On the relation between expressive meaning and information structure: Exploring focus-marking with emoji[1]

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Abstract. Written digital communication (e.g. text messages, email) lacks prosody, but innovations like emoji have emerged to enrich this communicative channel. In speech, prosody can indicate information structure, e.g. contrastive or new-information focus. In this paper I investigate the relation between focus and emoji, and propose that (i) one class of emoji (e.g. sparkles, pointing hands, what I call 'plain focus emoji') act as semantically flexible focus-signalers, and (ii) another class (e.g. angry-face, heart-eyes-face, what I call 'affective focus emoji') can signal focus while also resembling linguistic expressives (e.g. *yay*, *damn*) in conveying information about speakers' attitudes, in a way that I show to be scopally dissociable from their focus-related behavior.

Keywords: emoji, expressives, focus, digital communication, information structure

1. Introduction

Because digital communication (e.g. texts, social media) lacks many features of face-to-face communication, including facial expressions, gestures and prosody (e.g. Gawne & McCulloch, 2019; Pasternak & Tieu, 2022), innovations such as emoji have emerged to enrich this communication channel (Bai et al., 2019). In spoken communication, prosody can signal not only emotional content (e.g. Banse & Scherer, 1996; Cowie & Cornelius, 2003; Liscombe et al., 2003; Scherer, 2003; Wagner, 2016) but also information-structural meaning at the semantics/pragmatics interface, e.g. whether information is focused (new) or given. However, despite a lot of work spoken languages, to the best of my knowledge there is little systematic work on whether compensatory emoji mechanisms have emerged in digital communication for marking different focus types, or for marking information-structural focus at all.

In this paper, I explore the relation between emoji and the information-structural notion of focus by focusing on emoji that 'encircle' words (ex.1-2), and claim that we need to distinguish two sub-classes of focus-signaling emoji. Using Twitter data, I argue that one class of word-encircling emoji – what I call *plain focus emoji*, e.g. ✨and 👉 – consists of semantically and pragmatically flexible focus indicators, as exemplified in (1). Here, the emoji encircle the name 'Trump,' which – as the context indicates – is contrastively focused.

(1) *'Plain' focus emoji*
No she wasn't but 👉 TRUMP👈 was

Furthermore, I propose that we need to distinguish this class of plain focus emoji from another class, what I call *affective focus emoji*, e.g. 😍😡. These emoji act as focus indicators and also

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resemble expressives (e.g. *damn, yay*) in conveying information about affective attitudes in a way that (as I show in Section 5 of this paper) can be dissociated from their focus-related behavior. An example of affective focus emoji is provided in (2). Here, the 'angry face' emoji encircle the name 'Trump' in one sentence and the heart-eyes emoji encircle the name 'Biden' in the next sentence. Clearly, Trump and Biden are being contrasted with each other, and in addition to indicating contrastive focus, the emoji also signal the author's attitude towards the referents of the focused elements.[2] (All examples are from Twitter unless otherwise indicated.)

(2) *Affective focus emoji*
I know, right?? With Trump, it was, well, you know, 😡TRUMP😡 doing a totally illegal thing. Now it's 😍Biden😍 doing a totally very legal thing

The aim of this paper is largely empirical, as it seeks to explore the behavior of these kinds of word-encircling emoji, in particular in relation to focus types, with the goal of providing a foundation for future work.

1.1. Emoji as an object of study

In recent years, there has been an explosion of interest in emoji (e.g. see Bai et al., 2019 for a recent overview). Researchers have explored the nature of the relation between emoji and gestures (e.g. Gawne & McCulloch, 2019), the differences between face and non-face emoji (e.g. Maier, 2023), emoji and comic-type pictorial sequences (e.g. Cohn et al., 2019) as well as many other issues. Researchers have used various methods to explore emoji, including experimental approaches (e.g. Weissman & Tanner, 2018; Scheffler et al., 2021; Kaiser & Grosz, 2021; Weissman et al., 2023). Emoji are obviously a human-created artifact, which grew out from the 'emoticons' of the 1980s. Picture-type emoji similar to present-day emoji have been used for over ten years, as Apple added its first emoji keyboard in 2011 and Android in 2013. Emoji are an immensely popular aspect of digital communication: by some estimates, over 10 billion emoji were sent every day in 2020. This suggests that emoji fulfill an important communicative need and are shaped by how humans' minds work. Thus, although emoji are in some sense an artificial creation, the way that humans use them in communication – especially in conjunction with language – can offer new insights into human language as well.

The structure of this paper is as follows. Section 2 provides a brief overview of focus, especially the distinction between new-information vs. contrastive focus. In Sections 3 and 4, I introduce and provide evidence for the existence of two kinds of focus-sensitive emoji. First, in Section 3 I show that what I call *plain focus emoji* (in particular 👉 and ✨) can occur with multiple focus types, and thus I analyze them as underspecified 'focus indicators.' In Section 4 I provide evidence that what I call *affective focus emoji* (e.g. 😍😡🤢🤩) have a dual function, in that they indicate focus as well as affect. Crucially, I also show that with affective focus emoji, the scope of focus marking and the scope of the affective attitude is dissociable. The question of how to capture this dissociation raises intriguing theoretical challenges, and I sketch out informal steps

[2] It is also interesting to note that encircling emoji of both types can occur in addition to use of all capitals (e.g. here on TRUMP, see also ex.(1), (10d), (10e), (12b), (12d) for additional examples). This suggests that the information being expressed by these emoji goes beyond – or is not redundant in the presence of – whatever is being signaled by capitalizating all letters of a word.

towards an analysis that distinguishes expressive meaning vs. truth-conditional meaning in Section 5, building on non-emoji work by Gutzmann (2013; 2019, see also Potts 2005).

Before continuing, a few words about the scope of this investigation are in order. This paper focuses on configurations where the same emoji occurs immediately before and after the word or constituent of interest. I describe this as a situation where the emoji *encircle* the word/constituent. This work does not look at configurations where there is an emoji between every word (e.g. that 😍 look 😍 like 😍 this 😍, see Grosz et al. 2022 on beat emoji), or occurrences of only a single emoji.[3] We focus on the encircling uses because those are the ones whose distribution appears to show parallels to focus marking (e.g. pitch accents that signal new information focus or contrastive focus).

2. Focus and focus-marking in spoken and written language

Researchers at the semantics/pragmatics interface have, over the decades, argued for different kinds of information-structural divisions (e.g. *topic-comment*, Gundel 1974; Reinhart, 1982; *topic-focus*, Sgall & Hajicova, 1977/78; *focus-presupposition*, Chomsky, 1971; Jackendoff, 1972; *theme-rheme*, e.g. Halliday, 1967; *open proposition-focus*, Ward, 1985; see Vallduví, 1990 on a tripartite division). However, broadly speaking, all of these approaches distinguish between new vs. given information (see e.g. Krifka, 2008 for discussion), and build on the intuition that a part of each utterance connects to something the listener already knows, and another part provides new information. *Focus* refers to the part of an utterance that contributes new information, which is what this paper centers on. Many researchers agree that focus can be divided into (at least) two categories: *new-information focus* and *contrastive focus* (e.g. Chafe, 1976; Rochemont, 1986; Kiss, 1998; but see Rooth, 1992 for a different view).

New-information focus involves the introduction of new, non-presupposed information into the discourse, as in the answer to wh-questions (ex.3). It is widely agreed that the new-information focus is the part of the sentence that corresponds to the answer to the wh-question. This is illustrated in (3) for different parts of a sentence. Elements that are contrastively focused, on the other hand, have contextual or situational alternatives, e.g. elements that have already been mentioned in prior discourse (e.g. Kiss, 1998; Zimmermann & Onea, 2011, i.a.). This is illustrated in (4). While some researchers distinguish between contrastive focus (4d) and (explicitly) corrective focus (4a-c) (e.g. Dik, 1997), in the present paper we follow many others in grouping them together (see e.g. Zimmermann & Onea, 2011 for discussion), and will use the label 'contrastive focus' for both.

(3) *New information focus*
- a. Who likes coffee? [Sam] likes coffee.
- b. What does Sam like? Sam likes [coffee].
- c. How does Sam feel about coffee? Sam [likes] coffee.
- d. Tell me something about Sam. Sam [likes coffee].

[3] For recent research on emoji in clause final and clause-medial positions, see e.g. Paggio & Tse (2022), Grosz (2022), Grosz et al. (2023a; 2023b) and Tang et al., (2023).

(4) *Contrastive/corrective focus*
   a. I heard Sam likes coffee. No, [Alex] likes coffee.
   b. I heard Sam likes tea. No, Sam likes [coffee].
   c. I heard Sam dislikes coffee. No, Sam [likes] coffee.
   d. I heard that Sam likes tea. Good to know! [Alex] likes [coffee].

2.1. Linguistic means of encoding focus

Both new-information and contrastive focus can be encoded through a variety of linguistic devices, including prosodic, morphological and syntactic means. On the prosodic side, research suggests new-information focus and contrastive focus are realized differently in many languages (e.g. in pitch accent terms, H* vs. L+H* in English, see Pierrehumbert 1980 and many others), though differences many not involve a simple one-to-one mapping between focus types and pitch accent types (e.g. Watson et al., 2008 on English). Crucially, this kind of prosodic information is missing in the written domain, although visual cues such as *italics* and CAPITALS can be used (see e.g. Lukl, 2020, but also Norton, 2018). As will become clear, the naturally-occurring data that I present in this paper suggests that some emoji, such as the pointing hands in (5), can be used in a compensatory way as focus indicators in a modality that lacks prosodic cues. In (5a), the verb 'hate' is focused, and in (5b), the pronoun 'me' is in contrastive focus, evoking a contrast to 'you.'

(5)
   a. I 👉hate👈 being sick
   b. I forgot you're not adult like 👉me👈

Unless otherwise stated, all examples cited in this paper from Twitter (now renamed 'X') and available through Twitter's public search function. I omit usernames, Twitter handles and URLs, in light of recommendations from Tatman (2018).

It is worth noting these kinds of focus-indicating emoji are not required when an element is focused: focused elements can occur without focus emoji. In this regard these emoji pattern like italics and capitalization: based on contextual cues, we can construe a written text as having focused elements without emoji, italics or capitalization. In light of their optionality, I suggest that these emoji best viewed as disambiguating indicators of focus, in a written modality without prosodic cues.

3. Plain focus emoji

Now, let us take a closer look at the evidence that specific kinds of emoji have emerged as a focus-marking tool. This section considers the first of the two focus emoji types that I propose, namely *(plain) focus emoji*. I suggest that this class contains at least two emoji, namely the ✨ sparkles ✨and the 👉pointing hands👈.[4] In the rest of this section I investigate whether these emoji occur with different focus types and other related phenomena. This section also

[4] There may be other emoji with similar functions; I do not intend to claim that these two are the only plain focus emoji that exist. Furthermore, emoji use changes rapidly, so new options are probably already emerging.

provides a crucial backdrop for Section 4, where we turn to a second type of focus emoji – what I call *affective focus emoji* – that makes unique use of the affordances of digital communication, namely the fact that many emoji also express affective, emotion-related content (e.g. 😍🤢❤️).

3.1. New-information focus

As shown in (6a-c), both ✨ and 👉 occur with new-information focus. The critical word in each of these examples, encircled by the emoji, is new information that is being introduced to the discourse for the first time.

(6)

a. the first thing i think of in the morning is ✨ice cream ✨
b. Same! First haircut I've managed to get since last January and I am ✨excited✨
c. I have a new addiction 👉👉👉coffee 👈👈👈

It's worth acknowledging that these examples, like the others in this paper, are quite heterogenous. For example, the focused word in (6c) is essentially a free-standing constituent that is not an argument of the verb 'have' (and would presumably be preceded by a colon : in standard language). The varied nature of the example is due to my use of naturally-occurring examples from Twitter: In a corpus, especially one as informal as Twitter, it is often not feasible to find the minimal question-answer pairs used in theoretical work.

3.2. Contrastive focus

In addition to new-information focus, examples like those in (7) show that both ✨ and 👉 can also occur with contrastive focus:

(7)

a. I don't even wanna buy a car no more, I wanna buy a ✨house ✨
b. Not risking getting covid, but risking being ✨tired✨
c. the mirror didn't even mention you✨ it said 👉me👈
d. Every time Trump points a finger, there are three pointing back at 👉him👈

A variety of parts of speech can be focused in this way. In (7a), the noun 'house' is in focus and contrasts with 'car', while in (7b), the adjective 'tired' is in contrastive focus. Examples of pronouns in contrastive focus are in (7c,d). In (7c), the alternative to 'me' is explicitly mentioned in prior discourse ('you'), whereas in (7d), the existence of alternatives to 'him' can be inferred from the first clause even though the oblique object is omitted ('points a finger *at someone*').

3.3. Verum focus

In addition to new-information focus and contrastive focus, both ✨ and 👉 can also be used to indicate so-called verum focus, as shown in (8). Descriptively speaking, verum focus emphasizes the truth of the proposition and in English is typically indicated by a H*L pitch accent on the auxiliary verb (e.g. Peter *did* write a book, e.g. Höhle 1992, but see Gutzmann et al., 2020 for a crosslinguistic view). In (8a) and (8b), we see examples of the sparkles and the pointing hand respectively being used for verum focus, to emphasize the truth of the relevant proposition.

(8)

a. [context: someone said Republicans did not regroup]
They ✨did✨ regroup to figure out how to bring back the voters they lost: voters who want to trust elections

b. [note: '45' refers to the 45th president of the U.S., Donald Trump]
As usual Faux News leaves out a very salient point: 45 👉did👈 ask Comey to drop the Russia investigation during a subsequent mtg. Typical.

A fascinating question that I leave for future work has to do with whether the phenomenon standardly known by the name 'verum focus' actually involves a focus accent that focuses a covert verum predicate (as originally argued by Höhle 1992) or whether it is independent of focus *per se* and instead realizes a lexical verum operator that relates the predicate to the current Question Under Discussion (QUD), as argued by Gutzmann et al. (2020) on the basis of crosslinguistic evidence. Their claims raise important questions about whether what I am calling plain focus emoji can also be used in contexts that do not involve information-structural focus: it could be the case that plain focus emoji are not only underspecified for focus type – occurring with both new-information focus and contrastive focus – but are even more underspecified, such that their use extends beyond focus contexts. I leave this question for future work.

3.4. Further data from 'even' and 'only'

If the placement of ✨ and 👉 in encircling contexts is motivated by focus, we should be able to detect effects of their placement on the interpretation of focus-sensitive operators such as *even* and *only*. *Even* and *only* associate with the focused element and have truth-conditional consequences (e.g. Jackendoff 1972). Consider (9), with exhaustive *only*. Example (9a), with focus on 'look' and (9b), with focus on 'my' are interpreted differently: For (9a) to be true, the person only looked in the speaker's direction, and did nothing else (e.g. did not move towards the speaker). For (9b) to be true, the person only looked at the speaker and did not look at anyone else.

(9)

a. They only [looked]$_F$ in my direction.
b. They only looked in [my]$_F$ direction.

Thus, if ✨and 👉 are focus indicators, they are predicted to occur on the element that *even* or *only* associates with. Indeed, as can be seen in (10a,b) for *even* and (10c,d,e) for *only*, this is the case. In (10a,b) *even* associates with the emoji-encircled, focused verb. In (10c,d,e), *only* associates with emoji-encircled, focused pronouns and the numeral 'one.'

(10)

a. It seems like they didn't even ✨try✨
b. Conversations before coffee…like don't even ✨look✨ in my direction 😂
c. THEYRE surprisingly comfy! Chose them bc amazon reviews agreed they were easy to walk in even for infrequent heel wearers like 👉 me👈
d. Just a reminder to many that you ONLY need 👉ONE👈senator to contest the electoral college results on January 6th & Josh Hawley has ALREADY committed to doing so
e. What if I ONLY want 👉YOU👈
f. don't even look in ✨ my ✨ direction [constructed example, adjusted from 10b]

Furthermore, the constructed example in (10f) shows that the focus association pattern shifts if the emoji are moved to encircle another word: if the emoji encircle 'my' (10f) rather than 'look' (10b), the interpretation changes in exactly the way we predict if the emoji are signaling which constituent is in focus: in (10b), *even* associates with 'look,' indicating that 'look' is on the lower end of a likelihood scale: One should not look at the speaker, and not do anything higher on the scale either. In (10f), *even* associates with 'my,' now putting 'my' on the lower end of the scale, such that one should not look at the speaker's direction and not in the direction of anyone ranked higher on the relevant scale either. In sum, the interpretation of the focus-sensitive elements *even* and *only* provides further evidence that the sparkle emoji and pointing hand emoji, when used to encircle words, act a focus indicators.

3.5. Focus and/or prosodic prominence?

A consequence of focusing on emoji encircling single words is that one starts to wonder whether the sparkles emoji ✨ and the pointing hand emoji 👉 encircle words that are in focus, or whether they simply encircle the most stressed, most prosodically/accentually prominent word in a sentence (see e.g. Ladd & Arvaniti, 2023 for a recent review of the notion of prosodic prominence and phrasal accents). One might wonder, is the distribution of these emoji sensitive to an information-structural notion or to an acoustic/phonetic dimension? In many cases, these two things coincide. However, looking at multi-word expressions (11a,b) and VP-level focus (11d,e) suggests that the distribution of plain focus emoji is not simply reducible to words' accentual prominence and can indeed be driven by the information-structural notion of focus.

(11)

a. Bro I swear my Halloween costume this year is ✨on fleek✨
b. I'm feeling ✨on point✨ today
c. anxiety on ✨fleek ✨
d. I'm so jelly of girls that have a good relationship with their moms because my mom simply ✨ hates me ✨
e. my kids got these and I ✨hate them✨

Examples (11a,b) use the multi-word expressions 'on fleek' and 'on point' (roughly paraphraseable as meaning something similar to *awesome, perfect, flawless*). If emoji simply encircle the acoustically/accentually most prominent *word*, we would not expect them to be able to encircle the entire prepositional phrase. However, the entire prepositional phrase is in new-information focus in both of these examples, so from a focus-based point of view, the emoji positioning in (11a,b) is entirely expected. Nevertheless, the existence of examples such as (11c) shows that the emoji can also encircle just the word 'fleek,' not the entire prepositional phrase. While examples like (11a,b) provide evidence against a pure prominence-based approach, (11c) points to the existence of potential variation and individual differences in how plain focus emoji are used. This is a worthwhile direction to investigate further.

More evidence for the emoji positioning being sensitive to focus, rather than accentual prominence, comes from examples like (11d,e). Here, the entire VP ('hates me' or 'hate them') is in focus, and encircled by the plain focus emoji. If emoji positioning were driven only by an individual word's prosodic prominence, this pattern is not straightforwardly predicted. However, I emphasize that these are only initial observations, and more systematic, large-scale investigation is needed in future work.

3.6. Summary: plain focus emoji

The examples presented in Section 3 provide evidence that the sparkles emoji ✨ and the pointing hand emoji 👉 can occur with different kinds of focus, including new-information focus, contrastive focus and verum focus, and that they attract focus-sensitive operators (*even/only*). This suggests that these emoji are flexible in terms of the kinds of focus that they occur with. What does this tell us about the 'meaning' of plain focus emoji? I suggest that this points to focus emoji being semantically and pragmatically *underspecified* for focus type. It's not the case, for example, that one emoji is associated with new-information focus and the other with contrastive focus (at least we have uncovered no evidence for this). In this regard, they differ from pitch accents in many languages; for example, in English H* is typically associated with new information focus and L+H* with contrastive focus. Thus, if my approach is on the right track, plain focus emoji are more underspecified that many other focus-signaling devices in human language.

4. Affective focus emoji

In addition to ✨ and 👉, we also find affective emoji (e.g. 😡🤢❤️😍) in encircling configurations where they surround focused elements. (These emoji are also used in other ways.) Crucially, these kinds of emoji carry meaning that is not present with ✨ and 👉, as they express positive or negative emotional/affective content. In this section, I argue that this extra meaning dimension is a crucial distinguishing property between the plain focus emoji discussed in Section 3, and the affective focus emoji discussed here in Section 4.

Face emoji, by definition, resemble human facial expressions, something which has also been addressed in prior research (e.g. Weissman & Tanner, 2018). We build on observations by Grosz et al. (2023a,b) that affective face emoji (e.g. 😍😡) resemble linguistic expressives such

as *damn* and *f*ing,* which Gutzmann (2013) defines as linguistic elements "that express some emotional and evaluative attitude with a high degree of affectedness" (Gutzmann 2013:4, see also Gutzmann 2019, Potts 2005, and many others).

In this section, I first explore the use of affective focus emoji with new-information and contrastive focus. I then provide evidence that these kinds of emoji have a dual function: they function as focus indicators and also convey information about the author's opinion (like linguistic expressives). Thus, they carry meaning not present with plain focus emoji (✨and 👉). In the following section, I identify a dissociation between the focus- and affect-related interpretations of these emoji, by showing that the scope of the focus does not always match the scope of the affective attitude.

4.1. New-information focus and contrastive focus

As illustrated in (12), affective focus emoji can encircle new information (12a) as well as contrastively-focused information (12b-d). The examples in (12b-d) are contrastive contexts where the author has a positive attitude towards one and a negative attitude towards the other referent. Thus, by indicating the author's attitude, affective focus emoji can provide details about the nature of the contrast between the two focus alternatives. As a whole, these examples show language users employing emoji for the dual purpose of (i) indicating which element is in focus and (ii) what the author's attitude is towards that element.

(12)

a. I wanna buy so many things for myself but cant cause im 😡broke😡
b. I know, right?? With Trump, it was, well, you know, 😡TRUMP😡 doing a totally illegal thing. Now it's 😍Biden😍 doing a totally very legal thing
c. U ever see someone's body and ur like wow why do they look like 😍that😍 and I look like 🤮this🤮
d. How come han and leia look like ✨THAT✨ but then ben looks like 🤢…that…🤢

Before continuing, a brief digression about the sparkle emoji ✨ is in order. Although some regard the sparkle emoji as positively valenced (and that may well be its function in (12d)), it is currently widely used in seemingly negative contexts as well, as exemplified in (13a,b). In fact, in many contexts it is judged, at least by some people, to be sarcastic. The risk of the addressee interpreting the sparkle emoji sarcastically may what motivated the author to include the clarification clause in (13c), where 'no cap' means 'I'm sincere, I'm not lying.' For now, I will make the simplifying assumption that for many users the sparkle emoji has become bleached of positive connotations, and thus I group it with plain focus emoji. However, a closer look at changes over time, as well as potential differences between generations of emoji users, is a valuable direction for future work.

(13)

a. I am ✨sad✨
b. it was just ✨boring✨
c. Gurl, that is ✨ART✨. (No cap, that's actually amazing<3)

5. Expressives and use-conditioned meaning

The data presented in Section 4 shows that affective focus emoji act both as focus indicators and as signals about the author's attitude. In this section, I discuss examples showing a surprising dissociation, namely examples where the focus marking and the affective attitude do not target the same element. Before turning to the relevant examples, I first review relevant non-emoji work on linguistic expressives that will provide us with useful tools to analyze the behavior of the affective focus emoji.

In his work on expressive adjectives like *damn*, to express the author's attitude, Gutzmann (2013, 2019) uses fraction-like representations to distinguish truth-conditional meaning (shown in the denominator) from expressive (use-conditioned) meaning (in the numerator), which I have slightly adapted below (see also Potts 2005). Although discussion of expressives has mostly focused on examples like (14a) where the attitude can target a particular entity (e.g. the dog), Gutzmann points out that in cases like (14b), the most plausible reading is one where the expressive applies to the full propositional content of the sentence.

In both (14a) and (14b), the expressive adjective, here *damn*, syntactically modifies the noun. In (14a), this adjective can be interpreted as expressive the speaker's attitude towards the dog, i.e., that the speaker has a negative attitude towards the dog.

Crucially, in the right context, this adjective can also be interpreted as semantically targeting the propositional context of the sentence, not just the noun's referent. Thus, (14a) can be interpreted as the speaking having a negative attitude about the dog barking again, not necessarily about the dog *per se*. This reading is perhaps more easily available with (14b).[5] Here, although the adjective *damn* modifies the noun bottle, the speaker's negative attitude most plausibly targets the event of the bottle spilling, not the bottle itself. For example, someone could utter this after spilling their favorite bottle of wine. This is striking, as it shows that we can have a mismatch between the syntactic position of the adjective and its semantic interpretation, what Gutzmann (2019) calls non-local interpretations.

(14)

a. I hear your damn dog barking again =

   <u>I have a negative attitude towards the dog</u>
   I hear your dog barking again

b. I've spilled that damn bottle again =

   <u>I have a negative attitude towards this event</u>
   I've spilled the bottle again

[5] Another example is 'The damn dog ate the cake' (from Gutzmann 2019:87), which can express the speaker being angry about the situation as a whole, not the dog *per se*.

5.1. Affective focus emoji: When focus marking and the affective attitude target the same element

In the case of affective focus emoji, we find examples akin to both (14a) and (14b). In this section, I first consider a situation where the attitude expressed by the emoji targets a particular entity, which is the referent of the words encircled by the emoji. In this case, the 'target' of the focus marking and the 'target' of the author's attitude coincide, and are encircled by the affective focus emoji.

Consider (15). Here, the author's disgust is specifically targeted at the specific thing the person ate and that thing is also what's encircled by the emoji and in focus. The affective meaning can be represented along the lines of what we saw in (14a). This is depicted in (15), adapting Gutzmann's fraction format with the affective (use-conditioned) content as the 'numerator' on top and the truth-conditional meaning as the 'denominator.' Note that here, the affective meaning simply targets the (referent of the) DP *that*. The examples in (12) are of this same type: the affective emoji encircle the focused word and convey the author's attitude about the referent of that word.

(15) you ate 🤢that🤢 =

<u>I have a negative attitude towards what you ate</u>
you ate that

It's worth noting that the above representation does not capture the positional constraints we have observed, i.e. that the emoji occur at the left and right edges of the focused element. As we will see in the next section, this is a desirable property because at least in certain contexts, we need to be able to dissociate the focus-related content and the affective content of affective focus emoji.

5.2. Affective focus emoji: When focus marking and the affective attitude do not target the same element

In addition to the cases in Section 5.1 where the affective meaning of the emoji is specifically linked to the referent of the particular word that is in focus and is encircled by the emoji, we will now see cases where the emoji encircle the focused word but, strikingly, the affective meaning of the emoji is not restricted to that particular word and instead takes scope over a larger part of the utterance. Consider the examples in (16).

(16)

a. I woke up to #valentinesday2021 being not the usual coupledom but LOVE FOR THE WORLD in 2021 and I am ❤️here❤️ for that!
b. He's literally just..standing 😍there😍
c. I love when hes just ❤️there❤️

In (16a), the author's positive feelings are not about the referent of the word *here*. Rather, in this context 'I'm here for that' is an idiom, and *here* does not refer to a specific location. Instead, we can infer that the heart indicates that the author feels happy about the proposition

that Valentine's Day in 2021 is about love for the world. In (16b,c), the author's positive feelings are not about the location *per se* but rather about the entire situation where a particular person is present in that location. Thus, we see a mismatch in what the focus marking is targeting (a particular word) and what the affective attitude applies to (a larger constituent).

Similar patterns occur with negative affective focus emoji, as shown in (17).

(17)

a. Need a holiday right 😡now😡
b. Need 😡coffee😡

In (17a), *now* is in focus and encircled by the emoji, but author's anger is directed at the broader situation about her life being such that she needs a holiday. Similarly, in (17b), *coffee* is in focus and encircled by the emoji, but author's anger is not directed towards the referent of the noun *coffee*. Rather, the angry emotion takes scope over the entire utterance: the author is angry about the fact that she needs coffee (or angry at the situation of being without coffee). Thus, although the affective information is conveyed by the emoji encircling the focused word, the scope of this affective information is *not* limited to that word.

These kinds of examples show that the affective scope of the emoji does not have to match its 'focal scope.' Although the emoji encircle the focused word, their affective contribution can take wider scope. In this regard, they are very much like the 'damn bottle' example (14b) (from Gutzmann 2013). We can represent the truth-conditional meaning and affective (use-conditioned) meaning for (17b) as illustrated in (18).

Crucially, here, the emoji has scope over the entire proposition (similar to *damn* in (14b)). Thus, to capture the contribution of affective focus emoji, their affective meaning needs to be able to (potentially) project beyond the specific word that is focus-marked. While this mismatch may at first glance seem surprising, examples like (14b) show that this phenomenon has a linguistic precedent.

(18) Need 😡coffee😡=

<u>I have a negative attitude towards my needing-coffee situation</u>
I need coffee

5.3. Digression: Could the difference in scope be due to focus projection?

A possible concern is whether what the kinds of examples discussed in Section 5.2 could simply be analyzed as a case of focus projection (see e.g. Selkirk, 1984; 1995), eliminating the need to claim that the affective meaning of the emoji can scope over a larger constituent. However, examples like (19) suggest that this is unlikely to be the case. In (19), the author's positive attitude is not about the determiner *that* but about the entire noun phrase or even the entire clause: the author feels happy because she received good news. Thus, here we again see that affective meaning conveyed by the emoji applies not only to the encircled word but to a larger part of the utterance. Crucially, under typical analyses of focus projection**,** focus is not

expected to project out of *that*, which suggests these effects cannot be attributed to focus projection.

(19) When you get 😍😍THAT😍😍 notification

6. Discussion

This paper is an initial exploration where I argue for the existence of two kinds of focus-indicating emoji that are used to encircle words: (a) plain focus emoji such as the ✨sparkles✨ and the 👉pointing hands👈 and (b) affective focus emoji (e.g. 😡🤢❤️😍). Based on naturally-occurring examples from Twitter, I show that both focus emoji types are (i) semantically flexible, in the sense that they can occur with multiple focus types, unlike spoken language where different focus types often differ in prosodical realization, and (ii) positionally constrained, as they typically occur to the immediate left and right of focused element. Thus, they can provide a useful signal of focus in a domain lacking prosody.

Furthermore, I argue that these two emoji types differ in the information conveyed: While *plain focus emoji* function as focus indicators, *affective focus emoji* have a dual function: they act as focus indicators and also provide information about author's affective attitude (disgust, happiness etc). Crucially, I show that there can be a dissociation between the content that is targeted by focus and the content that is targeted by the affective attitudes expressed by affective focus emoji. While this lack of isomorphism may at first seem unexpected, I propose that there exists a linguistic precedent for this, in the domain of expressive adjectives (see Gutzmann, 2013; 2019), that provides us with tools to better explain these patterns.

Of course, many issues still remain open. In addition to the open questions I identified throughout this paper, there are also are other kinds of focus-related contexts where ✨and 👉 occur that merit a closer look. For example, in some contexts these emoji appear to resemble to contrastive-focus reduplication (e.g. Ghomeishi et al. 2004 on expressions like *salad-salad)*. Topics such as second-occurrence focus should also be explored in the domain of emoji. Furthermore, sentences that contain *both* focus emoji and expressive adjectives like *damn* need investigation. Hopefully this paper can provide a foundation for future work on these topics.

(20)

a. Not a salad but a ✨salad✨ [accompanied by picture of a fancy salad]

b. I meant [say] to pasta ✨salad✨[self-correction after tweeting about 'lemon basil pasta']

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