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A contrastive study between English and German: fear/Angst and guilt/Schuld in decisionmaking

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Abstract

The aim of this paper is to study the words expressing the emotions of *fear/Angst* and *guilt/Schuld* in English and German in decision-making contexts. The conceptual metaphor is used as a cognitive tool to test how decision making might result from the way the information is semantically expressed via the emotions of *fear/Angst* and *guilt/Schuld*. Using a corpus-based approach to the study of metaphorical mapping, I identify which conceptual metaphors have the strongest/weakest association with the given emotion words under scrutiny.

Keywords: corpus, conceptual metaphor, decision-making, cognitive semantics

INTRODUCTION

In this paper, I present a contrastive analysis of the emotion markers *fear/Angst* and *guilt/Schuld* as expressed in the English and German languages in decision-making. The research on mental processing from the psychological perspective and the perspective of emotions as expressed in language have shown that the given emotions proved to be the most important ones not only in decision-making but also in judgment and argument. The main aim of this study is to illustrate a twofold strategy for the analysis of emotions in language, *i.e.*, how a corpus-based approach to the

study of emotions benefits from the conceptual mapping of target domains (*fear, Angst, guilt, Schuld*) for the purpose of identifying variations in semantic relations in language. Moreover I will show that a linguistic approach to emotions can be effectively accommodated in psychological models of emotions.

I shall begin with a review of the notions of *fear* and *guilt* as presented in the psychological and philosophical literature to take stock of the differences of their conceptualization. The background is important when evaluating such complex emotions on a contrastive cross-cultural level within mental processing. The second section then overviews the approaches to the study of emotions in decision-making and presents a methodology of analysis. The third section describes methodology used for the corpora followed by the fourth section with results and discussion.

1. EMOTIONS OF FEAR AND GUILT: PSYCHOLOGICAL, COGNITIVE AND LINGUISTIC APPROACHES

The emotions of fear and guilt have a rich philosophical and psychological background. Aristotle talks about "three things that are present in the soul" referring to "passions, capacities and characteristics" where passions include fear alongside with desire, anger and joy (2011: 32). For instance, he regards fear in respect to confidence and courage as "the anticipation of a bad thing" (*ibid*: 55). In his philosophical writing *Trembling and Fear* (1863), Danish philosopher Kierkegaard, a "father of existentialism", addresses fear in relation to free will, conflict and sin.

Various psychological dictionaries including (visual) thesauruses¹ show that the emotion word *guilt* has close conceptual proximity with *shame*, *innocence* and *suffering*. For example, as part of Freud's psychoanalysis, guilt is linked with remorse and "uncommitted aggression", which explains why people feel guilty when they think they have done something bad or sinful (Freud, 1929).

Guilt is one of the few emotional concepts which has a direct influence on the perception of cultural mentality and general national identity (Wallbott & Klaus, 1995). Thus, Japanese culture is a shame culture, when American and German are guilt cultures.

Guilt as an emotion of self-assessment (Taylor, 1985) varies significantly in the intrapersonal context (Baumeister, Stillwell & Heatherton, 1994) due to the defence mechanisms against guilt, such as repression or self-harm (Fenichel, 1983). On the other hand, guilt has a strong collective bond, which is reflected in the culturally marked notion of *collective guilt* (Branscombe, 2004). Guilt is tied to the religious concepts of *sin* and often perceived as a "valuable barometer of social morality" (Karstedt, 2005: 299). Plutchik stated that "guilt is born of the interaction of pleasure and fear" and is based on "forbidden joys" (1991: 161).

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¹ Available online at http://www.visualthesaurus.com

Fear and guilt can be connected with each other via the association that fear of not living up to expectations leads to guilt. Plutchik (1991) explains that in the case of expectation or anticipation "guilt is a result of anticipated pleasure being fused or mixed with anticipated fear" (*id.*: 162).

Starting from the mid-20th century psychology took over the topic of emotions and their impact on personality and cognition. In his survey of the attitudes toward emotions in seven cultures (including American and German), Izard (1971) points out that the most dreaded emotion was fear. The emotion of fear is one of a few (normally from 6-8) basic emotions in various theories of basic emotions. For instance, Plutchik (1980) included fear as the primary emotion in his psychoevolutionary theory of emotions and multidimensional model of emotions.

The question of emotional involvement in mental processes highlighted the era of cognitive approaches to emotions. Two interesting approaches to their assessment should be mentioned in respect to the study of emotions in mental processing: (i) the "core" meaning view and (ii) the "dimensional" view (Kövecses, 2006).

For example, the way Wierzbicka (1995) analyses emotions as semantic domains with the Natural Semantic Metalanguage (NSM) accounts for the core meaning of emotion categories. From the psychological perspective NSM coincides with the Cognitive Appraisal Theory (Schachter & Singer, 1962), which states that emotions are first assessed cognitively and then an appraisal of a situation leads to an emotional response. Assuming that a set of semantic primes (evaluators good/bad) exist in every human language, Wierzbicka employs the principle of reductive paraphrase to say the same with simple translatable words focusing on semantic content (1995: 293):

X felt guilty =

X felt something

sometimes a person thinks something like this:

I did something

because of this, something bad happened

because of this, a person feels something bad

X felt like this

Angst is identified by Wierzbicka as "a peculiarly German concept", while Angstzustand (a state of Angst) is identified as a state of depression. Fear is "not a 'state' it is either a feeling, or disposition to a feeling, linked with thought about someone or something" (1999: 124). When Germans say Ich habe Angst (literally I have fear) they usually do not specify the cause or nature of this emotion or the reasons for being afraid or "having fear". It is a "nameless Angst". This can be identified as the main difference between Angst and another German word which is used to express the emotion of

fear – Furcht. According to Wierzbicka's case study Furcht is closer to the English fear than Angst but the latter is more common in German speech (ibid.).

The dimensional view on emotion comprises "a fixed set of dimensions of meaning" and according to Kövecses it aims to eliminate "the large gap between emotional meaning and emotional experience" (2003: 8). Thus, within the lexical approach to emotions, Kövecses points out the direct dependence between the most frequent metaphorical expressions – with conceptual source and target domains – and the strongest bond between them in the brain. Following the principles of the Conceptual Metaphor Theory (Lakoff & Johnson, 1980) and metaphor logic, emotions can be understood as FORCES including sub-categories that are most frequent in English and German, such as external **autonomous** forces, or **opposing** forces.

Due to the survival-driven nature of fear as a basic emotion, the dimensional view seems to dominate in the conceptualization of *fear*. Thus, such dimensions as OBJECT (*coping with fear*) or FORCE (*to be driven by fear*) are frequent source domains for the conceptual mapping of *fear*.

2. EMOTIONAL SIDE OF DECISION-MAKING

As language can be both a tool for provoking emotions and a source of emotional presence, emotions are linked with linguistics via information processing, *i.e.* how people acquire, process and store information. Information processing is a part of a decision-making process because when making a decision we are making up our minds on any point on a course of action, a resolution or determination or on thinking through the final and definite result of examining a question.²

Decision-making is a complex notion, which can be defined as a mental process with the main aim to "choose what should be done or which is the best of various possible actions".³

The study of emotions in decision-making started to show interesting results three decades ago mainly from the psychological perspective. Thus, research in psychology shows that the influence of emotions in decision-making can be higher than the calculated probabilities of the outcome (Han & Lernen, 2009). Emotions have started to be approached as "informational inputs into decision-making" (Loewenstein & Weber, 2001).

It has become evident that emotions are valuable parts of mental processing. Numerous psychological theories on cognition and emotions, such as Scherer's component process model (1984), risk-as-feeling hypothesis (Loewenstein, Weber, Hsee & Welch, 2001), Pfister and Böhm's framework of emotional function in decision-making (2008), Peter's functional roles of affect (2006) or Damasio's Somatic Marker hypothesis (2000) converge: emotions frequently drive behaviour, decision-making and judgment.

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² Oxford English Dictionary (2014), available at www.oed.org

³ Collins COBUILD Advanced Learner's Dictionary (2014), available at http://www.collinsdictionary.com

In the wake of cognitive approaches to linguistics and psychology in the 1960s, emotions studied as a part of rational mental processes. For example, an attitude-functional theory (Katz, 1960) states that decisions with rational logic still include an attitude element or else the elaborated likelihood model of persuasion (Petty & Cacioppo, 1986) emphasizes that motivation to make a "correct" decision inevitably drives attitudes to the decision.

I propose to study the emotion words of *fear/Angst* and *guilt/Schuld* as **immediate** and **anticipated** types of emotions within the interdisciplinary framework as emotions provide various kinds of information (e.g., intensity or duration of emotional reaction). In the context of this paper the image-schematic sources like OBJECT, CONTAINER etc. are understood as representative of the lexical and semantic information contained in the words themselves.

To this aim, I consider two approaches to emotions in decision-making. Firstly, according to the Loewenstein-Lerner classification, I argue "anticipated emotions are a component of the expected consequences of a decision" (2001). What is important about the immediate type of emotions is that they bear not only a quick evaluation of the situation but also options for further actions. Secondly, I rely on Pfister and Böhm's framework that focuses on the four-functional framework for "emotional phenomena as implementing specific mechanisms to account for different functions that arise in decision-making" (2008: 2). There are four major functions that emotions provide: (i) information (ii) speed (iii) relevance and (iv) commitment. In this paper I address the information function because according to Peters (2006) and as cited by Pfister & Böhm "the notion of information is related to our conceptualization" (id.: 9).

3. CONTRASTIVE ANALYSIS OF EMOTIONS IN CORPORA

There is a significant boost in research of language based on quantitative corpus-based analysis (Stefanowitsch, 2004) and on software-assisted qualitative data analysis (Kimmel, 2012). Despite having some exclusive characteristics, both approaches successfully employ the Lakoff and Johnson typology of metaphors with metaphor logic for the successful analysis of the lexical concepts and their semantics.

3.1. Corpora

Cross-linguistic corpora are balanced as far as possible in size, composition (various genres, texts), tools to carry out semantically oriented searches and access to the time span.

As far as English is concerned, I use the Corpus of Contemporary American English (COCA) from Brigham Young University, which is "the largest freely-available corpus of English and the

only large and balanced corpus of American English" (COCA) (450 million words covering time span 1990-2012).

Concerning German, I use Digitales Wörterbuch der deutschen Sprache des 20. Jhs. (DWDS) by the Berlin-Brandenburg Academy of Science and Humanities, which is also a freely-available, dynamic corpus of the German language. The "Kernkorpus" is the core corpus and contains 122 million words of text, with various sections and a time span covering 20th century. To balance the number of words to the COCA, I use the core corpus of DWDS and two corpora from DWDS Zeitungskorpora (newspaper corpora), *i.e.*, Berliner Zeitung (1995-2005) and Potsdamer Neueste Nachrichten (2003-2005). The total number of words in DWDS amount to a total of 416 million words.

3.2. Practical Methodology: A Twofold Linguistic Approach

The extraction of the list of co-occurrences for the given search was done using part-of-speech tagging (POS) of a search word (e.g., "guilt.[nn*]"). Language can offer various possibilities of emotion representation. For instance, an adjective in prenominal position often involves emphatic description (*tremendous guilt*) but in metaphor logic, nouns and verbs more often form source domains for the conceptualization of emotions (GUILT IS A BURDEN). Thus, for COCA a 4-word span was set for nouns and verbs and a 2-word span for adjectives to avoid noise. A minimum frequency (MI-index) was implemented to avoid high scores of unnecessary combinations. The methodology used for the German corpus is similar to the one used for COCA. The search in DWDS was based on lemma (e.g., "\$1=Angst") with MI-index and without the STTS-Tags⁴ of a search word due to the output specifics of the search in DWDS.

The next steps are to extract occurrences from the corpora and to identify and group the metaphorical patterns that occur. To demonstrate the target domain metaphorical patterning, I used 100 examples for each node word. The principle of selection is based on the context examination of collocation. An example should reveal metaphorical understanding as in "Beneath all the **guilt** and **fear**, there was a loneliness he had never allowed himself to feel [...]⁵". In this example *guilt* and *fear* conceptualize as "objects" (GUILT IS AN OBJECT). Another important point is the descriptive parameters of emotion including speed (*sudden fear*), degree (*the biggest fear*) or intensity (*deepseated guilt*).

With the extensive quantification information accumulated from the corpora I identified which conceptual metaphors have the strongest/weakest association with the emotion words of *fear/Angst* and *guilt/Schuld*. I relied on the classification of conceptual metaphors by Kövecses and on the most

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⁴ German equivalent of POS-tagging

⁵ all further examples are from COCA and DWDS

comprehensive resource of metaphorical mappings – the Master Metaphor List. Thus, the following conceptualizations were identified as major:

EMOTION IS:

AN OBJECT (thing, possession)

A FORCE (antagonist, counteraction)

A POWERFUL ENTITY INSIDE THE BODY (in eyes, heart)

A CONTAINER (liquid)

AN ENTITY WHICH IS NOT A MATERIAL OBJECT (idea, factor)

Further on, for the psychological evaluation of emotions as expressed in corpora I will observe how the given emotions can function as immediate or anticipated types of emotions in decision-making.

4. RESULTS AND DISCUSSION

4.1. Emotional Presence in Corpora

Fear/Angst

Observation of the emotion marker *fear* in COCA has shown that the conceptual proximity of the emotion word *fear* is most frequent with itself (*fear*) and other nouns with negative connotations such as *failure* or *anxiety*. In addition to that, the negative verbal collocation indicates that fear (*to*) *loose* somebody or something is dominant in English. However, the positive combinations with fear in the sense of counterforce are marked by the most frequent verb (*to*) overcome.

Fear: collocates	Verb		Noun		Adjective	
Frequency/all	losing 275	25695	fear 572	49162	biggest 275	34905
	overcome 196	10521	failure 309	27245	greatest 260	25798
	falling 163	20202	anxiety 287	14952	constant 156	16964

Table 1: The most frequent collocates for the node word *fear*

If responses to fear are modulated by culture (Chiao, 2008), then there must be some differences in the way people from different cultures cope with it. When extracting examples from corpora for a qualitative selection it was noticed that the emphasis is shifted toward intensity for fear in English and quality for fear in German. Fear in English is described as threatening with the first most frequent

adjective collocates *biggest* and *greatest*. In German fear combines rather with adjectives showing such qualities as *strafrechtlich* (*penal*), *festgestellt* (*established*) or *gering* (*minor*).

Frequency/all	Kernkorpus		Berliner Zeitung		Potsdamer	Neueste
					Nachrichten	
Angst	9975	103.432 pmw ⁶	23796	202.692 pmw	1242	13.364
Schuld	6773		15381		795	pmw

Table 2: Frequency for the node words Angst and Schuld

Guilt/Schuld

Observation of the emotion marker *guilt* in COCA has shown a conceptual proximity with the noun *feelings* as the second most frequent (after the noun *innocence*) and the verb *feel* and *felt* as the first and second most frequent co-occurrences. If guilt leads to a good social adjustment and increases the perspective of restoring a social bond (Leith & Baumeister, 2008), then the high frequency of **feeling** guilty can be further studied on the subject of the positive activity in the choice of alternatives and action readiness.

Guilt: collocates	Verb		Noun		Adjective	
Frequency/all	feel 242	155304	innocence 354	4771	collective 66	12225
	felt 239	114078	feelings 342	23249	sexual 57	46228
	admit 71	15503	shame 296	9275	liberal 24	21465

Table 3: The most frequent collocates for the node word *guilt*

The origin of *guilt* in English focuses on *guilt* as *collective*, which is the most frequent adjective collocation. Evaluation of *guilt* with regard to intensity or quality represents it as an object or force: terrible, tremendous, overwhelming or profound. The conceptual proximity of guilt is most frequent in both languages with the opposite notions of innocence in English and $S\ddot{u}hne$ (atonement) in German. Interestingly, the third most frequent word in English associated with guilt is shame, which is almost marginal in German: $Scham\ und\ Schuld^7 - 12$ (phrase search totals).

Angst and Schuld are more inclined toward **pairing** with other emotion markers or related notions mainly with negative connotations: Angst und Schrecken (fear and terror) co-occurred in DWDS 440 times (phrase search totals), Schuld und Sühne (guilt and atonement) – 171 (phrase search totals). An overall observation of both corpora with the methods described earlier indicates

⁶ per million words

⁷ shame and guilt

that English shows some **transition** qualities of both *fear* and *guilt* when such examples are almost marginal in German: *guilt was morphing into fear*.

4.2. Metaphorical Mapping of Emotions

The results from the metaphorical mapping of 400 examples (100 for each emotion word) show that the most frequent conceptualization for both emotions in both languages is OBJECT. FORCE most frequent conceptualization for both emotions in both languages is OBJECT. FORCE conceptualization is also strong and shows that further metaphorical sub-division is possible due to the variations of linguistic expressions. The distribution of conceptualizations in languages is shown in Diagram 1.

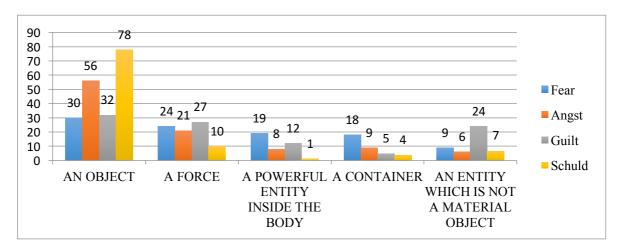


Diagram 1: Conceptualization of fear/Angst, guilt/Schuld

Fear/Angst

The results from the metaphorical mapping of the emotion marker *fear/Angst* showed dominance of OBJECT conceptualization alongside FORCE and ENTITY INSIDE THE BODY conceptualization. Kövecses states that "our understanding of fear is embodied" (2010: 335), which is supported in the pilot analysis with the numerous examples of fear as an immediate and primal emotion affecting body. This conceptualization points out a general similarity in conceptualization of *fear* in English and German.

FEAR/ANGST IS AN OBJECT

The most frequent conceptualization represents fear/Angst as a **physical object** or **animate object** (remember the knot of fear and anxiety, [...] fand die Angst keinen Ausweg⁸). Although such occurrences are not frequent, it is worth mentioning that fear can be understood as a **mixture** (emotional cocktail of fear, guilt and sadness). The conceptualization of **possession** is generally stronger in German (Angst bekommen⁹). In German an interesting co-occurrence of fear was found where it is associated with the idea of path in the combination with the noun **labyrinth** (ein Labyrinth der Ängste¹⁰).

FEAR/ANGST IS A FORCE

Fear is understood as an **autonomous force** (to be driven by fear of failure, Perhaps machte ihn diese Angst so vorsichtig $[...]^{II}$) or it can be perceived as an **antagonist** in the form of **attack** (fear gripped him, von Angst überkommt werden¹²). **Domination** (all-consuming fear of losing) and **destruction** (unter Angst leiden¹³) often accompany our perception of fear as well as opposing it – a **counterforce.** The latter is presented more frequently in German (die Angst überwinden¹⁴).

FEAR/ANGST IS A POWERFUL ENTITY INSIDE THE BODY

Powerful entities representing *fear* generally affect **body parts** including paralysis, shaking or trembling (*I was trembling with fear*) as well as affecting **facial expression** (*mit Angst in der Augen*¹⁵) or **internal organs** especially heart and gut (*a cold hand of fear gripped my heart*).

FEAR/ANGST IS A CONTAINER

The perception of *fear* as a container is represented widely with prepositions (*in*, *through/durch*, *out* of/aus, von). Not only do people find themselves inside *fear* as a **vessel** (*the home owner is in fear of* losing his property, in schrecklicher Angst¹⁶), trying to get out of it (*he acted out of genuine fear*) but one can also perceive *fear* as a **liquid** (*to be filled with fear*). Conceptual metaphor THE BODY IS

⁸ fear found no exit

⁹ to get scared

¹⁰ labyrinth of fear

¹¹ this fear made him so cautious

¹² overcome by fear

¹³ to suffer from fear

¹⁴ to overcome fear

¹⁵ with fear in the eyes

¹⁶ in terrible fear

A CONTAINER FOR EMOTION is also represented in the context of being full of fear (voller $Angst^{17}$)

FEAR/ANGST IS AN ENTITY WHICH IS NOT A MATERIAL OBJECT

This group is not rich in examples, however it seems very interesting because the way people conceptualize fear as something not material can be rather unique, especially in English. Fear in this group is understood as a **blur** (a blur of fear and panic), **portion** (significant portion of the fear of falling,) or **echo** (this was partly an echo of my own pain and fear). More general perceptions of fear as a **feeling** are represented in German (ein Ausdruck der Angst¹⁸).

Guilt/Schuld

The results from the metaphorical mapping of the emotion marker guilt/Schuld showed absolute dominance of an OBJECT conceptualization. The absence of a solid POWERFUL ENTITY INSIDE THE BODY conceptualization in comparison to fear/Angst can be explained by the nature of guilt as a complex self-assessed emotion. Thus, guilt as expressed in language does not show the variety of expression of this emotion via body changes. A person does not often tremble with guilt but most likely suffers from guilt.

GUILT/SCHULD IS AN OBJECT

The conceptualization of possession in both cultures is expressed in language via verbs such as holding, taking or getting rid of guilt (Schuld tragen¹⁹). In German the tendency toward receiving (bekommen) or giving (geben) guilt as an object is frequent. In English when I talk about guilt as an object it generally follows the actions of uncovering, searching or assuaging guilt.

Guilt in both cultures often belongs to someone rather than affects them. However, guilt shows collective characteristics in both cultures mainly through the historical concepts of white guilt, or collective guilt in English or Kollectveschuld (collective guilt) in German. Specifically in German, some examples of guilt were identified in the sense of dismissing guilt, i.e., schieben (to push) on someone else as in Schuld auf andere zu schieben (to push guilt on other). One of the most expressive examples of guilt as a plant was found in COCA: paternal guilt was growing like a mold on a loaf of bread in summer.

filled with fear the expression of fear

¹⁹ to carry guilt

GUILT/SCHULD IS A FORCE

Guilt can also be perceived as an antagonist in a form of attack (terrible guilt is gnawing at him), pain (twinge of guilt) or domination (dominated by the guilt he felt). Guilt is definitely understood as a **burden** in both languages (Schuld zuschieben)²⁰. As an **autonomous force** guilt is also represented in both languages, although less than fear (to be driven by the forces of guilt). In English examples of **counterforce** show that people are struggling, dealing with guilt and protecting against guilt (struggle with an irrational guilt). In German the expression of being free from guilt has been identified: frei vor aller Schuld (free from all guilt).

GUILT/SCHULD IS A POWERFUL ENTITY INSIDE THE BODY

Guilt can be perceived as an entity inside the body (THE BODY IS A CONTAINER FOR EMOTION) that has some effect on the **body** (a twinge of guilt made her shrug her shoulders).

GUILT/SCHULD IS A CONTAINER

This conceptualization is expressed mainly with prepositions (in, into/in, out of/aus) as something in a vessel (I came out of guilt and fear) or as being full with guilt (it fills you with tremendous guilt, in Schulden leben²¹).

GUILT/SCHULD IS AN ENTITY WHICH IS NOT A MATERIAL OBJECT

Within this conceptualization guilt appears more frequently than fear. Guilt has shown some variety in this conceptualization, especially in English. Thus, guilt is described as a flash (I felt a flash of guilt), tinge (I have to admit a tinge of guilt), notion (logic of collective guilt), level (the lower level of guilt) or path (guilt has always been the lazy man's way to innocence).

4.3. Emotional Function in Decision-Making

In the section 2 I discussed the types of emotions and their functions in decision-making. In this section, I evaluate the results presented above, which serve the informative function in decisionmaking. Figure 1 shows the model for evaluation of the most frequent conceptualization of the given

to pin the blame/guiltto live in guilt

emotion markers. Given consideration of space, I represent observations only of the most frequent conceptualizations.

General observation of corpora shows that *fear* tends to function as an immediate type of emotion in decision-making, which is supported by the numerous expressions of body changes (especially in English) as a result of an instant effect. *Guilt*, on the other hand, tends to belong to someone; it can be difficult to get rid of this emotion and consequently one usually tries to avoid it after a decision has been made. The numerous conceptualizations of OBJECT and FORCE in both languages can signify *guilt* as something people possess as a burden. As guilt is a negative emotion this kind of possession (both collective or personal) brings suffering, which originates in the mind rather than via any somatic experience. Thus, guilt can often function in decision-making more as an anticipated type of emotion.

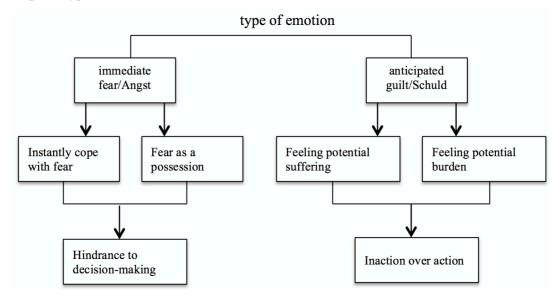


Figure 1. OBJECT conceptualization: emotion function in decision-making

Decision is also "a choice of action" (Baron 2007: 6), which can be influenced by an immediate fear because the latter requires not only quick evaluation of the situation but also options for action. As an immediate emotion fear is understood as an action-driven force, often sudden and hard to control in both languages. This is supported by the numerous bodily conceptualizations of *fear* in English and German. Somatic experiences are some of the strongest for humans and consequently can produce significant effects on decision-making. The superlative description of *fear* in English can work negatively as an immediate fear, which will intensify in risk situations. In contrast, there is less superlative description of *fear* in the German language.

5. Concluding remarks

The primary goal of this paper was to make two contributions: first, to reveal the strongest/weakest associations with the emotion markers of *fear* and *guilt* as expressed in English and German. The motivation behind this is to better understand how the information gathered via conceptualization of emotions in language can be applied to the study of mental processes. Second, an interdisciplinary approach was presented for the contrastive study of the given emotion markers in decision-making. Having combined linguistic and psychological approaches, I have provided examples of how the metaphorical understanding of the emotion markers can be applied to decision-making.

The results showed the following findings. First, *fear* and *guilt* show similarity in conceptualization and function in decision-making: (i) they both conceptualize most frequent as OBJECTS and FORCES and; (ii) they both function as hindrances in decision-making. The examples of fighting back (counterforce) the immediate fear are not frequent; and the strongest conceptualization of *guilt* as an object (especially in German) signifies potential inaction over action when making a decision. On the other hand, differences were found in the quality of *fear*: the numerous superlative description of *fear* in English can work negatively as an immediate fear, which will intensify in risk situations. In contrast, there is less superlative description of *fear* in the German language.

Given the growing interest in a cognitive approach to investigate the emotion markers via conceptual mapping, I believe this is a promising area of future research and may allow contributions not only to corpus-analysis but also to the psychological models that study emotions via language.

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