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The Corpus-based Methodology of Close Emotion Concepts Differentiation: A Case Study of ENVY and JEALOUSY

Abstract

The article is devoted to the identification of relevant parameters of differentiation for the close emotion concepts ENVY and JEALOUSY based on the analysis of their names profiles in the iWeb web corpus. The corpus-based research methodology included comparison of (1) the definitions of the lexemes *jealousy* and *envy*, (2) the semantic content of conceptual metaphors representing ENVY and JEALOUSY, and (3) these concepts according to intensity and evaluation parameters. The study of corpus data allowed us to obtain objective results, and also to claim that this method may be an alternative to another corpus-based one, MPA, as its analytical tools are simpler but no less reliable than those of MPA.
Keywords: emotion concept; envy; jealousy; corpus profile of word; conceptual metaphor

1 Introduction

More than thirty years ago, the adherents of cognitive linguistics Kövecses and Wierzbicka initiated research into the cross-cultural study of emotion concepts (Kövecses, 1990; Wierzbicka, 1999). Since then, in numerous studies various emotion concepts have been analysed in detail, both within certain linguo-cultures and in a cross-cultural dimension. The increased attention paid to this problem can be explained by new approaches to its solution. Interdisciplinary links of cognitive linguistics methodology have primarily facilitated it. Due to new analytical tools, promising ideas and hypotheses have emerged. Their proof has contributed to the formation of scientifically based provisions.

In particular, the idea that a person's emotional level can interact with the level of language through cognition is objective (Foolen, 1997, p. 20). This statement is based on the theoretical grounds of cognitology, psychology, and linguistics. Such a scientific symbiotic relationship has made it possible to consider emotions (emotional states, feelings) not only as emotion concepts, but also as much more complex phenomena – cultural concepts. The study of emotions as cultural concepts is especially relevant for those culture-oriented studies that address the relevant problems of intercultural interaction (globalization, ethnocentric trends, etc.) and intercultural communication (inter-lingual contacts, inter-lingual barriers, inter-lingual deviations, inter-lingual interference, etc.) (Mizin, Slavova, & Petrov, 2021, p. 172).

Arguments in favour of the statement that emotion concepts belong to cultural concepts are the conclusions of psychologists, anthropologists, sociologists, and linguists that in the process of social interaction between individuals even basic (universal) emotions receive socio- and ethno-cultural semantic nuances that influence their expression and perception in a particular linguo-society (Friedlmeier et al., 2011; Gendron et al., 2014; Mykhalchuk & Bihunova, 2019; Russell,

1991; Underhill, 2015). Derived (social) emotions, which are formed as a result of the symbiotic interaction of basic emotions, show even greater cultural labelling (Mizin & Ovsiienko, 2020; Mizin & Petrov, 2021; Ogarkova, 2007; Ogarkova et al., 2013; Shevchenko & Shastalo, 2021; Wilson & Lewandowska-Tomaszczyk, 2017).

It is noteworthy that the number of neither basic nor derived emotions is yet clear due to the lack of a common view of scholars on the criteria for their differentiation. Therefore, certain emotions in some works are defined as basic, and in others – as social (Ogarkova, 2007, p. 89). The proposed study is devoted to the emotions envy and jealousy. On the one hand, these emotions do not belong to the 'The Big Six' basic (universal) emotions, which include only happiness, sadness, fear, surprise, anger, and disgust (Ekman et al., 1969). However, on the other hand, the author of the 'Big Six' – Ekman (1992) – described envy and jealousy as basic emotions, underlying at the same time that there are no universal facial expressions that would reflect them. The ambiguity of these emotions has led to the opinion substantiated in some studies that, for example, jealousy may be a basic emotion (see, e.g., Sabini & Silver, 2005). However, it is undeniable that jealousy and the related emotion of envy arise solely from social comparisons (Alicke & Zell, 2008; Leahy, 2021; Vrabel et al., 2018), i.e., they have a clear social nature.

2 Theoretical Framework

In scientific studies, in particular in social psychology, clear criteria for close emotions differentiation have been developed (see, e.g., Salovey & Rodin, 1986). Psychologists, first of all, pay attention to the fact that the social situations that activate envy and jealousy are fundamentally different. Envy arises from objective and subjective contradictions in the interaction of an individual and society and such contradictions arise when individuals compare themselves with other members of the group to which they belong. It facilitates the hyperbolizing of their own virtues and the superiority of others. There appears intolerance to the success of other members of the group (Lange et al., 2018; Protasi, 2016; van de Ven & Zeelenberg, 2015). However, situations in which jealousy arises always involve three participants. In such a 'triangle', a relevant (close, intimate) relationship between two individuals is threatened by the third participant (Leahy, 2021, p. 418).

Envy and jealousy are very close emotions, which is why they are often confused. This is especially noticeable in English, where we can find, for instance, such metaphorical phrases as *the green-eyed monster* or *wear yellow hose*, which convey the meaning of both envy and jealousy (Wilkinson, 2002, pp. 831, 58). This means that in the Anglo-Saxons' 'naïve' picture of the world, the line between these emotions is blurred.

Language reflects naïve ideas about the surrounding reality (cf. Wierzbicka, 1999, p. 35). This may explain the fact that in explanatory dictionaries of the English language definitions record more 'naïve' characteristics of the emotions of envy and jealousy, for example: *jealousy* – '1) a feeling of jealous envy (especially of a rival); 2) zealous vigilance'; *envy* – '1) a feeling of grudging admiration and desire to have something possessed by the other; 2) spite and resentment at seeing success of the other (personified as one of the deadly sins)' (*iWeb*, n.d.). The recipient, especially a non-native English speaker, cannot have a complete picture of these emotions, as their definitions are rather vague and incomplete. Particularly vague is the interpretation of jealousy through the concept of 'jealous envy'.

However, a more detailed description of this emotion allows us to conclude that the lexeme *jealousy* conveys in English a wider range of emotional experiences, because it contains semantics of not only jealousy (romantic envy), but also intolerance or hostility to the superiority of others, i.e. it partially coincides with the meaning of the lexeme *envy*, e.g., *jealousy* – '1) a state of fear, suspicion or envy caused by a real or imagined threat or challenge to one's possessive instincts. It may be provoked by rivalry, esp. in sexual love, by competition or by desires for the qualities or possession of another; 2) a zealous desire to preserve an existing situation or relationship' (*New Webster's dictionary and thesaurus of the English language*, 1993, p. 522).

The analysis of the definitions of ENVY and JEALOUSY confirms the idea that people from different linguo-societies conceptualize emotions somewhat differently (Russell, 1991, p. 444). The linguo-cultural specifics of emotion concepts can be traced most distinctly in cross-cultural studies. Thus, a comparative study of the conceptualization of the concepts of ENVY and JEALOUSY against the background of the Russian ZAVIST′ ('envy') and REVNOST′ ('jealousy') (Stepanova Sachs & Coley, 2006, p. 209) revealed that the concept of REVNOST′, in contrast to Anglo-Saxon JEALOUSY, conveys in Russian linguo-culture only the meanings of the emotion that arises among three participants, when the third participant threatens the relationship of two of them – love, affection, sympathy, trust, and friendship. Therefore, the semantic scope of the concept of JEALOUSY is broader than that of JEALOUSY, because it contains meanings of both jealousy and envy.

In view of this, when studying the concept of JEALOUSY, even in the absence of cross-cultural analysis, the given specifics of its conceptual structure should not be ignored, as the objectivity of the results obtained may be doubted. In this regard, the corpus-based work of Ogarkova (2007) is significant. The author highlighted the features of the conceptualization of the concepts of ENVY and JEALOUSY by thoroughly studying the conceptual metaphors that represent them.

The researcher performed a qualitative and quantitative analysis of language units that objectify such metaphors, relying on the corpus-based method of Stefanowitsch (2004), Metaphorical Pattern Analysis (MPA). MPA is an important part of the methodology of his proposed corpus-based approach to the study of conceptual metaphors. His approach has become an alternative to two other cognitive and culturally oriented methods that became widespread in the late twentieth century: the lexical method of Kövecses (1990) and the Natural Semantic Metalanguage of Wierzbicka (1999).

Using corpus-based methods, Ogarkova found that the metaphoric patterns of the lexemes *jealousy* and *envy* according to quantitative (frequency) and qualitative indicators largely coincide, as it is expected in the case of close concepts. However, the parameters identified by her and according to which they differ are more important for the study of the concepts of ENVY and JEALOUSY. Thus, the Anglo-Saxons, or to be more exact the British (as the researcher formed a sample of metaphorical patterns based on data from the British National Corpus) associate JEALOUSY, in contrast to ENVY, with more intense, painful and unpleasant emotional experiences that are difficult to control. Metaphorical models of JEALOUSY focus more on conceptualizing the physiological expression of the emotion of jealousy, its effects on the human psyche, and related diseases. On the other hand, metaphorical models of ENVY focus mostly on behavioral scenarios associated with the emotion of envy in Anglo-Saxon (British) linguo-culture. Unfortunately, the aforementioned 'dual' nature of the concept of JEALOUSY was not considered by the researcher due to two possible reasons: (1) either the study of metaphorical patterns did not reveal the 'duality' of this concept, (2) or the author did not pay due attention to this fact, even though the definitions of the lexemes *jealousy* and *envy* clearly demonstrated this (Ogarkova, 2007, pp. 100, 138).

The latter reason is purely subjective. As for the former, it does not raise any doubt about its verification reliability, as the method used by Ogarkova (MPA) has been tested on the example of a number of case studies (Stefanowitsch, 2020, p. 410). However, MPA was developed almost two decades ago, which is a significant period of time if we take into account the rapid development of the methodology of corpus linguistics. The basis for such rapid methodological changes is the constant improvement of the technical (digital) capabilities of language corpora. These have become much bigger in size, thus increasing the scientific objectivity of their data. They also offer more automatic functions, which greatly simplify the analysis of language material in these corpora, reducing the number of 'manual' procedures. Such a state of affairs encourages linguists to test new corpus-based research procedures, including the authors of the proposed article, which deals with the development of an alternative to the MPA methodology. This alternative is procedurally simpler, but scientifically is no less objective.

3 Methods and Material (Language Corpus)

In modern representative language corpora, which number billions of words, there is a function which creates a language profile of words automatically. Such profiles make it possible to identify the closest semantic connections of query words on the basis of an extensive language material, thus making it possible to establish relevant fragments of the meaning of the word. In contrast to the routine search for the meanings of lexemes in various dictionaries and reference books, the methodologically correct interpretation of corpus profile data can provide the most complete information about the content of these lexemes. In addition, this information is relevant, while dictionaries often record out-dated meanings.

The digital and methodological processing of language material leads to the continuous improvement of corpora, which in turn contributes to an increase in the objectivity of indicators of frequency and strength of connection of occurrent forms. This raises the possibility that the interpretation of data from representative corpora can replace to some extent the definition and contextual and associative analysis of language units, or significantly supplement them. First of all, this applies to cases when differences between close lexemes are established, because it is necessary, firstly, to identify all the semantic characteristics of these lexemes (definition and contextual analysis), and secondly, to identify the closest associations that native speakers have in connection with the concepts that denote these lexemes (associative dictionaries, free associative experiment, etc.).

This became the impetus for the development of the methodology which helps to set the relevant parameters of the differentiation of the close emotion concepts ENVY and JEALOUSY based on the analysis of corpus profiles of their names. The study of the language profiles *jealousy* and *envy* is based on data from the iWeb web corpus, which contains 14 billion word usages. These profiles are created automatically in the form of lists of occurrent forms (left and right collocates) of these lemmas, represented by the criterion of decreasing frequency index (Freq.). In this corpus, occurrent forms are presented in four lists, divided by parts of speech (+NOUN / +ADJ / +VERB / +ADV). The list of the 50 most frequent co-occurrences is formed separately using the TOPICS function. If we extrapolate it to the conceptual level, then Freq. is an indicator of the relevance of a concept in a particular linguo-society, and the MI-index demonstrates the strength of connection (stability of compatibility) of this concept with other concepts.

The alternative methodology to MPA involves the use of similar analytical tools. Therefore, the study of the concepts of ENVY and JEALOUSY is based on those conceptual metaphors that represent them. Accordingly, the samples of research material are formed exclusively by autosemantic lemmas, as only notional words can objectify the concepts that represent the target domain in the structure of the conceptual metaphor. Those lemmas that serve as names of cultural concepts, including emotional ones, are of particular importance for the sampling, because their indicators can determine how closely they correlate with ENVY and JEALOUSY. The concepts that are most closely related are called *conceptual proximates* (CP) (Mizin, Slavova, & Khmara, 2021, p. 82).

CPs can be represented by both collocates and co-occurrences. The relevance of the CP is indicated by the frequency and strength of connection. These figures are mostly interrelated, although not always, as some CPs may have (1) high frequency at a low strength of connection or (2) low frequency at a high strength of connection. This means that in the first case, the relevance of a particular CP is distorted by 'accidental' occurrences of lemmas: the one that objectifies the CP and the one that objectifies the concept with which the CP correlates. In the second case, the relevance of the CP is distorted due to the high proportion of clichés (idiomatization) of the connection of these lemmas. In order to 'weed out' such cases, our study set the lowest limit on the frequency and strength of connection of collocates: Freq. ≤ 20; MI-index ≤ 2. In the study of conceptual metaphors, lower indicators should be defined as not objective.

In addition, while forming samples 'manually', collocates with high indicators were 'weeded out', but only in such cases when the lexemes collocated with *jealousy* and *envy* are used not as names of relevant emotion concepts, but as components of set phrases denoting proper names (e.g.:

HP Envy, *HP Envy printer*, *HP Envy laptop*, *HP Envy dv6 notebook*, *Dj Envy*, *Massage Envy*, *Brow Envy*) or psychological, technical or political terms (e.g.: *penis envy*, *womb envy*, *politics of envy*, *cartridge*). So, the collocate *HP* has the highest indicator for the query word envy (Freq. = 2077; MI-index = 7.83), but it is collocated with *envy* only in the name of the laptop series (see, e.g., *HP Envy 15z-ah000*).

At the conceptual level, collocates objectify the target domains of conceptual metaphors. The proposed research does not study conceptual metaphors specific to ENVY and JEALOUSY, but studies those that are considered most typical for the characterization of any emotion concepts (Mizin, Slavova, & Khmara, 2021, p. 80; see also Kövecses, 2020, p. 43): 1) EMOTION IS AN ENEMY; 2) EMOTION IS FIRE; 3) EMOTION IS SOMETHING INSIDE THE BODY; 4) EMOTION IS AN ILLNESS; 5) EMOTION IS A FLUID; 6) EMOTION IS A SUBSTANCE; 7) EMOTION IS A FORCE; 8) EMOTION IS A CREATURE, since the requirement of the comparability of the compared parameters (units, structures) is methodologically important for comparative analysis. These metaphors can clearly demonstrate the conceptual connections relevant to ENVY and JEALOUSY.

In addition to the sample of collocates representing the target domains of ENVY and JEALOUSY conceptual metaphors, the language corpus includes two samples: the first contains 20 collocates of *jealousy* and *envy* query words with the highest frequency and strength of connection, and the second – the most frequent co-occurrences selected from the list TOPICS. These samples contain only those collocates and co-occurrences that objectify the CP, and only those CPs that represent emotion concepts.

4 Results

By establishing the relevance of conceptual metaphors (Table 1), it is possible to identify the dominant meanings of the concepts ENVY and JEALOUSY. This helps provide a complete picture of the semantic organization of these concepts. When analysing the corpus data of the query words *jealousy* and *envy*, it is necessary to remember that their frequency differs: *jealousy* – 43,385, *envy* – 65,811 (*iWeb*, n.d.). This means that despite having a greater semantic scope, the concept of JEALOUSY is less relevant to Anglo-Saxon consciousness than ENVY, as the frequency of names of cultural concepts is considered to be a fairly objective criterion for determining their linguocultural significance (Mizin, Slavova, & Khmara, 2021, p. 87).

Table 1. Relevance of the conceptual metaphors of the emotion concepts JEALOUSY and ENVY (corpus data).

	Conceptual metaphor	JEALOUSY			ENVY		
		The most frequent collocates	MI-index	Freq.	The most frequent collocates	MI-index	Freq.
1	JEALOUSY/ENVY IS AN ENEMY	*envy*, n	9.77	1187	*jealousy*, n	9.77	1187
		anger, n	7.28	882	*hatred*, n	7.48	522
		hatred, n	8.25	880	*malice*, n	8.43	222
		resentment, n	9.04	639	*resentment*, n	7.47	218
		fear, n	4.61	577	*anger*, n	4.91	173
		insecurity, n	8.47	540	*strife*, n	7.61	157
		rage, n	6.75	396	*fear*, n	2.53	137
		provoke, v	7.01	339	*hate*, n	4.88	118
		suspicion, n	6.63	326	*anger*, v	5.62	108
		overcome, v	4.69	303	*competitor*, n	3.18	106
		rivalry, n	7.31	294	*rage*, n	4.65	93
		revenge, n	6.38	290	*wrath*, n	5.31	87
		bitterness, n	7.78	253	*malicious*, adj	4.84	84
		competition, n	2.72	230	*murder*, n	2.57	84
		hate, n	5.79	220	*jealous*, adj	5.04	82
		betrayal, n	7.41	211	*evil*, adj	3.14	82

	Conceptual metaphor	JEALOUSY			ENVY		
		The most frequent collocates	MI-index	Freq.	The most frequent collocates	MI-index	Freq.
		strife, n	7.68	163	*bitterness*, n	5.98	73
		spite, n	8.71	147	*spite*, n	7.63	70
		murder, n	3.16	125	*awe*, n	4.95	61
		violence, n	2.65	115	*provoke*, v	4.47	59
		evil, adj	3.39	97	*rival*, n	3.55	59
		grief, n	4.57	90	*suspicion*, n	4.10	57
		wrath, n	5.37	90	*revenge*, n	3.74	47
		prejudice, n	4.98	84	*rivalry*, n	4.62	46
		malice, n	6.90	76	*enmity*, n	6.47	35
		hostility, n	5.49	73	*envious*, adj	5.86	30
		enmity, n	7.46	69	*slander*, v	6.47	28
		quarrel, n	7.07	66	*contempt*, n	4.11	27
		animosity, n	7.29	63	*insecurity*, n	4.08	26
		quarrel, v	7.87	59	*prejudice*, n	3.21	25
		overcome, adj	7.80	57	*cruelty*, n	3.73	25
		vengeance, n	5.32	56	*dissension*, n	7.08	23
		aggression, n	4.51	55	*contention*, n	3.61	22
		competitiveness, n	5.48	54	*hostility*, n	3.75	22
		distrust, n	6.73	51	*guile*, n	6.61	20
		fierce, adj	4.06	49			
		contention, n	4.75	48			
		feud, n	5.45	46			
		ruin, v	2.80	44			
		cruel, adj	3.84	42			
		murderous, adj	5.91	41			
		rival, n	3.04	41			
		fury, n	4.13	38			
		treachery, n	6.66	36			
		discord, n	5.47	36			
		cruelty, n	4.19	34			
		dissension, n	7.57	32			
		humiliation, n	5.10	30			
		raging, n	5.23	28			
		irritation, n	3.20	25			
		insecure, adj	3.98	22			
		rival, adj	3.51	21			
2	JEALOUSY/ENVY IS HEAT/FIRE	*outburst*, n	6.29	58	—		
		spark, v	3.80	69			
		inflame, v	6.30	38			
3	JEALOUSY/ENVY IS SOMETHING INSIDE THE BODY	*harbor*, v	5.93	52	*harbor*, v	4.97	27
		deep-seated, adj	6.67	22			
		deep-seated, adj	6.67	22			
4	JEALOUSY/ENVY IS AN ILLNESS	*possessiveness*, n	12.89	364	*pang*, n	7.71	85
		pang, n	8.90	193	*twinge*, n	8.89	70
		frustration, n	4.99	180	*frustration*, n	2.73	38
		anxiety, n	3.49	146	*drunkenness*, n	6.61	29
		obsession, n	5.29	108	*pathological*, adj	5.33	26
		paranoia, n	6.95	103			
		insane, adj	4.53	96			
		twinge, n	9.28	91			
		mad, adj	3.40	83			
		depression, n	2.60	79			
		pathological, adj	6.55	60			
		obsessive, adj	5.83	56			
		unhealthy, adj	4.37	51			
		hurt, adj	4.23	45			
		morbid, adj	6.66	43			
		blind, v	5.02	43			

	Conceptual metaphor	JEALOUSY			ENVY		
		The most frequent collocates	MI-index	Freq.	The most frequent collocates	MI-index	Freq.
		possessive, adj	6.71	34			
		madness, n	3.55	33			
		delusional, adj	5.67	27			
		paranoid, adj	4.07	22			
		sickness, n	2.85	20			
5	JEALOUSY/ENVY IS A FLUID	*seethe*, v	8.65	89	*drool*, v	6.49	60
		stir, v	3.17	83	*seethe*, v	7.16	32
		fuel, v	4.83	74			
		fuell, v	5.8	46			
6	JEALOUSY/ENVY IS A SUBSTANCE	*pure*, adj	3.1	150	*green*, adj	5.22	1721
		tinge, n	4.53	89	*green*, n	5.31	593
		exhibit, v	2.88	57	*pure*, adj	2.68	113
		poison, n	7.16	47	*bitter*, adj	4.00	72
		sheer, adj	3.15	45	*sheer*, adj	3.16	46
		reek, v	6.71	30	*poison*, n	3.16	37
		bitter, adj	2.77	28	*tinge*, n	6.62	33
7	JEALOUSY/ENVY IS A FORCE	*lust*, n	7.16	247	*inspire*, v	2.53	161
		arouse, v	7.64	229	*lust*, n	6.52	160
		passion, n	3.47	211	*excite*, v	3.66	122
		desire, n	3.36	183	*desire*, n	2.72	118
		arise, v	3.36	180	*arouse*, v	6.58	111
		intense, adj	4.05	178	*motivate*, v	2.73	58
		motivate, v	3.93	132	*induce*, v	3.43	55
		excite, v	3.61	116	*destructive*, adj	4.05	48
		motive, n	4.72	93	*incite*, v	5.6	47
		trigger, v	3.02	92	*motive*, n	2.97	28
		rear, v	5.65	65	*root*, v	2.55	27
		destructive, adj	4.39	60	*temptation*, n	2.79	21
		incite, v	5.95	59			
		tension, n	2.54	57			
		violent, adj	2.58	48			
		root, v	3.34	46			
		affection, n	3.88	44			
		zeal, n	5.51	41			
		rouse, v	6.43	35			
		induce, v	2.79	35			
		rampant, adj	4.74	33			
		evoke, v	3.73	32			
		heartbreak, n	5.45	31			
		overwhelm, v	2.77	24			
		tantrum, n	4.86	21			
8	JEALOUSY/ENVY IS A CREATURE	*love*, n	3.33	720	*friend*, n	3.29	1301
		relationship, n	3.06	583	*neighbor*, n	4.78	435
		consume, v	3.56	200	*neighborhood*, n	4.56	377
		sibling, n	4.93	154	*peer*, n	3.73	130
		friendship, n	3.86	119	*spectre*, n	7.69	123
		monster, n	2.58	84	*devil*, n	3.79	110
		green-eyed, adj	11.11	75	*beard*, n	4.57	86
		guard, v	3.94	75	*neighbourhood*, n	3.82	53
		terrible, adj	2.62	70	*co-worker*, n	3.51	52
		lover, n	2.65	64	*classmate*, n	3.9	39
		intrigue, n	5.79	54	*demon*, n	2.68	37
		girlfriend, n	2.75	45	*weep*, v	4.46	33
		creep, v	4.0	39	*buddy*, n	2.6	30
		breed, v	3.07	37	*green-eyed*, adj	9.72	29
		gossip, v	5.95	35	*gaze*, n	3.79	28
		gossip, n	4.79	35	*hateful*, adj	4.6	22
		idol, n	3.02	22	*weep*, n	7.1	21

While studying the indicators of collocates it is important to consider not only their frequency, but also MI-index, which shows the strength of the associative connection between the concepts of the source sphere and the concepts of the target sphere within the conceptual metaphors that represent cultural concepts. Here, the frequency and MI-index correlate: the higher the frequency is, the higher the MI-index should be, and vice versa. If the strength of connection between the collocates does not differ significantly, the one with the higher frequency is more relevant. For example, the lemmas *jealousy* and *anger* (n) occur 882 times in different contexts (Table 1), i.e. their occurrence is 882. The strength of their connection is 7.28. In contrast, the strength of connection of the lemmas *jealousy* and *strife* (n) is 7.68, and the occurrence is 163, i.e. the strength of connection is actually the same as in *jealousy* and *anger* (n), but the frequency is almost five times lower. This means that the connection between JEALOUSY and ANGER is more relevant than with STRIFE for the Anglo-Saxon consciousness. Accordingly, the emotion concept of ANGER mostly defines the meaning of JEALOUSY, rather than STRIFE.

Data processing (Table 1) has demonstrated that there are only four out of eight conceptual metaphors most relevant to the emotion concepts of JEALOUSY and ENVY: 1) JEALOUSY/ENVY IS AN ENEMY; 2) JEALOUSY/ENVY IS AN ILLNESS; 3) JEALOUSY/ENVY IS A FORCE; 4) JEALOUSY/ENVY IS A CREATURE. These are unevenly represented in the conceptual structure of the studied concepts (Table 2).

Table 2. Dominant conceptual metaphors of concepts JEALOUSY and ENVY (in ascending order from light to black).

	Conceptual metaphor	JEALOUSY	ENVY
1	JEALOUSY/ENVY IS AN ENEMY		
2	JEALOUSY/ENVY IS AN ILLNESS		
3	JEALOUSY/ENVY IS A FORCE		
4	JEALOUSY/ENVY IS A CREATURE		

In Table 2, the metaphor JEALOUSY/ENVY IS AN ENEMY emphasizes the clear dominance of negative meanings in the compared concepts. At the same time, JEALOUSY conceptualizes more negative and intense emotional experiences than ENVY, which is evidenced by a larger part in the conceptual structure of the first concept of metaphors JEALOUSY IS AN ILLNESS (negative) and JEALOUSY IS A FORCE (intensity). The representation of the metaphors JEALOUSY/ENVY IS AN ENEMY and JEALOUSY/ENVY IS A CREATURE is almost the same.

JEALOUSY has the closest conceptual connection with the concept of ENVY (Table 1). It is fully consistent with the fact that these concepts have numerous semantic similarities. In addition, JEALOUSY is closely correlated with the concepts of ANGER, HATRED, LOVE, RESENTMENT, FEAR, RELATIONSHIP and INSECURITY. This means that in the Anglo-Saxon consciousness, the emotion of jealousy is associated primarily with such intense and negatively labelled emotions as anger, hatred, resentment, and fear, which are directed against love and friendship. Jealousy fills a person, boils in them (JEALOUSY IS A FLUID), causing obsessions and mental disorders (JEALOUSY IS AN ILLNESS), destroys them from inside (JEALOUSY IS A CREATURE). However, the concept of ENVY, which also conceptualizes intense and negative emotions (HATRED, MALICE, RESENTMENT), is not closely related to fear. This is one of the essential differences between the concepts of JEALOUSY and ENVY: jealousy causes fear due to the possible loss of the object of adoration, and envy, on the contrary, will disappear if the object that activates it vanishes. According to corpus data, most often friends and neighbours can act as such objects.

Jealousy is characterized as a green-eyed creature more often than envy. Apparently, this is due to the prevalence of the metaphorical expression *green-eyed jealousy*. The stability of this metaphor

in the Anglo-Saxon surrounding is evidenced by the high indicator of connection strength of the adjective *green-eyed* (MI-index = 11.11) at a relatively low frequency (Freq. = 75) (cf. indicators of the collocate *green-eyed* of the lemma *envy*: MI-index = 9.72; Freq. = 29). However, green is more associated not with *jealousy*, but with *envy*: *green*, adj – MI-index = 5.22; Freq. = 1721; *green*, n – MI-index = 5.31; Freq. = 593. As person's eyes and skin turn green due to intense bile secretion, this fact may indicate that envy is no less intense an emotion than jealousy. At the same time, the association of jealousy and envy with the colour yellow (see above, *wear yellow hose*) is no longer relevant for English speakers.

An important place in the conceptual structure of JEALOUSY is occupied by the meanings of obsessive ideas of ownership instinct, which confirms, e.g., the significant strength of connection between possessiveness and jealousy: MI-index = 12.89; Freq. = 364. This painful attraction to the other person, that is often transformed into pathological obsession and madness, is conveyed by a number of collocates: *obsession*, *paranoia*, *insane*, *mad*, etc. These objectify the metaphor JEALOUSY IS AN ILLNESS, which is one of the dominant ones for the concept of JEALOUSY. However, this metaphor is irrelevant for ENVY. In this case, envy is associated mainly with acute pain, which occurs due to intolerance of the subject of envy to the superiority of others, as well as due to an irresistible desire to possess the material goods belonging to the object of envy.

It should be noted that the proposed procedure for studying the conceptual metaphors of the concepts ENVY and JEALOUSY did not confirm the aforementioned fact that the latter concept contains part of the semantic scope of the former. This conclusion is consistent with the results of the study of metaphors of these concepts on the basis of metaphorical patterns (Ogarkova, 2007, p. 138). Such coincidences in the results are the basis for the assumption that qualitative and quantitative analyses of corpus data do not reveal the 'dual' nature of JEALOUSY. In order to verify this assumption, the concepts of ENVY and JEALOUSY are further compared according to the criteria of intensity and evaluation (Table 3). These criteria are determined by establishing the range of emotion concepts that have the closest connection with ENVY and JEALOUSY. Taking into account a person's constant desire to balance negativity and positivity in their dynamic emotional world, it can be assumed that emotions close to jealousy and envy can be not only negative or positive, but also ambivalent. Plutchik's wheel of emotions (Plutchik, 1997) serves as a basis for determining the intensity of CP.

The results of the samples analyses of collocates and co-occurrences, which are the names of emotional CP of concepts JEALOUSY and ENVY, are shown in percentages in Table 4.

On the one hand, comparison of the percentages of CP of JEALOUSY and ENVY confirms the results of the analysis of conceptual metaphors with regards to the clearly expressed intensity and negative labelling of these concepts. On the other hand, however, these indicators of the semantic structure of JEALOUSY and ENVY almost coincide. This fact is, to some extent, inconsistent with the aforementioned conclusions that JEALOUSY conceptualizes more intense and negative emotional experiences. On the contrary, the percentage of those CP which express emotions of high intensity is slightly higher in the concept of ENVY, which is especially noticeable on the example of co-occurrences. The high intensity of ENVY is evidenced by close associations of this concept with the colour green, as was mentioned previously.

Despite the clearly negative expression of envy, researchers agree that this emotion is also characterized by positive characteristics (Crusius et al., 2020, p. 4). Positive envy, which is considered 'white' in the 'naïve' picture of the world, adds motivation to the individual, encouraging them towards self-improvement (development) and to achieve higher social status. Negative 'black' envy is destructive, because it is based on the hostile attitude of the envious person to the preferences (superiority) of others, directing their hatred, anger, irritation and greed to the object of envy. From such a perspective, jealousy cannot be unequivocally negative, because it is primarily related to love. This is what activates paradoxical emotional experiences in the individual, which are an amalgam of love, on the one hand, and, anger, hatred and fear, on the other hand.

It is noteworthy that the study of the most relevant CP for the concepts under comparison did not reveal amalgams of meanings of jealousy and envy in the conceptual structure of JEALOUSY.

Table 3. The most relevant CP (ie – intense emotion; hie – high intense emotion; neg. – negative; pos. – positive; amb. – ambivalent).

	JEALOUSY				ENVY			
	Collocates	Freq.	Collocates	Freq.	Collocates	Freq.	Collocates	Freq.
1	*envy*$^{\text{neg.}}$	1187	*love*$^{\text{pos.}}$	422	*jealousy*$^{\text{neg.}}$	1187	*jealousy*$^{\text{neg.}}$	370
2	*anger*$^{\text{ie/neg.}}$	882	*anger*$^{\text{ie/neg.}}$	374	*hatred*$^{\text{hie/neg.}}$	522	*lust*$^{\text{ie/amb.}}$	252
3	*hatred*$^{\text{hie/neg.}}$	880	*envy*$^{\text{neg.}}$	371	*greed*$^{\text{neg.}}$	339	*hatred*$^{\text{hie/neg.}}$	247
4	*love*$^{\text{pos.}}$	720	*hatred*$^{\text{hie/neg.}}$	320	*pride*$^{\text{amb.}}$	284	*wrath*$^{\text{hie/neg.}}$	209
5	*resentment*$^{\text{ie/neg.}}$	639	*happiness*$^{\text{pos.}}$	318	*malice*$^{\text{ie/neg.}}$	222	*sorrow*$^{\text{ie/neg.}}$	195
6	*greed*$^{\text{neg.}}$	618	*fear*$^{\text{ie/neg.}}$	283	*resentment*$^{\text{ie/neg.}}$	218	*affection*$^{\text{amb.}}$	190
7	*fear*$^{\text{ie/neg.}}$	577	*desire*$^{\text{ie/pos.}}$	268	*anger*$^{\text{ie/neg.}}$	173	*pride*$^{\text{amb.}}$	174
8	*rage*$^{\text{hie/neg.}}$	396	*guilt*$^{\text{ie/neg.}}$	246	*admiration*$^{\text{hie/pos.}}$	170		
9	*possessiveness*$^{\text{ie/amb.}}$	364			*lust*$^{\text{ie/amb.}}$	160		
10	*suspicion*$^{\text{neg.}}$	326			*fear*$^{\text{ie/neg.}}$	137		
11	*pride*$^{\text{amb.}}$	306			*desire*$^{\text{ie/pos.}}$	118		
12	*bitterness*$^{\text{ie/neg.}}$	253			*hate*$^{\text{hie/neg.}}$	118		
13	*lust*$^{\text{ie/amb.}}$	247			*rage*$^{\text{hie/neg.}}$	93		
14	*hate*$^{\text{hie/neg.}}$	220			*wrath*$^{\text{hie/neg.}}$	87		
15	*passion*$^{\text{ie/pos.}}$	211			*bitterness*$^{\text{ie/neg.}}$	73		
16	*guilt*$^{\text{ie/neg.}}$	204			*spite*$^{\text{hie/neg.}}$	70		
17	*desire*$^{\text{ie/pos.}}$	183			*covetousness*$^{\text{neg.}}$	63		
18	*frustration*$^{\text{ie/neg.}}$	180			*awe*$^{\text{ie/amb.}}$	61		
19	*spite*$^{\text{hie/neg.}}$	147			*avarice*$^{\text{neg.}}$	42		
20	*anxiety*$^{\text{ie/neg.}}$	146			*frustration*$^{\text{ie/neg.}}$	38		

Table 4. Percentage of intensity and axiological labelling of concepts JEALOUSY and ENVY.

	Intensity				**Evaluation**					
	Collocates		Co-occurrences		Collocates			Co-occurrences		
	ie	hie	ie	hie	neg.	pos.	amb.	neg.	pos.	amb.
JEALOUSY	55	20	50	12,5	70	15	15	62,5	37,5	—
	Total: 75		Total: 62,5							
ENVY	45	30	42,9	28,6	75	10	15	57,1	—	42,9
	Total: 71,4		Total: 62,5							

However, a comparison of the data in Table 4 allows us to trace the close relationship of the proximate GREED, not only with ENVY but also with JEALOUSY (Freq. = 618). It can be assumed that this is evidence that in the Anglo-Saxon consciousness JEALOUSY may be associated with material goods that activate greed, although in the samples of the proposed study there are no collocates and co-occurrences to denote such goods (cars, housing, clothing, etc.). As for the concordance data with the query word *jealousy*, they confirm the connection of this word with, for example, the lexeme *car*, which is also pointed out by Stepanova Sachs and Coley (2006, p. 209). However, for every 1,000 examples of the contextual use of the lemma *jealousy*, there are only three occurrences with the lemma *car* (*iWeb*, n.d.), which means that these lemmas are irrelevant to English speakers.

In general, it should be acknowledged that the tested corpus-based methodology failed to fully reveal the parameters of differentiating the close emotion concepts of ENVY and JEALOUSY, and some results are somewhat contradictory. The methodology therefore requires further improvement, primarily through qualitative analytical procedures. However, the results of the analysis of conceptual metaphors representing the concepts of ENVY and JEALOUSY noticeably coincide with those which were obtained on the basis of MPA (Ogarkova, 2007, p. 138). Therefore, there are reasons to believe that the developed methodology may be an alternative to MPA. A certain advantage of this method is that its analytical tools are simpler, yet no less reliable than MPA. This is due to the fact that the proposed methodology focuses on the new technical capabilities

of language corpora, which contribute to the objectivity of digital language material. In addition, web corpora, in particular iWeb, increase the scientific reliability and, no less importantly, the relevance of the data of the studied material, due to the significant amount of corresponding texts. On the other hand, Ogarkova (2007, p. 99) in her work relied mainly on the data of the 'preserved' British National Corpus, which could have had a somewhat negative impact on the results of her research. There is also a possibility that the researcher's enhanced objectivity in the study of metaphorical patterns through a rather complex statistical analysis (Fisher exact test) may have been neutralized, to some extent, by possible subjective factors that influenced the formation of her sample. Because of this, 'manual' procedures are considered to be a weak point in the methodology of corpus linguistics. In doubtful cases, when one and the same metaphorical pattern can objectify two or more conceptual metaphors, it is often the researcher's own judgement which determines whether this pattern belongs to a specific metaphor.

5 Conclusions

In order to achieve the goal of the proposed work, which was to establish relevant parameters for differentiating the close emotion concepts of ENVY and JEALOUSY based on the analysis of profiles of their names in the iWeb web corpus, a corpus-based methodology consisting of three research steps was tested. These steps are based on the methodology of both traditional and cognitive linguistics, which make it possible to study the object of study at two levels – linguistic and conceptual.

These steps involve (1) elements of definition analysis (comparison of vocabulary definitions of the lexemes *jealousy* and *envy*), (2) elements of conceptual analysis (comparison of the semantic content of conceptual metaphors representing ENVY and JEALOUSY) and (3) qualitative and quantitative processing of corpus data (defining the most relevant conceptual metaphors of the concepts ENVY and JEALOUSY, as well as comparison of the latter on the parameters of intensity expression and evaluation).

Using the proposed methods, it was established that:

1. the names of the emotion concepts of ENVY and JEALOUSY show a close semantic intersection, but the lexeme *jealousy* conveys a wider range of emotional experiences, as it contains semantics not only of jealousy (romantic envy), but also hostility to the superiority of others, i.e., it partially covers the meaning of the lexeme *envy*;
2. four conceptual metaphors are the most relevant to the concepts of JEALOUSY and ENVY: 1) JEALOUSY/ENVY IS AN ENEMY; 2) JEALOUSY/ENVY IS AN ILLNESS; 3) JEALOUSY/ENVY IS A FORCE; 4) JEALOUSY/ENVY IS A CREATURE. These metaphors are unevenly represented in the conceptual structure of these concepts, in particular EMOTION IS AN ILLNESS and EMOTION IS A FORCE are more important for JEALOUSY, than ENVY, which may indicate that the first concept conceptualizes more negative and intense emotional experiences;
3. the study of the conceptual metaphors of the concepts ENVY and JEALOUSY by comparing them on the criteria of intensity and evaluation confirmed the dominance of negative meanings in these concepts, as well as a clear intensity. It is noteworthy that despite all the negativity of ENVY and JEALOUSY, there is a fairly high proportion of positive and ambivalent meanings in their conceptual structure, due to the ambivalence of the emotional world of a person as a whole. At the same time, the conducted analysis did not confirm that JEALOUSY represents a more intense and negative emotion than ENVY, as the percentage of those CP that express high-intensity emotions is slightly higher in the concept of ENVY, as evidenced by co-occurrences and close associations of ENVY with the colour green;
4. neither the proposed procedure for studying the conceptual metaphors of the concepts of ENVY and JEALOUSY nor their comparison on the criteria of intensity and evaluation revealed the 'dual' nature of JEALOUSY, which consists in the presence of an amalgam of meanings of jealousy and envy in its conceptual structure.

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