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ARTICLE

What is German 'Angst' (fear/anxiety)? A corpus approach based on frame analysis

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Abstract
The study employs a corpus-based frame analysis, grounded in Barsalou's frame notion, as a complementary methodological approach to metaphor analysis for studying emotion concepts. We examine the conceptualization of the German 'Angst', which is widely recognized as a uniquely German emotion concept, yet it remains insufficiently studied. Through a systematic analysis of linguistic patterns, this study reconstructs the frame structure of 'Angst' based on 200,319 instances extracted from newspaper and social media data. The findings show that 'Angst' arises from diverse factors, including threats to life and health, prosperity, status, identity, power, relationships and the need for certainty and stability. There is an awareness and acceptance of 'Angst', reflected in the openness to expressing personal fear and addressing the fear of others in media discourse. When contextualized within insights from other disciplines, it becomes evident that the 'Angst' is rooted in universal biological foundations while also shaped by Germany's sociohistorical context. Furthermore, it exhibits both alignment with and divergence from its philosophical conceptualization. These insights expose 'Angst' as both a psychological and cultural construct and demonstrate the advantage of combining frame analysis with corpus linguistic methods in capturing the specific structures of emotion concepts from large-scale data.

Keywords: Angst; concept; culture; emotion; frame analysis; German

1. Introduction

When it comes to the emotional landscape of Germans, one emotion often takes center stage: German Angst.[1] In German, *Angst* is a common term used to describe

[1]In the following, metalinguistic word forms are italicized (the word *Angst*). Concepts are placed in single quotation marks (the concept of 'Angst'). When referring to the emotion itself, neither italicization nor quotation marks are used (the emotion of Angst). Angst is the emotion represented by the concept 'Angst', which is understood as a variant within the broader category of fear in this study.

the emotion of fear, yet scholars such as Wierzbicka (1998, p. 163, 1999, p. 123) have argued that it represents a uniquely German concept. However, empirical research addressing the concept of 'Angst' remains limited.

While most current studies on emotion concepts primarily rely on metaphor analysis, this study adopts a corpus-based frame analysis to reconstruct the concept of 'Angst', as its linguistic expressions are often not metaphorical in nature. The strength of corpus-based frame analysis lies in its suitability for uncovering the 'frame-like structure' (Kövecses, 2014, p. 22) of emotion concepts. We identify the conceptualization of 'Angst' using a dataset of 200,319 instances of *Angst* drawn from newspapers and Twitter, representing informational and involved language production (Berber Sardinha, 2014, 2018; Biber, 1988). We analyze linguistic patterns around *Angst* using corpus-linguistics methods, including collocation analysis and pattern analysis based on corpus queries. From this, we reconstruct frame attributes (slots) and their values (fillers).

The article opens with an overview of the current state of research, addressing gaps in both the conceptualization of 'Angst' as an object of study and the methodological approaches employed in emotion concept research (Section 2.1). Section 2.2 outlines the theoretical foundations for reconstructing emotion concepts from language, while Section 2.3 introduces the frame approach adopted in this study. After outlining the methodology (Section 3), we present the results of our study (Section 4). Finally, we discuss the dimensions of 'Angst', contextualizing our results with those in biology, social history and philosophy (Section 5) and draw the conclusion (Section 6).

2. Language, cognition and emotion

2.1. Approaches to emotions in language

Recent research on emotion concepts shows two gaps. First, although conceptual knowledge is recognized as fundamental to the study of emotions, linguistic investigations into specific emotion concepts – particularly 'Angst' – remain limited. Second, there is an ongoing need to develop more refined methodologies for identifying and representing emotion concepts in language. The remainder of this subsection will examine these issues in detail.

The conceptualization of emotion is a foundational concern. In the field of emotion research, there are two primary perspectives regarding the origins of emotions (Prinz, 2004): basic emotion theory and psychological constructionism. Basic-emotion theorists have long held the notion that emotions are biologically evolved adaptive reactions (e.g., Ekman, 1992; Izard, 2007; Johnson-laird & Oatley, 1992; Plutchik, 1970). This theory falls short of explaining why German 'Angst' is considered to be special. This notion has been challenged by psychological constructionism, which posits that emotions are constructed phenomena (e.g., Barrett, 2006, 2017; Barrett & Russell, 2015; Lindquist & Barrett, 2008). Lindquist and Barrett (2008) argue that the experience of emotion, such as fear, is an act of categorization, guided by the conceptual knowledge of emotion. From this perspective, the conceptual knowledge of 'Angst' is essential to the study of the emotion Angst.

Analyzing the concept of 'Angst' is inseparable from examining the use of *Angst* in language. As Goddard (1995, p. 291) points out, linguistic meaning is indispensable in the study of emotions, as the emotional lexicon influences the perception, categorization and even the conscious experience of emotions. Fehr and Russell

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(1984, p. 483) emphasize that 'part of the psychologists' job in such cases is to understand emotion concepts as people use them in everyday life'. Emotion concepts in language not only serve to address emotions but also to reveal the speaker's emotional state, even though such expressions may include a reflective component (Schwarz-Friesel, 2013, pp. 144–147).

Linguistics, a discipline that bridges the humanities and the behavioral/cognitive sciences (Tomasello, 2003), is well-positioned to undertake the task of exploring the concept of 'Angst' in language. However, linguistic research on the concept of 'Angst' as it appears in everyday German remains fragmented and limited. Early works by Wierzbicka (1998, 1999) examined the meaning of *Angst* primarily by analyzing the distinction between *Angst* and *Furcht* and by examining words sharing the same root as *Angst*, but her analysis was largely based on introspective methods. More recent studies have adopted empirical approaches (e.g., Filatkina, 2015; Georgi, 2018, 2021; Schröter, 2021), yet they still fall short of providing a comprehensive and systematic account of the concept of 'Angst'. Some of these studies examine the conceptualization of 'Angst' within specific discursive contexts. For instance, Georgi (2018) analyzes 'Angst' in the context of terrorism-related media coverage, while Schröter (2021) focuses on representations of 'Angst' in self-help literature. Filatkina (2015) offers a diachronic analysis of newspaper discourse on 'Zukunftsangst' ('fear of the future'), with a particular focus on thematic developments. Despite its qualitative depth, the study is constrained by a limited corpus. Georgi (2021) investigates 'Angst' as a cultural construct through the analysis of recurrent linguistic patterns (e.g., collocations and n-grams) in a large corpus. However, because the analysis centers on linguistic patterns, it provides a fragmented portrayal of the concept of 'Angst'. Comparative studies, such as those by Oster (2012) and Mizin et al. (2021), demonstrate the uniqueness of the German concept of 'Angst' through contrastive analysis with English terms, but do not aim to provide a full conceptual exploration of 'Angst' itself. In addition, the claim of its uniqueness remains underexplored due to the lack of comparative research with languages other than English. Overall, the existing studies underscore the need for further systematic empirical investigation of 'Angst' in everyday German.

Moreover, dominant approaches in linguistic research on emotion concepts remain limited in their ability to capture their full conceptual complexity. Current linguistic studies on emotion concepts predominantly focus on their metaphorical conceptualization (e.g., Baş, 2024; Kövecses, 1990, 2014; Neumair et al., 2025; Oster, 2012; Wu & Liu, 2023). Stefanowitsch (2007) and Kövecses (2014) advocate combining corpus linguistics with traditional Conceptual Metaphor Theory in the study of emotion concepts. However, 'most of the metaphorical source domains for the emotions studied come from extremely generic metaphors, such as CONTAINERS, OBJECTS, FORCES and MOTION' (Kövecses, 2014, p. 25). They offer limited utility for capturing the specific content of emotion concepts – namely, their 'frame-like structure', such as cause and response (Kövecses, 2014, pp. 22, 25). Moreover, emotion concepts such as 'Angst' are not necessarily realized through metaphorical expressions.

The 'frame-like structure' could be uncovered through frame analysis. However, the application of this approach in emotion research has so far remained underexplored. 'The advantage of frame theories as opposed to previous concept theories is to be seen primarily in the ability to allow a structural description of the internal semantic, conceptual or epistemic structure of concepts, based on uniform criteria

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and a unified model of structure' (Busse, 2022, p. 334). Frame analysis has been applied at the interface between linguistics and various other disciplines (Ziem et al., 2018), such as terminology studies (e.g., Lönneker-Rodman & Ziem, 2018), law (e.g., Wulf, 2018) and politics (e.g., Klein, 2018). However, frame-analytical research on emotion words or frames is very rare (Busse, 2022, p. 334). As Busse (2022) emphasizes, one of the key tasks in current frame-semantic research is to develop methods for identifying and describing notions that are difficult to analyze, such as emotion words.

> Because frame semantic techniques have developed a lot since Fillmore wrote this, it is one of the tasks of this approach to develop methods for identifying and describing even what Fillmore seems to have thought of as 'unanalyzable notions.' A linguistic semantic analysis of emotion words has to develop the tools for such an analysis and description. (Busse, 2022, p. 335)

2.2. Concept reconstruction from language

It is widely acknowledged that human language serves as a window into cognition (Barsalou et al., 1993, p. 8; Ziem, 2008, p. 45). But language fails to provide direct access to human concepts, since 'concepts consist of perceptual symbols, which language, through the sequential operation of selective attention, describes in a relatively unprincipled, haphazard and incomplete manner' (Barsalou et al., 1993, p. 8). We argue that reconstructing the conceptual structure of emotions from language necessarily requires an understanding of how concepts are structured in cognition. In other words, understanding the way in which perceptual symbols constitute concepts provides the foundation for using linguistic symbols as tools for reconstructing those concepts.

Here we summarize how perceptual symbols represent concepts, following *Concepts and Meaning* by Barsalou et al. (1993). Perceptual representations arise from all types of experience, and perceptual symbols represent various aspects of individuals in the world. For example, in the case of a car, perceptual symbols may represent aspects such as the wheels, color, engine or the situation in which the car appears, such as a gas station. A certain type of car forms a model of car – a cognitive construction that no longer corresponds to any single physical object, but rather exists within our cognition. A concept is 'the collection of all specialized models for a particular type of individual, together with their associated generic situations' (Barsalou et al., 1993, pp. 25–26). At every level – whether at the level of individuals, models or the concept – the perceptual symbols representing different aspects are systematically structured by frames.

Linguistic symbols develop together with their associated perceptual symbols and can refer to entire entities or specific aspects of them (Barsalou, 1999, p. 592). In reconstructing the concept of 'Angst' through language, the key is to identify linguistic units that describe the perceptual symbols underlying Angst experiences and to organize them within a frame structure. This approach addresses the issues of unprincipled and haphazard descriptions of perceptual symbols by language noted by Barsalou et al. (1993). As for the problem of incompleteness – since not all perceptual symbols are verbalized – we argue that this limitation can be mitigated by enlarging the linguistic dataset. A single sentence containing the word *Angst* may

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describe only some perceptual symbols associated with an Angst event, while others may be neglected due to selective attention. However, when thousands of such sentences are collected, the selective representations of perceptual symbols across different contexts can complement each other, allowing a more comprehensive reconstruction of the concept. Additionally, some aspects of the emotion may not typically be verbalized, as they may be too diffuse, socially undesirable or too subjective to articulate. These elements, by their very nature, fall outside the scope of our present investigation.

In cognition, all instantiations (Barsalou calls them 'specializations') of a model are referred to by the same word, which organizes these instantiations and indicates that they are related (Barsalou et al., 1993). For example, the word *car* refers to all the instantiations of 'car'. In language, the word *car* brings together different language units (e.g., sentences or texts) containing *car* and signals that they all relate to the concept of 'car'. At the same time, it organizes the linguistic symbols describing '*car*' around itself (usually within the sentence). In the case of 'Angst', the language data for reconstruction of 'Angst' can be retrieved by searching for the word *Angst*. The words within these sentences that are associated with *Angst* represent the perceptual symbols of 'Angst'. The idea that frames can be reconstructed from lexemes in the sentence in which the target word appears is not new. The FrameNet project, for example, is also based on 'annotations on example sentences' (Ruppenhofer, 2018, p. 98), as 'the frame elements are typically realized by lexemes in the sentence' (Soriano, 2013, p. 73).

The frame reconstruction from language is analogous to the cognitive process of frame creation and revision, but can also differ from it. In cognition, a new frame is established when a type of individual is first encountered (Barsalou et al., 1993). As additional similar individuals appear, the existing frame is progressively revised and becomes a data structure that integrates perceptual symbols across multiple individuals, capturing constancies and organizing variability (Barsalou et al., 1993). In language-based frame reconstruction, sequential processing of linguistic data – such as annotating sentences individually – closely parallels the cognitive process of frame formation. By contrast, simultaneous large-scale processing, typical of corpus linguistics, bypasses the initial creation of a frame for a single instance and instead directly constructs a frame by integrating perceptual symbols across multiple instances, highlighting recurring elements.

2.3. Frame as a descriptive format for emotion concepts

2.3.1. Frame, attributes and values[2]

There are two traditions of frame theory: one rooted in linguistics and the other in cognitive science. In linguistics, the concept of 'frame' was introduced by Fillmore (1976). Fillmore (2006, p. 373) defines a frame as 'any system of concepts related in such a way that to understand any one of them, you have to understand the whole structure in which it fits'. In cognitive science, the frame theory was first proposed by Minsky (1974), who suggests that knowledge is organized and stored in memory in

[2]For the purposes of this study, the terms *slots* and *attributes*, as well as *fillers* and *values*, are regarded as synonymous and are used interchangeably.

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the form of frames. He describes frames as 'a sort of skeleton, somewhat like an application form with many blanks or slots to be filled' (Minsky, 1986, p. 245).

Barsalou's frame theory, on which this study is based, offers an alternative to common cognitive theories of concepts, such as those based on feature lists, prototypes or exemplars (Kann & Inderelst, 2018, p. 56). He assumes that frames represent all types of concepts (Barsalou, 1992, p. 31). Consistent with Minsky's tradition, Barsalou posits that 'frames provide the fundamental representation of knowledge in human cognition' (1992, p. 21) and that they possess an attribute-value set structure (1992, p. 43). He defines 'an attribute as a concept that describes an aspect of at least some category members' (p. 30) and values as 'subordinate concepts of an attribute' (p. 31), which 'contain additional information not in their respective attributes, thereby making them more specific concepts' (p. 31). Barsalou (1992, p. 34) argues that frames possess an unlimited number of attributes (slots), as humans can effortlessly construct new attributes as needed in different contexts. He further highlights that certain attributes form the core of a frame, noting that 'both frequency of occurrence and conceptual necessity probably contribute to the cores of frames' (Barsalou, 1992, p. 35).

In Germany, frame theory was further developed by Konerding and Ziem. Konerding (1993) proposed hyperonym type reduction based on matrix frames, a method that systematically reduces concepts to hyperonyms to identify the knowledge aspects associated with a category of nouns. This approach classifies a large and open-ended set of nouns into a finite set of matrix frames and assigns a set of related slots to any given noun, which provides a framework for analyzing it. However, due to this high degree of reduction, the resulting slots become highly complex and extensive, making it nearly impossible to study a concept by analyzing all of them. This limitation was pointed out by Klein (1999, p. 160) and later mentioned in Ziem's (2008, p. 323) work. Ziem (2008) proposed a solution to this problem by first converting the annotated relevant expressions into a set of explicit predications and then assigning them to the corresponding slots. For example, in analyzing the frame evoked by *financial investors*, expressions related to them are first transformed into explicit predications and then classified according to the predicator categories defined within the matrix frame *Person*. However, the process of manual transformation is not well-suited for handling large-scale corpora.

Ziem's (2008) clarification of the distinction between slots, fillers and default values, developed based on frame theories in cognitive science (Kann & Inderelst, 2018, p. 33), provides guidance for the empirical investigation of frames.[3] He understands slots in terms of questions that can be meaningfully posed about a referential object, with their answers serving as fillers (Ziem, 2008, pp. 304–305). Standard values, also known as default values, are implicit values that automatically fill a slot when no explicit value is provided (Barsalou, 1992; Ziem, 2008). Ziem further emphasizes the importance of analyzing high-frequency fillers rather than default values. As he states, 'since the degree of discursive consolidation of fillers can be approximately determined based on their frequency of occurrence, standard values are not the object of analysis but rather its ultimate goal'[4] (Ziem, 2008, p. 406).

[3]The distinction between slots, fillers and default values can be traced back to Minsky (1974) and was later adopted by Barsalou (1992).

[4]Our translation from the original German.

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Depending on the specific research objectives, different frame theories are chosen. For emotion concepts, the few studies, as well as resources like FrameNet (Ruppenhofer et al., 2016), mainly follow Fillmore's notion of 'frame' and the method of annotation established in the Berkeley FrameNet project (e.g., Giorgis & Gangemi, 2024; Ruppenhofer, 2018; Wang & Hu, 2022). These approaches primarily focus on identifying the frame elements of emotion concepts and the conceptual relations between them. However, they often fall short in representing the value-level specifications of these frame elements – that is, the typical fillers that instantiate them in actual language use.

Our study adopts Barsalou's frame theory for several reasons. First, Barsalou emphasizes not only the attributes of a frame, but also their value-level specifications. This makes his approach suitable for capturing the detailed features of emotion concepts. Second, since our study is grounded in Barsalou's concept theory – in which frames are the representational format of concepts – employing his frame model ensures theoretical consistency throughout the research. Third, Barsalou conceives of frames as flexible, open-ended structures organized around a central core, which aligns well with our goal of identifying the central features of the concept 'Angst' across large-scale corpus data. Additionally, Ziem's refinement of slots and fillers provides a solid foundation for their empirical identification in corpus data. His approach further informs our study by highlighting frequently instantiated slots as primary focal points of analysis.

2.3.2. Core attributes

As mentioned, Barsalou (1992, p. 35) suggested that both conceptual necessity and frequency of attributes' occurrence contribute to the cores of frames. While conceptual necessity can be inferred from world knowledge and established insights from other disciplines, frequency of occurrence can be empirically measured.

'Experiencer' and 'Stimulus' are two conceptually necessary attributes of 'Angst'. From the perspective of biology, fear 'is a central state of an organism' that is 'caused by particular patterns of threat-related stimuli, and in turn causing particular patterns of adaptive behaviors to avoid or cope with that threat' (Adolphs, 2013, p. 79). This suggests that 'Experiencer', 'Stimulus' and 'Reaction' are central to the emotion of Angst. However, the biological reactions – such as the release of hormones – differ significantly from the reactions that manifest in discourse and are linguistically encoded as part of the concept of 'Angst'. When talking about 'Angst', it is natural to ask who is experiencing the fear or what they are afraid of, rather than focusing on other aspects. These two questions are central to understanding 'Angst' and point to its conceptually necessary slots.

3. Methodology

3.1. Concept reconstruction with recurrent language patterns

Building on the theoretical foundation outlined in Section 2.2, we adopt a corpus-based approach to reconstruct the conceptual frame of 'Angst' by analyzing sentences that contain the word *Angst*. It should be noted, though, that linguistic signs are inherently open to interpretation. Consequently, corpus data should not be treated as direct reflections of conceptual content. Recovering the concepts indexed by

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linguistic forms requires methodologically controlled contextualization, drawing on both manual annotation and statistical analysis (Müller, 2017).

Not all the lexemes in sentences where *Angst* appears are related to it, and further, to the 'Angst' concept. The occurrence of these lexemes should be associated with the occurrence of *Angst.* In the FrameNet project, for example, frames are derived from the syntactic and semantic valence patterns of the target word (Baker et al., 1998, p. 86). In our study, we reconstruct the frame using words that form language patterns together with *Angst.* Language patterns are not conceptualized as abstract, cognitive or deep-semantic categories, but rather understood as a phenomenon of the textual surface – a phenomenon of recurrent language use that is typical for specific contexts (Bubenhofer, 2009, p. 30). The recurrent language patterns that reflect the collocational and grammatical behavior of *Angst* are the ones that can reveal the key aspects of the concept of 'Angst'.

The recurrent language patterns signal either an attribute alone or both an attribute and its values. For instance, the pattern 'the color of the car' highlights 'color' as a salient attribute in the conceptual representation of 'car'. The pattern 'red car' not only points to 'color' as a relevant attribute, but also specifies 'red' as a frequently instantiated value of that attribute. Language patterns exhibit various degrees of schematization and can be lexically fully specified as well as partially specified (Müller, 2015, p. 116). For example, the pattern 'red car' can be abstracted to the schematic form 'ADJ car', which can then be used to identify other adjectival modifications of *car* and thereby uncover additional specifications for the attribute 'color'. Such partially specified patterns play a crucial role in uncovering the conceptual structure of frames by linking linguistic surface forms to underlying attribute–value relations.

3.1.1. Finding attributes

Identifying attributes is achieved by analyzing those words whose probability of appearing near *Angst* is higher than would be expected by random distribution. Such neighboring words are referred to as collocations (Evert, 2009; Müller & Mell, 2021). By examining these collocates in their context, we can determine which specific aspects of the 'Angst' concept they relate to. Grouping the collocates according to these associations allows us to identify the core attributes that structure the conceptual representation of 'Angst'.

Although association scores indicate the most salient collocations, absolute frequency should not be disregarded. A word with low frequency, even if highly associated with *Angst*, would not be a strong candidate for identifying core attributes. Therefore, the collocations selected for attribute analysis must not only exhibit strong association with *Angst* but also maintain high overall frequency. According to Zipf's (1935) law, 'word frequency distributions are highly skewed, with few very frequent types and a large number of extremely rare types' (Evert 2009, p. 1244). Observations show that the top 10 collocates are also the highly frequent words in this study. Moreover, they are more likely to appear in syntactic structures indicating slots, whereas lower-ranked collocates – particularly those beyond the top 15 – tend to represent specific fillers rather than slots themselves. We therefore assume that the top 10 collocates offer a more robust basis for identifying slots. While a limited set of 10 collocates cannot capture all frame attributes of 'Angst', we argue that, given the inherently open-ended nature of frames, analytical priority should lie not in

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exhaustively identifying every possible attribute, but in focusing on the most central and representative components.

We use Sketch Engine (Kilgarriff et al., 2014) for data preprocessing and analysis. The corpus is processed in Sketch Engine for sentence segmentation and POS tagging using the German RFTagger tagset (Schmid & Laws, 2008). The 'Word Sketch' function in Sketch Engine is employed to analyze the collocational and grammatical behavior of words. A 'Word Sketch' of a word is a corpus-based summary of the word's collocates sorted into grammatical relations. The grammatical relations are defined by 'word sketch grammar rule', which are based on Corpus Query Language (CQL) (Jakubíček et al., 2010) queries (Baisa, 2010, p. 37).

The procedure was as follows: After data preprocessing, the collocational and grammatical behavior of the word *Angst* was analyzed using 'Word Sketch'. The option 'Combine grammatical relations' was selected to merge collocations from all grammatical relations into a single list. From this list, the top 10 collocates were selected based on their logDice statistics (Rychlỳ, 2008) for analysis. Their concordance lines were then examined to determine which frame attributes they are associated with.

3.1.2. Finding values

To identify values, this study integrates multiple sources to establish the broadest possible pool of candidate language patterns. These include: (1) bottom-up identification based on collocations derived from the corpus, (2) findings from previous research on *Angst* and related constructions and (3) external collocation profiles.

As mentioned, partially specified language patterns can be derived from collocations to identify values. For instance, *vor* is a collocate of *Angst*. When *vor* appears to the right of *Angst*, it forms the language pattern 'Angst vor X', which suggests that the 'Stimulus' of 'Angst' is explicitly mentioned, with the word following *vor* serving as the specific form of the 'Stimulus'. When *vor* appears to the left of *Angst*, it forms the language pattern 'vor Angst X', which indicates a reaction to Angst. We use the CQL to retrieve these patterns (cf. Müller et al., 2021).

Some important patterns may not be captured through collocation analysis, as they are not tied to fixed lexical units. For instance, genitive constructions in German, as highly grammaticalized language patterns, are challenging to identify solely through collocation analysis. However, existing research has shown their importance in referring to the 'Experiencers' of fear (e.g., Filatkina & Bergmann, 2021; Georgi, 2021). Therefore, the selection of language patterns for identifying values also draws on the findings of prior studies. Additionally, collocation profiles from existing research can help avoid overlooking important language patterns. This study utilizes the collocation profile of *Angst* provided by the Leibniz Institute for the German Language (IDS) (https://corpora.ids-mannheim.de/ccdb/) as a supplementary resource.

The procedure was as follows: first, candidate language patterns were identified based on the approaches described above. These linguistic patterns were translated into CQL queries, taking into account their syntactic variants as they occur in different positions within the sentence. The CQL queries were subsequently used to search the corpus. Language patterns that yielded insufficient results for meaningful quantitative analysis were discarded. This particularly applies to the analysis of values expressed in nominal form, as their high variability often leads to sparse distributions in small samples. Therefore, only patterns yielding at least 1,000

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Table 1. Language patterns for identifying values of typical attributes

Attribute		Language pattern	Source	Included
'Experiencer'	Pronominal	*machen* Experiencer$_{(dative)}$ *Angst*	C	Yes
		Experiencer$_{(dative)}$ *Angst machen*	C	Yes
		Experiencer$_{(nominative)}$ *haben Angst*	I	Yes
		Experiencer$_{(nominative)}$ *Angst haben*	I	Yes
		haben Experiencer$_{(nominative)}$ *Angst*	I	Yes
	Nominal	*machen* Experiencer$_{(dative)}$ *Angst*	C	No
		Experiencer$_{(dative)}$ *Angst machen*	C	No
		Experiencer$_{(nominative)}$ *haben Angst*	I	Yes
		Experiencer$_{(nominative)}$ *Angst haben*	I	No
		haben Experiencer$_{(nominative)}$ *Angst*	I	No
		Genitive attribute of *Angst*	P	Yes
'Stimulus'		*Angst vor* Stimulus$_{(dative)}$	C	Yes
		Stimulus$_{(nominative)}$ *machen*	C	No
		Experiencer$_{(dative)}$ *Angst* Stimulus$_{(nominative)}$	C	No
		Experiencer$_{(dative)}$ *Angst machen*		

Note: C = identified from collocates; P = drawn from previous linguistic studies; I = based on collocation profiles provided by IDS.

Table 2. Collocations of *Angst* in newspapers and on Twitter

Newspaper				Twitter			
Collocate	Translation	Frequency	Score	Collocate	Translation	Frequency	Score
aus [aus Angst vor]	out of [out of fear of]	10123	11.2	groß [große Angst]	great [great fear]	5809	11
von [von Angst]	of/from [of/from fear]	3290	9.54	aus [aus Angst vor]	out of [out of fear of]	3675	10.4
mit [mit der Angst]	with [with the fear]	3094	9.5	machen [Angst machen]	make [make fear]	3332	10.2
in [in Angst und]	in [in fear and]	3200	9.23	mit [mit Angst]	with [with fear]	1763	9.2
groß [große Angst]	great [great fear]	2096	9.05	in [in Angst]	in [in fear]	1519	8.68
machen [Angst machen]	make [make fear]	1901	8.91	ohne [ohne Angst]	without [without fear]	1000	8.63
Schrecken [in Angst und Schrecken]	terror [in fear and terror]	1553	8.67	von [von Angst]	of/from [of/from fear]	1035	8.46
vor [vor Angst]	of [of fear]	2185	8.67	machen [macht mir Angst]	make [makes me afraid]	965	8.42
nehmen [Angst nehmen]	take away [take away fear]	1162	8.24	vor [vor Angst]	of [of fear]	1141	8.42
ohne [ohne Angst]	without [without fear]	987	8.01	schüren [Angst schüren]	stoke [stoke fear]	818	8.37

Note: The column 'Score' reports LogDice values. Expressions in square brackets are typical collocations as displayed in Word Sketch.

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occurrences were included in the analysis of nominal values. Values expressed in pronominal form exhibit much lower variation, which allows for reliable quantitative analysis even with smaller result sets. The final set of language patterns is listed in Table 1, with the selection process explained in detail in Sections 4.2.1 and 4.3.1.

The identified values were then filtered based on their frequency, categorized and analyzed. For values associated with the 'Experiencer', nominal and pronominal forms were analyzed separately to capture features of reference and identity. The analysis of 'Stimulus'-related values focused on deriving categories from a diverse and complex set of stimuli. The categorization followed an inductive, data-driven approach, informed by interdisciplinary research on Angst, particularly the phenomenological typology proposed by Thomas Fuchs and Stefano Micali (2013), who emphasize the richness and differentiation of Angst forms. Rather than mapping the observed 'Stimulus'-related values onto abstract superordinate categories like 'social Angst', this study adopts a more fine-grained, basic-level classification. We argue that this approach is not only more informative but also reduces ambiguity. In cases where a stimulus could plausibly fit into more than one category, it was assigned to all relevant ones. Instances that were too vague or contextually underspecified to allow for reliable classification were grouped under a residual 'Others' category.

3.2. Data

We collected data on the use of *Angst*[5] from two sources: newspapers and social media (specifically, Twitter). These sources were selected for two reasons: they offer a wide range of contexts in which the term *Angst* appears and they exemplify two distinct types of language production – newspapers representing informational production, while Twitter texts reflect involved production (Berber Sardinha, 2014, 2018; Biber, 1988).

The newspaper data is sourced from the DWDS (Digital Dictionary of the German Language) Text Corpora (https://www.dwds.de/r), from three influential newspapers: *Die Zeit* (1946–2018), *Der Tagesspiegel* (1996–2004) and *Berliner Zeitung* (1994–2005). The selection of years was determined by data availability via the API at the time of retrieval. We selected *Die Zeit* due to its broad temporal coverage, which ensures a representation of standard written German across decades. *Der Tagesspiegel* and *Berliner Zeitung* were included to complement this material with additional editorial perspectives and more contemporary discourse contexts. The DWDS database allows a lemma-based search and thus retrieves all instances of the lexical paradigm *Angst* with its inflected forms (Sg.: *Angst*, Pl. Nom./Gen./Acc.: *Ängste*, Pl. Dat.: *Ängsten*). The newspaper corpus comprises 120,779 sentences with *Angst* as a lemma, totaling 2,811,075 word tokens.

The Twitter data is sourced from the *Monthly Samples of German Tweets (2019–2022)* (Kratzke, 2023). Although the dataset spans several years, this study focuses on data from 2019 to ensure a representative analysis of 'Angst' in everyday language. This choice aims to reduce potential distortions from the COVID-19 pandemic,

[5]Compound words are not analyzed due to their uncertain relevance to the frame of 'Angst'. When *Angst* appears as a modifier, the compound word seldom has any connection with the frame of 'Angst', as in *Angstkultur* 'culture of fear'. With *Angst* as a head, the word sometimes refers to 'Stimulus', as in *Prüfungsangst* 'exam anxiety', but not consistently, as in words like *Riesenangst* 'extreme fear'.

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which began in late 2019 and may have disproportionately influenced public discourse and the use of emotion-related terms such as *Angst* (cf. Georgi, 2021). Tweets containing the expressions *Angst*, *Ängste* and *Ängsten* were identified, and the complete tweets were extracted as the research corpus. The Twitter corpus consists of 87,517 tweets, in which the lemma *Angst* appears 79,540 times.[6] These tweets contain a total of 3,304,571 word tokens. The data are stored on: https://osf.io/34zfn/

4. Results

In Section 4.1, we analyze the collocates of *Angst* to determine its frame attributes. The values of the typical attributes, addressing the questions 'Who are the Experiencers?' and 'What are they afraid of?' will be examined in Sections 4.2 and 4.3. Before presenting the results, the language patterns used to retrieve these values will be introduced in 4.2.1 and 4.3.1.

Section 4.2 focuses on the 'Experiencer' attribute, analyzing its pronominal and nominal values. The values provide insights into three questions: Who experiences Angst? Are they individuals or groups? Is 'Angst' an expression of one's own emotional state, or a description of the emotions experienced by others? Section 4.3 investigates the values of the 'Stimulus' attribute, addressing the questions: What types of stimuli elicit Angst? Do the stimuli reflect fear of loss, danger or risk?

4.1. Frame attributes of 'Angst'

The 10 most frequent collocations in these two genres, sorted by LogDice value, are listed in Table 2.

It is evident that the collocates of *Angst* in newspapers and on Twitter overlap greatly, with the two collocate lists containing a total of 11 different collocates. These collocates point to six frame attributes: 'Experiencer', 'Stimulus', 'Degree', 'Reaction', 'Related State' and 'Influencer'. The sections below outline each of these attributes and the collocates that signal them.

a. Experiencer

'Experiencer' can be considered the most typical frame attribute of 'Angst', being associated with 8 out of the 11 different collocates (see Table 3). Aside from the rare instances where the emotion itself is the sole focus of discussion, an 'Experiencer' of the emotion is almost always present. The first collocate that signals an 'Experiencer' is *aus* 'out of', the top collocate in the newspaper corpus. It typically occurs in the pattern 'aus Angst VP', indicating that someone performs an action driven by fear. Example (1) illustrates this clearly: the phrase *aus Angst vor der neuen Unübersichtlichkeit der Welt* 'out of fear of the new complexity of the world' modifies the verb *verweigern sich* 'refuse' and expresses the motivation behind the action. Although *die Grünen* 'the Greens' is not syntactically linked to *Angst*, the connection is established

[6]Instances of *Angst*, *Ängste* and *Ängsten* were identified from the tweets, which also included compound words containing these terms. Consequently, the total count of instances with *Angst* as a lemma is less than the total number of instances. During analysis, the contexts in which *Angst* appears as a lemma are specifically examined, ensuring that the additional instances do not affect the research outcomes.

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Table 3. Frame attributes identified through collocates of *Angst*

Attribute	aus	von	mit	in	groß	machen	Schrecken	vor	nehmen	ohne	schüren
Experiencer	×	×	×	×		×		×	×	×	
Stimulus	×					×		×			
Degree					×						
Reaction	×							×			
Related state							×				
Influencer									×		×

through the verb – the Greens are both the agent of the action and the 'Experiencer' of the emotion.

(1) **Aus Angst** vor der neuen Unübersichtlichkeit der Welt $_{\text{Stimulus}}$ verweigern sich $_{\text{Reaction}}$ die Grünen $_{\text{Experiencer}}$ der Auseinandersetzung $_{\text{Reaction}}$.
'**Out of fear** of the new complexity of the world $_{\text{Stimulus}}$, the Greens $_{\text{Experiencer}}$ refuse to engage in the debate $_{\text{Reaction}}$'.
[Berliner Zeitung, 12.11.2001]

Like *aus Angst*, the phrase *vor Angst* 'of fear' also points to the 'Experiencer' as the one acting out of fear. Another prepositional collocate that is relevant to the 'Experiencer' is *in*. *In Angst* 'in fear' describes a state experienced by a person. It typically appears in expressions such as *in Angst leben* 'live in fear', *in Angst geraten* 'fall into fear' and *in Angst sein* 'be in fear'. Other prepositional collocates like *von* 'of/from', *mit* 'with' and *ohne* 'without' are also related to the frame attribute 'Experiencer', as they frequently occur in expressions like *von der Angst befreien* 'be free from fear', *mit der Angst leben* 'live with fear' and *ohne Angst die Bahn benutzen* 'use the train without fear' – all of which indicate the presence of an 'Experiencer'. The verbs *machen* 'make' and *nehmen* 'take away' are closely related to the 'Experiencer' as well. *Machen* 'make' appears in the context 'Stimulus machen Experiencer Angst' 'Stimulus makes Experiencer afraid' and *nehmen* 'take away' appears in the context 'Influencer nehmen Experiencer Angst' 'Influencer takes away Experiencer's fear'. Below are examples.

(2) Jetzt hat mir $_{\text{Experiencer}}$ seine Aggressivität $_{\text{Stimulus}}$ **Angst gemacht**.
'Now his aggressiveness $_{\text{Stimulus}}$ has **made** me $_{\text{Experiencer}}$ **afraid**'.
[Berliner Zeitung, 02.09.2000]

(3) Sie $_{\text{Influencer}}$ kaufen Sojabohnen schon Monate vor der Ernte und **nehmen** damit den Bauern $_{\text{Experiencer}}$ die **Angst** vor fallenden Preisen $_{\text{Stimulus}}$.
'They $_{\text{Influencer}}$ buy soybeans months before the harvest, thereby **taking away** the farmers' $_{\text{Experiencer}}$ **fear** of falling prices $_{\text{Stimulus}}$'.
[Die Zeit, 26.07.1996]

b. Stimulus

'Stimulus' is another important frame attribute of 'Angst', being associated with 3 out of the 11 collocates. The emotion of Angst is triggered by a stimulus, although it is not always explicitly expressed. The preposition *vor* 'of' is most directly related to the

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'Stimulus'. When *vor* 'of' appears to the right of *Angst*, it typically introduces expressions that describe the 'Stimulus' (see example 4). *Aus* 'out of' is also relevant, as it frequently appears together with *vor* in the phrase *aus Angst vor* 'out of fear of', which similarly introduces the cause of the emotion. Among the verbs, *machen* 'make' is associated with the 'Stimulus', as demonstrated in example (2), where the 'Stimulus' serves as the subject in the sentence with the phrase *Angst machen* 'make fear'.

(4) Zentral war die Darstellung, dass ausländische Kommilitonen $_{\text{Experiencer}}$ in ständiger **Angst vor** rechtsradikalen Übergriffen $_{\text{Stimulus}}$ leben würden.
'Central to the portrayal was that foreign students $_{\text{Experiencer}}$ live in constant **fear of** right-wing extremist attacks $_{\text{Stimulus}}$'.
[Berliner Zeitung, 26.04.2001]

c. Degree

Unlike the 'Experiencer' and 'Stimulus', which are associated with multiple collocates, the 'Degree' is indicated by only one collocate, *groß* 'great'. This collocate serves as a specific filler of 'Degree'. Notably, *groß* ranks first in the Twitter collocates list and fifth in the newspaper collocates list, highlighting that 'Degree' is a crucial attribute of the frame for 'Angst', predominantly occupied by *groß*.

(5) Es war schwierig, weil die meisten Menschen $_{\text{Experiencer}}$ **große** $_{\text{Degree}}$ Angst hatten.
'It was difficult because most people $_{\text{Experiencer}}$ were **very** $_{\text{Degree}}$ afraid'.
[Berliner Zeitung, 22.12.2001]

d. Reaction

There are two collocates associated with 'Reaction': *aus* and *vor*. They appear in the phrases *aus Angst* 'out of fear' and *vor Angst* 'of fear'. Both are found in the collocate lists for both newspapers and Twitter. They introduce a reaction that people undertake either out of fear or due to fear. These reactions can range from conscious actions, such as remaining silent (example 6), to unconscious bodily responses, such as crying (example 7).

(6) Doch die Ermittlungen verlaufen immer wieder im Sand, weil die russische Community $_{\text{Experiencer}}$ **aus Angst** eisern schweigt $_{\text{Reaction}}$.
'But the investigations repeatedly come to nothing because the Russian community $_{\text{Experiencer}}$ remains steadfastly silent $_{\text{Reaction}}$ **out of fear**'.
[Die Zeit, 14.04.1995]

(7) Allein im Behandlungsraum, Ich durfte nicht bleiben obwohl sie $_{\text{Experiencer}}$ **vor Angst** geweint hat $_{\text{Reaction}}$.
'Alone in the treatment room, I wasn't allowed to stay, even though she $_{\text{Experiencer}}$ was crying $_{\text{Reaction}}$ **out of fear**'.
[Twitter, 2019]

e. Related state

The word *Schrecken* 'terror' from the newspaper collocates list, which typically appears in the phrase *Angst und Schrecken* 'fear and terror', reveals that the frame

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also includes the attribute 'Related State'. Similar to *groß*, *Schrecken* also serves as a value. It represents a state that coexists with fear.

(8) Wir $_{\text{Experiencer}}$ leben hier doch alle in **Angst und Schrecken** $_{\text{Related State}}$.
'We $_{\text{Experiencer}}$ all live here in **fear and terror** $_{\text{Related State}}$'.
[Berliner Zeitung, 12.09.1995]

f. Influencer

The attribute 'Influencer' is indicated by the words *nehmen* 'take away' from the newspaper collocates and *schüren* 'stoke' from the Twitter collocates. Whether it is *jemandem Angst nehmen* 'take away someone's fear' or *Angst schüren* 'stoke fear', both indicate the presence of an 'Influencer'. This 'Influencer' is not the one experiencing the emotion, but rather someone who influences the intensity of the emotion, either amplifying (example 9) or diminishing (example 10) the fear.

(9) Beide großen Medien $_{\text{Influencer}}$ manipulieren in gewohner Sonntagsmanier **schüren Ängste** über die bösen Nationalisten $_{\text{Stimulus}}$.
'Both major media outlets $_{\text{Influencer}}$ manipulate, in their usual Sunday manner, **stoke fears** about the evil nationalists $_{\text{Stimulus}}$'.
[Twitter, 2019]

(10) 'Es gibt Angsträume im Land, und der Staat $_{\text{Influencer}}$ muss den Bürgern $_{\text{Experiencer}}$ die **Angst nehmen** – auch mittels Videoüberwachung', sagte Domanski.
'"There are fear zones in the country, and the state $_{\text{Influencer}}$ must **take away** the citizens' $_{\text{Experiencer}}$ **fear** – also through video surveillance", said Domanski'.
[Berliner Zeitung, 13.07.2000]

The corpus analysis of collocates reveals that 'Experiencer' is associated with the highest number of collocates, followed by 'Stimulus' in second place, with 'Reaction', 'Influencer', 'Related State' and 'Degree' ranking lower. This demonstrates a clear alignment between conceptually necessary attributes and frequently occurring attributes in the case of 'Angst' – namely, 'Experiencer' and 'Stimulus' are the most central attributes of the concept. Given space constraints, these two attributes deserve a more in-depth analysis in our study.

4.2. Values of 'Experiencer'

The 'Experiencer' in German is represented by both nouns and pronouns. While nouns allow for allocating lexically rich values to the 'Experiencer' role, pronouns often make it difficult to determine the exact identity of the 'Experiencer', especially when the 'Experiencer' is represented by a deictic pronoun, as in *Ich habe Angst* 'I am afraid'. However, this does not mean that pronouns as 'Experiencers' should be overlooked. On the contrary, pronoun 'Experiencers' can provide significant clues for exploring 'Angst'.

a. Talking about Angst or expressing Angst

Emotion language or emotion words can be broadly categorized into two functions: discussing emotions and expressing emotions (Schwarz-Friesel, 2013). While discussing emotions refers to the descriptive or referential use of emotion words,

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expressing emotions involves the speaker's direct emotional involvement. Is the concept of 'Angst' a tool for expressing Angst or for talking about Angst? The answer to this question is closely tied to the use of personal pronouns as 'Experiencer'. As Ortner (2015, p. 69) states:

> *…the thematization of emotions can, under certain conditions, also serve as an expression of emotions, particularly when it is realized with an immediate first-person singular or plural reference in the present tense. However, direct naming or thematization of emotions with self-reference (pertaining to the speaker themselves) is relatively rare across all tenses and moods, whereas the expression of emotions occurs more frequently…*[7]

Therefore, while the use of first-person pronouns and the function of 'Angst' as an expression of emotion are not strictly equivalent, there is a strong correlation between the two. Here are examples.

(11) **Er** hat Angst vor Mutti.
'**He** is afraid of Mom'.
[Twitter, 2019]

(12) '**Ich** habe Angst', flüsterte sie.
'"**I** am afraid", she whispered'.
[Berliner Zeitung, 14.04.2001]

b. Individual Angst or collective Angst

The boundary between individual and collective Angst is not always clear. As Berninger (2021, p. 35) notes, fear in its prototypical form is 'a profoundly egocentric affect'[8], primarily concerned with one's own survival or well-being. An example is the fear of social decline. When individuals experience such fear, they are typically preoccupied with the threat of their own decline – such as the potential loss of employment – while the fate of others remains largely peripheral (p. 36). Nevertheless, such fears may still be described as 'collective' when they become widespread and socially salient within a given context (p. 36). In these cases, what appears to be a personal fear may acquire collective relevance through its frequency and social salience.

We suggest that the use of personal pronouns may serve as indicators of the type of 'Angst' being expressed. When 'Angst' is attributed to an individual subject (see example 13), it generally reflects an individual emotional experience (even though recurring individual experiences can together constitute a collective phenomenon). Conversely, when 'Angst' is attributed to a group (see example 14), it more clearly signals a collective emotional orientation.

(13) Naja, guess what, **ich** habe Angst vor dem Spanisch Unterricht.
'Well, guess what, **I** am afraid of Spanish class'.
[Twitter, 2019]

[7]Our translation from the original German.
[8]Our translation from the original German.

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(14) **Sie** haben Angst vor Pöbeleien und Überfällen, weil dort mehr rechtsradikale Jugendliche leben würden als in den West-Bezirken Berlins.
'**They** are afraid of harassment and assaults because there are reportedly more right-wing radical youths living there than in the western districts of Berlin'.
[Berliner Zeitung, 17.11.2000]

Thus, this study examines both nominal and pronominal 'Experiencers'. The following sections will first introduce the language patterns used to identify nominal and pronominal 'Experiencers', and then present the values analysis.

4.2.1. Language patterns for identifying values of 'Experiencer'

Many collocates are associated with the attribute of 'Experiencer'. Since verbs possess both semantic and grammatical valence in relation to the 'Experiencer', verb phrases are better suited for identifying 'Experiencers'.

The verb *machen* 'make' is the most common verb associated with *Angst* (see section 4.1). The collocation profile from the Leibniz Institute for the German Language (IDS) (https://corpora.ids-mannheim.de/) indicates that *haben* 'have' is the most frequently paired verb with *Angst*. These two verb phrases frequently appear with the 'Experiencer' in form of the patterns listed in Table 4. These patterns were adapted into CQL queries in Table 5 to enable their retrieval from the corpus. In the CQL queries, the 'Experiencer' is represented as a noun or personal pronoun,

Table 4. Interaction of the verb phrases *Angst machen* and *Angst haben* with the 'Experiencer'

Verb	Patterns in main clauses 1	Patterns in main clauses 2	Patterns in subordinate clauses and main clauses with modal or auxiliary verbs
machen	*machen* Experiencer$_{(dative)}$ *Angst*	-	Experiencer$_{(dative)}$ *Angst machen*
haben	Experiencer$_{(nominative)}$ *haben Angst*	*haben* Experiencer$_{(nominative)}$ *Angst*	Experiencer$_{(nominative)}$ *Angst haben*

Note: Other patterns, such as 'Experiencer$_{(dative)}$ *machen* Stimulus$_{(nominative)}$ *Angst*' or 'Experiencer$_{(dative)}$ Stimulus$_{(nominative)}$ *Angst machen*' rarely appear.

Table 5. Patterns in Corpus Query Language

Patterns	CQL
machen	[lemma = "machen"][tag = "ART.*"]?
Experiencer$_{(dative)}$	[tag = "ADJ.*"]?[tag = "N.*Dat.*|PRO.Pers.*Dat.*"] [tag = "ADJ.*|ADV.*"]?
Angst	[tag = "ADJ.*|ADV.*"]? [lemma = "angst|Angst"]
Experiencer$_{(dative)}$	[tag = "N.*Dat.*|PRO.Pers.*Dat.*"] [tag = "ADJ.*|ADV.*"]?
Angst machen	[tag = "ADJ.*|ADV.*"]? [lemma = "angst|Angst"][lemma = "machen"]
Experiencer$_{(nominative)}$	[tag = "N.*Nom.*|PRO.Pers.*Nom.*"] [lemma = "haben"]
haben Angst	[tag = "ADJ.*|ADV.*"]? [tag = "ADJ.*|ADV.*"]? [lemma = "angst|Angst"]
Experiencer$_{(nominative)}$	[tag = "N.*Nom.*|PRO.Pers.*Nom.*"] [tag = "ADJ.*|ADV.*"]?
Angst haben	[tag = "ADJ.*|ADV.*"]? [lemma = "angst|Angst"][lemma = "haben"]
haben	[lemma = "haben"] [tag = "ART.*"]? [tag = "ADJ.*"]?
Experiencer$_{(nominative)}$	[tag = "N.*Nom.*|PRO.Pers.*Nom.*"] [tag = "ADJ.*|ADV.*"]?
Angst	[tag = "ADJ.*|ADV.*"]? [lemma = "angst|Angst"]

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Table 6. Number of instances retrieved using the CQL queries across the newspaper and Twitter corpora

Patterns	Newspaper			Twitter		
	Total	Noun	Personal pronoun	Total	Noun	Personal pronoun
machen Experiencer$_{(dative)}$ *Angst*	489	92	397	1543	157	1386
Experiencer$_{(dative)}$ *Angst machen*	391	167	224	536	162	374
Experiencer$_{(nominative)}$ *haben Angst*	8119	2941	5178	8243	2433	5810
Experiencer$_{(nominative)}$ *Angst haben*	2109	583	1526	2534	607	1927
haben Experiencer$_{(nominative)}$ *Angst*	3193	648	2545	3328	435	2893

optionally preceded by a determiner, an adjective or both. Before *Angst*, there are two optional blanks that can be filled by an adjective or an adverb to modify *Angst*. The decision to include two blanks, rather than more or fewer, was based on pilot studies, which indicated that the retrieval results were nearly saturated with this configuration. The number of instances retrieved using the CQL queries across the newspaper and Twitter corpora is shown in Table 6.

As seen in Table 6, the number of instances with nominal 'Experiencers' identified through different patterns varies. The pattern 'Experiencer$_{(nominative)}$ *haben Angst*' comes with more instances than other patterns, with a substantial number of nominal 'Experiencers' identified – 2,941 instances in the newspaper corpus and 2,433 in the Twitter corpus – allowing for quantitative analysis.

Another pattern is also effective in identifying nominal 'Experiencers': the genitive constructions. Genitive attributes, which refer to the 'Experiencer' of fear, are typical constructions associated with *Angst*. In the newspaper and Twitter corpora, 6,460 and 2,230 instances of this pattern were found, respectively, using Word Sketch of Sketch Engine.

This study's analysis of 'Experiencers' thus primarily relies on the patterns outlined in Table 5, with 'Experiencer$_{(nominative)}$ haben Angst' and genitive attributes of *Angst* specifically used to determine who the 'Experiencers' are.

4.2.2. Personal pronouns as 'Experiencers'

'I am/We are afraid' versus 'Others are afraid'

Instances where the 'Experiencer' is a first-person pronoun are grouped under 'I am/We are afraid', while those involving second- or third-person pronouns, as well as noun 'Experiencers', are grouped under 'Others are afraid'.

The results show that the concept of 'Angst' fulfills more than just the function of either emotion expression or emotion description (see Figure 1). In newspapers, references to others' fear are more common and are generally not accompanied by negative connotations.[9] Expressions of personal fear in newspapers primarily come from quotes in interviews (see example 15). On Twitter, people are not solely expressing their own fear. When 'Others are afraid' is mentioned, it often carries a

[9]The distinction between neutral and negative connotations in this study does not rely on a formal annotation, but is based on qualitative observations made during close reading of the data. Negative connotations refer to cases in which 'Angst' is attributed to others in a dismissive or ironic way, often serving to delegitimize their fears as irrational, exaggerated or politically motivated.

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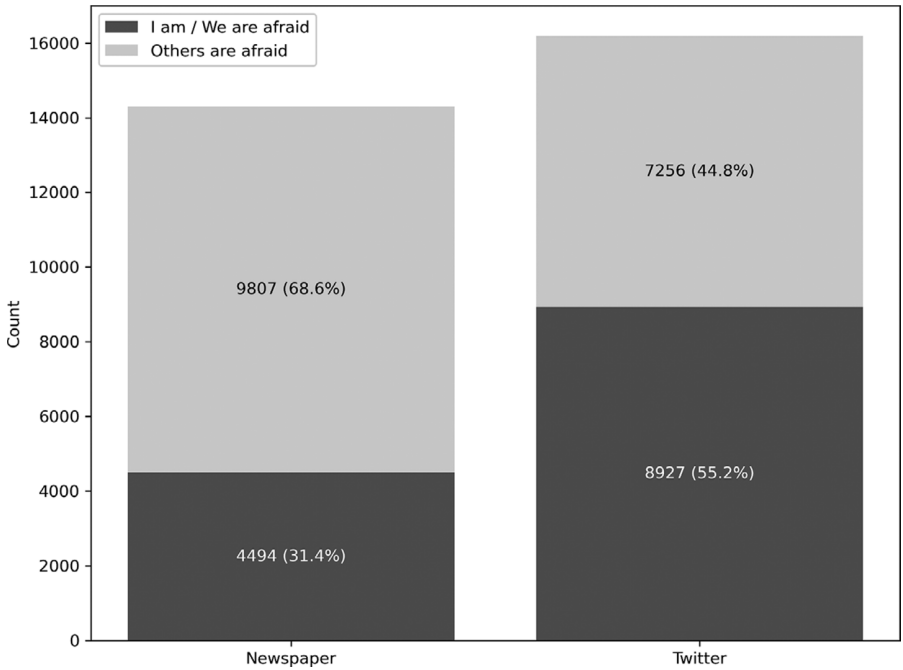

Figure 1. 'Experiencers': self-focused and other-focused.

negative connotation, particularly in political contexts (see example 16). There is no clear tendency to avoid expressing personal fear in either medium.

The results show partial alignment with the findings of Georgi (2021) and Filatkina (2015), suggesting that in newspaper discourse, 'Angst' is primarily attributed to others. At the same time, the present study extends their observations by providing insights into 'Angst' in Twitter discourse and demonstrating that 'Angst' is not only constructed as an emotion attributed to others but also serves as a means of expressing personal emotional stance.

(15) '**Ich** habe Angst um meinen Job, der Konzern soll privatisiert werden', erzählt der 42-Jährige.
'"**I**'m afraid for my job; the company is supposed to be privatized", says the 42-year-old'.
[Berliner Zeitung, 27.05.2005]

(16) **Sie** haben Angst die Macht zu verlieren.
'**They** are afraid of losing power'.
[Twitter, 2019]

Individual versus collective

Based on the use of personal pronouns, the 'Experiencer' of 'Angst' is predominantly singular rather than collective (see Figure 2). The notable difference in the use of singular versus plural pronouns is largely attributable to first-person pronouns, with minimal variation observed between singular and plural third-person pronouns in

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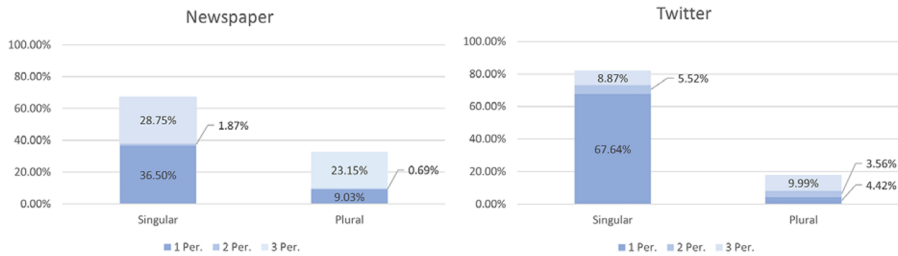

Figure 2. Singular and plural personal pronouns as 'Experiencers' (raw counts available in the Appendix).

both newspapers and on Twitter. Overall, there is no clear evidence of a collective nature of 'Angst'. In expressions of emotion, the 'Experiencer' is most often the singular *ich* 'I' rather than *wir* 'we'. When discussing the Angst of others, it can be framed as both an individual and a collective experience.

This finding stands in marked contrast to the conclusion drawn by Georgi (2021), who, based on a quantitative analysis of the pattern 'KOUS PPER Angst APPR', found *sie* to be the most frequent personal pronoun in this pattern. Georgi, therefore, concludes that 'Angst' is mostly attributed to collectives rather than individuals. The discrepancy between these findings may be attributed to differences in pattern selection. While Georgi's analysis is restricted to subordinate clauses introduced by conjunctions, the present study identifies 'Experiencer' across a broader range of syntactic environments, encompassing both main and subordinate clauses.

4.2.3. Nouns as 'Experiencers'

The 10 most frequent nominal 'Experiencers' of 'Angst' in the pattern 'Experiencer$_{(nominative)}$ *haben Angst*' and the 10 most frequent genitive attributes of *Angst* in newspapers and on Twitter are presented in Tables 7 and 8.

These four lists show substantial overlap. *Mensch* ranks first by a wide margin, theoretically referring to a broad audience that includes everyone, but in context, it predominantly refers to German people. *Mensch* and its synonyms in various contexts – *Leute* 'people', *Bürger* 'citizens', *Bevölkerung* 'general public' and *Deutsche*

Table 7. The most frequent nominal 'Experiencers' in the 'Experiencer$_{(nominative)}$ *haben Angst*' pattern in newspapers and on Twitter

Newspaper			Twitter		
Lemma	Translation	Frequency	Lemma	Translation	Frequency
Mensch	person/people	210	Mensch	person/people	188
Leute	people	181	Ich*	I	110
Frau	woman	76	Leute	people	75
Kind	child	66	Deutsche	German	73
Deutsche	German	66	Kind	child	64
Mann	man	60	Mann	man	56
Eltern	parents	57	Frau	woman	44
Mutter	mother	38	Regierung	government	33
Spieler	player	27	Merkel	Merkel	32
Politiker	politician	18	CDU	CDU	30

Note: The term *Ich* (marked with an asterisk) is incorrectly tagged for part of speech.

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Table 8. The most frequent genitive attributes of *Angst* in newspapers and on Twitter

Newspaper			Twitter		
Lemma	Translation	Frequency	Lemma	Translation	Frequency
Mensch	person/people	479	Mensch	person/people	189
Deutsche	German	179	Bürger	citizen	107
Bürger	citizen	178	Deutsche	German	91
Bevölkerung	general public	156	Bevölkerung	general public	52
Tormann*	Tormann	91	Leute	people	36
Mann	man	88	Frau	woman	35
Kind	child	77	Eltern	parents	29
Leute	people	68	Kind	child	23
Eltern	parents	67	Erderwärmung*	global warming	21
Frau	woman	57	Überfremdung*	foreign infiltration	21

Note: The terms marked with an asterisk – *Tormann*, *Erderwärmung*, *Überfremdung* – do not provide identity information about the 'Experiencer'. *Tormann* is part of the book title *Die Angst des Tormanns beim Elfmeter* 'The Goalie's Anxiety at the Penalty Kick', a 1970 novel by the Austrian writer Peter Handke. The other two terms represent 'Stimulus' of 'Angst'. Due to the informal language use on Twitter, the preposition *vor* 'before' is omitted, creating a false genitive structure. These incorrect expressions are frequently repeated through retweets.

'Germans' – form the core of nominal 'Experiencers'. This aligns with the observation made by Georgi (2021) and Filatkina (2015) that vague collective terms are often cited as bearers of Angst.

What exactly is being discussed when referring to 'German people's Angst'? To answer this question, it is necessary to examine the context of the utterances. By analyzing the collocations of *Angst* (within a span of 5 words to the left and right), it becomes clear that 'German people's Angst' is primarily associated with two main groups of verbs as follows:

a. Angst should be taken seriously: This category includes verbs such as *ernst nehmen* 'take seriously', *ignorieren* 'ignore', *vorbeigehen* 'pass by' and *verlachen* 'mock'.

(17) Man muss die Sorgen und Ängste der Bürger*Innen **ernst nehmen**…
'One must **take** the worries and fears of the citizens **seriously**…'
[Twitter, 2019]

b. Angst is exploited: This category includes verbs like spielen 'play with', ausnutzen 'exploit', schüren 'stoke' and instrumentalisieren 'instrumentalize'.

(18) Wenn Populisten **mit** den Ängsten der Menschen **spielen**, malen sie einen Teufel an die Wand.
'When populists **play with** people's fears, they paint the devil on the wall'.
[Twitter, 2019]

In the first category, Angst is seen as justified and should be taken seriously. In the second category, however, Angst is perceived as a vulnerability that can be exploited. This exploitation or manipulation of Angst is closely tied to politics and elections.

4.3. Values of 'Stimulus'

4.3.1. Language patterns for identifying values of 'Stimulus'

As identified in the analysis of frame attributes, phrases related to the 'Stimulus' are *Angst vor X* 'fear of X' (in the dative case) and *X Angst machen* 'X causes fear'. While X can also be a clause, we focus here on nominal 'Stimulus' for clearer quantitative

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Table 9. Searching patterns for 'Stimulus' and number of occurrences

Patterns	CQL/Word sketch	Newspaper	Twitter
Stimulus$_{(nominative)}$ *machen*	[tag = "N.*Nom.*"] [lemma = "machen"][tag = "ART.*"]? [tag = "ADJ.*"]?[tag = "N.*Dat.*|PRO.Pers.*Dat.*"]	135	384
Experiencer$_{(dative)}$ *Angst*	[tag = "ADJ.*|ADV.*"]? [tag = "ADJ.*|ADV.*"]? [lemma = "angst|Angst"]		
Stimulus$_{(nominative)}$ Experiencer$_{(dative)}$ *Angst machen*	[tag = "N.*Nom.*"] [tag = "ART.*"]? [tag = "ADJ.*"]? [tag = "N.*Dat.*|PRO.Pers.*Dat.*"] [tag = "ADJ.*|ADV.*"]? [tag = "ADJ.*|ADV.*"]? [lemma = "angst|Angst"] [lemma = "machen"]	17	19
Angst vor Stimulus$_{(dative)}$	[lemma = "angst|Angst"][lemma = "vor"] [tag = "ART.*"]? [tag = "ADJ.*"]? [tag = "N.*Dat.*"]	32077	15392
	"Angst" vor + noun (Word Sketch)	34351	17107

analysis. Using CQL and Word Sketch in Sketch Engine, we identified instances that match the specified patterns. The total number of retrieved occurrences is summarized in Table 9. It is evident that *Angst vor X* yields significantly more nouns representing 'Stimulus' than *X Angst machen*. This is consistent with Georgi's (2021, p. 255) finding that *Angst vor X* 'fear of X' predominantly names the object of *Angst*.

The searches using CQL and Word Sketch produced similar results (see Table 9). The analysis is based on the results obtained through Word Sketch.

4.3.2. 'Stimulus' in newspapers and on Twitter

The 20 most frequent nouns representing 'Stimulus' (see Table 10) reveal that the triggers of 'Angst' in newspapers can be categorized into three main aspects (see Table 11): (a) life and health, (b) prosperity, status and identity and (c) certainty and stability. Similarly, on Twitter, 'Angst'-inducing stimuli fall into four categories (see Table 12): (a) life and health, (b) relationship and selfhood, (c) certainty and stability and (d) power. While both sources highlight life and health as well as the inner need for certainty and stability, newspapers tend to emphasize material and societal concerns such as prosperity and status, whereas Twitter places more focus on interpersonal dimensions and power dynamics. 'Angst' can be further divided into fear of loss, fear of danger and fear of risk. The first two can be classified as 'bad things', while the latter represents the possibility that 'bad things can happen'.

Georgi (2021) also examined the 'Stimulus' in the pattern 'Angst vor X'. Due to the temporal overlap between his study and the COVID-19 pandemic, *Ansteckung* 'infection' and *Corona* 'corona' emerged as the most frequent 'Stimulus'. In addition, lexemes such as *Anschlag* 'attack', *Überfremdung* 'foreign infiltration', *Flüchtling* 'refugee', *Veränderung* 'change' and *Repressalie/Repression* 'reprisal/repression' appeared recurrently over several years.

In contrast, the present study excludes the pandemic period from its data. As a result, COVID-related terms are absent from the list. Nevertheless, stimuli related to threats to life and health still emerge as some of the most salient triggers of 'Angst'. In this regard, the findings partially resonate with those of Georgi (2021). At the same time, this study identifies a broader and more finely categorized range of triggers. A detailed overview of these stimulus categories is provided below.

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Table 10. 'Stimulus' in newspapers and on Twitter

Newspaper			Twitter		
Stimulus	Translation	Frequency	Stimulus	Translation	Frequency
Tod	death	578	Tod	death	349
Zukunft	future	521	Nähe	closeness	286
Anschlag	attack	392	Veränderung	change	259
Verlust	loss	357	Zukunft	future	231
Krieg	war	313	Mann	man	183
Courage	courage	307	Wahl	election	181
Arbeitslosigkeit	unemployment	301	AfD	AfD	165
Angst	fear	292	Konsequenz	consequence	140
Terroranschlag	terrorist attack	248	Hund	dog	130
Terror	terror	217	Nazi	Nazi	126
Fremde	stranger	216	Mensch	person	123
Veränderung	change	215	Klimawandel	climate change	120
Abstieg	decline	211	Neuwahl	new election	116
Gewalt	violence	203	Verlust	loss	114
Virginia	Virginia	202	Wähler	voter	112
Folge	consequence	190	Spinne	spider	108
Fliege	fly	187	Volk	people	107
Konkurrenz	competition	160	Wahrheit	truth	99
Versagen	failure	156	Tag	day	99
Krankheit	illness	145	Frau	woman	98

Table 11. Categorized 'Stimulus' in newspapers

	Bad things		Bad things can happen
Category	Loss	Danger	Risk
Life and health	Tod (death), Krankheit (illness)	Anschlag (attack), Terror (terror), Terroranschlag (terrorist attack), Krieg (war), Gewalt (violence)	Fliegen (flying)
Prosperity, status and identity	Abstieg (decline), Arbeitslosigkeit (unemployment), Verlust (loss)	Folge (consequence), Versagen (failure)	Zukunft (future), Veränderung (change), Konkurrenz (competition)
Inner need for certainty and stability	Veränderung (change), Fremde (strangers), Zukunft (future)	–	–
Other	Courage (courage), Angst (fear), Virginia (Virginia)*		

Note: The asterisked term *Virginia* comes from the title of the play *Wer hat Angst vor Virginia Woolf?* (English original title *Who's Afraid of Virginia Woolf?*) by Edward Albee.

a. Life and health

Tod 'death' ranks first on both the newspaper and Twitter lists and can be seen as the most representative stimulus that triggers Angst. Death signifies the loss of life, and the fear of death is a universal anxiety rooted in biological instincts.

(19) Und nun regiert die **Angst vor dem Tod** die Menschen ungeheuerlich.
'And now the **fear of death** governs people tremendously'.
[Berliner Zeitung, 05.07.1997]

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Table 12. Categorized 'Stimulus' on Twitter

	Bad things		Bad things can happen
Category	Loss	Danger	Risk
Life and health	Tod (death)	Hund (dog), Spinne (spider), Nazis (Nazis)	Klimawandel (climate change)
Relationship and selfhood	–	Wahrheit (truth), Frau (woman)	Nähe (closeness), Mensch (people)
Inner need for certainty and stability	Veränderung (change), Zukunft (future), Neuwahl (new election), Wahl (election)	–	–
Power	Verlust (loss)	AfD (AfD)	Wahl (election), Neuwahl (new election), Wähler (voter), Volk (people)
Other	Mann (man)*, Konsequenz (consequence), Tag (day)		

Note: The asterisked term *Mann* appears in the sentence *Wer hat Angst vorm schwarzen Mann* 'Who's afraid of the black man', referring to a traditional children's leisure game.

In emotional expressions, we find not only sentences like *Ich habe Angst vorm Tod wie jeder andere* 'I am afraid of death, like everyone else', but also *Ich habe keine Angst vor dem Tod* 'I am not afraid of death'. The latter is used to express one's courage. However, this still highlights that death is a fear-inducing object, regardless of whether negation is present or not.

Similar bodily-related fears include the fear of *Krankheit* 'illness', as illness represents the loss of health. Threats to life and health are similarly triggers of fear. Many such terms appear on the newspaper list, including *Anschlag* 'attack', *Terror* 'terror', *Terroranschlag* 'terrorist attack', *Krieg* 'war' and *Gewalt* 'violence'. While these stimuli were rarely found in Filatkina's (2015) study – which she considered 'unexpected' (p. 120) – our findings confirm that they are relevant themes associated with 'Angst'. On Twitter, these stimuli include *Hund* 'dog', *Spinne* 'spider' and *Nazis* 'Nazis'.

Extending beyond fears of losing life and health are fears of risks that may lead to such losses, such as the fear of *Fliegen* 'flying'. The fear of *Klimawandel* 'climate change' can also be placed in this category. While climate change does not directly and immediately threaten life and health, it represents a risk. Unlike danger, which is purely negative, risk carries both positive and negative aspects. Fear arises when the negative aspect is more strongly perceived, and this fear is often considered irrational.

b. Prosperity, status and identity

Social status, identity and income from work are closely interconnected. The loss of a respected job means the loss of a good income, social recognition and one's own identity. The fear of *Abstieg* 'decline', of *Arbeitslosigkeit* 'unemployment' and of *Verlust* 'loss' all relate to this type of Angst. This type of 'Angst' is particularly prominent in newspaper discourse, confirming Filatkina's (2015) observation that

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'Angst' in newspaper discourse is closely linked to occupational prospects and the loss of prosperity.

(20) Sozialwissenschaftler stellen fest, dass die Stimmung im Osten immer schlechter wird, dass die Menschen zunehmend hoffnungsloser in die Zukunft schauen, dass sie **Angst haben vor sozialem Abstieg, Angst vor Arbeitslosigkeit**.
'Social scientists have found that the mood in the East is worsening, that people are increasingly looking to the future with hopelessness, and that they are **afraid of social decline and unemployment**'.
[Berliner Zeitung, 07.12.2001]

The fear of losing one's identity can be independent of financial factors, such as the fear of *Versagen* 'failure'. The fear of losing prosperity can also occur in isolation, such as the fear of *Folge* 'consequence'.

(21) Das hat man nicht gemacht – aus **Angst vor den wirtschaftlichen Folgen**.
'This wasn't done – out of **fear of the economic consequences**'.
[Der Tagesspiegel, 23.12.2002]

This fear extends to factors that could lead to such losses, such as *Zukunft* 'future', *Veränderung* 'change' and *Konkurrenz* 'competition'. Although these do not inherently cause the loss of prosperity, status or identity, the risk remains.

(22) Die Deutschen haben Angst vor Inflation, **Angst vor der Zukunft**, Angst um oder vor dem Arbeitsplatz.
'The Germans are afraid of inflation, **fear the future**, and are anxious about or afraid for their jobs'.
[Die Zeit, 25.07.2013]

c. Inner need for certainty and stability

In both newspaper and Twitter discourse, Angst can be triggered by loss of certainty and stability. This category includes stimuli such as *Zukunft* 'future', *Veränderung* 'change', *Neuwahl* 'new election', *Wahl* 'election' and *Fremde* 'foreigner'. Although these phenomena do not inherently imply negative outcomes, they nevertheless symbolize a disruption of certainty, stability, continuity and predictability – fundamental psychological needs whose disturbance often evokes a sense of insecurity.

(23) Denn die **Angst vor dem Fremden** ist ein Instrument, das der CSU-Chef zu spielen versteht, auch wenn er heute nicht mehr von 'durchrasster Gesellschaft'spricht.
'For the **fear of the unfamiliar** is a tool that the CSU leader knows how to use, even though he no longer speaks of a "racially mixed society"'.
[Berliner Zeitung, 06.08.2001]

(24) Und die Wähler wählen auch immer die gleichen Leute, weil sie einfach nur **Angst vor Veränderung** haben, da Veränderungen in DTL meist mit Verschlechterung einhergehen.

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'And voters always elect the same people because they are simply **afraid of change**, as changes in Germany are often associated with deterioration'.
[Twitter, 2019]

d. Relationship and selfhood
Nähe 'closeness' ranks second in the Twitter list. The 'fear of closeness' refers to the fear of forming intimate relationships with others due to the concern of being hurt. Some people report having a fear of others and avoid contact with them. Both *Nähe* 'closeness' and *Mensch* 'people' involve risks, as forming interpersonal relationships can either succeed or fail. Failure can result in emotional harm or discomfort.

(25) Wir haben **Angst vor Nähe**, weil jeder, der versprochen hat, zu bleiben, wieder gegangen ist.
'We are **afraid of closeness** because everyone who promised to stay has left again'.
[Twitter, 2019]

Another form of psychological discomfort arises from presuming that one is inferior to others or that one's views and positions are questioned. This can trigger self-doubt and undermine one's sense of identity. An example of this is the fear of the *Wahrheit* 'truth' or the fear of a strong, intelligent *Frau* 'woman', a topic often addressed in feminist discourses.

e. Power
In the Twitter discourse, the current governing parties are portrayed as being afraid of *Wahl* 'election'/*Neuwahl* 'new election', *Wähler* 'voter', *Volk* 'people' and the opposition party (the *AfD*). The *AfD* poses a threat to their power, while new elections and voters represent risks that could lead to a *Verlust* 'loss' of their authority.

(26) Die Altparteien haben so eine große **Angst vor den Wahlen** im Osten.
'The established parties are deeply **afraid of the elections** in the East'.
[Twitter, 2019]

5. Dimensions of 'Angst'

Based on the results of the 'Angst' frame, including its attributes and their values, we delineate the following dimensions that constitute German 'Angst':

a. Biological 'Angst'
'Angst' exhibits characteristics rooted in biology, aligning with Adolphs' (2013, p. 79) definition of biological fear (see Section 2). The attributes 'Experiencer' and 'Stimulus', representing the 'organism' and 'stimuli' in this definition, are associated with more collocates than other attributes. The biological aspect of 'Angst' is further evident in its 'Stimulus': in both newspaper and Twitter data, the most common 'Stimulus' for 'Angst' is threats to life and health. Such fear or anxiety can be considered universal, rather than culture-specific.

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b. Socialhistorical 'Angst'

'Angst' also reflects influences from Germany's sociohistorical context. In sociohistorical research, German Angst is often considered to have originated in the aftermath of World War II, marked by a pervasive sense of fear and uncertainty about West Germany's future (Biess, 2020). The values of 'Stimulus' include future-oriented concerns such as the future itself, change, climate change and elections. Notably, the fears extend beyond loss to encompass danger and even risk, reflecting a sense of insecurity.

c. Philosophical 'Angst'

Does 'Angst' also possess a philosophical dimension, as highlighted by Wierzbicka (1998, 1999) and Oster (2012)? To address this, we must first understand 'Angst' in its philosophical context. 'Angst' became prominent as a philosophical concept through Kierkegaard (1855) and later within existentialist philosophy. It arises from the awareness of freedom of choice, which brings challenges such as calculating consequences, making decisions and having to take responsibility for those decisions, without knowing what will ultimately result from them (Frischmann, 2023, p. 140). Heidegger, in *Being and Time* (1967, pp. 185–186), differentiates 'Angst' from 'Furcht' by its uncertain stimuli. Unlike 'Furcht', triggered by specific, external threats, 'Angst' arises from 'Being-in-the-world itself'.

According to studies conducted by Wierzbicka (1998, 1999) and Oster (2012), which are based on the analysis of German itself and comparisons with the English concept of 'fear', the German 'Angst' is characterized by its indeterminate nature. In our study, 'Angst' demonstrates both consistency and inconsistency with its philosophical conceptualization. The consistency is evident in its 'Stimuli', particularly those related to the future, such as *Zukunft* 'future' and *Veränderung* 'change'. These 'Stimuli' are not only inherently ambiguous but also unavoidable, as long as one exists in the world. However, the inconsistency also lies in its 'Stimuli'. Unlike the philosophical notion of 'Angst', which is marked by the absence of a specific cause or reference point, the 'Stimuli' for 'Angst' in this study can, like those for 'Furcht', involve specific, determinate and external threats. This suggests that 'Angst' and 'Furcht' are not as clearly delineated as they are traditionally conceptualized in philosophy and that the philosophical 'Angst' represents only one aspect of the broader concept of 'Angst'.

6. Conclusion

The study applied corpus-based frame analysis as a complementary methodological approach to (corpus-based) metaphor analysis for studying the emotion concept of 'Angst'. By analyzing language patterns through corpus linguistics methods, the frame of 'Angst' was reconstructed, consisting of six frame attributes.

The analysis of the values associated with the 'Stimulus' attribute shows that 'Angst' arises from various factors, including threats to life and health, prosperity, status and identity, power, relationships and inner need for certainty and stability. The analysis of the values associated with the 'Experiencer' attribute suggests that 'Angst' serves both as a means of expressing one's own fear and as a way of discussing the fear experienced by others. Particularly when referring to the fear of groups, 'Angst' is often seen as justified and generally carries no strongly negative connotations. This reflects an acceptance of 'Angst' and an openness in addressing and discussing it.

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When contextualizing the findings within existing studies from other disciplines, it becomes evident that the concept of 'Angst' possesses both universal aspects, rooted in its biological foundations, and cultural characteristics shaped by sociohistorical influences. It reflects both alignment with and divergence from the philosophical conceptualization of 'Angst'. Thus, Angst is not merely a psychological phenomenon or a cultural construct, but rather a combination of both. This suggests that its uniqueness is likely restricted rather than absolute. Compared to approaches from other disciplines, the linguistic analysis of *Angst* – grounded in its use across authentic discourse – yields new and concrete details about the concept – for instance, by identifying the specific stimuli that give rise to Angst.

According to Barsalou (1992), frames are highly complex and flexible, making them inherently inexhaustible. This study's results have some limitations: 1) It focuses on newspaper and social media data, excluding other important genres like literature and spoken discourse. 2) Due to space constraints, only the values of core attributes 'Experiencer' and 'Stimulus' were analyzed in detail. Despite these limitations, this study contributes to understanding the 'frame-like structure' (Kövecses, 2014, p. 22) of emotion concepts and offers meaningful insights into the conceptualization of 'Angst' in German.

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Appendix

	Singular			Plural		
Corpus	1 Per.	2 Per.	3 Per.	1 Per.	2 Per.	3 Per.
Newspaper	3603	185	2838	891	68	2285
Twitter	8380	684	1099	547	441	1238

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