

Why Are We Angry? A Corpus-linguistic Investigation of the Emotion *Anger**

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Abstract—This study explores how the emotion *anger* is construed through language patterns and what are the causes of the emotion *anger* from a corpus linguistic perspective. It is demonstrated that grammar patterns are frequently used to construe emotions; and grammar patterns inform us the trigger of a specific emotion. It is then illustrated that the emotion *anger* is elicited by (*physical or verbal*) *behaviour*, (*natural/abstract*) *phenomenon*, *mental state*, and *text*, which would offer insights into emotion regulation. What is highlighted, most importantly, is that linguistic analysis of affective expressions is complementary to emotion research conducted from psychological perspective.

Index Terms—corpus linguistics, *anger*, grammar patterns, trigger, complementarity

I. INTRODUCTION

A simple search of *we are angry* in Google returns 672,000,000 hits (on 25 Nov. 2013), which clearly shows that *anger* is frequently talked about in our daily life. Important indeed is the emotion *anger* which is considered as one of the basic emotions in psychology (see Ekman, 1994, 2003). Consequently, much attention has been paid to the study of the emotion *anger* (e.g. Ekman, 2003; Clore & Centerbar, 2004; Schieman, 2006; Ford & Tamir, 2012; Huntsinger, 2013). However, even though studies in both emotion psychology and linguistic research have shown that language plays an important role in conceptualising and understanding emotions (see Niemeier & Dirven, 1997; Fussell, 2002; Gendron, 2012), only very few studies have focused on a linguistic analysis of emotion terms (e.g. Halliday, 1998; Weigand, 2004; Bednarek, 2008; Romano et al, 2013), let alone the emotion *anger*. Consequently, it is necessary and worthwhile to analyse emotional or affective expressions from a linguistic perspective, which could contribute to bettering our understanding of emotions and further assisting emotion regulation. The present study therefore attempts to investigate the emotion *anger* from a corpus-linguistic perspective, with an aim to complement emotion research conducted in the psychological tradition.

II. ‘WISDOM’ EMBEDDED IN LANGUAGE

Language is one of the main ways in which emotion is expressed, it is true, though, that emotions can be expressed either verbally or nonverbally (for studies on nonverbal expression of emotions, see Joseph, 2004; Feng & O’Halloran, 2012). As far as linguistic expressions of emotions are concerned, it is believed that the cause of one specific type of emotion can be revealed through analysing those affective expressions associated with it. This is because there is much knowledge (or wisdom) embedded in naturally-occurring language, as suggested in Saucier & Goldberg (1996). In fact, Whorf (1956) has argued that language influences our conceptualisation and cognition of the world; and Austin has noted that all the distinctions worth drawing are embodied in “our common stock of words” (Austin, 1957, p. 8). These studies support the view that ‘wisdom’ is embedded in language.

This philosophical belief is the foundation for the lexical approach to personality research (Saucier & Goldberg, 1996). The lexical approach hypothesises that the significant and widespread personality traits are encoded in natural language (Saucier & Goldberg, 1996); or more straightforwardly, “[a]ll significant individual differences are embodied in language” (De Raad, 2000, p. 16). Researchers who are in favour of this approach thus advocate that personality traits can be identified through linguistic analysis. Following this viewpoint, researchers in personality psychology developed the Five Factor Model (FFM) of personality, whose validity and applicability has been supported in a number of studies (e.g. Saucier & Goldberg, 1996; Nettle & Robins, 2007; etc.).

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It has also long been suggested in emotion research that emotion and language are connected (e.g. Clore, Ortony & Foss, 1987; Niemeier & Dirven, 1997; Radden, 1998; Gendron et al, 2012; etc.). Researchers in this tradition hold the view that human beings cannot have a categorical perception of emotions, whereas the categorical perception can be induced when the facial expressions are paired with language (Roberson et al., 2007; Fugate et al, 2010). Following this suggestion, it would be arguable that a corpus linguistic investigation could be contributing to emotion research. In short, the upshot of this discussion is that linguistic analysis is an effective way to understand the world, be it personality or emotion, or anything else.

III. CORPUS AND METHODOLOGY

The corpus used for this study is the British National Corpus (BNC), and accessed through using the BNCweb interface - the CQP edition (see Hoffman et al, 2008). This corpus is compiled of samples of written (90%) and spoken (10%) language, with approximately 100 million tokens, which therefore guarantees that it is representative of how language is used in daily life. Basically, corpus queries can provide various information about how language is used. For example, the simple query of angry can provide information, such as whether it is more frequently used in spoken texts or written texts, gender differences, etc.

Spoken or Written:				
Category	No. of words	No. of hits	Dispersion (over files)	Frequency per million words
Written	87,903,571	3,852	1,030/3,140	43.82
Spoken	10,409,858	145	79/908	13.93
total	98,313,429	3,997	1,109/4,048	40.66

Figure 1. The distribution of the use of *angry* in spoken and written texts

Fig. 1 shows that angry are more often used in written texts, reflected by the normalized frequency, i.e. frequency per million words (43.82 vs 13.93).

Sex of Author:				
Category	No. of words	No. of hits	Dispersion (over files)	Frequency per million words
Female	14,588,254	1,499	257/414	102.75
Mixed	6,538,929	262	108/234	40.07
Male	30,662,031	1,070	341/920	34.9
total	51,789,214	2,831	706/1,568	54.66

Figure 2. The distribution of the use of *angry* according to sex of author

Fig. 2 shows that female authors like using angry much more than their male counterparts, as manifested by the normalized frequency (102.75 vs. 34.9) (cf. Schieman, 2006, p. 504). Other information, like how different people in different age groups or in different social classes use angry can also be found on the BNCweb interface.

This study is mainly concerned with *anger* construed as quality in terms of Halliday (1998) (see below). Accordingly, the analysis below is based on the hits of the query of angry in BNC. The query of angry returns 3997 hits in total, which is quite a large number to be manually analysed one by one. The concordance lines, therefore, are further restricted. The concordance lines analysed are those fitting into complementation patterns (see Hunston & Francis 1999), specifically the adjective complementation pattern in the present study.

The basic idea of a complementation pattern is that it links different elements, or in other words, a complementation pattern is a configuration of elements associated with one particular meaning. In the case of complementation pattern that are associated with affective meaning, it is typically a configuration of “Emoter + Emotion + Trigger” (trigger is a term similar to cause or stimuli) in terms of local grammar (see Bednarek 2008). The configuration makes it particularly suitable for investigating the cause of a specific emotion from a linguistic perspective, which is one of the research questions to be addressed (see below). For example, the following instances fit into the complementation pattern ADJ about, and the about-phrase indicates the trigger/cause of the emotion *anger*:

TABLE 1
EMOTER + EMOTION + TRIGGER CONFIGURATION

Emoter		Emotion	Trigger
n	v-link	ADJ	prep.
he	was	<i>angry</i>	about being spied on
I	used to be	<i>angry</i>	about hypocrisy and the cruelty of religion
he	was	<i>angry</i>	about the comment
she	seemed rather	<i>angry</i>	about something

In general, this study is guided by the following research questions: 1) What linguistic patterns are often used to construe *anger*; 2) What are the causes of the emotion *anger*; and 3) What are the implications. It needs to be pointed out that the investigation of the trigger of the emotion *anger* through analysing the complementation patterns is complemented by analysing a specific frame – angry because, which clearly explains why people feel angry. The

purpose is to find out to what extent the findings about the cause of *anger* provided by analysing complementation patterns is valid.

IV. CONSTRUING *ANGER* THROUGH LINGUISTIC PATTERNS

As abovementioned, a complementation pattern links different elements of a configuration, which make it particular suitable for the investigation of the causes of a specific emotion. Complementation patterns in this study are mainly formed of an adjective followed by prepositions, i.e. the prototypical form of complementation pattern is ADJ prep n. Prepositional phrases indicating circumstances (e.g. time period, place, and manner) are not considered as part of a complementation pattern. Conforming to this principle, 587 instances that are fitting into complementation patterns were identified and analysed. The following are some illustrative instances, which reveals the language patterns that are typically used to construe the emotion *anger*.

TABLE 2
ANGRY IN ADJ ABOUT

n	v-link	ADJ	about
The children	are	<i>angry</i>	about the stealing of bird's eggs
locals	are still	<i>angry</i>	about that delay
he	was still	<i>angry</i>	about the coat

TABLE 3
ANGRY IN ADJ AT

n	v-link	ADJ	at
he	got quite	<i>angry</i>	at the impossibility of ...
they	are particularly	<i>angry</i>	at the extensive use made of ...
Nicholson	is	<i>angry</i>	at a magazine article ...

TABLE 4
ANGRY IN ADJ FOR

n	v-link	ADJ	for
But I	was also	<i>angry</i>	for myself, because ...
but we	are	<i>angry</i>	for being penalised for ...
he	looked just a bit	<i>angry</i>	for outright defiance ...

TABLE 5
ANGRY IN ADJ OVER

n	v-link	ADJ	over
I	am	<i>angry</i>	over an act of injustice ...
They	are	<i>angry</i>	over plans aimed at encouraging...
Villagers	are	<i>angry</i>	over a proposed deal ...

TABLE 6
ANGRY IN ADJ TO-INF.

n	v-link	ADJ	to-inf.
I	was very very	<i>angry</i>	to read Batty's comments ...
I	was that	<i>angry</i>	to actually say something cos ...
I	pretended to be	<i>angry</i>	to punish her

TABLE 7
ANGRY IN ADJ WITH

n	v-link	ADJ	with
she	gets	<i>angry</i>	with the children ...
I	was	<i>angry</i>	with the hijackers...
I	feel very	<i>angry</i>	with the whole government ...

Though angry can co-occur with various prepositions, the frequency of the co-occurrence with different prepositions are different. The Figure below shows the distribution of *anger* construed through different language patterns.

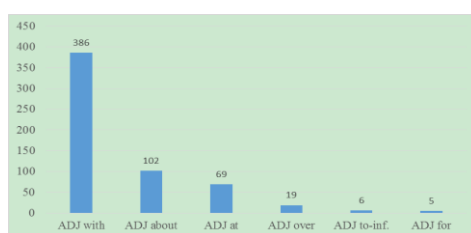


Figure 3. Language patterns and *anger*¹

¹ Instances in which *anger* is treated as the 'cause' of other actions are excluded. For the distinction between 'emotion as cause' and 'cause of emotion' see Dirven (1997).

V. TANGIBLISING THE INTANGIBLE: DECODING THE CAUSE OF *ANGER*

There have been some studies focusing on the investigation of the conceptualisation of emotions through looking at the prepositions the emotion terms co-occur with (e.g. Dirven, 1997; Osmond, 1997; Radden, 1998). For example, Dirven (1997) investigates the causes (the cause of emotions) and effects of emotions (emotions as cause), which is termed as ‘emotional causality’, through studying how emotional causality is expressed by English prepositional phrases. He argues that the prepositions such as *at*, *about* and *over* are often used to construe the stimulus triggering the emotion. According to Dirven (1997), the triggers of different types of emotions can be detected from the prepositional phrases, for instance, *at* implies that the cause of emotions as a target; *about* implies that the cause of emotions as abstract motion; *over* implies that the cause of emotions as concrete motion. Similarly, Osmond (1997) and Radden (1998) also examine the co-occurrence of emotion terms with prepositions.

These studies (Dirven, 1997; Osmond, 1997; Radden, 1998) are actually addressing the choice of the preposition for the construal of emotion from a cognitive perspective. They argue that the expression of emotive meaning is related to how they are conceptualised spatially and therefore the conceptualisation of emotion can be revealed by studying the prepositional phrase. For instance, they suggest that the emotion is conceptualised as container is construed with *in*, the emotion construed as companion is construed with *with*, for those are conceptualised as front and back regions are construed by *for* and *out of*. It seems that they are more focused on why a preposition is chosen to construe specific emotion/s (the answer is that because they denote different spatial meaning or because they are conceptualised differently). It is interesting to have these findings, yet it might also potentially be problematic (because, obviously, this approach cannot explain why the same emotion term can occur with different prepositions, like ‘angry’ can co-occur with *at*, *with*, *for*, *that*, *about*, etc.). Nevertheless, the current study is not going to verify or falsify this approach as or not as a proper way to explain the use of prepositions with the construal of emotions, but it aims to explore the possibility of identifying the causes of emotions through analysing what the noun phrase following the preposition indicates.

In addition, it is worth mentioning Halliday (1998) who investigates the lexicogrammar of pain using evidence from a corpus compiled of typical everyday expressions. He finds that the emotion pain is categorised in various ways: it could be construed as process (e.g. *hurt*), quality (e.g. *painful*) and thing (e.g. *pain*), which indicates that every emotion is a complex domain of experience. When it comes to the emotion *anger*, it is also the case that it can be construed either as process (e.g. *anger*, *annoy*), thing (e.g. *anger*, *annoyance*), quality (e.g. *angry*, *annoyed*). However, as an exploratory study, only *anger* construed as an attribute is analysed, which is intended as a demonstration of how to decode the trigger of a specific emotion by analysing the linguistic expressions associated with it.

It has been admitted in emotion research that it is difficult to figure out why someone is angry from his/her facial expressions. For instance, Ekman states that “[w]hen you see that someone is angry, you don’t know what made the person angry” (Ekman, 2003, p. 159). This indicates that the trigger of a specific emotion, including those ‘basic’ emotions, cannot be inferred from emotion display (e.g. facial expression, gesture). However, it is assumed that we will ‘tell’ the others why we have a specific feeling when the emotion becomes the discourse topic. It is therefore arguable that the linguistic analysis of angry-expressions will contribute to our understanding of what causes the emotion *anger*.

It is indeed very difficult to define what exactly triggers a specific emotion. Unlike the triggers suggested in emotion research (such as frustration behaviour, social stress, aversive mental states, etc. see Berkowitz & Harmon-Jones 2004 for more details), appraisal research from the linguistic perspective suggests that there might be three types of triggers of affect: 1) behaviour, 2) phenomenon, and 3) texts/processes (cf. Martin & White, 2005, p. 43). However, concordance analysis suggests that these triggers cannot fully explain the cause of *anger*. Consequently, the triggers of emotion need to be reconsidered. Bringing together those triggers proposed in both emotion research and linguistic research, we identified the five types of triggers of the emotion *anger*: 1) behaviour, 2) phenomenon, 3) mental states, 4) text and 5) vague (cannot tell what causes the emotion *anger*), which will be discussed respectively.

Apparently, researches from both psychological and linguistic perspectives agree that ‘behaviour’ causes emotion. In the current study, behaviour includes both verbal behaviour (e.g. *asking*, *telling*) and physical behaviour (e.g. *being spied*, *stealing*). What is more, this study considers all sentient beings as behaviour because it is arguable that when we say we are angry with/at someone, it is not someone who causes the *anger*, but it must be because of the behaviour someone did or someone who did not do what he was supposed to do. Illustrative examples are given below:

TABLE 8:
ANGRY TRIGGERED BY BEHAVIOUR

Perhaps he was	<i>angry</i>	about being spied on ...
She is	<i>angry</i>	at the way it portrays handicapped people...
Suddenly she was	<i>angry</i>	at everyone for involving her in all this

The second type of trigger is ‘phenomenon’. Martin and White (2005) have not clarified what they mean by saying that emotion is reactions to behaviour, text/process and phenomenon. Whereas ‘behaviour’ is more self-explanatory, the other two are less so. In the current study, phenomenon refers to those abstract things (e.g. *plans*, *proposals*), facts and situations, for instance:

TABLE 9:
ANGRY TRIGGERED BY PHENOMENON

I used to be	<i>angry</i>	about hypocrisy and the cruelty of religion ...
because he was	<i>angry</i>	at the child's existence...
They're	<i>angry</i>	over plans aimed at encouraging parents ...

Similar to findings from emotion research, the corpus data suggests that sometimes *anger* is triggered by mental affairs or states, such as thoughts, decision, attitude, etc. 'mental state' is therefore proposed to explain cases where *anger* is triggered by cognitive factors, e.g. *attitudes*, *thoughts*. For instance:

TABLE 10:
ANGRY TRIGGERED BY MENTAL STATE

Staff are	<i>angry</i>	at the thought ...
she felt	<i>angry</i>	at the idea being thrust on her ...
I was	<i>angry</i>	with what I thought about ...

It appears that there is an overlapping between the trigger labelled as 'verbal behaviour' and 'text'. Nevertheless, they are not the same thing. 'text' mainly deals with those things presented in the written form, for example, report, what is said in a newspaper, letter, etc. Though instances in which *anger* is triggered by 'text' is rare, there are a few, for instance:

TABLE 11:
ANGRY TRIGGERED BY TEXT

he was	<i>angry</i>	about the comments
Mr Clarke is ... extremely	<i>angry</i>	about the report which said he was ...
I was very	<i>angry</i>	about this letter

In addition, the corpus data also shows that sometimes we, as the Emoter (i.e. who are experiencing the emotion, see Bednarek 2008), do not know why we are angry, in which case the trigger is categorised as 'vague'. Examples are given as follows,

TABLE 12
VAGUE TRIGGER OF ANGRY

I suspect the singer is	<i>angry</i>	about something
he has never been	<i>angry</i>	about anything
she seemed rather	<i>angry</i>	about something

Considering the vagueness of emotion triggers, it might be considered as evidence to support the argument that vagueness is not a phenomenon unique to language use, but it might be a universal phenomenon existing in human experience.

The following table shows the proportion of *anger* elicited by different types of triggers (see Table 13)

TABLE 13
ANGRY ELICITED BY DIFFERENT TYPES OF TRIGGERS

Trigger \ Data	Number	Percentage
behaviour	405	68.99%
phenomenon	111	18.91%
mental state	37	6.30%
vague	25	4.26%
text	9	1.54%

Clearly, it shows that *anger* is most frequently triggered by behaviour, which is consistent with findings from psychological researches. It also shows that abstract things and situations can also be the cause of *anger*. Complementary to Berkowitz and Harmon-Jones (2004), corpus analysis also shows that not only other negative emotions can trigger *anger*, various kinds of mental states (e.g. *thoughts*, *decision*) can also be *anger* determinants. What is more, it is demonstrated that even we, the Emoter, sometimes do not know why we are angry or what we are angry about.

But to what extent are the findings valid? In other words, does the analysis reflect and reveal exactly the triggers of *anger*. In order to address this issue, we further analysed instances fitting into the frame angry because which are explicitly explaining why someone is angry. The query of angry because returns 53 hits and six instances (48 – 53) are excluded: two are repeating the same instance, one is explaining the reason why it is kinder to cry than to be angry, the other three instances do not fit into the pattern (i.e. they are in the pattern angry because of).

1	H7V	to see us , but rather	<i>angry because</i>	another of his shoes had disappeared	phenomenon
2	AT1	He used to say he got	<i>angry because</i>	he cared so much . He	mental state
3	FSE	. He wondered if Alexei was	<i>angry because</i>	he had been beaten again ,	behaviour
4	H7V	said. I was upset and	<i>angry because</i>	he had not told me his	behaviour
5	FRU	rode away . Although I was	<i>angry because</i>	he had smiled at Flavia ,	behaviour
6	G1Y	six feet high and you are	<i>angry because</i>	he is not seven .]	phenomenon
7	B0U	a German is not necessarily	<i>angry because</i>	he is shouting , and so	behaviour
8	HWL	. I could tell he was	<i>angry because</i>	he was red in the face	phenomenon
9	CFC	. Gillespie was jealous and	<i>angry because</i>	his wife Kay , 28 ,	behaviour
10	HH1	. [I thought you were	<i>angry because</i>	I 'd run away .]	behaviour
11	ED4	your emotions : [I 'm	<i>angry because</i>	I 'm disappointed ,] or	mental state
12	HJH	s very territorial . She 's	<i>angry because</i>	I didn't consult her before	behaviour
13	JY7	she said . [He is	<i>angry because</i>	I did not keep my promise	behaviour
14	KDW	he says it makes me so	<i>angry because</i>	I don't know the voices	behaviour
15	HJ3	feel angry too . I feel	<i>angry because</i>	I know even this war will	mental state
16	FRU	. [Oh , she 's	<i>angry because</i>	I never do anything useful ,	behaviour
17	KDW	side , I get a bit	<i>angry because</i>	I see what society does to	phenomenon
18	ASA	of the circumstances ; I was	<i>angry because</i>	I thought we were going to	mental state
19	K5L	house all day . I 'm	<i>angry because</i>	I was told it would be	behaviour
20	K5L	divorce.] [I 'm	<i>angry because</i>	I was told it would be	behaviour
21	G15	under Stalin . They were	<i>angry because</i>	it was carried out unofficially --	behaviour
22	CBC	in Dances With Wolves are	<i>angry because</i>	it will divert money from their	phenomenon
23	K5L	this . [I 'm also	<i>angry because</i>	my husband isn't working so	behaviour
24	B21	them. We become inwardly	<i>angry because</i>	our partner fails to live up	behaviour
25	FP7	her fear . He 'd been	<i>angry because</i>	Pascoe had rewritten his script.	behaviour
26	HH4	up. She 'd only been	<i>angry because</i>	she 'd been so unaccountably shaken	behaviour
27	G06] said my mother , getting	<i>angry because</i>	she wasn't used to converse	behaviour
28	FPU	house. My sister was very	<i>angry because</i>	she was not invited as well	behaviour
29	FRH	Computers -- Whither ?] was	<i>angry because</i>	the ape recordings had thieved some	behaviour
30	K3K	fight the plans . They are	<i>angry because</i>	the site is a greenfield open	phenomenon
31	G3P	Situation : A parent is very	<i>angry because</i>	their son or daughter has arrived	behaviour
32	KRL	of people who come in are	<i>angry because</i>	they can't get anywhere .	phenomenon
33	CEJ	, they would make the people	<i>angry because</i>	they considered John to be a	mental state
34	HU0	ransacked his room and were	<i>angry because</i>	they couldn't find anything .	phenomenon
35	CK6	television . Catholics are only	<i>angry because</i>	they feel threatened and so there	mental state
36	A6V	workers in section 61 were	<i>angry because</i>	they felt , firstly , that	mental state
37	EBT	those on the list who were	<i>angry because</i>	they had been made liable to	behaviour
38	GWH	Hindley and Catherine were	<i>angry because</i>	they had not received any presents	phenomenon
39	E9U	, said some commuters were	<i>angry because</i>	they normally used the carriage	behaviour
40	CH3	The home fans were	<i>angry because</i>	they thought Andy Ansah was offside	mental state
41	C89	was four and she got really	<i>angry because</i>	they were wee tiny tubes and	phenomenon
42	G06	.] I knew she was	<i>angry because</i>	this appraisal reflected badly on her	phenomenon
43	K55	town . Masters said he was	<i>angry because</i>	vandals had smashed his door .	behaviour
44	HH3	make things worse . We get	<i>angry because</i>	we cannot understand , because	mental state
45	EWG	I 'm not going to get	<i>angry because</i>	you call me stupid names .	behaviour
46	JYD	convincing . [I 'm just	<i>angry because</i>	you want me to stop seeing	behaviour
47	HA6	denied hotly . [I 'm	<i>angry because</i>	-- because you think you can	mental state
48	FRD	my church .] People were	<i>angry because</i>	of that . A man called	
49	ASA	in a bunker . He was	<i>angry because</i>	of the circumstances; I was	
50	EAA	extremely frustrated and	<i>angry because</i>	of the number of controls head	
51	CFL	was four and she got really	<i>angry because</i>	they were wee tiny tubes and	
52	G0T	kinder to cry than to be	<i>angry because</i>	, they claimed , if they	
53	HGK	journalist .] [He is	<i>angry because</i>	I will not work all day	

We carefully read all the instances, and categorised the trigger types based on what is indicated by *because-clause* accordingly. The results are presented in Table 14.

TABLE 14
RESULTS OF ANALYSING ANGRY BECAUSE

Trigger	Number	Percentage
behaviour	26	55.32%
phenomenon	11	23.40%
mental state	10	21.28%
vague	/	/
text	/	/

It is clear that the result is to a great extent consistent with the findings from analysing the complementation patterns. It shows that most of the time we are angry because we or other person do not behave properly. It also demonstrates that we are angry because of unsatisfactory situations or facts and because of aversive mental states.

VI. IMPLICATIONS

It has been clearly illustrated and illuminated that *anger* is often elicited by behaviour, though phenomena or situations and mental states can also cause anger. Both verbal behaviours, such as insulting, shouting, and physical behaviours, such as stealing, interruption, can potentially elicit *anger*. Therefore, it is suggested that we should behave, verbally and physically, with decency and dignity so that we can live harmoniously in a society which is replete with joyfulness and peacefulness.

Most importantly, the identification of the cause of a specific emotion would greatly contribute to regulating that specific emotion. It has been shown that emotion regulation is one of the hottest topics in emotion research (see Gross, 2007, 2013; Kuppens, 2010; Brans et al., 2013). Emotion regulation is a process through which an emotion can be dampened, intensified, or simply maintained (see Rimé 2007, p. 466). It is important because it influences our mental and physical health, and even helps to make a better world, for example, researchers are attempting to extend these findings to global conflicts, such as the ongoing conflict in Cyprus (e.g. Halperin et al., 2012; Brans et al., 2013).

It is assumed that a complete understanding of the causes of emotions will contribute to successful emotion regulation. It has been suggested that inadequate understanding of the cause of a specific emotion might lead to failure of emotion regulation. Consequently, to regulate emotion, one must accurately track the ongoing (or anticipated) emotional responses either explicitly or implicitly; and to track the emotional response requires an understanding of what causes the emotional reaction. However, it is noted that most of the studies to date on emotion causations are mainly conducted from a psychological perspective. Though useful these studies are, it is believed that the investigation of emotion causation from a linguistic perspective would be complementary to psychological studies. In other words, it is believed that linguistic analysis of a specific emotion term can reveal more detailed information about what causes that specific emotion, as demonstrated above, and can contribute to successful emotion regulation.

What is more, it is also important to understand the consequences of a specific emotion because emotion regulation does not only mean the avoidance of negative emotions. Generally, people tend to decrease negative emotions and to increase positive emotions. However, it has been also pointed out that negative emotions (such as *anger*, *sadness*) are not necessarily a bad thing (Ford & Tamir, 2012). On the contrary, negative emotions can sometimes function positively, for example, *anger* when collecting debts and in a fight (see Ford & Tamir, 2012), and vice versa, i.e. positive emotions can have negative effects, for example, amusement during meetings (see Gruber et al, 2011).

It does not matter very much whether we are trying to approach or avoid a specific emotion; successful avoidance or failure of emotion regulation is what matters. It is believed that successful emotion regulation is possible provided that we have a complete understanding of what elicits emotions. In terms of the current study, the linguistic analysis informs us more about why we are angry, which will further contribute to emotion regulation of *anger*, i.e. the emotion *anger* can be successfully approached when feeling angry is helpful or avoided when feeling angry is bad.

VII. CONCLUSION

This study has explored the language patterns that are frequently used to construe the emotion *anger* and the causes of the emotion *anger* (mainly on *anger* construed as quality) from a corpus linguistic perspective, with an aim to complement psychological investigation of *anger* causation. Through analysing expressions in which the adjective *angry* occurs, it has identified the language patterns that are frequently used to express *anger*. Subsequently, the causes of the emotion *anger* have been revealed, i.e. *anger* could be triggered by behaviour, phenomenon, mental state, and text. It has also been demonstrated that occasionally we do not know why we are angry.

Emotion regulation requires a better understanding of emotion causation. It is believed the causes of emotion are encoded in naturally occurring language, which therefore can be revealed through analysing expressions that are associated with emotions. It is argued that linguistic analysis of emotion expressions is complementary to psychological investigation of emotion causation, which would ultimately contribute to successful emotion regulation.

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