



Stative verbs and perceptions of intensity: The case of 'believe' in simple and progressive aspect

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ABSTRACT

This study assessed the validity of descriptive findings from corpus linguistics research by analyzing human participants' performance and perception data. While the stative verb *believe* usually occurs in the simple aspect, a corpus-based analysis has revealed that *believe* also occurs in the progressive form in communicative situations conveying a heightened degree of intensity and marked with specific linguistic features such as intensifying adjectives, adverbs of certainty, direct addresses, and others (Gracheva, in press). This study adopted an experimental approach to further assess the link between the progressive form in situations of use conducive to assertive stance and emotional involvement and its surrounding linguistic characteristics. Eighty-six native English speakers were presented with 24 naturally-occurring texts from corpora. Half of the texts involved linguistic features of intensity (progressive aspect condition), while half involved no such features (simple aspect condition). Participants read the texts and selected the form of *believe* (simple or progressive aspect) which they thought was appropriate in each text. Results showed that participants selected the progressive aspect 47% of the times for the texts featuring language of intensity, while their selection of that aspect was less than 3% in the simple condition texts. Follow-up interviews revealed that participants sensed the intensity conveyed by the texts (e.g., strong emotion, urgency, emphasis), leading to their choice of the progressive over the simple aspect.

Introduction

While stative verbs typically occur in the simple aspect (Quirk et al., 1985), corpus linguistic data show that such verbs also occur in the progressive aspect, particularly when the speaker shows their keen involvement and is in control of the action or state described (Biber et al., 2002). Correspondingly, recent corpus-linguistics research has revealed that in contexts where the progressive aspect of the stative verb *believe* occurs, linguistic features that convey heightened level of intensity tend to co-occur systematically (Gracheva, in press). Heightened intensity is often observed in expressions of strong emotion, emphasis, and certainty, which are conveyed through specific linguistic forms such as intensifying adverbs and adjectives (e.g., very, even, ever), adverbs of certainty (e.g., surely, obviously), direct appeals in the form of 2nd person pronoun, quantifiers (inclusive meaning – *all*, *every*; large quantity – *much*/ *many*, Biber et al., 1999), and imperative sentences (e.g., Stop doing X) (Gracheva, in press). These features and the progressive form of *believe* are often found in communicative situations of news and blogs, particularly in discussions of controversial topics where the

speaker uses argumentative tone and tries to persuade the audience. Hence, linguistic features of intensity and the progressive aspect of *believe* are the speaker's resources for persuasion conveying a forceful expression of their stance.

While corpus linguists have revealed a meaningful connection between the progressive form of *believe* and linguistic features of intensity in specific communicative situations, their findings are limited to description of text characteristics and do not extend to human perceptions of those characteristics. Thus, a question remains whether human participants actually attend to those linguistic features and corresponding situational differences, and choose the progressive aspect over its simple counterpart. To address this question, the present study combines the corpus linguistics approach and experimental human subjects research. We investigate whether human participants choose the progressive aspect of *believe* over the default simple aspect when they read experimental texts depicting communicative situations that involve linguistic features of intensity. Participants' performance data from the experimental task is supplemented with perception data collected from interviews. Adopting the mixed-methods approach, this

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study intends to address whether linguistic characteristics of texts align with human processing and perceptions of these characteristics.

Background

Stative verbs and grammatical aspect

It is widely accepted that stative verbs (i.e., verbs denoting mental activity, feelings, or sense perception) are typically used in the simple aspect. This fact is usually explained through their stative nature being incompatible with the basic function of the progressive aspect. As Quirk et al. (1985) claim, “stative verb meanings are inimical to the idea that some phenomenon is ‘in progress’”. Since stative verbs denote states rather than actions (Emmerson, 2002; Parrott, 2010), there cannot be a communicative need to express progress of a state. As a result, grammarians list common non-progressive verbs, such as *know*, *own* (Quirk et al., 1985), *hate*, *like*, *love*, *mean*, *need*, *prefer*, *understand*, *want* (Swan and Walter, 2003), *believe*, *doubt*, *realize*, *recognize*, *feel*, *smell*, *taste* (Parrott, 2010), among others, and talk about typical or “normal” nonprogressive and “nonnormal” progressive uses in examples like the following:

- (1) I **hope** you will come (normal nonprogressive).
 I **am hoping** you will come (nonnormal progressive).
 (Quirk et al., 1985, p. 202)

However, while the simple aspect is indeed the more frequent default use for stative verbs, it is now acknowledged that such verbs do allow progressive, and this variation entails a change in meaning as well as pragmatic force. Descriptive corpus-based grammars associate the simple aspect with stative verbs when they express the speaker’s “state of mind rather than an activity” (Biber et al., 2002, p. 164; Biber et al., 1999, pp. 472–473). On the other hand, the progressive aspect occurs with stative verbs when the speaker is the agent in control of the action or state (Biber et al., 2002). Thus, differences in grammatical aspect are often associated with varying degrees of speaker agency: While the simple aspect is unmarked and indicates the speaker’s passive experience of a state, progressive aspect indicates the speaker’s active involvement. This is exemplified with the following contrasts:

- (2) He didn’t **know** why.
 I **was just thinking**, it’d be nice to go there.
 (Biber et al., 1999, pp. 473)

Similar insights come from studies specifically targeting the progressive use of stative verbs, which conclude that when stative verbs take the progressive aspect, they convey “subjectivity, emphasis, intensity, emotion” (Smitterberg, 2005, p. 217), expressivity, immediacy, and emotional involvement (Granath and Wherrity, 2014), “the speaker’s control” (Freund, 2016, p. 51), emphasis on conscious involvement (Pražmo, 2018), the speaker’s personal perspective and “a range of subjective meanings” (Szczyrbak, 2021, p. 239). It is apparent that agency and heightened speaker involvement are the common underlying theme in these conclusions. In particular, Szczyrbak (2021) observes an interesting tendency of heightened expressivity and intensity in a group of cognition verbs that are especially rare in progressive, such as *understand* and *want*, and discusses the progressive aspect as a linguistic resource that aids speakers in adding substantial prominence to the expression of their attitudes, assessments, and beliefs. This group, i.e., cognition verbs that are commonly not associated with progressive, includes the verb *believe*, which is said to typically reject progressive use (Belli, 2017; Biber et al., 1999, 2002). However, recent research has shown that not only does *believe* occur in progressive, but it shows systematic patterns that support Szczyrbak’s (2021) conclusions. The next section reviews these findings.

The verb *believe* in simple and progressive and its pragmatic functions

Existing studies have examined the verb *believe* in its typical use – the simple aspect (e.g., Chaemsaitong, 2017; Fetzer, 2014; Hyland and Jiang, 2017; Kärkkäinen 2003) – and reached conclusions about the verb’s limited functional range (Fetzer, 2014). For example, scholars maintain that, unlike other multifunctional verbs (e.g., *think*), the verb *believe* has preserved its semantic meaning and thus is limited in its pragmatic functions. Indeed, the functions of *believe* in the simple aspect appear to be sparse and quite general, such as an assertive function, a booster, or an attention getter (e.g., Diessel and Tomasello 2001), and hedging (e.g., Chaemsaitong, 2017; Erman 1987; Fetzer, 2008; Kärkkäinen 2003).

However, recent research has revealed a much more complex functional profile of *believe* in its progressive aspect. Gracheva’s (in press) corpus-based analysis shows that, although the simple aspect is the prevalent use, the verb also occurs in progressive, and its progressive form is associated with specific pragmatic functions: the speaker’s expression of an ongoing strong belief, dissociation from someone else’s belief and its criticism, and belief in or hope for a future outcome. Importantly, these functions appear to be associated with heightened intensity and emotion as suggested by research on other cognition verbs in progressive (e.g., Szczyrbak 2021).

However, this conclusion is not based solely on the structure under analysis. That is, it is not the verb *believe* itself in the progressive form that denotes intensity. Rather, intensity appears to manifest itself through specific linguistic features that are systematically observed in the immediate linguistic context of *believe* in progressive (e.g., features expressing certainty, emphasis, and emotion) (Gracheva, in press). Analyzing data from two corpora, COCA (~560 million words) and CORE (50 million words), Gracheva (in press) identifies 12 linguistic features that consistently appear in texts with progressive and concludes that it is not accidental that the progressive form of *believe* is found exclusively in communicative situations lending themselves to emotional involvement and consistently co-occurs with linguistic features of intensity. Indeed, this feature co-occurrence corresponds to specific situational distinctions observed in texts with the progressive form of the verb. That is, expression of intensity and the speaker’s active involvement, often associated with stative verbs in progressive, are necessitated by particular situational contexts, such as discussions of divisive and sensitive topics or high-stakes outcomes. Contexts where a number of features of intensity co-occur, predominantly found in news and blogs, tend to be argumentative in tone and include debates and discussions of controversial topics of social or personal importance to the speaker (e.g., politicians’ actions, abortion rights, immigration, bias against minorities). These contexts call for persuasion and trigger a particularly forceful and direct expression of speaker stance. It is perhaps intuitive that the communicative contexts that demand this forceful and expressive stance occur predominantly in news and blogs. Spoken news reports are characterized by immediacy of real time production as well as the time-sensitive nature of the presented information and its urgency; that is, the speaker’s take on the current events is expressed at a particular moment – a feature of the situational context served by the canonical meaning of the progressive aspect. Additionally, interviews that are often integrated in news broadcasts feature frequent instances of subjective stance in the interpretation of current events. The goals of personal or opinion blogs are often to offer evaluation and advice. Studies of online news reports and news and opinion blogs as

registers covering public events emphasize the clear opinionated bias of both (Biber and Egbert, 2018). Expression of opinion is central for the goals of these registers, which include persuasion, construction of the online persona, credibility, and public engagement. Thus, in such communicative situations, the speaker signals the force of their belief to appeal to the audience in the hope to gain their support.¹

It is such communicative contexts that are marked by systematically occurring intensifying adverbs, direct appeals in the form of 2nd person pronouns, pronouns/determiners such as 'all', adverbs of certainty, intensifying adjectives, imperative structures, nominal pronouns contributing to emphatic generalizations such as 'everyone', rhetorical questions, modal verbs of prediction, obligation, and prohibition, cleft structures serving to manipulate the listeners' focus, superlative forms, and verbs of volition (see the complete list with examples in Appendix A) alongside *believe* in progressive. For example, Gracheva (in press) illustrates that in an 88-word text where the speaker launches an attack at someone who claims to support the Constitution, their position is intensified through a stance adverb (*in fact*), an intensifying adverbial structure (*above and beyond*), an intensifying adjective (*their own words*), a quantifier serving as an intensifier (*all of their filthy lying*), and two cleft structures directing the reader's focus to what the speaker finds important (*That's what...*). These linguistic features of intensity thus directly contribute to the communicative goals of situational contexts in which the speaker's position gains prominence and to the overall tone of heightened emotional involvement. Gracheva (in press) interprets this co-occurrence of the progressive form and features of intensity as a meaningful functional association. This interpretation draws in important ways on the phenomenon of linguistic co-occurrence in the text-linguistic framework of register research, i.e., studies of "variet[ies] associated with a particular situation of use" (Biber and Conrad, 2019, p. 6), discussed in the next section as it pertains to the present study.

Linguistic co-occurrence: Insights from the register-functional perspective

Linguistic co-occurrence has now been consistently observed by the growing body of work on register variation. This research tradition assumes a functional relationship between the situation of use and pervasive linguistic features that co-occur to co-construct a functional pattern characteristic for a particular communicative situation. The fundamental tenet of this research tradition is that linguistic features do not co-occur at random (Biber, 1988). Rather, their individual functions work together as they jointly contribute to a particular underlying communicative function in a discourse domain. Examples of feature co-occurrence that contributes to shared general functions are features associated with oral and involved discourse (co-occurrence of private verbs, 'that' deletion, contractions, present tense, 2nd person, 1st person, among others) or information density (nouns, prepositions, long words, attributive adjectives), abstract discourse (agentless passive, agentive passive, conjuncts, past participial clauses), stance (prediction, necessity, and possibility modals, persuasive verbs, conditional subordination), or situation-dependent discourse (time and place adverbials) (Biber, 1988). In this theoretical framework, co-occurrence of these features is always functionally motivated and serves certain communicative needs in particular situations of use.

While Gracheva (in press) did not use statistical procedures to reveal co-occurrence, patterns of *believe* in progressive occurring with features of intensity became apparent through systematic text analysis. In line with the notion of functional correspondence between situation and

language, this prominent use of features of intensity (e.g., certainty, emphasis, and emotion) in texts was explained through particular situational characteristics of these texts. As noted above, these characteristics included the controversial topics of the texts that lent themselves to a strong expression of speakers' opinions, the communicative goals of arguing a point, persuading the interlocutor, and expressing disagreement. Linguistic features of intensity directly serve the communicative needs arising from such situations of use. Crucially, the fact that *believe* in progressive consistently occurs in such situations of use with features of intensity suggests that the progressive aspect of the verb contributes to the same functional pattern as these features.

Moreover, a comparative analysis of contexts that contained *believe* in the simple aspect (its unmarked default use) revealed an overall absence of such features.² Again, this lack of features of intensity with the simple aspect can be explained through the situation of use, which is in stark contrast with the public settings conducive to expressions of opinion and emotional involvement, as seen in texts with progressive. As will be shown later in this study, texts featuring *believe* in simple are mostly informational, conveying facts rather than opinions in a neutral objective tone.

It has become apparent through these analyses that linguistic co-occurrence associated with a particular situational context is highly informative in what we learn about the choice of aspect and the functions of *believe*. Specifically, it appears that the progressive form of the verb is functionally associated with the linguistic features of intensity in emotionally charged contexts, thus acquiring a connotation or a semantic prosody (Louw, 1993) of intensity, while the simple aspect does not convey that function. It is this functional association that the present study aims to explore further from the perspective of people's perceptions as they encounter a particular communicative context and select the form of *believe* they find the most suitable for that context.

The present study

The present study investigates the effect of the systematic co-occurrence of linguistic features of intensity with the progressive aspect of *believe* on the human subjects' choice of aspect (simple or progressive). In other words, the study tests whether participants are likely to choose the marked progressive use over the default simple use as the text situation changes from neutral to emotionally-charged contexts. While the former contexts contain no linguistic features of intensity, the latter involve several such features. We hypothesize that the presence of these linguistic features in intense, emotionally-charged contexts triggers associative links with the progressive aspect of *believe*. The present study is designed to test this hypothesis with an experimental design.

Previous experimental efforts suggest that there is a reason to expect participants to form such associative links through repeated exposure to particular contexts. Keller (2021), for example, explores registers as mental constructs and investigates language users' associations between particular situational cues and processing of contingent linguistic items. As speakers repeatedly experience situations of use where co-occurrence of particular features is functionally determined, they build a network of associative links between linguistic items and the situations in which they typically occur (Logan, 1988; Smith and Yu, 2008; McMurray et al., 2012, cited in Keller 2021, p. 9). While the results varied depending on the register, Keller (2021) did show that such links between a mental representation of a particular situation of use and its associated linguistic features exist. Thus, evidence of such links as well as the patterns observed with *believe* in simple and progressive warrant an investigation of human perceptions of the contextual and linguistic differences

¹ The communicative situations that trigger emotional intensity are not found only in blogs and news, although they are particularly common in these registers. Interested readers are referred to Gracheva (in press) for the register distribution of *believe* in progressive generally and in each pragmatic function and the interpretation of the pragmatic functions with relation to the situational characteristics of the registers.

² A detailed analysis of the simple aspect was not included in Gracheva (in press) but was conducted to inform the interpretation of the progressive form of *believe* as well as for the present study.

associated with the two aspects of the verb. The present study therefore investigates whether participants recognize these differences in texts and rely on them in their choice of aspect in the verb *believe*.

By doing so, the present study intends to contribute to the advancement of research methods in applied linguistics. Specifically, the study combines the strengths of several prominent methods: (1) detailed text analysis of authentic corpus data; (2) an experimental task based on these corpus data which elicits native speakers' intuitions regarding the target structures (simple vs. progressive aspect of *believe*); (3) an investigation of human perceptions of the target structures through an interview. We show that the corpus linguistic approach has helped us identify highly specific links among linguistic structures, their pragmatic meaning, and contexts of use. The use of these data in the experimental task then ensures an instrument that is based on authentic material reflecting real-world communicative tendencies. Human subjects' responses to the developed task then offer their unique interpretation of the target structures in different contexts of use. Finally, their intuitions are verbalized and explained in the interviews. We propose that this combination of approaches results in a more rigorous research process and a rich dataset that offers more comprehensive and in-depth insights into the progressive use of stative verbs in our case or any complex linguistic phenomenon.

Research questions

The following research questions guided the study:

- (1) Do participants select the simple or progressive aspect of the stative verb *believe* in texts involving language of intensity as opposed to texts that do not involve such language?
- (2) What are the underlying reasons for participants' choice of the simple or progressive aspect of the stative verb?

Method

Participants

Participants were 86 native speakers of English enrolled in undergraduate courses in a U.S. University (72 females, 8 males, and 6 other gender). Their average age was 21.4 ranging from 18 to 34. There were 9 freshmen, 28 sophomores, 25 juniors, and 24 seniors majoring in English, speech pathology, communication, nursing, and criminology. They were all volunteer participants recruited from existing classes. They received a \$10 Amazon gift card for their participation.

Task

The experimental task involved 24 short texts (each about 100 words in length) taken from Corpus of Contemporary American English (COCA) (Davies, 2008) and Corpus of Online Registers of English (CORE) (Davies, 2016) containing over a billion and over 50 million words, respectively. There were eight texts involving the simple aspect (*believe*) and eight texts involving its progressive counterpart (*be believing*). The eight remaining texts were distractor texts featuring non-target stative verbs (e.g., *love*, *wonder*). Participants were asked to read each text and select the verb form (simple or progressive) that they thought was most suitable in each text (sample items below). The task was created and delivered online through Qualtrics.

From the corpora Gracheva (in press) analyzed, we selected eight texts involving linguistic features of intensity for the progressive aspect condition. Our goal in this text selection was to identify texts that contained the most features of intensity to ensure that the presence of such features was perceptually salient and could be noticed by the participants. Although we could have used random sampling from the texts with progressive, we decided against it, as it could have yielded texts with fewer features of intensity. We determined that such texts, would

not serve the goal of the present study – to test human perceptions of features of intensity – equally well due to a lower perceptual saliency of these features. We opted for ruling out such borderline texts and consulted our colleagues to confirm that intensity was clearly felt in the communicative situation of each text and its tone. Appendix B presents the counts of the features of intensity in each of the experimental texts selected for the progressive condition.

The sample test item below illustrates the progressive condition. This excerpt is a direct address to the person being verbally attacked by the speaker (Dr. Meyers). The directness and intensity of this text are conveyed through such linguistic features as the 2nd person pronoun repeated throughout the passage (repetitions of *Thank you, if you're certain that you're right, if you feel*), adjectives of certainty (*if you're certain*) and adjectives used as emphasizees (*a complete prat; a fundamental moron*), intensifying adverbs (*it's perfectly right; rational thought will never be brought into the equation; Some of them are even schizophrenic*), verbs of volition and modals of prediction (*want, will*), and nominal pronouns contributing to a hyperbole (*Nobody is against anyone believing*).

Sample test item, progressive condition.

Thank you, Dr Meyers. Thank you for proving that you don't need religion to be a complete prat. That being a douche is acceptable if you're certain that you're right. That it's perfectly right to be an idiot if you feel the other side is stupid. Thank you for ensuring that rational thought will never be brought into the equation. In short, thank you for being a fundamental moron. Nobody is against anyone believing whatever crazy crap they want. People _____ (have believed/ have been believing) crazy crap for eons. Some of them are even schizophrenic or have other reasons for believing it.

In contrast, the texts in the simple aspect condition (taken from the same corpora) did not involve any of these linguistic features of intensity, as shown in the sample test item below. Appendix B shows that the relative frequencies of these features in all texts of the simple condition are considerably lower than in all texts of the progressive condition.

Sample test item, simple condition.

Most of the AGA (i.e., hair loss) patients also had deficient protein intakes and a high carbohydrate/fat diet. A noteworthy finding in AGA patients was that many of them had a positive family history but of lesser severity and presentation in later life. The authors _____ (believe/ are believing) that low protein intake, missing breakfast, and faulty lifestyle hastened the onset and increased the severity of AGA. Another striking observation in two of AGA patients was that in spite of an intake of >50 g/day of protein, they were simultaneously doing intense physical activities.

Two pilot studies were conducted to confirm the differences between these two text categories. In the first pilot, we had five graduate students in applied linguistics complete the task. When their responses did not match with our expectation (i.e., they selected the simple aspect when the original text had the progressive aspect), we followed up with a brief interview exploring reasons behind their choice and replaced some texts with alternative ones. In the second pilot, 21 undergraduate students completed the task involving 10 texts in each category (simple or progressive). The texts in the simple condition achieved almost perfect accuracy, while the progressive condition achieved about 70% accuracy. Two texts which showed extremely low accuracy were removed.

An additional consideration in the pilot stage was the possibility of syntactic priming being a factor in participant responses. That is, previous uses of other verbs in progressive in the text could lead the participants to select progressive in the gap. As we analyzed the pilot results, we recorded the progressive occurrences of other verbs in the texts and the participant responses that followed. In both rounds of pilots, there was no clear pattern of priming, with several participants selecting the simple aspect after prior occurrences of the progressive aspect, and vice versa. Based on the pilot results, we proceeded with the experiment without manipulating the texts in any way for the purpose of

avoiding the potential priming effect. Naturally occurring, real-world uses were thus fully represented in our texts in their original form.

Participants received a link to the experimental task (Qualtrics survey) and completed it individually online. After the informed consent process, they completed a brief background questionnaire and proceeded to the task (15–20 min total). After the task, four participants were contacted for a follow-up one-to-one interview, which was conducted on Zoom in a quiet office.

Interview

Follow-up interviews were conducted with a subset of four participants to triangulate the data collected from the experimental task in the main study. Participants who achieved a near-perfect score were recruited for the interview, which was conducted individually via Zoom and lasted about 15 min. The goal of the interview was to examine participants’ reasons behind their choice of aspect.³ From the experimental task, we selected two texts involving the simple form (*believe*) and four texts involving the progressive form (*be believing*). The participants read the texts one-by-one and chose the verb form that they thought was more suitable for each text. Then, they were asked to explain why they selected the form. The researcher asked follow-up questions only when participants’ responses were not clear. All interviews were recorded and transcribed for analysis.

Data analysis

A total of 1376 responses were collected from the experimental task (86 participants; 8 responses for the simple and progressive condition, respectively). Participants’ choices of the verb form were analyzed between the texts requiring the simple aspect and progressive aspect by comparing frequency of the cases when progressive form was selected between the two text conditions. Interview data were transcribed and analyzed thematically for notable trends (Braun and Clarke, 2006). Both researchers first segmented the participants’ responses (reasons why they selected the simple or progressive form) by individual thought unit (i.e., unit expressing the same idea) and then assigned a label to each thought unit. After that, they compiled the labels to identify common, salient themes. Those themes were interpreted as main underlying reasons guiding participants’ choices.

Results

Research question 1: Participants’ choice of the simple vs. progressive aspect

Table 1 displays the proportion of the times when the progressive aspect (*believing*) was selected. As can be seen from Table 1, only about 3% of the times participants selected the progressive form when reading

Table 1
Proportion of progressive aspect choices between two text conditions.

	% of progressive form choices
Simple aspect condition	2.9%
Progressive aspect condition	47.1%

Note. N = 86. 8 texts x 2 conditions; total of 1376 responses.

³ We intentionally selected high-performing participants for the interview because we wanted to see the reasons behind their choices of the progressive aspect (whether their choices indicate the language of intensity in texts as we hypothesized). We would not have been able to see the reasons if we had selected low-performing participants who did not select the progressive aspect.

texts involving the simple aspect. That is, they almost always selected the simple aspect in the texts where language of intensity was absent. In stark contrast, the percentage went up dramatically in the progressive condition. Participants selected the progressive aspect 47% of the times for the texts featuring language of intensity.

However, there was variation among the texts involving the progressive form in terms of correctness of participant responses (i.e., alignment with the original use in the corpus). While the participants’ choice of the simple aspect was almost uniform across texts requiring the simple form (93–100%), in the progressive condition, proportion of correct responses across progressive texts ranged from 23% to 72%. The experimental texts below illustrate this variation. Text #15 showed the highest percentage of the correct progressive form choices, whereas for Text #28, only 23% of the participants selected the progressive form. Both texts involve language of intensity. In Text #15, we see a number of stance adverbs of certainty (*really, certainly, not nearly*), direct addresses expressed through the pronoun *you* and statements of the speaker’s intentions (*many of you; I’m going to tell you*), a cleft structure used to manipulate focus (*That’s what really bothers me*), and a nominal pronoun intensifying the speaker’s meaning (*I don’t know why anybody would think*). Similarly, Text #28 contains a cleft structure, which serves to draw the listener’s attention to the object of the speaker’s criticism (*What’s getting tiring is hearing from the left that...*), intensifying adjectives (*they are the only ones that care; for their own self-gratification*), and an intensifying adverb, additionally foregrounded through graphic means – all capital letters (*It’s worked SO well*).

Text #15, progressive condition.

The bad thing about it is that you’ve got people who really respect Mr. Buchanan and I’d say, in some cases, idolize him, and he’s telling them things which aren’t true. He’s energizing people to be confident in things which are not true. That’s what really bothers me. It bothers me that you – and many of you (believe/ are believing) this stuff. So, I’m going to tell you the economy’s not great, but it certainly isn’t as bad as people are saying and the country is not nearly as bad as people are saying. I don’t know why anybody would think it’s true.

Text #28, progressive condition

Compassion is found throughout this land on both sides. What’s getting tiring is hearing from the left that they are the only ones that care about xxx issue and worse, they (believe/ are believing) that garbage for their own self gratification. Perhaps a better idea might be to stick our isolationist heads in the sand and continue to slight foreign languages. It’s worked SO well for us in the past. Norfolk, VB and perhaps other public schools are to be applauded for picking up Arabic.

Despite the presence of these linguistics features of intensity, a closer look at these texts may offer clues as to why the participants’ perceptions of these texts differed. One potential reason is that Text #28 contains implicit sarcasm. Specifically, while the first two sentences directly state the speaker’s position – namely, their frustration with the political left, in sentences 3–5, the speaker’s actual meaning is in fact the opposite of what they say. That is, the speaker condemns the idea of xenophobia or excluding foreign languages from the curricular and clearly means that in the past these actions were wrong. The explicit representation of these thoughts, however, may have been confusing to the participants, as the speaker mockingly calls these actions “a better idea” and notes that they “worked SO well [...] in the past”. It is thus these indirectness and sarcasm that may have posed a problem with selecting the progressive aspect. Alternatively, the overall issue raised in this text might have been too complex to be understood correctly in this limited context, and more extended context (not always available in the corpora used) may have aided the participants’ understanding. In contrast, the overall meaning of Text # 15 is quite straightforward, with little to no scope for misunderstanding.

Research question 2: Participants' perceptions of the simple vs. progressive aspect

The second research question examined reasons underlying the participants' choice of the verb form (simple or progressive aspect). We addressed this question via interview in order to supplement the findings obtained from the experimental data. As we explained in the Method section, four participants who consistently selected the progressive aspect in the progressive condition were recruited for the interview. They read a subset of the experimental texts one-by-one (two texts in the simple condition and four texts in the progressive condition) and verbalized why they selected the particular form for each text. We coded participants' responses for themes underlying their responses. Table 2 displays consistent themes that emerged in the data, along with descriptions and frequencies of mentions.

As shown in Table 2, overwhelmingly the most common theme associated with the progressive aspect is 'emotion' (29 mentions). For example, when reading Text #37 below (features of intensity highlighted), Participant RC chose *believing* (correct response) and identified emotions underlying the speaker's voice, saying that "[this text] has a lot of emotion behind it" and "they're kind of upset".

Text #37, progressive condition.

She does not yet know how to understand that these decisions she is making, based on the wrong actions of another, **will** haunt her and control practically **every** decision she **will** make for the rest of her life. **Worst of all**, her decisions are based on error, believing something that is not true. As far as she is concerned, what happened to her is the **REAL**

Table 2
Themes in interview responses.

Verb form	Theme associated with the verb form	Definition	Frequency of mention
Believe	Fact	(According to the interviewee), the verb form (<i>believe</i>) is used in reference to factual, verifiable information.	12
	General belief	The verb form denotes a commonly accepted belief, majority consensus, or universal truth.	8
Believing	Form	Grammatical forms found in the surrounding context determines the choice of the verb form.	6
	Context (e.g., neutral context)	The verb form systematically occurs in a particular context.	4
	Emotion	(According to the interviewee), the verb form (<i>believing</i>) is associated with a heightened expression of feeling, emotion, and emphasis.	29
	Ongoing belief	The verb form denotes an ongoing, current belief.	7
	Certainty	The verb form is associated with marked certainty expressed by the speaker.	7
	Dissociation	The verb form is used by the speaker to express their dissociation from the belief held by others.	6
	Form	Grammatical forms found in the surrounding context determined the choice of the verb form.	5
	Informality	The verb form is associated with spontaneous speech common in informal situations.	3
	Context (e.g., social/political change)	The verb form systematically occurs in a particular context.	2
	Falsity of belief	The verb form is used to refer to a false belief held by others.	2

proof that she (believes/ is believing) the truth. And, along life's road, she **will** make **many** decisions in which she **will** put herself in bad situations with men, and further "prove" that she was right.

Upon being asked where she sees 'emotion', RC responded as follows:

Interview excerpt 1, Participant RC.

The verb "haunt" to me is very emotionally charged, because it's not used in everyday language, and it's very strong. A lot of people say, oh, well, "this will stick with you", or like "this can last", but a lot of people don't say "it haunts you". And then the phrase, "worst of all" is also pretty emotionally charged because it's like, "it's kind of bad", she could have said that. But they're saying "worst of all", it's the absolute. And also just the way this is transcribed with the all capital letters before "proof" makes it feel like there is emphasis on there and then. The quotations . . . also make it feel emotionally charged because it kind of tries to display what you would do in normal speech and that could be interpreted as like more emphasis on something.

As we see in this excerpt, RC identified a range of features of intensity, including the connotation of the word *haunt*, intensifying expression *worst of all*, use of capital letters for an intensifying adjective, and quotations for emphasis. Many of these expressions include the specific linguistic features of intensity associated with the progressive aspect found in Gracheva (in press) and used in this study to test the hypothesis that speakers sense the intensity conveyed by this set of features. RC reported that the presence of these features led her to choose the progressive over simple aspect. In addition to the theme of 'emotion', the theme of 'certainty' (7 mentions) also adds to the overall impression of emotionally-charged texts.

Another participant (MC) noticed "negativity" and "dismissiveness" due to "falsity" of the belief as the underlying tone of Text #37 above, which was the reason why she chose the progressive form:

Interview excerpt 2, Participant MC.

Worst of all, decisions are based on error. Believing something that is not true. [...] it also brings in that disconnect. [...] it just sounds like the entire tone is extremely just, dismissive and critical of what's going on. So "believing" sounds more of like, yeah, "she's believing" instead of "she believes", which feels a lot more like ground and realistic.

Upon being asked where she sees the negative tone, MC reported *worst of all*, *all decisions are based on error*, and falsity of the belief as her reasons. Unlike RC, MC did not clearly articulate the connection between these features and the progressive form; yet, the overall tone and emotion evoked in the text (i.e., dismissive voice, criticism, negative connotation) seem to have led to her choice of *believing*. The expressions reported by MC also contain the features of intensity tested in the present study (superlatives contributing to intensity – *worst of all*; quantifier used for intensity – *all decisions*). Interestingly, MC's words are exactly in line with Gracheva's (in press) interpretation of the pragmatic functions associated with *believe* in progressive aspect – specifically, the speaker's negative attitude to the commonly held belief, criticism of its falsity, and their dissociation ("disconnect" in MC's words) from that belief. While negativity and dismissiveness are treated as expressions of emotion, speaker dissociation and falsity of the belief are separated as unique themes associated with progressive (Table 2).

MC further saw the same themes in Text #18 below (features of intensity highlighted), about which she says the following, again identifying the specific language from the text that prompted her decision (e.g., imperative form, the hyperbolic *everyone*):

Interview excerpt 3, Participant MC.

The entire tone really feels very negative with the whole saying, get your story straight, so I can pretend to believe you. Everyone exaggerates, but most people know that when they're doing it just feels

like the narrator is purely just not focusing on anything but the lie that is being told.

Text # 18, progressive condition.

She lied about stuff that didn't even make any difference. She would tell a story, and a week later tell the same story with different characters. "Get your story straight", I would think to myself, "so I can pretend to believe you. Everyone exaggerates, but most people know when they're doing it. If a person doesn't know they're making stuff up, or they themselves _____ (believe/ are believing) their own lies, at some point you question their sanity.

MC's responses with regard to Text #18 mirrored another participant's (TP) responses also highlighting falsity of the belief and the speaker's negative attitude and emotion: "So like she lied about stuff, and she would tell stories and like it's kind of implying that, like through the frustration of the speaker."

Apart from the themes of 'emotion', 'certainty', 'falsity of belief', and 'dissociation', interviewees mentioned the role of contexts associated with the progressive aspect, namely the ongoing nature of the belief and the informality of such contexts. MC, for example, noticed spontaneity in progressive use, saying that the progressive aspect occurs "when you're just thinking off the top of your head" and associated it with the current events reported in "news stor[ies] or a news broadcast[s]", which is indeed the register where *believe* in progressive is common (Gracheva, *in press*). Another interviewee (RC) also identified topics such as political change and social developments as characteristic for the use of the progressive aspect, thus relating it to the current moment in time and sensing its dynamic nature as opposed to its simple aspect counterpart.

In contrast to all the aforementioned themes, the participants predominantly associated the simple aspect (*believe*) with the themes 'fact' (12 mentions) and 'general belief' (8 mentions). That is, according to the interviewees, *believe* denotes a state of knowledge shared by a large number of people, a general consensus, or a universal truth. These themes emerged from Text #16 below, which represents the simple condition.

Text # 16, simple condition.

The attack happened at Manchester's Victoria Station shortly before 9 p.m. on New Year's Eve. The busy train station is next to Manchester Arena, where a suicide bomber killed 22 people at an Ariana Grande concert in 2017. Police have detained the suspect, who has been arrested on suspicion of attempted murder, but not yet provided a motive for the stabbings. A witness said the suspect shouted Islamic slogans during the frenzied attack. Assistant Chief Constable Russ Jackson said the police (believe/ are believing) they have identified the suspect and are searching his home in the Cheetham Hill neighborhood of Manchester.

The interviewees made several specific comments about this text: "[the simple aspect is] more like cut and dry in a sense when you're saying something that's more factual" (RC) and "I think *believe* works a little better here than *are believing*. There's ...the words surrounding it don't have as much emotion in them even though it seems to be like an emotionally charged topic. It's not portrayed with as much emotion as you would think it would be. It's kind of stated as like a fact." (RC).

Similarly, for Text # 3 below, the interviewees noted: "it's more factual than it is anything else. It feels like the conclusion, or maybe the introduction of a study and the phrase, the authors believe that low protein intake, and then the rest after make it seem like majority have come to this consensus" (RC).

Text # 3, simple condition.

Most of the AGA (i.e., hair loss) patients also had deficient protein intakes and a high carbohydrate/fat diet. A noteworthy finding in AGA patients was that many of them had a positive family history but of lesser severity and presentation in later life. The authors (believe/ are believing) that low protein intake, missing breakfast, and faulty lifestyle hastened the onset and increased the severity of AGA. Another striking observation in two of AGA patients was that in spite of an intake of 50 g/day of protein, they were simultaneously doing intense physical

activities.

Two other notable themes that emerged in relation to the simple aspect were 'form' (6 mentions) and 'role of context' (4 mentions). 'Role of context' was prominent in Text #3 above. When reading Text #3, one interviewee (TP) noted that the progressive form sounds "wrong" in such a neutral context. Overall, this emphasis on neutrality as well as on fact and the general nature of the belief is informative, as it is in stark contrast with the emotionally-charged contexts of the progressive condition.

The theme 'form' represents the participants' focus on the grammatical context of the target structure. That is, the participants saw an association between a particular linguistic feature and the simple aspect of *believe*. Participant GE, for example, named the single subject or a collective noun as a factor that prompted her to choose the simple aspect. Indeed, the verb *believe* as a stance marker frequently co-occurs with the 1st person singular (e.g., 'I believe') (e.g., Chaemsaitong, 2017; Fetzer 2014). It may be, therefore, that upon encountering the singular subject in neutral contexts, GE felt that it is natural for the two features to go together. GE also recognized that other simple forms were common in neutral contexts and reported that as the motivating factor in her choice of the simple aspect of *believe*.

At this point, it is worth addressing some possible alternative routes the participants may have taken to the choices they made. One such possibility is syntactic priming. Indeed, our interviewees have mentioned the occurrence of other progressive as well as other simple structures as a rationale for their choices, and these responses suggest that previously occurring structures have determined their choices at least to an extent. We do not find this result concerning for several reasons. First, our goal was to test whether the participants sense the communicative differences in the two conditions, and all the verb forms occurring in the texts, simple or progressive, are a natural linguistic reflection of these communicative differences alongside presence or absence of features of intensity. Thus, processing these features is part of the participants' experience with these naturally occurring texts. More importantly, however, attention to form does not rule out attention to the other features of the contexts, such as features of intensity, at the same time. This is confirmed through the other themes that emerged from interview data alongside the theme of 'form', which seems to suggest that even if syntactic priming occurred, the participants were guided by other considerations as well.

Discussion

This study examined the validity of linguistic description coming from corpus-linguistic analyses by probing human perceptions of communicative and linguistic distinctions identified in those analyses. Previous research revealed that *believe* in progressive occurs in argumentative contexts (mainly debatable, controversial topics discussed in a public setting) conducive to persuasion and an expression of forceful, assertive stance. This assertive stance, however, is not expressed through *believe* in progressive alone, but through an amalgam of features that appear to jointly contribute to the effect of heightened emotional intensity of such contexts. It has thus been argued that it is these communicative contexts that determine the choice of the progressive aspect of *believe* (Gracheva, *in press*). The progressive aspect of the verb did not occur in neutral situations (where the simple aspect was used instead) with no need for persuasion and argumentation on high-stakes matters and, subsequently, was not marked by features that we label as features of intensity.

In line with the register-analytical perspective, any linguistic variation is explained through the situation of use. As discussed earlier, the situational characteristics of news and blogs, the main (although not the only) sources of the progressive structure, in many ways explain the assertive stance of *believe* in progressive and its associated intensity. More specifically, it appears that the situational parameter responsible for variation in aspect of *believe* (and perhaps of other cognition verbs as

well, as the heightened intensity of their progressive forms has been reported by other studies before ours) may be thought of as the type of topic that lends itself to persuasion (vs. topics that do not) or the type of public setting that generates an argument and requires assertive stance (vs. settings that do not). Emotional intensity conveyed through the progressive aspect and the other associated features is thus the pragmatic nuance acquired by the structure in a certain (quite specific) situational context.

In this study, we examined whether native speakers of English recognize these communicative differences by choosing the simple or progressive aspect of *believe* when reading texts involving language of intensity, commonly found in argumentative contexts, as opposed to texts that do not involve such language. Indeed, participants selected the progressive aspect 47% of the times for the texts featuring language of intensity, while their choice of that aspect was less than 3% when intensity features were absent (in which case they chose simple).

The present findings point to two important conclusions. First, as indicated in the existing literature, the simple aspect is the default form of *believe*. Almost 100% of the participants selected the simple aspect when reading the simple condition texts (no language of intensity). Even in the progressive condition, over 50% of participants selected the simple aspect. This outcome is unsurprising as speakers selected a variant they are exposed to and experience more frequently (in COCA, for example, the simple aspect occurs around 400,000 times in normed frequency compared to the 182 occurrences of progressive extracted from both COCA and CORE). Hence, human perception data in this study add to the common generalization: Stative verbs such as *believe* normally take the simple aspect because they denote states rather than actions (Emmerson, 2002; Parrott, 2010; Quirk et al., 1985).

However, another, more critical conclusion drawn from this study is that there is an exception to the default use of the simple aspect for stative verbs. Close to 50% of the participants selected the progressive aspect when reading texts involving language of intensity. The present findings then complement descriptive corpus linguistics findings: The progressive aspect of stative verbs occurs when the speaker shows active involvement in the state or action described (Biber et al., 2002), and such active involvement is often indicated through linguistic features conveying emotion and emphasis (Gracheva, in press). Heightened intensity, subjectivity, emotion, and involvement have been consistently associated with the progressive aspect of state verbs (e.g., Granath and Wherrity, 2014; Smitterberg, 2005; Szczyrbak, 2021), especially verbs of cognition that are particularly rare in progressive (Szczyrbak, 2021). Hence, the present findings lend additional evidence to the connection between the progressive form of stative verbs and connotations of intensity from the novel perspective of human perception data. Specifically, the findings show that participants are likely to be sensitive to the communicative situation of the texts and the linguistic environment around *believe* in progressive, namely, features of intensity systematically co-occurring with the progressive aspect, leading to their choice of the progressive over its default simple counterpart.

Follow-up interview data reinforced this conclusion. Participants indeed identified linguistic expressions of intensity under investigation (e.g., emotional language, negativity, pessimistic expressions, criticism) and used them to justify their choice of the progressive aspect. Critically, none of the interview themes that were prominent for the progressive aspect (i.e., emotion, the ongoing nature of the belief, and certainty) were found among the themes associated with the use of the simple aspect. On the contrary, when the participants chose the simple aspect, they seemed to focus on the neutral tone of the contexts and the factual information conveyed. The themes of neutrality, factuality, and the general nature of the belief are in line with the default use of stative verbs in the simple aspect, which describe “a state of mind rather than an activity” (Biber et al., 2002; Biber et al., 1999).

In the case of progressive, however, we saw a different trend. Interviewees perceived this marked use to be emotionally-charged and emphatic. They specifically associated it with contexts where expression

of emotion is not uncommon (e.g., social and political change reported in the news). They also observed speakers’ negativity and dissociation from the belief they found false and criticized. This type of belief is not general in nature, but ongoing and typically rooted in the current moment. Importantly, when asked where in the text the interviewees saw concrete language supporting their perceptions, they systematically identified linguistic features of intensity that we hypothesized to contribute to the effect of heightened intensity associated with the progressive aspect of the verb.

All in all, adopting corpus-informed material in an experimental setting, the present study confirmed the connection between the progressive form of *believe* and linguistic features of intensity surrounding the form in emotionally-charged contexts (e.g., debates and discussions of controversial topics in news and blogs). The results suggest that language users may indeed sense the association that exists between linguistic features and the contexts in which they commonly occur (Keller, 2021). While description of language use is often the primary purpose of corpus linguistic research, the present findings go beyond a mere description of texts, extending to human perceptions of linguistic features in context. As found in this study, linguistic characteristics of texts indeed aligned with human perceptions of these characteristics. Hence, triangulation of data and data analysis methods explored in this study advanced and strengthened the validity of the existing findings, suggesting a promising future direction of combining corpus linguistics and human subject research in investigating linguistic phenomena.

Limitations and future directions

One limitation of the approach used in this study stems from variation in the accuracy rates we observed in participants’ responses in the progressive condition. As we noted in the Results section, some texts yielded accuracy rates of over 70%, while others only slightly over 20%. Thus, despite several pilots, the instrument clearly contained texts perceived differently by the participants. We hypothesized earlier that the cause of such differences may be the implicit indirectness of some texts (e.g., sarcasm) or their complex subject matter (i.e., unfamiliar topics to the participants). This outcome suggests that future studies may need to control for indirectness and topic complexity to ensure that all experimental texts can offer equal insights into the target phenomenon. In addition, future research can explore reasons behind different accuracy rates across texts by attending to low-performing texts via interview. In this study, we intentionally selected high-performing participants for interview to gain insights about the reasons behind their choices of the progressive aspect. We wanted to know whether the reasons of these successful participants (those who selected progressive where it occurred in the corpus) indicate the language of intensity and emotion appearing in the experimental texts as we hypothesized. However, future investigation can be more exploratory (rather than experimental) to examine what textual features actually guide participants’ choice of one verb form over the other. By interviewing both high and low-performing participants (e.g., those who selected the simple aspect regardless of text types), we can gain a more comprehensive understanding of the connection among situational contexts, linguistic features, and the use of the simple or progressive aspect of *believe*.

Another limitation concerns the premise that associative learning (i.e., associations developed between linguistic features co-occurring in particular situations of use) led speakers to link the progressive of *believe* to features of intensity typical for emotionally-charged contexts. While the association between the progressive form of *believe*, the linguistic features of intensity, and the typical situations they occur in is apparent in our corpus data, *believe* in the progressive aspect is still a rare structure. Although it may reflect the pattern of gradually increasing use of progressive with stative verbs reported in diachronic studies (e.g., Mair 2006), the fact that only 182 occurrences of that structure were extracted from large corpora like COCA and CORE (Author, in press) suggests that speakers may not have had sufficient repeated exposure to

this structure in enough contexts to build those associative links. Therefore, the chances of our participants choosing the much more frequent simple aspect as the default were quite high, as the simple aspect is the structure that they have had ample experience with. While our results still suggest that participants recognize the pragmatic differences associated with the progressive condition, an interesting future direction seems to be tracing the diachronic trajectory of this structure. If *believe* in progressive increases in use in the future, researchers could test whether the rising frequency of the structure has resulted in more and stronger associative links.

A related possibility for future research involves a comparison of speakers' perceptions of *believe* in progressive with other stative verbs in progressive with attention to their corpus frequencies. The present study used distractor items involving other stative verbs (e.g., *love*, *know*, *wonder*), but we did not compare the accuracy rates of speakers' responses to distractor items and the progressive condition of *believe*. A future analysis could base such a comparative experiment on corpus frequencies of the progressive forms of these stative verbs. As some progressive forms are quite rare (such as *believe*) and others are quite frequent (such as *wonder*), this comparative analysis could reveal a difference in the associative links already formed and those not yet developed due to low frequencies of exposure to a rare structure.

Future studies could yield a more systematic insight into the linguistic context of progressive of *believe* as well as other cognition verbs. While our studies focused only on the presence of features of intensity in the immediate linguistic environment of the verb, a lot can be learned from a systematic analysis of other features. For example, we noticed in the process of exploratory analyses that progressive is often followed by nominal and pronominal forms, but further analysis is needed to compare the rates of occurrence of clausal versus nominal structures following *believe* in progressive. Another interesting feature to examine is the type of subjects common with progressive. One trend highlighted by Author (in press) was that of generalized, unidentified subjects, such as 'they' or 'people', occurring systematically with the progressive form in a particular function. According to research on the simple aspect of *believe*, 1st person singular subjects are common in *I believe* as a stance marker. As we note earlier, one interviewee identified the number of the subject as a factor in their choice, which may suggest that frequent exposure to the simple aspect primes people to expect certain structures in its linguistic environment. Therefore, investigating form – instances of prepositional verbs (e.g., *believe in*) or syntactic structures controlled by the verb such as nominal or clausal structures (e.g., 'that' complements)

– is a highly informative future direction.

Finally, future studies can explore linguistic co-occurrence with progressive forms of various stative verbs to test whether the commonly reached conclusion that the progressive aspect conveys emotion, intensity, and heightened speaker involvement is due to features that systematically co-occur with progressives of other stative verbs. Associating such patterns, if they exist, with the situation of use can contribute to the body of research demonstrating that grammatical structures form complex functional patterns and acquire a new pragmatic force in particular contexts.

Conclusion

The study presented an investigation of human perceptions of the pragmatic meaning associated with differences in grammatical aspect of the stative verb *believe*. The study built on the concept of functional linguistic co-occurrence and the notion that linguistic frequencies are associated with particular situations of use. Specifically, the progressive form of *believe* is found among linguistic features of intensity in emotionally-charged situational contexts. The study revealed that language users are, in fact, sensitive to such patterns even in the case of the rare structure analyzed in this study. The study demonstrates that such questions benefit substantially from a combination of methods that ensure authenticity of the instrument and a possibility for detailed linguistic analysis of this instrument, native speaker intuitions about a linguistic phenomenon elicited with the help of this instrument, and interviews revealing language users' motivations in their linguistic choices.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Linguistic features of intensity

Features contributing to intensity in the context of *believe* in progressive from Gracheva (in press). Note: 'Frequency count' indicates raw frequencies of the feature in all texts featuring progressive aspect of *believe*

Feature	Example	Frequency count
amplifiers/ intensifying adverbs	very, so, even, ever	668
2nd person (direct appeal)	you should.../I'll tell you	437
pronouns/ determiners	it hurts all of us	339
stance adverbs: adverbs of certainty	certainly, of course, surely, obviously	116
intensifying adjectives/ emphasers	woman's own answer	65
imperatives	stop doing X	53
nominal pronouns	everyone knows, no one understands	52
rhetorical questions	Then why won't they answer any questions about this whole thing when we ask them?	49
modals of prediction, obligation, certainty, prohibition	X will happen; you must (not)	41
cleft structures	What this means is X, That's what you should do; It's this issue that's causing X	27
superlatives	the most terrible	20
verbs of volition	they want to impose	20

Appendix B. Features of intensity per text in progressive and simple conditions of the present study

Frequency Counts of Features of Intensity per Text in Progressive and Simple Conditions

Experimental Condition	Text #	Raw Counts	Normalized Counts (to 100 words)
Progressive Condition	15	6	7.1
	23	8	8.2
	25	7	8.9
	28	5	6.1
	31	9	9.0
	34	8	10.8
	37	8	8.0
	38	6	9.2
Simple Condition	20	1	1.1
	18	1	1.1
	22	2	2.3
	26	1	1.1
	29	4	3.7
	32	0	0.0
	35	1	1.2
	40	2	2.1

Note. The Table presents counts of *all features of intensity* shown in [Appendix A](#) per text rather than counts of each individual feature per text. Since it is the amalgam of features co-occurring in the texts of the progressive condition that contributes to the effect of intensity and *not* any of the features alone, we consider these collective counts more informative.

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