Giorgi, 2010; Woods, 2014).

(37) a. Frankly, who was wrong? (Giorgi, 2010, 94)  
b. Seriously, did Jane get kicked out of the program?

These utterances are paraphrasable as "I frankly ask you, Who was wrong?" or "I seriously ask you, did Jane get kicked out of the program?". They are precisely as their label suggests: modifiers of utterances, including interrogative utterances. Unlike emotive markers, they cannot associate with the existential presupposition of a *wh*-question, or the bias of a polar question.

Emotive markers differ in their behavior in questions from evidential adverbs, too. In contrast to both emotive markers and utterance modifiers, evidential adverbs can only occur in questions utterance-finally (Giorgi, 2010; Woods, 2014).

(38) a. Who was responsible for the computer hack, allegedly?  
b. How much does the dean make, reportedly?

While emotive markers associate with a question's presupposition or bias, and utterance modifiers associate with the question itself, evidential adverbs associate with a question's answer. In particular, they participate in 'interrogative flip,' just like many evidentials do (Speas and Tenny, 2003), orienting with the hearer's response rather than the speaker's question. This means that the questions in (38) can be paraphrased as "Tell me who was responsible, according to the allegations you've heard" and "Tell me how much the dean makes, according to the reports you've read".

I'll end by noting, for the sake of completeness, that emotive markers are unacceptable with other non-declarative moods as well (for instance, in imperatives, (39)).

- (39) a. #Alas/Unfortunately, clean up your room!  
 b. #Fortunately, get a job!

They are also unacceptable in performatives:

- (40) a. #Alas, I declare you man and wife.  
 b. #Unfortunately, I (hereby) promise to take out the garbage.

This is also true for Finnish *pää* (and English exclamation intonation, again for plausibly phonological reasons).

### 3.4 Interim summary

I've delineated a class of linguistic markers based on the meaning they encode: the speaker's emotive attitude towards some salient proposition, in backgrounded content. This groups together words like *alas* with prosodic markers like exclamation intonation; it also includes some discourse particles like the Finnish *pää*, and the mirative interpretation of mirative evidentials. And it excludes many other linguistic elements that are prima facie similar: evidentials, utterance modifiers like *frankly*, expressives, appositives, and speaker certainty markers.

Like these other elements, emotive markers encode not-at-issue content: their semantic contribution cannot be targeted by truth-conditional operators, be denied in discourse, or used to address the Question Under Discussion. But I've argued here that emotive markers don't behave like other encoders of not-at-issue content in several respects.

First, denying the content of an emotive marker results in Moore's Paradox, while denying the content of other encoders of not-at-issue content does not. The case is clearest in the comparison of emotive markers and evidentials in (23): embedding an emotive marker and its denial under *suppose* removes the sense of Moorean Paradox, while embedding an evidential and its denial does not.

Second, emotive markers scope differently than other proposition-targeting encoders of not-at-issue content. In the case of propositional operators like conditionals and modals, emotive markers scope locally (in the clause they occur in), while utterance modifiers and evidential adverbs associate with the matrix proposition. In the case of illocutionary mood, the three categories all behave distinctively. Emotive markers can, in certain contexts, target a single proposition: the existential presupposition in the case of *wh*-questions, or the speaker bias in the case of polar questions. In contrast, utterance modifiers and evidential adverbs both seem to scope over the interrogative mood; the former range over the question itself, while the latter participate in interrogative flip, effectively ranging over the answer.

In what follows, I propose an account of emotive markers in which they effectively restrict the sincerity conditions of an utterance, which is also a role played by illocutionary mood. I couch the analysis in a dynamic update semantics –



based on Farkas and Bruce (2010) but drawing on similar adaptations in Murray (2010, 2014) and Ettinger and Malamud (2015) – and model illocutionary content as meaning that is added to the speaker’s set of Discourse Commitments (Gunlogson, 2001), rather than the Common Ground (as descriptive not-at-issue content does).

I will argue that this treatment of emotive markers as modeling ‘illocutionary content’ – effectively, as restrictors of sincerity conditions – does a good job of naturally accounting for the semantic differences observed in this section between emotive markers and other encoders of not-at-issue content. It is, additionally, a satisfying model of the persistent intuition – dating at least back to Frege – that emotive markers belong more to the realm of illocution than description.<sup>7</sup>

I do not, however, attempt to make the stronger claim that no extant theory of canonical not-at-issue content is capable of modeling the idiosyncratic behavior of emotive markers detailed here. Recall that there are two such types of theory: static accounts, (like Potts, 2003a,b, 2005; McCready, 2010, 2012; Gutzmann, 2015), which treat not-at-issue content in a second, fairly independent semantic tier; and dynamic accounts, (like Murray, 2010, 2014; AnderBois et al., 2010, 2013), which encode not-at-issue content in an automatic common-ground update. These approaches could, in principle, treat emotive markers as they do other encoders of not-at-issue content, and accommodate their differences in behavior a case-by-case basis.

## 4 Modeling illocutionary content

In the present analysis, emotive markers behave differently from other propositional encoders of descriptive not-at-issue content in two respects: emotive markers add to the speaker’s Discourse Commitments, instead of the Common Ground; and emotive range over the most salient proposition in their update, rather than the proposition(s) being added to the Common Ground in the utterance. I will argue that emotive markers behave the way they do because they encode *speaker-oriented, emotive, propositional attitudes*: not-at-issue content about the speaker (relative to some salient proposition) rather than the world.

### 4.1 A formal foundation

The claims made here – that sincerity conditions can be restricted by lexical or prosodic markers – underscores the need for a compositional semantic representation of sincerity conditions, or something equivalent. The compositional semantics developed below distinguishes between at-issue content, not-at-issue content, and illocutionary content; formally models sincerity conditions; and

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<sup>7</sup>Frege (1956, 295) says, “An indicative sentence often contains, as well as a thought and the assertion, a third component over which the assertion does not extend. This is often said to act on the feelings, the mood of the hearer or to arouse his imagination. Words like *alas* or *thank God* belong here.”

represents salience in a way that can include focus alternatives and not-at-issue content. While the proposal is consistent in principle with a number of different formal semantics for illocutionary mood (including Gazdar, 1976; Asher and Lascarides, 2003; Lascarides and Asher, 2009; Krifka, 2001, 2014; Murray, 2014; Murray and Starr, 2016; Portner, 2016), I adopt the framework proposed in Farkas and Bruce (2010) as a foundation, largely because it is flexible enough to be easily supplementable.

#### 4.1.1 The Farkas and Bruce framework

Farkas and Bruce (2010) define speech acts as functions from input discourse structures  $K_i$  to output discourse structures  $K_o$ ; a subcomponent of any discourse structure is a (possibly empty) set of propositions that are under consideration for addition to the CG. This set is called a projected set, and an assertion that  $p$  adds  $p$  to the input  $ps$ . They specify that interrogative mood differs from declarative mood in that the former adds a non-singleton set of propositions to the  $ps$ , while the latter adds and projects only one proposition (p.88).

They use the notion of a stack (a Table  $T$ ) to model salience in discourse (Ginzburg, 1996; Roberts, 1996). In addition to affecting the common ground, utterances can also raise propositional discourse referents (“drefs”) to salience, and they do so in this theory by pushing the drefs to the top of the Table. Their original conception of the Table separates at-issue content from not-at-issue content; I will revisit this assumption in §??.

Gunlogson (2001) defined the CG in terms of the participants’ commitment sets; specifically, as the union of the discourse commitments of the participants. But one other important innovation of Farkas and Bruce’s approach is the separation of the CG and Discourse Commitment sets. They say: “The discourse commitment set of a participant A at a time  $t$  in a conversation  $c$  contains those propositions A has publicly committed to in the course of  $c$  up to  $t$  and which have not (yet) become mutual commitments. The CG, on the other hand, is that set of propositions that have been agreed upon by all participants in  $c$  at  $t$  together with the propositions that represent the shared background knowledge of the discourse participants” (p.85). Among other things, this allows for participants to negotiate the CG independently of their own public beliefs.

To summarize, the theory in Farkas and Bruce (2010) relies on characterizing several different subcomponents of a given discourse structure  $K$ :

1. the **common ground** (CG), the set of propositions all the discourse participants are committed to (for the purpose of the conversation);
2. sets of **discourse commitments** ( $DC$ ): for each participant  $x$ , the set of propositions  $x$  has publicly committed to during the conversation;
3. the **Table**  $T$ , modeling discourse salience;
4. the **projected set** ( $ps$ ), the set of propositions that are being considered for addition into the CG.

Farkas and Bruce (2010) adopt from Krifka (2001) a particular formulation of illocutionary mood in which it takes a sentence as its argument and outputs a function from input to output context states. The declarative mood  $D$  is defined over an indicative sentence  $S_p$ , a speaker or author  $a$  and a discourse structure  $K_i$ ; its output is a discourse structure  $K_o$  such that  $K_o$  is restricted as in (41) (Farkas and Bruce, 2010, 92). (41) has been modified slightly for terminological consistency, and I’ve labeled it “to be revised” because I will amend it in (43) to explicitly differentiate between at-issue and not-at-issue content.

$$(41) \quad \text{Declarative operator (i.e. } \mathbf{D} \text{), for sentences } S_p \text{ with at-issue content } p: \\ \mathbf{D}(S_p, a, K_i) = K_o \text{ such that} \quad \text{(to be revised)} \\ \begin{aligned} \text{(i)} \quad & DC_{a,o} = DC_{a,i} \cup \{p\} \\ \text{(ii)} \quad & T_o = \text{push}(\langle S_p; \{p\} \rangle, T_i) \\ \text{(iii)} \quad & ps_o = ps_i \bar{\cup} \{p\} \end{aligned}$$

Step (i) in (41) models the addition of the at-issue content  $p$  (the propositional content of the sentence  $S_p$ ) to the set of propositions representing the speaker’s discourse commitments: those propositions the speaker has publicly committed to during the conversation. Step (ii) in (41) represents that the utterance of  $S_p$  makes salient the proposition  $p$ ; it defines the output stack  $T_o$  as the input stack  $T_i$  with  $p$  pushed on top. Step (iii) represents the illocutionary content of assertion, using the notion of an input ( $ps_i$ ) and output ( $ps_o$ ) projected set.<sup>8</sup> These propositions can then be added to the CG or eliminated throughout the discourse.

Farkas and Bruce’s polar question operator  $\mathbf{PQ}$  takes an interrogative sentence  $S_{p?}$  and a discourse structure  $K_i$  as its arguments. It raises the issue of whether  $p$  by adding  $p$  and  $\neg p$  to the stack, in (42) (i). It proposes, in (ii), that the interlocutors accept either that  $p$  or that  $\neg p$  (Farkas and Bruce, 2010, 95).

$$(42) \quad \text{Polar question operator (i.e. } \mathbf{PQ} \text{)} \quad \text{(to be revised)} \\ \mathbf{PQ}(S_{p?}, K_i) = K_o \text{ such that} \\ \begin{aligned} \text{(i)} \quad & T_o = \text{push}(\langle S_{p?}; \{p, \neg p\} \rangle, T_i) \\ \text{(ii)} \quad & ps_o = ps_i \bar{\cup} \{p, \neg p\} \end{aligned}$$

The relevant difference between the two illocutionary moods is that declarative mood introduces a singleton set of propositions, while the polar question introduces a non-singleton. These illocutionary moods, as they’re defined, make predictions about the sort of content an utterance makes salient and the sort of effect that utterance has on the common ground, by virtue of what it adds to the projected set. This allows Farkas and Bruce to model discourse anaphora to propositions, as many dynamic accounts do, as well as the discourse effect of question responses (which can result, in part, in the acceptance of projected set propositions to the common ground).

One adaptation I will make to the Farkas and Bruce framework is to incorporate long-standing arguments that differentiating between at-issue and not-at-

<sup>8</sup> $\bar{\cup}$  represents set union minus the elimination of inconsistent propositions (p.90).

issue content requires differentiating between a proposal to update the Common Ground, and a direct update of the Common Ground.

The claim that assertions effectively *propose* to update the CG (instead of directly updating it) comes, as far as I can tell, from Clark 1992 and Ginzburg 1996, and is motivated by the observation that assertions can be denied in discourse in a way that not-at-issue content cannot.<sup>9</sup> As a result, several recent theories have distinguished between at-issue and not-at-issue content by treating the latter as directly updating the common ground.

Murray (2010, 2014) argued that Cheyenne evidentials introduce not-at-issue content; her semantic theory analyzed not-at-issue content as a direct CG update. (See Portner, 2006; AnderBois et al., 2010, 2013, for similar proposals.) We can supplement Farkas and Bruce’s illocutionary mood operators in (41) and (42) with Murray’s treatment of not-at-issue content by adding a requirement that a not-at-issue proposition  $q$  directly updates the CG.

- (43) *Declarative operator* (i.e. **D**), for sentences  $S_p$  with at-issue content  $p$  and not-at-issue content  $q$ : *(to be revised)*  
 $\mathbf{D}(S_p, a, K_i) = K_o$  such that  
 (i)  $DC_{a,o} = DC_{a,i} \cup \{p\}$   
 (ii)  $T_o = \text{push}(\langle S_p; \{p\} \rangle, T_i)$   
 (iii)  $ps_o = ps_i \sqcup \{p\}$   
 (iv)  $CG_o = CG_i \cup \{q\}$
- (44) *Polar question operator* (i.e. **PQ**), for an interrogative sentence  $S_{p?}$  with at-issue content  $p, \neg p$  and not-at-issue content  $q$ :  
 $\mathbf{PQ}(S_{p?}, K_i) = K_o$  such that  
 (i)  $T_o = \text{push}(\langle S_{p?}; \{p, \neg p\} \rangle, T_i)$   
 (ii)  $ps_o = ps_i \sqcup \{p, \neg p\}$   
 (iii)  $CG_o = CG_i \cup \{q\}$

From this perspective, encoders of canonical not-at-issue content, like the evidential adverb *allegedly*, add a not-at-issue proposition  $q$  to the discourse, and that proposition directly updates the common ground. This is parallel to the treatment of Cheyenne evidentials in Murray (2010), and is exemplified in (45).

- (45) Allegedly, John won the race.  
*results in the output discourse structure  $K_o$  such that:*  
 (i)  $DC_{a,o} = DC_{a,i} \cup \{\text{John won the race}\}$   
 (ii)  $T_o = \text{push}(\langle \text{‘John won the race’}; \{\text{John won the race}\} \rangle, T_i)$   
 (iii)  $ps_o = ps_i \sqcup \{\text{John won the race}\}$   
 (iv)  $CG_o = CG_i \cup \{\text{It is alleged that John won the race}\}$

In sum, I’ve adopted the semantic treatment of illocutionary mood in Farkas and Bruce (2010) to form the foundation of the account. It encodes illocutionary

<sup>9</sup>Another motivation is the intuition that, in asserting that  $p$ , a speaker cannot force her addressee to commit to  $p$  (Malamud and Stephenson, 2014).

mood – at least for declaratives and polar questions – and additionally models salience and discourse commitments, which I’ll take advantage of for the formal proposal in §4.2. But while Farkas and Bruce characterize at-issue content as proposals to update the common ground, they do not include an explicit treatment of canonical or descriptive not-at-issue content. I’ve adapted their account, following Murray (2010), to treat canonical or descriptive not-at-issue content as direct common ground update.

This covers the first two desiderata outlined above: we have a theory that represents illocutionary mood and distinguishes between at-issue and descriptive not-at-issue content. In what follows, I’ll supplement this theory further, to accommodate illocutionary content (and thereby to model the meaning of emotive markers).

## 4.2 Sincerity conditions in an update semantics

Farkas and Bruce (2010) foresee the need to expand their analysis:

“For the matters we discuss here, further additions to context structure such as the agendas of participants or representations of their private doxastic states are not necessary. The model we provide is consistent with expansion in these directions, as well as with additions of finer-grained structures for dealing with anaphoric relations.” (Farkas and Bruce, 2010, 89)

The goal of this section is to expand Farkas and Bruce’s framework in just this way. I’ll begin by discussing how we can use their formalism to model speakers’ emotive attitudes; I’ll expand the notion of Discourse Commitments to account for the sorts of content emotive markers can apply to.

### 4.2.1 The relationship between sincerity conditions and discourse commitments

According to Searle (1969), the utterance of an assertion is conventionally associated with several constitutive rules, one of which is the sincerity condition that the speaker believes the content of the utterance. An utterance that does not satisfy this condition is uttered insincerely; this is one way in which sincerity conditions differ from other constitutive rules, like preparatory conditions. And in fact, it seems appropriate to characterize the utterance of a sentence containing an emotive marker (e.g. *alas*) by a speaker who is not in fact dismayed by its content as an insincere utterance.

We have already seen reason to associate the content of emotive markers with sincerity conditions: their ability to result in Moore’s Paradox. An appealing explanation of Moore’s Paradox is that it results when the speaker denies the content of a sincerity condition on her utterance (Searle, 1969, 65). If emotive markers contribute sincerity conditions – like illocutionary mood does – we would expect that the denial of their content, too, would result in Moore’s Paradox.

Following Searle (1969) (see especially his discussion of promising, p.57), I will assume that this additional sincerity condition effects changes in the essential conditions (i.e. the discourse properties) of the utterance. The essential conditions of an exclamation, then, effectively include “expresses that  $S$  is surprised that  $p$ ”.

Searle and other Speech Act Theorists have considered sincerity and essential conditions to be properties of a speech act. However, recent dynamic proposals follow Stalnaker (1973, 1978) in characterizing the effect of an utterance on the discourse as a property of illocutionary mood instead (Murray, 2014; Murray and Starr, 2016). Such an approach offers a compositional account of illocutionary mood in a way that still allows it to not fully determine illocutionary force. The current proposal is that we should similarly adapt Speech Act Theorists’ treatment of sincerity conditions: instead of being a property of a speech act, sincerity conditions are a part of the sentence’s content, introduced by illocutionary mood and emotive markers. If this is right, illocutionary mood and emotive markers – qua illocutionary content – have in common that they restrict a speaker’s Discourse Commitments.

This perspective has the benefit of treating illocutionary mood and emotive markers compositionally, while still allowing for a many-to-many relationship between illocutionary mood and illocutionary force (see, among others, Harnish, 2005). In particular, from this perspective, an utterance of the declarative sentence *Your behavior has, alas, made me angry* can count as a threat when contextual information about the context of utterance supplements the illocutionary content it encodes semantically: namely, that it updates the common ground with the proposition ‘Your behavior has made me angry’ (a contribution of its illocutionary mood); and that its use is licensed when, and thereby signifies that, the speaker is dismayed by that proposition (the contribution of the emotive marker).

Informally, my analysis characterizes emotive markers as restricting the sincerity conditions of an utterance with the requirement that the speaker be surprised, dismayed, etc. (depending on the emotive marker) by that sentence’s descriptive content. The connection between emotive modifiers and sincerity conditions is explicit in Vanderveken (1990), according to whom *alas* expresses “the sincerity condition that the speaker is unhappy with the existence of that state of affairs” (p.128). I will approximate this perspective by using a speaker’s Discourse Commitments to model sincerity conditions.

#### **4.2.2 A recharacterization of discourse commitments**

Discourse commitments were initially proposed to address speaker bias in rising declaratives. The original characterization of discourse commitments in Gunlogson (2001) is in terms of beliefs that each participant is publicly committed to: “public in the sense that the participant is mutually recognized as committed to them” (p.42).

(46) **Discourse Commitments** (to be revised)

Let  $DC_a$  and  $DC_b$  be sets of propositions representing the public beliefs of  $a$  and  $b$ , respectively, with respect to a discourse in which  $a$  and  $b$  are the participants, where:

- a.  $p$  is a public belief of  $a$  iff ‘ $a$  believes  $p$ ’ is a mutual belief of  $a$  and  $b$
- b.  $p$  is a public belief of  $b$  iff ‘ $b$  believes  $p$ ’ is a mutual belief of  $a$  and  $b$

Harnish (2005) reviews a number of objections to *reducing* illocutionary force to commitments – as Krifka (2014) does in his approach (in which speech acts are typed as “commitment change potentials”) – but the division of labor proposed here side-steps most of these problems. The idea is that what Searle thought of as the speaker’s belief in  $p$  is in fact part of the speaker’s Discourse Commitments: in addition to its effect on the Common Ground, an act of assertion that  $p$  publicly commits the speaker to  $p$ . There are, technically speaking, differences between Searle’s sincerity condition on assertion (the requirement that the speaker believe that  $p$ ) and the Gunlogson/Farkas/Bruce characterization of an assertion adding  $p$  to the speaker’s set of discourse commitments. This is because publicly committing to a proposition  $p$  doesn’t reduce to believing that  $p$  (and vice versa).

However, a speaker’s belief that  $p$  and her public commitment to  $p$  are closely enough related that we can treat public commitment as a proxy for belief – for the purposes of modeling conversation – and additionally use DCs to encode the contribution of emotive markers. Specifically, a speaker’s Discourse Commitments are things that the speaker is committed to treating, for the purposes of the conversation, as if she did believe them. In other words: in contexts in which the speaker is being sincere (or in which the hearer assumes the speaker is sincere), the speaker’s publicly committing to  $p$  amounts to the speaker’s assurance she believes that  $p$ . If this is right, then the assertion operator proposed by Farkas and Bruce (2010) in (43) represents, albeit indirectly, Searle’s sincerity condition on assertion.<sup>10</sup>

Recall that Gunlogson defines Discourse Commitments in terms of beliefs: “ $p$  is a public belief of  $a$  iff ‘ $a$  believes  $p$ ’ is a mutual belief of  $a$  and  $b$ ” (p42). This is not a complete list, as the discussion in §2 demonstrated that we need to include the antonyms of these emotive attitudes as well, something like *is-pleased* (for *fortunately*) and *is-not-surprised* (for the Mandarin *jingran*).<sup>11</sup>

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<sup>10</sup>The equivalence is not a perfect one: it’s easy to imagine a situation in which each discourse participant believes that  $p$ , and knows the others believe that  $p$ , but in which no one wants to publicly commit to  $p$ : say, a situation in which the boss has some toilet paper stuck to her shoe. Of course, it’s possible that Discourse Commitments model the sincerity conditions on assertion more accurately than Searle does, in which case the differences between public commitment and belief are unproblematic. Arguments to this effect can be found in Asher and Lascarides (2003, 2008); Lascarides and Asher (2009), whose specific approach I do not adopt because, like Krifka (2014), they do not distinguish between force and mood.

<sup>11</sup>I notate the contents of DC sets as ordered pairs (instead of as, for instance, the *prima-facie* equivalent *believes( $p$ )*) because it is a natural way to require that all additions to the DC set contain a propositional attitude and a proposition.

(47) **Discourse Commitments** *(final)*

Let  $DC_a$  be a set of pairs representing the public commitments of  $a$  with respect to a discourse in which  $a$  and  $b$  are the participants, where:

- a.  $\langle \text{believes}, p \rangle$  is a public commitment of  $a$  iff ‘ $a$  believes  $p$ ’ is a mutual belief of  $a$  and  $b$ ;
- b.  $\langle \text{is-disappointed}, p \rangle$  is a public commitment of  $a$  iff ‘ $a$  is disappointed that  $p$ ’ is a mutual belief of  $a$  and  $b$ ; and
- c.  $\langle \text{is-surprised}, p \rangle$  is a public commitment of  $a$  iff ‘ $a$  is surprised that  $p$ ’ is a mutual belief of  $a$  and  $b$ .

This switch from a set of propositions the speaker believes to a set of pairs of propositional attitudes and propositions is reminiscent of a similar innovation proposed in Portner (2006). Portner proposes an account of speaker certainty markers wherein the set of propositions representing the Common Ground is subdivided into those mutually agreed to be true (the traditional Common Ground) and those reported to be true, conjectured to be true, etc. This is an evidential version of the emotive adaptation in (47).

There are additional proposals to modify update-semantic theories like Farkas and Bruce’s in order to track other components of discourse. In their analysis of the Mandarin discourse particle *ba*, Ettinger and Malamud (2015) model a request for hearer involvement by introducing different sub-parts of Table to designate different levels of speaker commitment to the proposed CG update. And in his recent theory of the semantics of imperatives and modal particles, Portner (2016) supplements this sort of account with a list of priorities. He says (p.14): “just as we must maintain both the common ground and individual commitment slates in our discourse model, we also must keep track of the shared to-do list function and individual participants’ understanding of what priorities each participant is committed to.”

In Farkas and Bruce’s account, the CG is defined independently of participants’ DC sets as “the set of propositions that have been agreed upon by all participants... together with the propositions that represent... shared background knowledge” (p.85). Because this characterization of the CG is independent of participants’ DC sets, the new definition of Discourse Commitments in (47) does not affect the formal model of the common ground. There does, however, remain the question of how and when information encoded in speakers’ DC sets could enter into the CG; I address this at the end of this section.

### 4.3 The analysis

#### 4.3.1 The formal treatment of emotive markers

Tracking this change in the characterization of Discourse Commitments requires an amendment of the formulation of the sincerity conditions encoded in declarative mood **D** to include pairs in the DC requirement in (i) (from (43)):

- (48) *Declarative operator* (i.e. **D**), for sentences  $S$  with at-issue content  $p$  and not-at-issue content  $q$ : *(final)*



- $\mathbf{D}(S, a, K_i) = K_o$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{believes}, p \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \{p\} \rangle, T_i)$
  - (iii)  $ps_o = ps_i \sqcup \{p\}$
  - (iv)  $CG_o = CG_i \cup \{q\}$

The final component of the analysis is the treatment of emotive markers themselves. I'll model this account on *alas*, but intend it to be generalizable to other emotive markers. I define *alas* over the same input as illocutionary mood in Farkas and Bruce (2010) – an ordered triple of a sentence  $S$ , author  $a$ , and input context  $K_i$  – but whereas illocutionary mood has a single output context  $K_o$  as its output, emotive markers are modifiers, returning the same sort of semantic object they operate on.

- (49) *Alas* (i.e.  $\mathbf{A}$ ), for sentences  $S$  with content  $p$ :  
 $\mathbf{A}(S, a, K_i) = (S, a, K_o)$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{is-disappointed}, p \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \{p\} \rangle, T_i)$

In combination with a sentence's mood – e.g. the declarative mood  $\mathbf{D}$  in (48) – the meaning of an utterance containing an emotive marker like *alas* ( $\mathbf{A}$ ) is exemplified as follows.

- (50)  $\llbracket \text{Alas, Jane lost the race} \rrbracket = \mathbf{D}(\mathbf{A}(S, a, K_i)) = K_o$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{believes, Jane lost the race} \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \text{Jane lost the race} \rangle, T_i)$
  - (iii)  $ps_o = ps_i \sqcup \{\text{Jane lost the race}\}$
  - (iv)  $DC_{a,o} = DC_{a,i} \cup \langle \text{is-disappointed, Jane lost the race} \rangle$

I'll discuss the fundamentals of the definition in (49) before exemplifying some other, more complicated uses of emotive markers.

There are several ways in which the definition of an emotive marker in (49) differs from that of declarative mood in (48) or other encoders of not-at-issue content, as in (45). First, unlike declarative mood, *alas* does not update the projected set  $ps$ , which is how this approach models the assertoric component of declarative mood. Second, *alas* in (49) does not update the Common Ground, which is how this approach models not-at-issue content (cf. (45)). Third, (49) restricts the speaker's DC set with an ordered pair whose first member is the propositional attitude *is-disappointed*, not *believe*. These last two characteristics represent how emotive markers differ importantly from canonical, descriptive not-at-issue content: they update the speaker's Discourse Commitments, rather than the Common Ground.

The extent to which Discourse Commitments involve propositional attitudes other than belief is constrained lexically. In this paper, I discuss emotive markers that encode disappointment (e.g. *alas*) and surprise (e.g. mirativity markers); there is also evidence, given the discussion in §2, that the antonyms of both emotive attitudes must be included.

Encoding the content of an emotive marker in a speaker’s Discourse Commitments gives us a way of preserving its not-at-issue status while addressing its difference in meaning from that of encoders of canonical or descriptive not-at-issue content. I’ve argued that DC sets are appropriate for modeling the sincerity conditions of an utterance because they represent the speaker’s public commitments, and to be insincere is to falsely commit oneself to something publicly. Searle (1969) and others have argued that the unacceptability of Moorean sentences is best attributed to the conflict of one claim with the sincerity conditions of another; in this framework, according to that perspective, Moore’s Paradox results when one claim contradicts that speaker’s Discourse Commitments. Since emotive markers behave like classical Moore’s Paradox cases in this respect, their content should receive the same formal treatment as (other) sincerity conditions.

### 4.3.2 Embedded emotive markers

The formal treatment of emotive markers in the previous subsection allows for the confluence of two semantic properties that are seemingly at odds with each other: it provides a characterization of emotive markers as encoding illocutionary content – thus potentially leading to Moore’s Paradox – while at least in principle allowing for emotive markers to range over embedded content, or to operate at a non-matrix level (which, presumably, illocutionary mood itself cannot, although see Krifka 2001 for a dissenting view). According to this account, emotive markers and illocutionary mood have in common that they introduce illocutionary content because they both restrict a speaker’s Discourse Commitments; this explains the Moorean effects. But they differ in that only illocutionary mood modifies the projected set, which is what best corresponds to the illocutionary force of an utterance.

Recall that the declarative operator, too, pushes a salient proposition to the top of the stack (from (48)):

- (51) *Declarative operator* (i.e. **D**), for sentences  $S$  with at-issue content  $p$  and not-at-issue content  $q$ :
- $\mathbf{D}(S, a, K_i) = K_o$  such that
  - (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{believes}, p \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \{p\} \rangle, T_i)$
  - (iii)  $ps_o = ps_i \bar{\cup} \{p\}$
  - (iv)  $CG_o = CG_i \cup \{q\}$

This analysis, then, predicts that a sentence could contain a declarative mood marker and an emotive marker which each introduce distinct salient propositions. This would happen in just the sort of configuration in which the emotive marker occurs in an appositive, as in *Jane, who alas lost the race, won the lottery*. The meaning of this utterance as a whole is composed first when *alas* applies to the appositive clause, as in (52), and then when the utterance as a whole is interpreted, as in (53).

- (52)  $\llbracket \text{who alas lost the race} \rrbracket = \mathbf{A}(S, a, K_i) = (S, a, K_o)$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{is-disappointed, Jane lost the race} \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \{\text{Jane lost the race}\} \rangle, T_i)$
- (53)  $\llbracket \text{Jane, who alas lost the race, won the lottery} \rrbracket = \mathbf{D}(\mathbf{A}(S, a, K_i)) = K_o$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{believes, Jane won the lottery} \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \{\text{Jane won the lottery}\} \rangle, T_i)$
  - (iii)  $ps_o = ps_i \sqcup \{\text{Jane won the lottery}\}$
  - (iv)  $CG_o = CG_i \cup \{\text{Jane lost the race}\}$

While the proposition that Jane lost the race is pushed to the top of the stack in the embedded update for the appositive clause, it is no longer at the top of the stack after the utterance of the sentence as a whole. The speaker's disappointment is not explicitly represented in (53), but it is included – due to (52) – in the input  $DC_{a,o}$  set for the declarative mood marker. The definition in (49) accounts for this restriction insofar as it ties the emotive marker to the most salient proposition (the one added to the Table) in the dynamic update the emotive marker participates in. Emotive markers contribute their own restriction to the speaker's DC set, which (in the case of embedded clauses) requires a sub-sentential dynamic update.

The analysis – and this distinction between embedded and matrix updates – carries over to the conditional and modal data discussed in §3.3.1. The derivation for (30-c), repeated below in (54), parallels that in (50) quite closely.

- (54)  $\llbracket \text{Alas, it's possible that it's raining} \rrbracket = \mathbf{D}(\mathbf{A}(S, a, K_i)) = K_o$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{believes, It's possible that it's raining} \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \text{It's possible that it's raining} \rangle, T_i)$
  - (iii)  $ps_o = ps_i \sqcup \{\text{It's possible that it's raining}\}$
  - (iv)  $DC_{a,o} = DC_{a,i} \cup \langle \text{is-disappointed, It's possible that it's raining} \rangle$

This same derivation could be used to characterize an interpretation of the utterance-final version, *It's possible that it's raining, alas*, from (31-c), when it attaches to the matrix clause. The local interpretation of this sentence, in which *alas* scopes under the possibility modal, also happens successively, as shown in (55) and (56).

- (55)  $\llbracket \text{it's raining alas} \rrbracket = \mathbf{A}(S, a, K_i) = (S, a, K_o)$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{is-disappointed, It's raining} \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \{\text{It's raining}\} \rangle, T_i)$
- (56)  $\llbracket \text{It's possible that it's raining, alas} \rrbracket = \mathbf{D}(\mathbf{A}(S, a, K_i)) = K_o$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{believes, It's possible that it's raining} \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \{\text{It's possible that it's raining}\} \rangle, T_i)$
  - (iii)  $ps_o = ps_i \sqcup \{\text{It's possible that it's raining}\}$
  - (iv)  $CG_o = CG_i$

The account in (49) predicts that emotive markers take scope locally because

they are interpreted in the clause they occur in. This is modeled in (49) by the fact that the scope of the emotive marker is the same as the most salient proposition in that update. Judging from the fact that emotive markers differ in this respect from e.g. evidential adverbs, we can infer that evidential adverbs scope over something else; in particular, the proposition added by the declarative mood to the projection set *ps*.

### 4.3.3 Emotive markers and non-declaratives

The characterization of emotive markers in (49) also accounts for the fact that emotive markers don't scope over a question (like utterance modifiers do), or participate in interrogative flip (like evidential adverbs do). It also accounts for their incompatibility with any sentence that can't be associated with a single salient proposition. (49) is defined only over proposition-denoting clauses; while the descriptive content of a declarative sentence is a proposition *p*, the descriptive content of a question is a set of propositions (Hamblin, 1971) and, arguably, an imperative denotes a property or some other non-propositional content (Hausser, 1980; Portner, 2004; Murray and Starr, 2016).

This definition predicts that emotive markers can't scope over a (matrix) question or imperative. It also correctly predicts that emotive markers can apply to sentences embedded in questions, as (57) shows.

- (57) What does Sue, who alas couldn't be here today, think about the proposal?

This aspect of the account isn't stipulative: it's arguably not possible to hold an emotive attitude towards a set of propositions. Even explicitly encoded emotive attitudes are awkward in questions, presumably for this same reason:

- (58) \*Has John arrived on time, which disappointed me?

There is additional empirical support for an analysis in which emotive markers can only range over single propositions. Recent work in alternative semantics (Alonso-Ovalle, 2006, among others) and inquisitive semantics (Groenendijk, 2009, among others) have proposed treating certain cases of disjunction as similar to polar questions in just this respect. Alonso-Ovalle (2006), for instance, adopts a Hamblin semantics in which, in certain contexts, disjunctive sentences denote a set of propositions (i.e. multiple alternatives). If these approaches are right, (49) predicts that e.g. *alas* is unacceptable in alternative-projecting disjunctive sentences for just the same reason they're unacceptable in polar questions. And this seems to be the case:

- (59) a. #(Wow,) John rode his bike or arrived on time!  
b. #Alas, John rode his bike or arrived on time.

This is not to say that emotive markers are ungrammatical in any sentence that includes a disjunction, just in those in which the disjunction introduces multiple alternatives. It's possible, of course, to be disappointed at a single proposition

that just happens to be disjunctive: in a situation in which you learn that John’s family is no longer a two-income family, it is perfectly acceptable to lament *Alas, John lost his job or Mary lost hers*. These sentences differ intonationally in English, and involve distinct lexical items in languages like Egyptian Arabic (Winans to appear).

This component of the analysis in (49) – that emotive markers must scope over a single, salient proposition – thus ensures that the distribution of emotive markers is restricted to only those constructions that make salient a single proposition. However, they can occur in some (matrix) questions, as discussed in §3.3.2; in particular, *wh*-questions (when it’s clear from context that the question carries an existential presupposition) and in polar questions (when it’s clear from the context or the construction itself that there’s a clear speaker bias).

On the one hand, standard semantics of questions don’t treat these propositions as the denotation of the question: both are seen, roughly, as denoting properties, or sets of propositions. But on the other hand, there is independent evidence that polar questions need to be associated at some level with their speaker bias (Romero and Han, 2004; Reese, 2008), and *wh*-questions need to be associated at some level with their existential presupposition.

First, when they are used as rhetorical questions, this is exactly how they are interpreted: as negations that  $p$ , where  $p$  corresponds to the speaker bias, for polar questions, and the existential presupposition, for *wh*-questions (Sadock, 1974; Han, 2002).

- (60) Did I tell you that writing a dissertation was easy?  
*amounts to an assertion that*  
 It’s not the case that I told you that writing a dissertation was easy
- (61) Didn’t I tell you that writing a dissertation was easy?  
*amounts to an assertion that*  
 It’s not the case that I told you that writing a dissertation was not easy
- (62) (After all,) Who helped Mary?  
*amounts to an assertion that*  
 It’s not the case that someone helped Mary

Second, the fact that emotive markers track the speaker bias and existential presuppositions of sentences is completely in line with the fact that they appear to operate on the speaker’s Discourse Commitments; this set was motivated – by Gunlogson 2001 – to model speaker bias in polar questions. To model this effect, we’d need to adapt the polar question operator from Farkas and Bruce (2010) in (44), to incorporate Gunlogson’s DC update.

- (63) *Polar question operator* (i.e. **PQ**), for an interrogative sentence  $S$  with bias  $p$ , at-issue content  $p$ ,  $\neg p$  and not-at-issue content  $q$ :  
**PQ**( $S, K_i$ ) =  $K_o$  such that
- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{believes}, p \rangle$
  - (ii)  $T_o = \text{push}(\langle S; \{p, \neg p\} \rangle, T_i)$
  - (iii)  $ps_o = ps_i \sqcup \{p, \neg p\}$

$$(iv) \ CG_o = CG_i \cup \{q\}$$

The derivation of a polar question with an acceptable emotive marker, as in (34-b), would look like this:

$$(64) \quad \llbracket \text{Did Jane lose the race, alas?} \rrbracket = \mathbf{PQ}(\mathbf{A}(S, a, K_i)) = K_o \text{ such that}$$

- (i)  $DC_{a,o} = DC_{a,i} \cup \langle \text{believes, Jane lost the race} \rangle$
- (ii)  $T_o = \text{push}(\langle S; \{\text{Jane lost the race, Jane did not lose the race}\} \rangle, T_i)$
- (iii)  $ps_o = ps_i \sqcup \{\text{Jane lost the race, Jane did not lose the race}\}$
- (iv)  $DC_{a,o} = DC_{a,i} \cup \langle \text{is-disappointed, Jane lost the race} \rangle$

A similar modification would need to be made to any *wh*-question operator.

This paper began with the claim that emotive markers form a natural class within the larger group of encoders of not-at-issue content by virtue of the meaning they encode: in particular, that they behave differently from other encoders of not-at-issue content because they mean what they mean. Emotive markers behave the way they do because they encode not-at-issue information about the speaker’s propositional attitude toward a salient proposition. Because the information is about the speaker’s *propositional* attitude, it ranges over a (single) proposition, and so is incompatible with any construction that can’t proffer a single, salient proposition. And because the information is about *the speaker’s* propositional attitudes, it is represented as her public commitment, instead of being automatically introduced into the Common Ground. This is, arguably, an intuitive way of modeling the apparent differences between descriptive and illocutionary content (and, possibly, Kaplan’s related distinction between descriptive and expressive content).

This formal system, as it’s borrowed from Farkas and Bruce (2010) and amended in §4.1, allows three ways for a proposition to get admitted into the common ground: 1) by direct update (the effect of a descriptive not-at-issue proposition  $q$ ); 2) when a proposal to add to the common ground is accepted from the projected set by participants (the eventual effect of the utterance of most declarative sentences with at-issue content  $p$ ); and 3) via the speaker’s DC set. This third route is discussed only briefly in Farkas and Bruce (2010), but it’s especially significant for the present analysis.

If, in the course of a conversation, A asserts that  $p$ , an interlocutor B can later presuppose that A believes  $p$ , which suggests that A’s belief in  $p$  (here, the pair  $\langle \text{believes}, p \rangle$ ), which this theory initially places in  $DC_A$ , has at some point been admitted into the CG. Farkas and Bruce refer to this as a “secondary effect” (p.93) and differentiate qualitatively between it and the other two methods of addition to the CG.

The same story can, of course, be told for utterances involving emotive markers: If A asserts that *alas*,  $p$ , an interlocutor B can later presuppose that A is disappointed that  $p$ . In this same way, the analysis must allow for discourse commitments encoded in emotive markers to be admitted into the common ground. In keeping with Farkas and Bruce’s account, I must insist on a qualitative distinction between the primary CG updates of declarative mood or descriptive

not-at-issue content and the secondary CG effects of illocutionary content, to model the principle differences between it and descriptive content. But I have no more concrete proposals than this primary/secondary distinction for doing so.

## 5 Conclusions

I've delineated a class elements called 'emotive markers': morphemes or prosody that encode a) the speaker's emotive attitude; b) towards some proposition made salient by the utterance in which they occur; c) in backgrounded, not-at-issue content. I've used emotive markers as a case study for better examining the traditional divide between descriptive and illocutionary (or expressive, in the sense of Kaplan, 1997) content. While descriptive content amounts to what is said, illocutionary content pertains to how the speaker is using the utterance in context. The meaning encoded in emotive markers, while clearly not-at-issue, differs in several ways from descriptive not-at-issue content, encoded in utterance modifiers, evidential adverbs, appositives, etc.: it can participate in Moore's Paradox, and it must scope locally over the clause it occurs in.

I've presented a formal account of emotive markers in which the content they apply to is added to the speaker's Discourse Commitments in the form of an ordered pair, e.g.  $\langle \text{disappointed}, p \rangle$ . Emotive markers therefore differ from encoders of descriptive not-at-issue content in that the information they encode updates the DC set instead of the Common Ground. And while illocutionary mood restricts the DC set as well – encoding, in the case of declarative mood, the sincerity condition that the speaker believe the content of the utterance – emotive markers differ from mood in this analysis because mood also alters the projected set. I've argued that assimilating the content of emotive markers to the sincerity conditions of illocutionary mood correctly predicts their ability to participate in Moore's Paradox; it also correctly predicts that emotive markers can only apply to clauses that are associated with single propositions.

I've defined the class of emotive markers based on the sort of meaning they encode, but I've demonstrated that they behave as a natural class semantically, as well, and that this behavior holds of emotive markers across languages. As a result, I've suggested that emotive markers behave the way they do *because of* the sort of meaning they encode. Because they encode propositional attitudes, they must range over (single) propositions, and in particular, they must range over the most salient proposition encoded in the utterance. And because emotive markers encode *the speaker's* propositional attitude, they add information to the speaker's Discourse Commitments (like sincerity conditions do), rather than the Common Ground.

In making these arguments, I've drawn in part from the phenomenon of mirative evidentials: morphemes that have an evidential interpretation in some contexts and a mirative interpretation in others (in which case they count as emotive markers). When Cheyenne mirative evidentials act as evidentials, they can occur with non-declarative mood (Murray, 2010; Rett and Murray, 2013).

When they act as miratives, however, they cannot.

There is currently a debate in the evidentials literature about how to classify evidentials, and this debate is complicated by observations that the compatibility of evidentials with non-declarative mood appears to vary cross-linguistically: in languages like Abkhaz, Baniwa, and Jarawara, evidentials, too, are unacceptable in questions (Aikhenvald, 2004). While there are open questions about what evidentials are and what they contribute to a sentence, the discussion here offers one possibility of reconciling the observed cross-linguistic differences with respect to compatibility with illocutionary mood. It's possible that, while evidentials in some languages are classified as encoding descriptive not-at-issue content, and thereby update the Common Ground (as they do in Cheyenne; Murray, 2010), evidentials in other languages are classified as encoding illocutionary content about speakers' doxastic states, and thereby update the DC set (as they do, with some important differences, in the account of Cuzco Quechua evidentials in Faller, 2002). In other words, while it's clear that certain aspects of meaning (like the speaker's attitude towards the descriptive content of an utterance) is best encoded as illocutionary content, languages might differ on how other aspects of meaning (like evidence type, or speaker certainty) should be encoded, suggesting that the class of illocutionary content might be to some extent cross-linguistically variable.

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