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SKETCHING EMOTIONS: A CORPUS-BASED STUDY OF EMOTIONAL STATES IN ENGLISH USING SKETCH ENGINE

Emotions are central to human cognition and communication, yet their verbal expression remains a complex linguistic phenomenon. The articulation of emotional states in language involves intricate combinations of lexical choices, syntactic structures, and pragmatic functions. While emotion has long been a topic of interest in psychology and philosophy, modern corpus linguistics enables empirical analysis of emotion-related language on a large scale. This study aims to analyze the linguistic representation of emotional states in modern English using the Sketch Engine corpus analysis system.

Sketch Engine is a powerful web-based corpus query system developed by Lexical Computing Ltd. for exploring and analyzing language data across various corpora. Designed for both linguistic research and lexicographic applications, Sketch Engine allows users to work with pre-loaded corpora or to upload and build their own using tools for lemmatization, part-of-speech tagging, and statistical analysis (Kilgarriff et al., 2022).

The system supports over 90 languages and provides access to billions of words in structured datasets, including the British National Corpus (BNC) (Bober et al., 2021), enTenTen (a web-crawled corpus for English), GloWbE (Global Web-Based English), and many more. This makes it an essential platform for contrastive linguistic research, lexicography, language teaching, and semantic analysis.



Fig. 1: Visual Representation of Sketch Engine Interface

One of the most innovative features of Sketch Engine is the *Word Sketch* — a one-page, automatically generated summary of a word's grammatical and collocational behavior (Hu et al., 2015). Word Sketches provide insights into how a

word typically functions in real language use by listing its frequent collocates grouped by grammatical relation (e.g., adjective + noun, verb + object, modifier + noun). For instance, in the case of the noun *fear*, a Word Sketch might reveal that it often occurs with verbs like *overcome*, *instil*, *express*, and adjectives such as *great*, *deep*, and *irrational*.

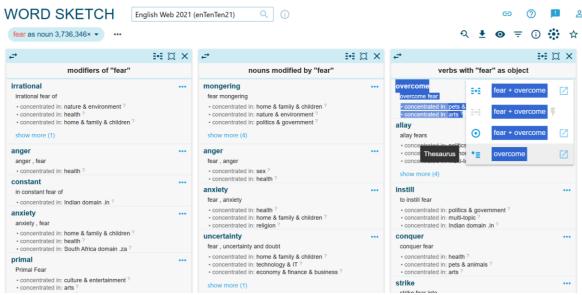


Fig. 2: Visualizing Fear: Collocational Patterns in Word Sketch

Another significant feature is *Sketch Diff*, which compares the collocational profiles of two words or the same word across two corpora or subcorpora. This is particularly valuable in diachronic or contrastive studies, such as exploring how emotional terms like *sadness* and *grief* differ in usage, or how the expression of *anger* varies across genres or regions.

VORD SK	EICH	וטורו			English	Web 20	21 (enTen	Ten21)	Q (i)		(=)	?	:
sadness 339,138	8×		Ш	grief 575,486×					વ	<u>*</u>	⊙ =		(i)
≓		* (X	←→			₩ (C X	←→			*	(C) >
"sadness	s/grief" and	/or		verbs with "	'sadne	ss/grief	' as objec	t	verbs with	"sadne	ss/grief	' as sub	ject
happiness	5,103	513	141	sadness + anger	Ø	75	9	•••	ting		80	0	
grief	4,740	1,022	141	grief + anger		398	71	•••	creep		254	26	
regret	2,306	940				241	68	•••	pervade		105	21	
disappointment	1,963	1,002	0	sadness + anger		340	143	•••	envelop		95	20	
loneliness	2,616	1,524	0	grief + anger		7,569	4,023	•••	temper		94	36	
joy	6,000	3,438				91	104	•••	well		77	47	•••
anger	13,359	8,116	•≡	anger		5,648	7,780	•••	overwhelm		427	665	
guilt	2,006	3,944	•••	compound		79	399	•••	overcome		266	538	
rage	1,021	2,678	•••	channel		67	619	•••	paralyze		12	89	
sorrow	2,108	7,091	•••	assuage		28	612	•••	consume		106	563	
loss	3,350	18,540	•••	strike		0	1,809	•••	subside		19	160	
sadness	434	4,740	•••	disenfranchise		0	413		counsel		0	839	

Fig. 3: Contrastive Analysis of Sadness and Grief via Sketch Diff

Concordance analysis allows for the extraction of context-rich examples of word usage (Wulff et al., 2021). Users can sort, filter, and annotate concordance lines, which is especially useful for studying the discourse contexts of emotional

expressions — for example, whether joy tends to occur in narrative versus expository writing, or whether disgust appears more frequently in evaluative and moralistic discourse.

Sketch Engine also integrates a *semantic tagging and classification tool*, enabling researchers to identify broader conceptual categories and semantic roles associated with emotional terms. Its *frequency lists* and *term extraction* features can highlight culturally salient emotional expressions or emerging colloquial patterns (e.g., *emotional rollercoaster*, *feeling seen*, *mentally exhausted*).

Importantly, the platform supports *custom corpus building*, which enables scholars to compile specialised corpora (e.g., clinical texts, social media posts, psychological case studies) for emotion research in applied and interdisciplinary contexts. For instance, a researcher might upload a collection of online forums on mental health to examine how users verbalise anxiety, stress, or hope.

The results underscore the value of corpus-based analysis in uncovering both the lexical richness and cognitive underpinnings of emotional language. Sketch Engine proves to be an effective tool for identifying collocational and phraseological patterns that shape our understanding of emotions. This approach also contributes to the development of data-driven emotion typologies and may support applications in sentiment analysis, intercultural communication, and language teaching.

This study demonstrates how digital corpus tools like Sketch Engine can deepen our insight into the linguistic encoding of emotional states in English. The findings affirm that emotional expressions are not only culturally and contextually shaped but also systematically patterned in language. Future research may expand the scope to multilingual corpora, diachronic analysis, or multimodal representations of emotions.

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