Online Interconnectivity and Negative Emotion Patterning

Barbara Lewandowska-Tomaszczyk
University of Lodz (Poland)
blt@uni.lodz.pl

Abstract:

The main goal of this work is to present corpus-based quantitative and qualitative properties of *negative emotion patterning* in terms of online discussion concerning a referendum planned for the year 2015 on the British membership in the European Union. The issue is observed to instigate strong emotional reactions of CMC users, primarily in terms of emotion *valence* and *arousal*, expressed in their comments to two political events, described in online newspaper articles. The present analysis illuminates the linguistic contexts in which the negative emotions which arise in connection with these events spread in the audiences and the extent to which the type of interactional exchange identified in the study affects the users' emotionality dynamics (Lewandowska-Tomaszczyk submitted 2013). The dynamics axis concerns the development and maintenance of the community's common standpoint with regard to the issue (cf. also Atkinson et al. 2012). The common standpoint is a consequence of common group identity emerging to exert social pressure with reference to real life context.

Keywords: Emotion Event, emotional language, group identity, interactional exchange typology, Interconnectivity Value (IV), language corpus, negativity, negative discourse patterning, online discourse analysis

1. Rationale

Emotions are a driving force of human activity. Understood in their broad biological terms of an automated homeostatic regulation (Damasio 2003:35) at different levels of biological behaviour, they accompany us from the very first moments of life and develop into more and more complex responses to the contextual clues with a strong impact of the community, language and culture we live in (Wierzbicka 1995). The interplay between emotion and reason has been the subject of research since

Plato's first theory of a tripartite soul, which put emotion aside, while the last few decades have witnessed a particularly strong interest in their cognitive and linguistic properties (Lakoff and Johnson 1980, Turner and Fauconnier 1985, Kövecses 1990, 2000, Gibbs 2006), undermining supposedly altogether rational judgments in human behaviour for the sake of emotions.

Psychologically oriented emotion studies rely in the majority of cases on experimental findings and questionnaire-based data (e.g. Scherer 2005). Focusing particularly on the analysis of emotion concepts into discrete features or feature dimensions, psychologists have been trying to determine a repertory of prototypical emotion concepts, their interrelationship and, more recently, cross-linguistic dependencies. A special development of linguistically oriented emotion studies has been observed for over two decades now, with reference to uncovering the range of prototypical and peripheral emotion concepts and their linguistic expression particularly with regard to the rapidly developing study of metaphor, metonymy and other figurative verbal uses (Lakoff and Johnson 1980, Kövecses 2000). Feature analyses, attacked by cognitive linguists (Lakoff 1987), have been modified into a lower-level methodology with conceptual dimensions and frame semantics as their top-down instigating structures. In modified versions, features, or properties, make it possible to determine concept prototypes and their extended, more peripheral, variants, not infrequently appearing as radial clusters with a number of prototypical peaks within a conceptual space.

Another new branch of linguistics, correlated with a rapid development of computers and computer capacity, computational and corpus linguistics, gave a new impetus to emotion studies in the eighties. Large amounts of authentic language data, spoken and written, formal, colloquial or intimate, from different times and regions, as well as their fast processing, make it possible to trace regularities and idiosyncrasies in emotion expression, also in comparative terms among groups of users and individual language speakers.

Computer-mediated communication is an area particularly suitable to examine with the use of cognitive corpus-based linguistic methods (Lewandowska-Tomaszczyk and Dziwirek 2009). Access to large amounts of data and their fast analysis by means of dedicated corpus tools make it possible to uncover new patterns in emotion expression in different CMC types.

This paper is a follow-up of two more extensive research projects, one referring to cross-linguistic studies of emotions and their verbal manifestations (Dziwirek and

Lewandowska-Tomaszczyk 2010, Lewandowska-Tomaszczyk and Wilson 2011) and the other, first presented in terms of a cognitive-interactional model of negativity (Lewandowska-Tomaszczyk 1996), extended later to deal with negation and discourse negativity in the context of emotion studies. Negative utterances are of particular interest in CMC research. Negativity is both a cognitively more conspicuous, more salient as well as a more powerful rhetorical device in discourse than less marked corresponding positive forms (Lewandowska-Tomaszczyk 1996). Negative emotions are also less controllable and potentially more revealing with regard to the mental state and stance expression than positive emotions. Therefore the tracing of negative emotions can contribute to the research aiming at the development of more salient CMC groups and uncovering their identity characteristics.

Below the CMC materials used in the present study will be described, followed by a discussion of negation, negativity and negativity as expressed verbally, a short introduction to emotion studies focusing on verbal expressions of online emotions, and basic components in identity research.

The online materials and examples are drawn from two online publications - an article and the users' comments on UK - EU relationship in The Guardian on 4th December, 2012. The article Boris Johnson: UK should renegotiate relationship with EU, Johnson proposes 'minimalist strategy' with EU that should be put to British people in a referendum was written by a political reporter, Hélène Mulholland. The second one, used here for contrastive purposes is an online Huffington Post publication (Reuters) UK EU Referendum: David Cameron Promises In-Out Vote In 2015 by Andrew Osborn and Peter Griffiths, published on 23 January 2013. In this article the authors present and discuss Prime Minister David Cameron's promises to give Britons a referendum choice on whether to stay in the European Union or leave if he wins the election in 2015. Both discussions show a degree of the users' involvement and emotionality with respect to this issue, which places a question mark over Britain's EU membership. The former displays the users' more negative and more emotional involvement patterning with regard to the issue discussed. The users' perspective and their opinions towards the issue of UK membership in EU are shaped to a large extent by their political preferences, pro- or anti-conservative in this case, and primarly, or as a consequence, by their opinions about its conservative leaders, Boris Johnson, Mayor of London in the first text and David Cameron, UK Prime Minister in the second one.

The research methodology employed combines discourse and lexical analyses in terms of the Cognitive Corpus Linguistics approach Lewandowska-Tomaszczyk

2012) , which involves the conversion of the original format of the materials into the text format to apply WordSmith corpus tools (concordances, collocations, frequency lists and keywords) and carry out a linguistic and discourse analysis. To investigate the material used here is a Model of Overall Online CMC Activities (OCA), originally proposed in Lewandowska-Tomaszczyk (2012). The quantitative parameters comprise an Interconnectivity Value (IV), which identifies the number of interacting participants and the number of jointly constructed discourse turns. The qualitative parameters of the analysis explore types of lexical patterns, lexical choices, syntactic structures and discourse behaviour preferences of groups of participants. The IVs and their visualization are generated from the corpus data by the application of the Gephi software, publicly available online.

CMC users get emotional about diverse social and political events which involve both their life experiences as well as their convictions and beliefs. Past and projected experiences, also of a social and political character, affect the scale of the emotional personal and group responses. Real-life events which are likely to arouse large-scale emotions in the internet communities are precisely those that involve the areas of direct personal involvement. In other words, the event must be sufficiently salient, either to an individual or to the group they identify with, to instigate an emotion. The real life events are sources for online publications - press articles, journalistic news, blogs, scholarly papers of a certain social significance, and last but not least, the opinions of other CMC participants frequently grouped in ad-hoc internet communities. Properties of background knowledge concerning salient real life events as well as information on the users' linguistic and discourse preferences are extracted from the collected internet texts by means of dedicated corpus tools.

An interesting property of both sets of comments in the collected samples (1) and (2) is their highly personalizing character, focusing on two UK conservative party leaders, Boris Johnson, Mayor of London, and David Cameron, UK Prime Minister, epitomizing current political order in Britain.

The first part of the paper (sections 2 - 3) investigates and develops the concept of negativity in language and the section to follow in (10) present the use of these models for the analysis of the function of negative emotions in online discourse. In sections 4 - 8 the concept of emotions is illuminated, followed by a description of how emotions are verbally signaled in posts and comments.

The paper aims uncover the negative emotion patterns as emerging in the interactions, particularly in two types of online communication (section 9), dubbed in

Lewandowska-Tomaszczyk (submitted 2013) snow-ball communication and exemplified in sample (1) and ping-pong communication (elements of sample (1) and sample (2)). The final outcome of negative emotion patterning studies leads to a more explicit manifestation of the conditions conducive to rising social pressure, likely to surface in real life contexts and exemplifies the mechanisms of a *new democratic order* emerging in modern society with regard to the researched web content.

2. The concept of *negativity* in language[1]

There are a few categories of words and phrases introducing negativity in natural language (Lewandowska-Tomaszczyk 1996). Lexical items such as the explicitly prefixed words *insufficient*, *unacceptable* or the counterfactuality marking adjectives *fake* (diamonds)*, false* (documents) are clearly negative in their meanings. Other forms introduce more hidden negative structures which include a class of lexical items with a negative element present in their conceptual structures, although not in morphological marking e.g. *putative* (marriage), or more implicit such as e.g., *wig*, *bald*, *denture*, *pretense, manipulate.* The negative character of a number of *verbs of change* may not be immediately evident or not present in fact if we consider it from the axiological appraisal perspective, and yet their presupposition has to incorporate an element of negativity defined as a counterfactual element, opposite to the state of affairs co-temporal with that at the time of speaking (the presuppositon of *He opened the door* is its opposition *The door was closed*). This is true of actions, processes and states. The element of negativity is also evident in classes of so-called *force-dynamic* expressions (Talmy 1985), such as *persuade, insist*, which convey the semantic elements of exerting and confronting force between an agonist and an antagonist. In force-dynamic expressions negation is found in the form of a parameter signifying a real or potential resistance of the agonist against the antagonist, present at the conceptual level. Mark Johnson proposes (1987:41-42) that the dimension of what he calls "forceful interaction" is one of the most prominent "ever-present dimension of our experience" and further, that "the [...] schemata of CONTAINMENT gave prominence to the limitation, restriction, and channeling of forces. By paying more attention to our experience of force as such, we uncover new considerations that did not arise in the analysis of boundedness. These considerations include motion, directedness of action, degree of intensity and structure of causal interaction (including motions of both agency

[1] The present discussion of *negation* and *negativity* is based on Lewandowska-Tomaszczyk (1996).

and patienthood, for animate and inanimate things alike). These new factors constitute further kinds of internal structure that an image schema (as gestalt) might manifest".

Another manifestation of negativity is observed in so-called *aura of meaning* referred to as *semantic harmony* or *semantic prosody* (cf. Sinclair, 1994), which is understood as a fairly systematic spread of a feature from one to another linguistic unit in an utterance, typically not marked as negative in context-free setting (e.g. the word *utterly* as in *utterly disgusting/stupid*) or foregrounding its explicit negative sense to other lexical items (cf. Lewandowska-Tomaszczyk 1996). Such negatively-charged individual lexical items spread over the senses of their neighbours and create negatively coloured semantic expectations. The items in the same utterance or in a larger unit of speech (say, speech event or a paragraph) tend to harmonise with the negative nature of their triggers.

Explicit negation marked with the negative operator *not* or embodied in negative adverbs or pronouns in English (*nobody*, *never*) as an expression of negativity, plays a major role as a component of counterfactuality. The prototypical negation as in *I am not tired* is conceptualized in terms of the *categorial exclusion* (OUT in Fig. 1), as a unit outside of the category named in the utterance.

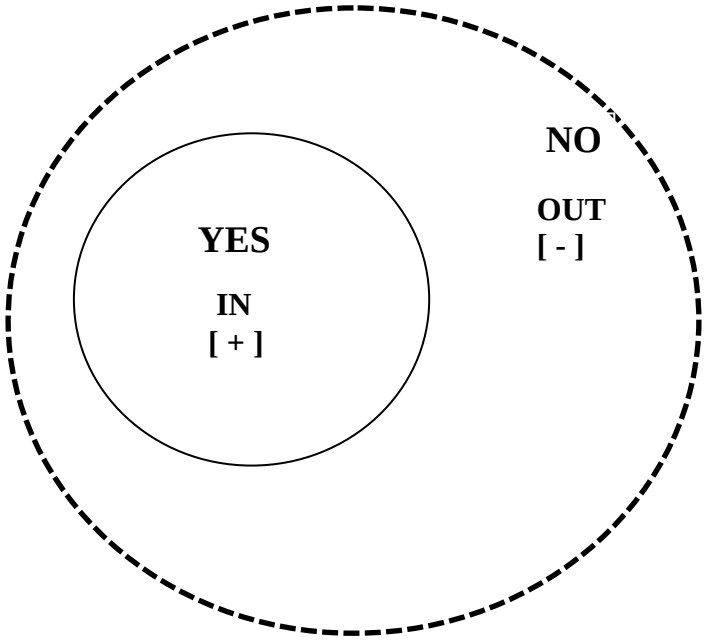


Fig. 1: Schema of prototypical sentential negation

An observation which can be of interest here is that even though negation tends to express conceptually the notion of less rather than more, morphologically it is realised as MORE rather than LESS both at the lexical and the sentential level e.g. *interesting* versus *uninteresting*, *I am not tired* as opposed to *I am tired*. This is connected with the fact that from the cognitive processing perspective, the negative is more complex than the positive. Negation also opens up a larger range of options, which is one of the reasons why it is so frequently used as a powerful rhetorical device in political discourse. It is less explicit as it leaves more space for individual, more subjective interpretation and creates more favourable conditions for the speaker's avoidance of full political accountability. On the other hand, when contrasted with positive statements, which are, in total, more frequent in discourse than negative ones, the negative utterances are more marked, therefore more linguistically salient and more foregrounded in discourse.

3. Negativity as an interactional concept

In the course of communicative interaction, each participant builds up a system of conceptual domains (*discourse domains* cf. Seuren 1985, *alternative realities* (Lewandowska-Tomaszczyk 1985)), based on their knowledge of reality in the form of *knowledge frames* (Minsky 1975) or *Idealized Cognitive Models* (Fillmore 1982) and enriched during the interaction. The linguistic material as used by the speaker has a potential to evoke relevant parts of the hearer's knowledge, rearrange it, and set up new domains with old or new referential addresses in them. The domains do not necessarily reflect the state of affairs perceived by an interactant. Mental representations are gradually built up and modified by the incoming verbal material. Each lexical item is associated with a value which designates its meaning and its function in the discourse (these two may coincide in the case of some predicates, such as e.g. *not*).The value called the *increment value* by Seuren (1985) covers the lexical (including the presuppositional) as well as technical information, concerning the conceptual/semantic material of an item and the way which this material is to be included in the process of building a discourse domain. The item *not* and negative evaluative markers potentially *exclude* the referent from the current discourse domain on the one hand but on the other they make it possible to introduce into the current discourse a number of other linguistic *world-creating* devices such as contrastive and conditional structures as e.g. *He is really a poor politician. Otherwise, he would…*, which set up a desired *alternative reality*, so much needed in confrontational discourse of the type analysed here.

3.1. The notion of *negatibility*

Any linguistic item (word, phrase or sentence), by the very fact of its having been selected to form a communicative unit, implies a potential existence of all other possible forms ('parallel' or 'alternative' items) which *could have been* but were *not* selected for informative purposes. These 'unselected' items then, counterfactual by implication, are 'dormant' in unmarked contexts and can be activated by an interactant as in *Speaker 1: look at this green car over there!, Speaker 2: d'ye mean green green or just green?* The *negatibility* of an utterance, to use the term introduced by Huebler (1983:12), is based exactly on the existence of such alternative, unselected options. It becomes evident in what Huebler calls "the hearer's right to *refute* a sentence". Any sentence, irrespective of its polarity, requires ratification to a greater or lesser extent by the audience and thus reveals its negatibility. Negatively loaded emotional utterances create particularly favourable discourse conditions for their consequential ratification or, equally frequently, non-ratification by the interacting users.

4. Emotion studies

Emotions are experienced by human beings as a mixture of bodily and mental experiences and when talking about emotions or expressing them, people resort to various devices offered by their language. They refer to human bodily reactions, facial and body gestures, behavioural and situational properties. They use structure and categorizing relationships filled with meanings to convey their conceptualizations of emotion words, i.e. *mental models* of emotions they construct and use in verbal interaction. Meaning has elements of *convention* as well as *culture-related* properties involving the conceptualizer. The conceptualizer presents his *construal of the world*, i.e. to quote Langacker "the relation between the speaker (or hearer) and the situation that he conceptualizes or portrays" (Langacker 1987: 487–488). Linguistic units differ in meaning not only due to their conventional designation but also with respect to a variety of *different construals of the world*, expressed in morphological and syntactic patterns of individual languages, which are also employed by language users to *structure* their perception and conceived contents.

The semantics of *emotion* can be structured in terms of a *radial category* (Lakoff 1987), with a number of prototypical peaks, related by *family resemblance* (Wittgenstein 1953). Emotion concepts have both a physical-physiological stratum and a psychological one: mental and cognitive. Unlike other nominal concepts, categorized into two categories: concrete and abstract objects, emotion concepts refer both to

physical, concrete objects and properties on the one hand and mental constructs on the other (Altarriba & Bauer 2004). An important source of conceptual knowledge that is brought to bear in the formation of an emotion is *culture* (Wilson and Lewandowska-Tomaszczyk 2012).

A prototypical *Emotion Event Scenario* EES (1) involves an *Experiencer* with their bodily and mental predispositions and a *Stimulus*, immersed in social and cultural conditioning and immediate context. Emotions are manifested as the Experiencer's bodily and mental reactions and can be expressed in terms of linguistic utterances which include a number of meaningful markers, phonetic, lexical, syntactic and pragmatic in nature.

(1)

Prototypical Emotion Event Scenario EES (cf. Lewandowska-Tomaszczyk and Wilson in press):

Context (*Biological* predispositions of Experiencer, *Social* and *Cultural* conditioning, *On-line* contextual properties of Event) **[**Stimulus → Experiencer {(internally experienced) Emotion [**EMBODIED mind - -- a road to METAPHOR]** + (internally and externally manifested) physiological and physical symptoms} → possible external reaction(s) of Experiencer (language: emotion and emotional talk including **METAPHOR**)**] i.e . EXBODIED mind.**

Extended Emotion Event Scenarios (ExES) involve cases of experiencing more than one emotion of *the same valence* at the same time, i.e., *emotion clusters* on the one hand, and so-called *mixed feelings*, experienced as two *contradictory emotions* at the same time on the other (Lewandowska-Tomaszczyk 2012a). It is worth to observe that, with reference to the online material analysed in the present paper, the emotion patterning expressed in sample (2) is of the latter, while in sample (1), more frequently than not, of the former type of blending.

5. Expression of emotions online

Emotions expressed online or so-called *cyberemotions* are a relatively new research topic (Chmiel et al. 2011). Cyberemotions are emotional processes related to CMC of any type, involving text, sound and/or image transmission. The area of such investigation refers to the way emotions arise and spread in e-communities and the extent to which such patterns can be considered similar or divergent from those experienced in direct face-to-face interaction in real life contexts. The crucial question

is whether CMC conditioning, its technological infrastructure and properties which diverge from real-world communication can be associated with newly emerging patterns of emotion (or sentiment) development and their spread in CMC contexts. CMC contexts are the contexts of blurring numerous traditional boundaries, those between the Sender (message production) and the Addressee (message reception), between the private an the public, production and consumption, and linguistically between the spoken and written modes, and between genres and styles (Herring 2004). Some properties arise in the course of interaction both in real and virtual worlds, i.e. they can be considered *discourse emergent properties* (Lewandowska-Tomaszczyk 2010), however the proliferation of specific internet communication properties, such as its mass-scale nature, transcending space and time boundaries and the fact that such interactions give rise to virtual encounters, of a different character than in real world, may contribute to different patterning of emotion rise and sustainability in internet communication. Some research focuses on collective emotional phenomena in cyberspace, using mainly engineering methodology of data collection and analysis (*Cyberemotions* FP7)[2].

Political and social topics motivate a large section of users to start or join online discussions and it is precisely their interest, related most often with the user's personal opinion on the topic that activates emotions. Online discussion forums elicit subjective emotional responses. Mathias Theunis et al. (2010) from the CYBEREMOTIONS project (poster CERE 2010) propose that interest is followed by *excitement* in the discussion The authors also predict *more variance in arousal for negative stimuli* which, more readily than language of positive valence, contributes to the formation, development and cessation of an emotional discussion in a thread (forum). The present paper further investigates this issue and presents new materials in connection with the claim. It shows that the preferred dynamics of an emotional CMC discussion in terms of the users' Overall Online Discourse Activity (Lewandowska-Tomaszczyk 2011) are so-called *snow-ball* and *ping-pong* communication patterns (Lewandowska-Tomaszczyk submitted 2013) and uncovers the traces of classical 'banal nationality' sentiment (cf. Postill 2011).

[2] Some scholars introduce a terminological distinction between *emotions* and *sentiments. Sentiment* in this sense is taken to mean *emotion-related aspects of messages* (*Cyberemotions* FP7) investigated in terms of the development of automatic sentiment analysis as a large-scale emotion detection and analysis using text messages collected from the web. However, the research cannot make it clear at present how such emotions arise in e-community and to what extent they influence group activities.

5.1. Language markers of online emotions

Language can facilitate, construct and regulate the occurrence of an emotion. Out of a number of communicative functions language has an important emotive function which covers two areas. Firstly, language is used to talk *about* emotions, descriptively or in narration. This kind of *emotion talk* is either complemented by or juxtaposed to *emotional talk*, in which a speaker uses diverse prosodic clues (stress, pitch, intonation) and paralinguistic markers (facial expression, body movements) together with a specific verbal repertoire (expletives, interjections, swear-words, marked expressions such as intensifiers, evaluative expressions, etc.) to *express* feelings and emotions. Contrary to emotion language, which tends to use explicit emotion terms (*hate*, *love*, *fear*) not all patterns of emotional discourse can be identified by means of fully automatic corpus tools, which makes the quantitative corpus study more laborious. In online (written) communication the emotional language is also expressed by symbols and writing conventions, such as emoticons (Dresner & Herring 2012), spelling, particularly capitalization, punctuation and sets of individual diacritic markers on the one hand apart from negatively marked lexis, semantic prosodies, selected syntactic structures and hybrid (written/spoken) discourse strategies on the other. The most characteristic language properties of emotion expression in sample 1 are face-to-face interaction extension strategies which cover frequent personal pronoun reference, rhetorical questions and rhetorical exclamatives, overt negative lexis and phraseology, shorter turns, much more frequent than in the reference sample (2), in which what is used are more items and discourse strategies with more or less *implicit* negative meanings, written language-based syntax and longer turns on a whole, as e.g. in (2) below,[3]

(2) Rhetorical Questions

(2i) A few of the younger zealots might find openings but why do Labour need these non-entities, especially the ones they have already ditched in the past? 20 507 888 63% 0 99%

(2ii) Hold on, didn't Boris say out in India last week that there was no need for a referendum? 19 413 854 84% 0 94%

In rhetorical questions (2) from sample 1, certain patterns of meanings such as the negative syntax, explicitly negative words phrases or metaphors point to a particular emotion or emotion clusters. In example (2i) they are disapproval, anger,

[3] The numbers following the examples in the paper refer to the analysed corpus data identification, generated by WordSmith Tools.

combined with sarcasm, and in example (2ii) – disappointment clustered with disbelief and irony.

Irony and sarcasm as well as aggressive and marked vocabulary (offensive or vulgar posts can be deleted by the moderator) are other signs of emotion. Furthermore, some distancing elements like *so-called* or *as is referred to* and particular forms of address will function as emotion-laden discourse identity markers.

6. Figurative meanings and ANEW measures

Parts of the meanings of emotion concepts, i.e., their behavioural and experiential properties[4], are not directly accessible in the CMC conditions but their conceptualizations in terms of networks of different kinds of meaning such as figurative, frequently, metaphoric form, can be investigated in the verbal material to help uncover their axiological marking. Metaphors and metonymies, similes and other figures of thought (Lakoff and Johnson 1980), are a useful methodological tool to uncover speakers' attitudes both towards the events portrayed in the utterances and towards the characters responsible for them. Both simile and metaphor refer to the understanding of one idea from one domain, or the whole domain (target domain) in terms of another (a source domain). A source domain is usually more basic and physically grounded, which functions as a mapping site for a given target domain. The figurative uses clearly point either to a positive or negative valence of the event described in the example, as both conventional associations and evaluation connected with them are unambiguous. A few examples from sample (1) will be analysed in this context.

(3) It is the Titanic, holed below the waterline. The band are playing and everyone is chatting and drinking but the water is overflowing the watertight bulkheads.

The figurative uses clearly point to the negative valence of the event described in the example, as both conventional associations and evaluation connected with them are unambiguous. *The Titanic* is a conventional metaphor foregrounding threat, danger and failure.

Negatively charged metaphors in (4), (5) and (6) and metonymy (*the City* in example (4) used for London major business and financial CEOs), foreground the speakers' unambiguously critical attitude towards the future prospects:

[4] Users' experiential references in their online activities are frequently observed in some, so called *string balloons*, types of online interaction (e.g. sample 3 in Lewandowska-Tomaszczyk submitted 2013), although this is regulated to a large extent by a discussion topic.

(4) Don't pin your hopes on the City either - if we leave the EU, a lot of that business will be lost as well.

(5) it's plain that he's lost his marbles and has no rational argument to put forward 4 637 205 86% 0 22%

(6) have I just made that up? Anyway: Boris is the vulture circling in the noonday heat, Cameron the bad guy chained to his past sins. 10 469 486 50% 0 51%

To find additional support for the negative evaluative charge of the words *Affective Norms for English Words* by Bradley, M.M., & Lang, P.J. (1999) have been consulted. The authors refer to the ratings which were collected with subjects who performed the procedure for three scales: HAPPY-UNHAPPY, EXCITED/CALM, CONTROLLED/IN CONTROL. Means and standard deviations for them (pleasure (*valence*), *arousal*, and *dominance* ratings for each word) were calculated. The word frequencies in the affective norms were taken by the authors from Kučera and Francis's (1967) norms. A higher number indicates a more frequent word. For instance, the item *hope* in (4) above and (4a) below is associated with high or very high valence, fairly high emotional arousal and fairly high control, while *lost* in the same example is associated with more negative valence, equal (or somewhat higher, depending on the subjects' gender) arousal and a significant fall of control. The descriptions listed represent Word Description, Word Valence, Arousal, Dominance in terms of No. Mean(SD) Mean(SD) Mean (SD) Frequency No. Mean(SD) Mean(SD) Mean (SD) Frequency.

(4a)

Word No Valence Mean Arousal Mean Dominance Mean Frequency

hope 794 7.05 (1.96) 5.44 (2.47) 5.52 (2.20) 178

lost 852 3.22 (1.70) 5.89 (2.35) 2.83 (1.69) 173

Although the reference materials in Bradley et al.(1999) contain only one thousand items, the following values are identified for some of the items used in the metaphors above [5]

(3a)

[5] Differences between the ratings of male and females subjects identified in Bradley et al. are also notable, although they are easily applicable to online discourse studies:
water ALL: water 486 6.61 (1.78) 4.97 (2.49) 5.08 (1.99) 442; MALE: water 486 6.93 (1.75) 5.13 (2.75) 5.00 (2.20) 442; FEMALE: water 486 6.39 (1.80) 4.87 (2.36) 5.13 (1.89) 442; surprised ALL: surprised 422 7.47 (1.56) 7.47 (2.09) 6.11 (2.19) 58; MALE: surprised 422 7.07 (1.94) 7.80 (2.27) 5.87 (1.96) 58, FEMALE: surprised 422 7.66 (1.33) 7.31 (2.02) 6.22 (2.31) 58

water 486 6.61 (1.78) 4.97 (2.49) 5.08 (1.99) 442

(6a)
sin 392 2.80 (1.67) 5.78 (2.21) 3.62 (2.29) 53[6]

Of interest to us are the ratings for clearly negative items as in:

(7)
nonsense 905 5.11 (1.73) 4.89 (1.94) 5.47 (1.47) 13

Emotion-charged words are also used in non-figurative contexts e.g. *rational arguments* in example (5). *Reason* and *rationality* are often used synonymously with *mind*, in opposition to *body*.

(5a)
mind 877 6.68 (1.84) 5.00 (2.68) 6.37 (2.19) 325

It is revealing to contrast the valence value attributed to *mind* with that of *body*:

(8)

body 665 5.55 (2.37) 5.52 (2.63) 5.34 (2.12) 276

The item *body* as compared with *mind*, is associated with less positive evaluation (valence), higher arousal and less control than *mind* .

Metaphors make it possible to perceive one object or event from different angles and perspectives through a meaning structure typical of other, usually physically grounded, networks of more basic meanings. When asked to give descriptions of intense feeling states, participants generate more metaphors than when describing actions (Fainsilber & Ortony 1987; Williams-Whitney, Mio, and Whitney 1992). Edwards & Clevenger (1990) found that participants chose to construct more metaphorical statements for political candidates for whom they had relatively more intense feelings.

Emotions can also be represented metonymically. Metonymy, identified above with reference to elements of example (4), foregrounds areas of contiguity or inclusion between the whole object and its parts. One illustrative example of metonymy is a *pars pro toto* or part-for-a whole relation, in which one word or phrase is substituted for another with which it is closely associated such as the one quoted in (4), in which the concept of the London City epitomizes the major City business and financial officials.

Another important source of information relevant to the present study are external corpus data (the consulted corpora are the British National Corpus and the

[6] Male subjects: sin 392 3.36 (1.60) 5.07 (2.06) 4.21 (2.12) 53; Female subjects: sin 392 2.50 (1.66) 6.15 (2.24) 3.31 (2.36) 53

combined Longman-Microconcord corpora). The corpus materials additionally illuminate the negativity of the lexical and syntactic uses, in (9) below, literal and metaphoric uses in reference to the sample (1) use of *chained to* metaphor present in (6)

(9)

N	Concordance	Set	Tag	Word #	t. #	os.	a. #	os.	d. #	os.	t. #	os.	File	%
145	It was dark in there. She rode up and chained her bicycle to tall railings. She			373 073	485	8%	0	9%			0	9%	longman2.crp	40%
146	days in a row. Locked up and chained down, his hands shook so bad			430 278	530	8%	0	2%			0	2%	longman1.crp	66%
147	all time.' `I think I will muzzle him and chain him all right if you will give me your			405 225	506	7%	0	5%			0	5%	longman1.crp	46%
148	with the usual chinar leaves, loops, and chains. "Her nephew," he says. The			485 049	913	0%	0	4%			0	4%	longman2.crp	71%
149	with a dripping cat's cradle of ropes and chains. With its masts gone elsewhere,			614 587	084	0%	0	8%			0	8%	longman1.crp	50%
150	and counting tools, in guarding and chaining and releasing the workmen, that			894 905	585	8%	0	2%			0	2%	longman1.crp	76%
151	with colourful stripes on their pants and chain-mail on their shoulders and the			664 298	149	8%	0	2%			0	2%	longman1.crp	71%

The extended context in (9a) below reveals additional properties of the metaphorical *chained to*:

(9a) Feminine women chained to men in our society are in this situation. They are formed to be artificially different and fascinating to men and end by being merely different, isolated in the house of a bored and antagonistic being.

7. Rule of Nazi analogies

A particularly interesting type of marking is one instance of conventional metaphor and simile which was defined by Godwin (1995) and gained the name of *Godwin's law* (also known as *Godwin's Rule of Nazi Analogies* or *Godwin's Law of Nazi Analogies*), which states that when a discussion is progressing the probability of a comparison involving Nazi Germany increases. In online discourse studied here the point of reference is invariably extended from Nazi and Hitler to other outside world events and individuals such as Bin-Laden, USA or other tokens of imperialism, etc., which are also part of Godwin's discourse effect, provided they refer to (subjectively negatively evaluated) threat- and fear-inducing stereotypical entities such as *imperialism* and *capitalism* below:

(10) I'm also sure that he is also a fascist imperialist capitalist although i have no information i cant be bothered researching in detail it is only my intuition

19 769 867 54% 0 96%

Emotion Events are variously constructed. The *threat/fear* emotion clusters represented in (4) as the conventional metaphorical *Titanic* (3) or *vulture* (4), which are manifested in the lexical and syntactic EES patterning referred to, are more elaborated on in the quoted utterance, hence subject to more complex implications than the relatively simple and less sophisticated *he is a* --- construction presented in (10) above. The latter is less compact, has a sequential structure, and can be considered a less powerful rhetorical instrument in the interaction. Yet, in both cases the linguistic use uncovers a facet of the user's *self* by exposing their emotionality expressed by well-defined verbal means.

8. Emotions and Identity

Emotions and emotion disclosure are intrinsically connected with the manifestation of an individual's personal identity as well as other (fragmented) identities, relating to their social, political, corporate, as well as gender stance. The message tone and stylistic variants are characteristics involving emotions, emotional arousal and valence. Herring (1993, 2003) found the majority of apologetic, appreciative and thanking speech acts in academic female communication online, accompanied by more frequent expression of upset and worry. Joy and happiness (laughter and smiling) are also more frequently expressed by females than males in Internet Relay Chat rooms as opposed to more authoritarian tone, aggression, negativity and vulgarisms as used by males. In this sense it is such turns, not only those of the conciliating tone as proposed by Herring, but also the negatively charged ones which make emotional contribution to the discussion. In the samples examined in Lewandowska-Tomaszczyk (submitted 2013) it is both direct statements identifying any of these attributes by the user and also indirectly conveyed meanings and allusions, sometimes the user's profile, his/her commenting history or internet friends who support his/her ideas and verbalize their own, that are diagnostic in attributing the identity type to the user.

Mixed feelings (Lewandowska-Tomaszczyk 2012a), alluded to before, are ambivalent attitudes in situations when people entertain simultaneous, even conflicting, beliefs and convictions or see some matters from two opposite points of view. In such cases the valence is both positive - usually towards certain aspects of the issue - and negative towards some others. No persuasive strategies however are explicit in our present data and no amplification effects which would prioritize one sets of beliefs over the other was observed. Interestingly, the same type of observation refers to the majority of comments analysed in other data by the present author, in which users

remain stable in their political and social convictions (Lewandowska-Tomaszczyk 2012; submitted 2013). Additionally, conforming to what Chingching Chang (2012:333) proposes, persuasion effects in the samples analysed in the present paper emerge only in the cases when the quality of the message is considered to be high by the interactants (in other words, reasonable and rational or intellectually stimulating). On the other hand what is observed in the present discussion is a strong critical attitude towards the present political scene, although a more extensive analysis of a number of particular contributions can reveal deeper sources of external negativity, rooted in the non-satisfying personal life, job- or position-related failure, in other words, internalized causes of really experienced or perceived injustice. An aspect of such attitude can be identified in (11) below.

(11)

I criticise manchester united and real madrid all the time...i have incredible insight into exactly how shit each and every player is...and especially the managers. but i don't play for the clubs, cos at the end of the day, im just not good enough.

Well, britain is the cobblers. Although they have a lot of faults and foreign players causing problems, the EU is manchester united.

Right now, they may have been caught out to 1-1 in the fa 3rd round, but you know who's gonna win in the end, cos the cobblers are shit.

And the UK in europe? a bunch of whinging plumbers would be politicians who instead of getting in there and playing a decent game, will just drag the game down into a historical who invented football and beat up the ref game. So no britain no cry.

Italy will have to shape up its act though.

The idea of *disclosing oneself* in the context of online communication is certainly worth further researching. It is interesting to note that a large proportion of the commentators use the forum to disclose intimate details from their lives and life experiences[7]. Our data from some internet encounters (also sample 3 in Lewandowska-Tomaszczyk submitted 2013) confirm this observation. However, in the case of sample (1) analysed in the present paper, which started as a response to a

[7] Susan Waters & James Ackerman (2011) point that e.g. Facebook users use it more for disclosing to distant friends rather than to close friends, which is divergent from most disclosure research that equates disclosure with intimacy. The phenomenon of a relative disclosure is also observed with reference to some topics rather then others (viz. comments on sex-change as opposed to comments on Noam Chomsky's political opinions in Lewandowska-Tomaszczyk submitted 2013).

political programme, individual experiences are invoked and emotions manifested primarily with respect to the unambiguously outer facet of the personal self.

9. Types of online communication encounters

Different CMC communication *types* are not structured in the same way. For instance, a number of social networking sites will have a question-answer(s) discourse structure (e.g. sites focussing on medical queries), in which both emotion patterning, politeness rules, and other discourse properties, are distinct from those in other types of CMC interactions. There are three main online communication types identified in the comments parts of CMC *proposed* in Lewandowska-Tomaszczyk (submitted 2013). They are

1. *Ping-pong* communication, which underlies an interaction confrontational profile, targeted towards two polar judgments and positions.
2. *Snowball* communication, which has a fully determined and uniform communicative profile, mainly of uniform polarity (unambiguously pro or, more frequently, against, supporting or opposing a given issue) with a clearly defined ultimate objective and an external opponent, not infrequently leading to spectacular success in real life (e.g. 38 degree movement in UK).
3. *String balloons* communication, which presents a looser interactional structure often around issues of social and moral values, weakly polarized and representing sets of interactional, often digressive, moves around a controversial theme.

The data analysed in the present paper are structured mainly according to the ping-pong type, with strongly prevailing negativity components, although elements of the snowball effect can also be identified, particularly with regard to sample 1, with a higher number of emotional expressions, higher on the negativity arousal measure than that in sample 2. It may be premature today to pass judgement about a possible effect of a referendum planned for the year 2015, but what can be conjectured at present is precisely the emotion patterning type that is likely to develop dynamically in the future.

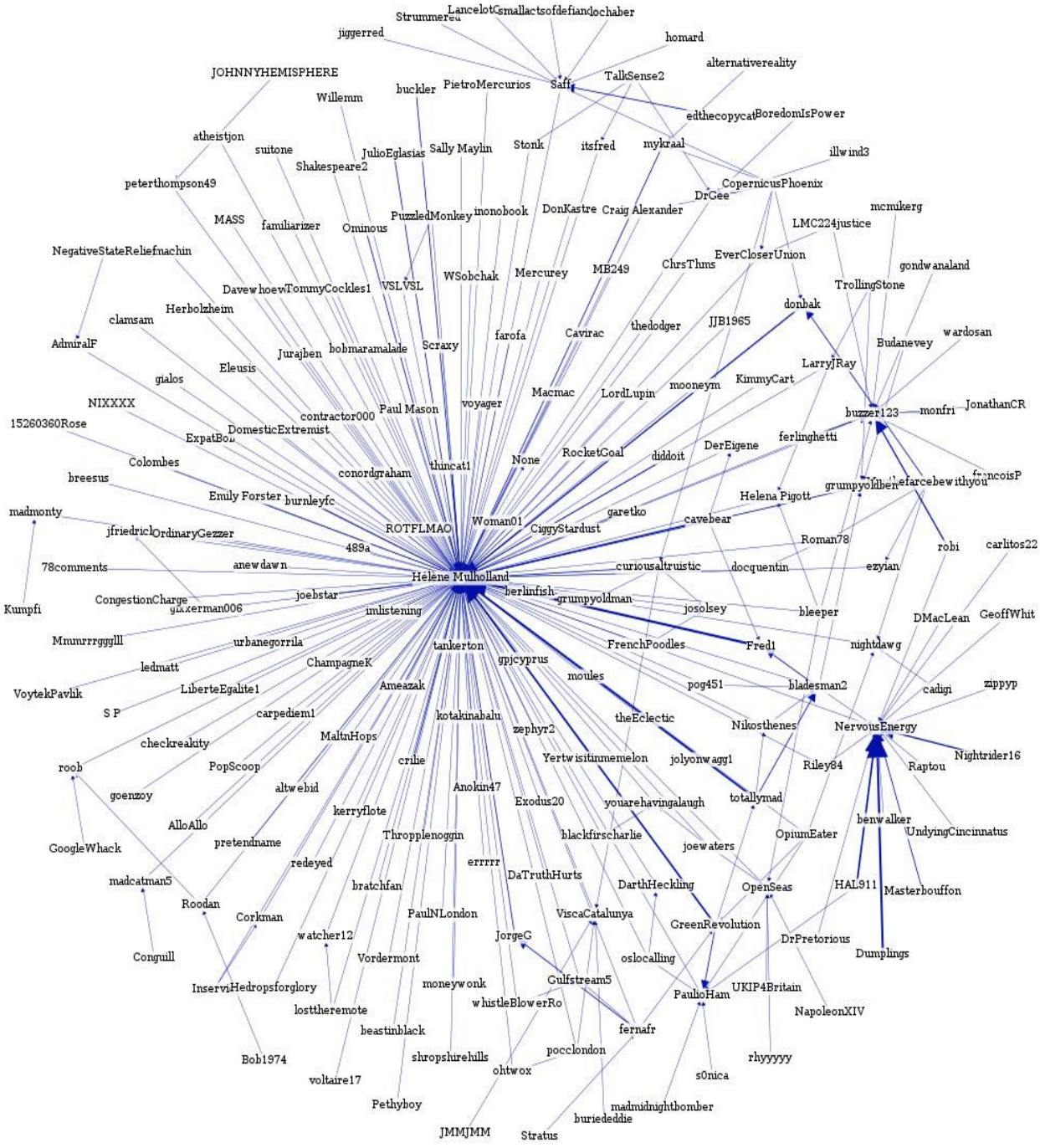
10. Quantitative analysis of the data

What will be presented in the present section are the results of the quantitative measures with reference to linguistic emotion-related signals in the analysed contributions. The data collected from the respective websites, was converted to text format and quantitatively analysed by means of the relevant concordancing and other WordSmith instruments.

10.1. Visualisaton

Parts of the quantitative representation of the Interconnectivity Value (IV), proposed and discussed in Lewandowska-Tomaszczyk (2012), is presented below for sample (1) and confronted with some quantitative properties of sample (2). IV is understood as a number and type of individual users' and user groups' interconnections with other participants of a given discussion. Partial visualization of the results for sample (1) is presented (Fig. 1 and Fig. 2) in terms of undirected graphs (*Gephi* software freely available online), understood as a collection of *vertices/nodes*, which signify individual users, and a collection of *edges* that connect pairs of vertices, which represent the interconnectivity relations among them. The number of edges and the length of the lines represent the number of (inter)connective comments of a given user.

Fig. 1 below represents the interconnections identified and generated for sample (1). The centre of the Interconnectivity is Hélène Mulholland, a political reporter at the Guardian and the author of Text 1. Fig. (2). Fig. (2) presents a magnified picture of a smaller subthread in the same sample.


Strummerau
LancelotGsmallactsofdefiandlochaber
jiggerred
homard
alternativereality
JOHNNYHEMISPHERE
Saff
TalkSense2
buckler
PietroMercurios
Willemm
edthecopycat
BoredomIsPower
atheistjon
suitone
JulioEglasias
Sally Maylin
Stonk
itsfred
mykraal
illwind3
Shakespeare2
peterthompson49
CopernicusPhoenix
DrGee
MASS
familiarizer
Ominous
PuzzledMonkey
inonobook
DonKastre
Craig Alexander
mcmukerg
LMC224justice
NegativeStateReliefmachin
EverCloserUnion
ChrsThms
MB249
Mercurey
WSobchak
VSLVSL
DavewhoewTommyCockles1
gondwanaland
TrollingStone
donbak
Herbolzheim
clamsam
AdmiralF
Jurajben
bobmaramalade
Scraxy
farofa
Cavirac
thedodger
JJB1965
wardosan
Budanevey
Eleusis
gialos
LarryJRay
KimmyCart
mooneym
LordLupin
Macmac
NIXXXX
voyager
Paul Mason
contractor000
buzzer123
monfri
JonathanCR
15260360Rose
DomesticExtremist
ExpatBou
ferlinghetti
DerEigene
diddoit
RocketCoal
None
thuncat1
Colombes
conordgraham
breesus
Emily Forster
burnleyfc
grumpyoldben
efarcebewithyou
francoisP
Helena Pigott
madmonty
jfriedricl
OrdinaryGezzer
Woman01
ROTFLMAO
CiggyStardust
garetko
cavebear
Roman78
489a
robi
carlitos22
78comments
anewdawn
curiousaltruistic
docquentin
ezyian
Hélène Mulholland
CongestionCharge
joebstar
berlinfish
grumpyoldman
josolsey
bleeper
Kumpfi
glixerman006
imlistening
DMacLean
GeoffWhit
Mmmrrrgggllll
urbanegorrila
tankerton
FrenchPoodles
Fred1
nightdawg
ledmatt
ChampagneK
gpjcyprus
moules
pog451
bladesman2
cadigi
zippyp
VoytekPavlik
LiberteEgalite1
Ameazak
S P
carpediem1
kotakinabalu
theEclectic
Nikosthenes
NervousEnergy
checkreality
MaltnHops
zephyr2
Nightrider16
roob
PopScoop
crihe
Yertwisitinmemelon
jolyonwagg1
Riley84
Raptou
goenzoy
altwebid
Anokin47
Exodus20
youarehavingalaugh
totallymad
benwalker
kerryflote
AlloAllo
UndyingCincinnatus
GoogleWhack
pretendname
Throppleneggin
blackfirscharlie
joewaters
OpiumEater
redeyed
errrrr
madcatman5
DaTruthHurts
DarthHeckling
OpenSeas
HAL911
Masterbouffon
bratchfan
Roodan
PaulNLondon
ViscaCatalunya
GreenRevolution
Corkman
watcher12
JorgeG
DrPretorious
Dumplings
Conguill
Vordermont
oslocalling
InserviHedropsforglory
moneywonk
Gulfstream5
PaulioHam
UKIP4Britain
whistleBlowerRo
losttheremote
NapoleonXIV
beastinblack
fernafr
Bob1974
shropshirehulls
pocclondon
rhyyyyy
ohtwox
s0nica
voltaire17
Pethyboy
madmidnightbomber
buriededdie
JMMJMM
Stratus

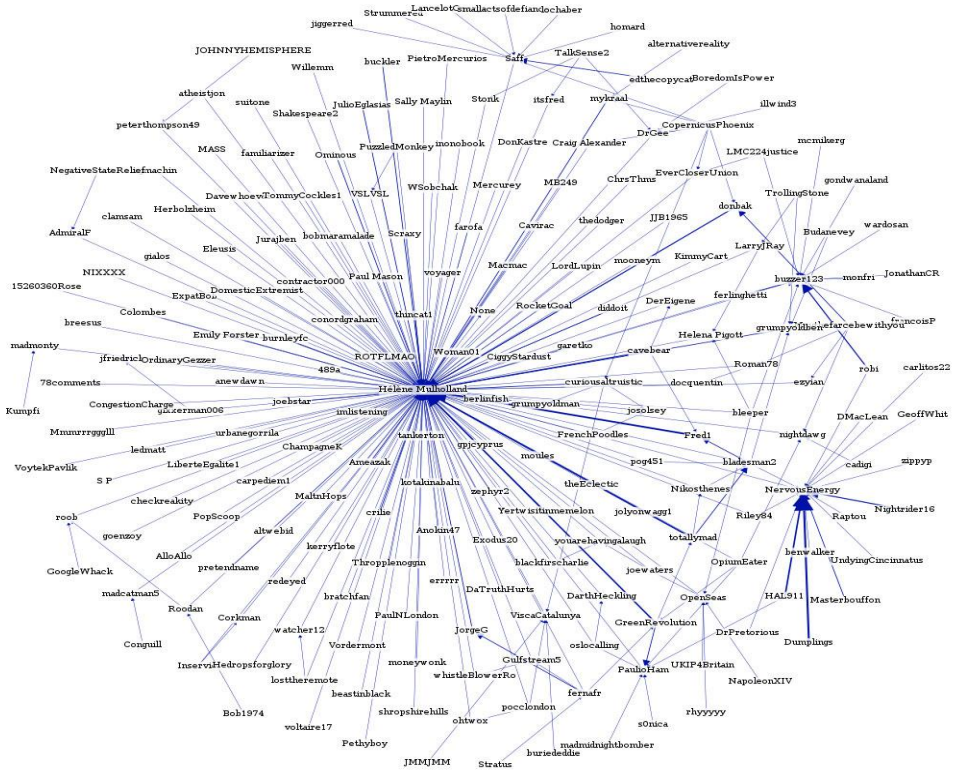
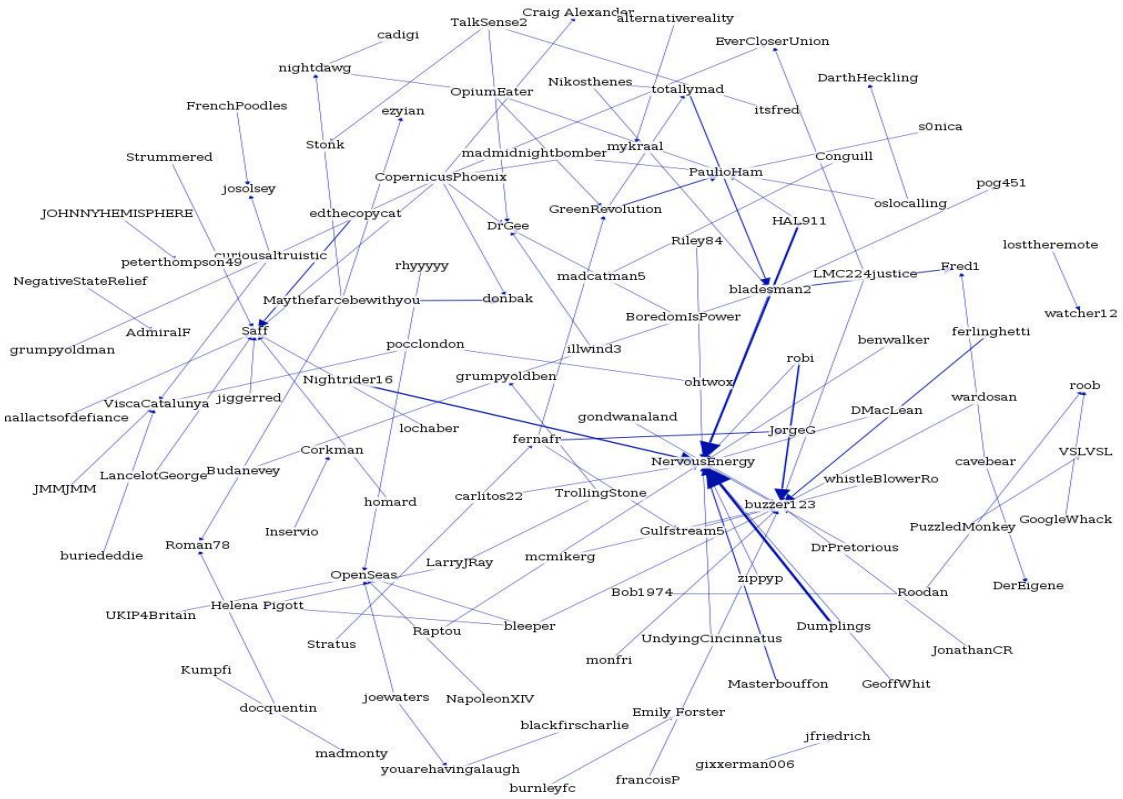

Helene Mulholland
Woman01
ROTFLMAO
CiggyStardust
Saff
TalkSense2
PistroMercurios
buckler
Willemm
JOHNNYHEMISPHERE
alternativereality
homard
edthecopycat
BoredomIsPower
CopernicusPhoenix
DrGee
LMC224justice
EverCloserUnion
TrollingStone
gondwanaland
donbak
JJB1965
LarryJRay
Budanevey
wardosan
KimmyCart
mooneym
LordLupin
Macmac
Mercurey
MB249
WSobchak
VSLVSL
TommyCockles1
DavewhoevI
Herbolzheim
clamsam
AdmiralF
Jurajben
bobmaramalade
Scraxy
farofa
Cavirac
thedodger
Eleusis
gialos
NIXXXX
15260360Rose
ExpatBou
DomesticExtremist
contractor000
Paul Mason
voyager
RocketGoal
diddoit
DerEigene
ferlinghetti
buzzer123
monfri
JonathanCR
Colombes
breesus
conordgraham
thincat1
None
Emily Forster
burnleyfc
Helena Pigott
grumpyoldben
Maythefarcebewithyou
francoisP
madmonty
jfriedrich
OrdinaryGezzer
489a
78comments
anewdawn
garetko
cavebear
Roman78
robi
carlitos22
curiousaltruistic
docquentin
ezyian
Kumpfi
CongestionCharge
gixxerman006
joebstar
inulisteninq
berlinfish
grumpyoldman
josolsey
bleeper
DMacLean
GeoffWhit
Mmmrrrgggllll
urbanegorrila
lankerton
FrenchPoodles
Fred1
nightdawg
ledmatt
ChampagneK
gpjcyprus
moules
pog451
bladesman2
cadigi
zippyp
VoytekPavlik
LibertéEgalite1
Ameazak
S P
carpediem1
kotakinabalu
theEclectic
Nikosthenes
NervousEnergy
checkreality
MaltnHops
zephyr2
Yertwisitinmemelon
jolyonwagg1
Riley84
Raptou
Nightrider16
roob
PopScoop
crile
Anokin47
Exodus20
youarehavingalaugh
totallymad
goenzoy
altwchld
kerryflote
AlloAllo
GoogleWhack
pretendname
Throppleneggin
blackfirscharlie
joewaters
OpiumEater
benwalker
UndyingCincinnatus
redeyed
errrrr
DaTruthHurtz
DarthHeckling
OpenSeas
HAL911
Masterbouffon
madcatman5
bratchfan
Roodan
Corkman
PaulNLondon
ViscaCatalunya
GreenRevolution
watcher12
JorgeG
DrPretorious
Congulll
Vordermont
oslocalling
Dumplings
InserviHedropsforglory
moneywonk
Gulfstream5
PaulioHam
UKIP4Britain
losttheremote
whistleBlowerRo
NapoleonXIV
beastinblack
fernafr
Bob1974
shropshirehills
pocclondon
rhyyyyy
voltaire17
ohtwox
s0nica
Pethyboy
madmidnightbomber
buriededdie
JMMJMM
Stratus

Fig. 2


Craig Alexander
TalkSense2
alternativereality
cadigi
EverCloserUnion
nightdawg
DarthHeckling
Nikosthenes
OpiumEater
totallymad
itsfred
FrenchPoodles
ezyian
s0nica
Stonk
madmidnightbomber
mykraal
Strummered
Congulll
CopernicusPhoenix
PaulioHam
pog451
josolsey
oslocalling
JOHNNYHEMISPHERE
edthecopycat
GreenRevolution
HAL911
DrGee
Riley84
losttheremote
curiousaltruistic
peterthompson49
rhyyyyy
madcatman5
Fred1
LMC224justice
NegativeStateRelief
Maythefarcebewithyou
donbak
bladesman2
watcher12
BoredomIsPower
AdmiralF
Saff
ferlinghetti
grumpyoldman
pocclondon
illwind3
benwalker
robi
Nightrider16
grumpyoldben
ohtwox
roob
ViscaCatalunya
jiggerred
wardosan
DMacLean
nallactsofdefiance
gondwanaland
lochaber
JorgeG
Corkman
fernafr
VSLVSL
NervousEnergy
cavebear
LancelotGeorge
Budanevey
whistleBlowerRo
JMMJMM
carlitos22
TrollingStone
homard
buzzer123
PuzzledMonkey
GoogleWhack
Inservio
Gulfstream5
buriededdie
Roman78
DrPretorious
LarryJRay
mcmikerg
OpenSeas
zippyp
DerEigene
Bob1974
Roodan
Helena Pigott
UKIP4Britain
bleeper
Raptou
Dumplings
Stratus
UndyingCincinnatus
JonathanCR
monfri
Kumpfi
Masterbouffon
GeoffWhit
joewaters
NapoleonXIV
docquentin
Emily Forster
blackfirscharlie
jfriedrich
madmonty
youarehavingalaugh
gixxerman006
francoisP
burnleyfc

10.2. Statistics

Sample 1: BORIS JOHNSON 3123 type-words, 45 081 token-words, 328 comments, 180 Facebook shares, 85 tweets, 10 g+, 0 email; average length of one comment 137 tokens (see Appendix 1)

(1) Sample 2: DAVID CAMERON: 1226 type-words, 5235 token-words, 85 comments, 47 Facebook shares, 20 tweets, 10 g+, 6 email, average length of one comment 62 tokens

The keywords tables below present the keyword items (2.) of the basic text in sample (1) and in the relevant comments (3.). While in the text no negative keyords are identified, in the comments, the first evaluative terms which surface are negative evaluation emotional vocabulary (in bold).

Table 2. Keywords[8] for Text (sample 1)

N	Key word	Freq.	%	RC.	Freq.	RC. %	Keyness P[9]
1	EU	14	1,55	7		244,94	0,0000000000
3	JOHNSON	11	1,22	396		112,33	0,0000000000
4	EUROZONE	5	0,55	0		96,98	0,0000000000
5	RELATIONSHIP	13	1,44	1 921	0,01	96,51	0,0000000000
6	REFERENDUM	5	0,55	66		60,81	0,0000000000
7	RENEGOTIATED	3	0,33	2		51,45	0,0000000000
8	BRITAIN	8	0,88	1 960	0,01	51,37	0,0000000000
9	UK	7	0,77	1 097		51,11	0,0000000000
10	MARKET	8	0,88	2 306	0,02	48,82	0,0000000000
11	SINGLE	8	0,88	2 457	0,02	47,83	0,0000000000
12	CAMERON	3	0,33	23		39,58	0,0000000000
13	BORIS	3	0,33	24		39,34	0,0000000000
14	UNION	6	0,66	1 891	0,01	35,55	0,0000000002
15	STAYING	4	0,44	345		33,91	0,0000000028
16	NARROWLY	3	0,33	102		30,95	0,0000000236
17	EUROPE	5	0,55	1 488	0,01	30,18	0,0000000364
18	FISCAL	3	0,33	186		27,39	0,0000001633
19	MAYOR	3	0,33	265		25,29	0,0000004902

[8] The tables of keywords below are generated taking as a reference a 25million-unit Longman/Microconcord corpus of modern English. The items of structural relevance only are not included in the lists. Presented in bold font are the words with unambiguously negative evaluative charge.

[9] p value, Default=0.000001)

The ***p*** value is that used in standard chi-square and other statistical tests. This value ranges from 0 to 1. A value of .01 suggests a 1% danger of being wrong in claiming a relationship, .05 would give a 5% danger of error. In the social sciences a 5% risk is usually considered acceptable.

Table 3. Kewords for Text and Comments (sample 1)							
Nº	**Key word**	**Freq.**	**%**	**RC. Freq.**		**RC. %**	**Keyness P**
9	EU	294	0,65	7		3 339,04	0,0000000000
11	RECOMMEND	298	0,66	127		2 934,24	0,0000000000
13	BORIS	139	0,31	24		1 473,52	0,0000000000
14	UK	194	0,43	1 097		1 160,79	0,0000000000
15	REFERENDUM	79	0,18	66		715,26	0,0000000000
16	EURO	54	0,12	26		524,48	0,0000000000
17	UKIP	45	0,10	0		521,00	0,0000000000
18	EUROPE	98	0,22	1 488	0,01	408,37	0,0000000000
19	BRITS	35	0,08	6		371,11	0,0000000000
20	VOTE	72	0,16	785		344,02	0,0000000000
22	TORY	48	0,11	328		270,55	0,0000000000
23	NORWAY	30	0,07	54		238,16	0,0000000000
25	CAMERON	24	0,05	23		212,86	0,0000000000
26	JOHNSON	40	0,09	396		198,22	0,0000000000
27	TORIES	30	0,07	127		194,94	0,0000000000
29	EUROPEAN	52	0,12	1 269		171,47	0,0000000000
34	**RE-NEGOTIATE**	14	0,03	0		162,08	0,0000000000
35	BJ	14	0,03	1		154,74	0,0000000000
36	MEMBERSHIP	29	0,06	296		142,07	0,0000000000
37	COUNTRIES	52	0,12	1 767	0,01	140,68	0,0000000000
41	CURRENCY	25	0,06	199		133,92	0,0000000000
45	BRITAIN	49	0,11	1 960	0,01	118,60	0,0000000000
46	GREECE	23	0,05	207		118,01	0,0000000000
53	**RENEGOTIATING**	9	0,02	0		104,19	0,0000000000
55	SCOTLAND	25	0,06	448		96,52	0,0000000000
58	BRUSSELS	16	0,04	99		93,06	0,0000000000
71	EC	15	0,03	128		78,43	0,0000000000
72	SPAIN	22	0,05	464		78,37	0,0000000000
73	**POPULIST**	11	0,02	34		77,50	0,0000000000
100	DEMOCRACY	25	0,06	836		68,33	0,0000000000
101	VOTING	15	0,03	196		66,64	0,0000000000
103	INTEGRATION	17	0,04	300		66,11	0,0000000000
104	GERMANS	21	0,05	565		65,54	0,0000000000
107	**HAHA**	6	0,01	2		60,48	0,0000000000
109	**INCOMPETENCE**	9	0,02	34		60,28	0,0000000000
111	EUROPEANS	12	0,03	119		59,42	0,0000000000
112	MAYOR	15	0,03	265		58,30	0,0000000000
114	EUROZONE	5	0,01	0		57,88	0,0000000000
117	TRADE	32	0,07	1 845	0,01	57,75	0,0000000000
120	**MISINFORMATION**	7	0,02	11		57,05	0,0000000000
122	**DICTATORSHIPS**	6	0,01	4		56,03	0,0000000000
124	**MURDOCH**	9	0,02	48		54,76	0,0000000000
125	FUNDING	13	0,03	193		54,69	0,0000000000
128	**FUCK**	12	0,03	156		53,42	0,0000000000

The absolute incidence of explicit *no* (also other neg- utterences not displayed here) is much higher in Sample (1) - 115 (Table 4, Table 5) than in Sample (2) - 18. Even considering the differences in the number of tokens in both texts, characteristic is the functional role of *no* as absolute negation targeted towards desired commodities in sample (1) Table 4., and its much more mediating discursive function in sample (2), Table 5. :

Table 4. *no* utterances (Sample 1)

N	Concordance	Set	Tag	Word #	t. #	t. os.	a. #	a. os.	d. #	d. os.	t. #	t. os.
1	the UK with 8 million on the dole, no future for the average working person			32	649	179	7%	0	2%		0	2%
2	under them. Limited dole payments, no public housing. And funnily enough,			32	676	180	1%	0	2%		0	2%
3	families losing everything and with no options, it is really taking its toll, both			32	818	184	0%	0	2%		0	2%
4	chained to the rotting PIGS doe sus no good. The future is in the Far East			32	422	170	1%	0	1%		0	1%

Table 5. *no* utterances in Sample (2)

N	Concordance	Set	Tag	Word #	t. #	t. os.	a. #	a. os.	d. #	d. os.	t. #	t. os.
1	let Britain exit in no time if it would be a no vote. Germany would think "That's a			3	847	217	4%	0	6%		0	6%
2	"That's a bummer. But hey, they were no good for solving the Euro issue			3	859	219	6%	0	6%		0	6%
3	Fans 01:07 PM on 01/23/2013 There is no doubt Britain would survive outside			2	591	158	0%	0	1%		0	1%
4	In Europe they would let Britain exit in no time if it would be a no vote. Germany			3	840	217	6%	0	6%		0	6%

As mentioned in the introductory section above, both the samples display in fact personalized attacks against the conservative Tory Mayor of London (example 12, sample 1, example 12) and UK Prime Minister, representing the same party (sample 2, example 13). The growing *snow-ball emotionality* pattern is represented by the qualitative and quantitative linguistic properties of the utterances particularly in the discourse of comments in sample (1). The utterances reveal both pro- and anti- UK UE membership, nevertheless the strong negativity element is present in both.

(12) Boris Johnson, the new ass-clown mayor of Mumbei. Why don't you shut that ugly girning hole in your face that passes for a mouth and stop spouting shit, chappati boy?

(13) It's the same with Cameron - he'd rather talk about the Eurozone than his own crazy policies - see also Blair acting as the world's police-poodle. Why can't they just do the job for which they receive a salary

10.3. Direct and indirect negativity markers (sample 1)

The negativity component is much more strongly represented in sample (1). Comments representing negative categories in both samples are given below.

10.3.1. Negative lexis and phraseology (italicized)

(14) Sample (1)

(i) I'm *sick of* hearing or seeing him - always *pontificating*.

(ii) He's the Mayor of London *not the Lord Mayor of the City* of London.

(iii) He was *(stupidly)* voted in by the people of London *not the square mile*.

(iv) His priorities should be improving the tube and transport network. Its a *scandal* that we pay the most for the worst service. Each year it gets *more expensive* but the service *never improves*.

(v) He has *no vision*. Visionaries are in Paris and Berlin.

(vi) A sentence that encapsulates the *infantilism* and *stone cold ignorance* of many British politicians, particularly those *Oxbridge un-educated*.

The negative emotions are often used in (blended) clusters of identical prosody, both in order to emphasize the negativity of the opinion and equally frequently for the lack of one, more focused linguistic concept or form in which to epitomize the frustration and disappointment, a list of related emotionally charged words and phrases is used instead:

14 (vii) a bit of humble pie...but the day to day, year to year, (generation to..) with normal families losing everything and with no options

The discourse extracts above exemplify frequent generalizations, often unaccounted for, and radically negative opinions, targeted towards UK politicians and large sectors of British political elite (14(vi) and 15).

(15) Sample (1)

Of course *i am just a laymen [corporal] with no great education like all you guardian readers ha ha!!!*

10.3.2. Capitalization

Capitalization in the samples represents a typical emphasizing function:

(16) Sample (1)

Then, the idea that the rest of the EU, even under BLACKMAIL, which is now the policy of last resort of these toffs, will agree to give the UK any and all remaining opt-outs from every EU policy except membership of the single market while still nominally remaining INSIDE the EU, i.e. with a say in EU legislation, is a total fantasy that only these mentally under aged ignoramuses can entertain.

10.3.3. Sample (2) negativity markers

Sample (2) displays less emotional language and less negativity. The reasons may be clearer when confronted with two observations. Firstly, networks of commentators in different online discussions are rarely identical. Secondly, the fact is that the information on the planned referendum on UK UE membership *lost its novelty character* may cause less interest and cosequently arouses less *emotion* for the time being.

The characteristic use of positive politeness strategies in sample (2) comments, interrogative rather than exclamatory syntax, negative vocabulary of a much weaker calibre, are the essential linguistic properties of what can be considered a much less emotional discourse than in sample (1). Moreover, the ping-pong exhibits a much less confrontational character with respect to the interlocutor than any of the similar ones in sample (1), as exemplified in the example below:

(17) Sample (2)

- Every single country in the EU needs a referendum; the people had no say, their governments joined in whether the people wanted it or not. Cameron's motive may be political but a good one anyway.

- Sorry, but clearly no. Where does this unflinching believe into the wisdom of referendums come from? I really feel the idea of "referendum" is almost exclusively brought up by those who realize their position on a single question has no representative majority. WIYO [viz. What's In Your Opinion] wrong with parliamentarism?

- Yes, referendums CAN, when rightly and honestly applied, be a valid procedure to decide questions. BUT - as even Switzerland, who are the most seasoned European people when it comes to referendum and the decision about Mosques shows - people can be manipulated to choose emotionally, not rationally. Even with a historical perspective, referendums are to be seen with skepticism. The historical

experience of Germany is exactly the reason why the constitution does not allow a referendum on all but one things.

- Besides, there are (fringe) parties almost everywhere promising similar things as PM Cameron. There are such parties in Germany. They just stay below 1% of votes. When the Euro was about to be introduces, a group of conservatives defected from the CDU (with lots of tv coverage) and formed a party which had one single goal: Not to join the Euro. They failed to get even a single seat in parliament.

- The same applies to parliamentarism. Polticians sometimes promise a lot and do a u-turn right after elections, saying they had to compromise.

-While that CAN be a valid reason, it can also simply be cheating on your electorate.

The users' less engaged interactional activity patterns in sample (2) involve a lower frequency of negative evaluating lexis than in sample (1), where what is observed are numerous evaluative *metalinguistic comments* on the current interactants' linguistic, writing, spelling skills (18). Some of the remarks instigate a series of hectic mutual attacks and grow into a more and more personalized ping-pong type of negation and accusations.

(18) sample (1)

(i)You accuse him of weak arguments yet your arguments are fallacious non-sequiturs. What has this to do with xenophobes? You don't get it.

(ii) sample (1)

A: - I would take this more seriously if the writer knew the difference between it's and its.

B: - Excellent comment it really shows you up. You don't care about the policies so long as they

A: -It's hard to believe a comment like this has 76 recommends. A sad reflection of the pedantry of CIF these days.

C: A person's spelling ability is postively correlated with their intelligence and level of education. The are exceptions are when people are non-native users of a language or have specific learning disabilities (such as low level autism/dyslexia). How many professors of economics can't apply basic spelling rules such as using apostrophes correctly?

B: of course, the chief risk of pedantry is that you will be hoist on your own petard, such as when I wrote 'the are exceptions are' above, but in such circumstances it's useful to point out that I am dyslexic and do not claim to be either well educated or intelligent.

A: - I bet you're the life and soul of the party.

For anyone who thinks I don't also have a view on the wit and wisdom of BJ, here it is from another blog: BJ says what Murdoch wants him to say. Anyone fed up with Murdoch running British politics - whether or not they are enthusiastic about the EU, the Euro, etc - should vote with their feet.

To those who think wishing people could at least try to write correct English is boring undemocratic pedantry, let me say this: if you can't do it, you risk not getting a fair hearing. Of course, as peterthomson49 and others stress, the real agenda of people like BJ is to drop out of the social chapter, spend less and less on education and culture, and fall further and further behind countries like Germany in giving people the kind of solid education that might make 'it's' for 'its' less prevalent.

D: - I balme the new nested comments.

C: - Since when was the correct use of apostrophes considered to be a spelling rule? Idiot.

Infrequently observed in the exchanges are instances of genuinely creative metaphoric and other figurative language, although a number of users, with high metalinguistic awareness, applies the strategy of verbal games, word play (e.g., 'The *Clown Prince* in waiting'), and inter-variety linguistic borrowing , marked by the distancing phraseology, quotation markes, etc., (e.g., 'with all Farage, Cameron and Johnson "nombrilistic" postures').

11. Conclusions: Emotion, language and communication dynamics

The negative emotionality patterns as identified in the two corpora of the internet international commenting discourses are found to play a crucial role in building and strangthening internet group identities in the cases investigated in the present paper. They lead to the following observation. The first text stimulates more interest than the second one in terms of the number of comments and their dissemination in the social networks, which also correlates with a longer and higher degree of the commentators' emotional arousal, calculated in terms of the Overall Interconnectivity Values (see Appendix for the frequency sample) with reference to the qualitative and

quantitative analyses of the respective negativity uses. The ping-pong communication pattern, clearly visible in both samples, is strongly intertwined with the snow-ball cascade type of communication, more likely to bring about desired social effects, particularly visible in sample 1.

The negative emotions are created and experienced in individuals, transmitted, and spread in relatively clearly identified two groups of users, more salient in sample 1, and the respective linguistic and discourse markers evident there, i.e. a higher number of negatively charged lexical items, more frequent metaphoric uses, a higher numerical Interconnectivity Value, i.e. more interactionally salient, and simultaneously lower on the politeness strategic axis, are the characteristic properties of such emotionally-charged discourse patterns.

The new methodological approach to emotion studies presented here, which combines a qualitative cognitive linguistic analysis of online discourse with the quantitative linguistic corpus data generated by the computational tools, shows certain advantages when contrasted with more constrained homogenous methodology of either questionnaire-based or else clearly narrow linguistic analytic approaches.

The discussion in the present materials revolves around essential national issues, although at face value, it is basically targeted towards the Tory government and its chief representatives. Its clearly British nation-centred character is visible in the incessant highly emotional references to the current political and social divisions - divisions between the EU/non-EU, the Euro/non-Euro countries, 'the Europhile Guardian and its readers' and the others - having 'rational arguments', the negotiate/re-negotiate/non-negotiate dilemmas, failing and blaming others (like say the 'banking hordes') for one's own failure in the spirit of the 'whingeing Pom' sentiment, or calling for the debate 'to rise above the DailyMail/Tory level of nonsense' and for the politicians - to stop acting in the Blair-like 'the world's police-poodle' fashion, all of which are used with regard to the interactants' worry about the role of their country in the contemporary Europe. Scarce jokes, numerous sarcastic comments, few instances of word play, infrequent creative metaphors, seven 'yes' statements, which do not mark confirmation but an alternative rather, evidence a fairly serious tone of the debate within the divided communities of the internet users, who care about their country.

More, or 'new' internet-based democracy is clearly observed in the debate but so is a certain reproduction of 'banal nationalism' (Billig 1995, Postill 2011, Soffer 2013), which, although on a mass-scale emotion-laden ping-pong exchange, seemingly

embedded in the local, narrow, problems, aims in fact at the (inter-)national, cascade or snow-ball effect-bringing targets.

12. References

- Altarriba, Jeanette and Lisa M. Bauer. (2004). “The distinctiveness of emotion concepts: A comparison between emotion, abstract, and concrete words”. *American Journal of Psychology*.vol. 117, no 3. 389-410.
- Atkinson, J. D., Rosati, C., Stana, A. and S. Watkins (2012). "The performance and maintanace of standpoint within an online community". *Communication, Culture and Critique* 5.4. 600-617.
- Billig, Michael (1995). *Banal Nationalism*. London: Sage Publications
- boyd, danah (2001). *FACETED ID/ENTITY: Managing representation in a digital world.*
- A.B. Computer Science. Brown University. Providence, Rhode Island.
- Bradley, Margaret M., & Peter J. Lang (1999). *Affective Norms for English Words (ANEW): Instruction manual and affective ratings*. Technical Report C-1, The Center for Research in Psychophysiology, University of Florida.
- Chang, Chingching (2012) Ambivalent Attitudes in a Communication
- Process: An Integrated Model. *Human Communication Research* 38. 332–359.
- Chmiel, Anna, Julian Sienkiewicz, Mike Thelwall, Georgios Paltoglou, Kevan Buckley, Arvid Kappas and Janusz A. Hołyst (2011). ”Collective emotions online and their influence on community life” http://arxiv.org/abs/1107.7.Journal reference: PLoS ONE 6(7): e22207.
- Damasio, A. (2003). *Looking for Spinoza: Joy, sorrow, and the feeling brain*, Harcourt.
- Dresner, E., & Herring, S. C. (In press, 2012). Emoticons and illocutionary force. In D. Riesenfel & G. Scarafile (Eds.), *Philosophical dialogue: Writings in honor of Marcelo Dascal* (pp. 59-70). London: College Publication. Prepublication version:
- http://ella.slis.indiana.edu/~herring/Dresner_Herring.pdf
- Dziwirek, K. & B. Lewandowska-Tomaszczyk (2010). *Comples Emotions and Grammatical Mismatches.* Berlin: Mouton de Gruyter.
- Edwards, R., and T. Clevenger (1990). ‘The effects of schematic and affective processes on metaphorical invention.’ *Journal of Psycholinguistic Research*, 19 (2), 91-102.

- Fainsilber, L., and A. Ortony (1987). 'Metaphorical uses of language in the expression of emotions.' *Metaphor and Symbolic Activity*, 2, 239-250.
- Fillmore, Charles (1982). "Towards a descriptive framework for spatial deixis", in: Robert J. Jarvella and W.Klein (eds.).*Speech, Place and Action.* London: John Wiley, 31-59.
- Gibbs, Raymond (2006). *Embodiment and Cognitive Science*. New York: Cambridge University Press.
- Godwin, Mike (January 12, 1995). "Godwin's law of Nazi Analogies (and Corollaries)" *EFF.org*. Electronic Frontier Foundation pp. "Net Culture – Humor" archive section. http://w2.eff.org/Net_culture/Folklore/Humor/godwins.law. Retrieved 2012-06-19
- Herring, Susan C. (1993). Gender and democracy in computer-mediated communication. Electronic Journal of Communication, *3* (2). http://ella.slis.indiana.edu/~herring/ejc.doc
- Herring, Susan C. (2003). Gender and power in online communication. In J. Holmes & M. Meyerhoff (Eds.), The Handbook of Language and Gender (pp. 202-228). Oxford: Blackwell Publishers. http://ella.slis.indiana.edu/~herring/gender.power.pdf
- Herring, Susan C. (2004). Computer-mediated discourse analysis: An approach to researching online behavior. In S. A. Barab, R. Kling, & J. H. Gray (Eds.), Designing for Virtual Communities in the Service of Learning (pp. 338-376). New York: Cambridge University Press. Preprint: http://ella.slis.indiana.edu/~herring/cmda.pdf
- Huebler, Axel (1983). *Understatements and hedges in English* (*Pragmatics and Beyond* IV:6), Amsterdam: Benjamins.
- Johnson, Mark (1987). *The body in the mind.* The University of Chicago Press; Chicago and London.
- Kövecses, Zoltan (1990). Emotion Concepts. New York: Springer-Verlag.
- Kövecses, Zoltan (2000). Metaphor and Emotion: Language, Culture, and Body in Human Feeling. Cambridge: Cambridge University Press.
- Kučera, Henry, and Francis, W. N. (1967). *Computational Analysis of Present-day American Engish.* Providence: Brown Unviersity Press.
- Lakoff, George. 1987.*Women, Fire, and Dangerous Things: What categories reveal about the mind*. Chicago: University of Chicago.
- Lakoff, George and Mark Johnson. (1980). *Metaphors we Live By.* Chicago: Chicago University Press.

- Langacker, Ronald W. (1987, 1991). *Foundations of Cognitive Grammar* Parts 1 and 2. Stanford University Press, Stanford.
- Lewandowska-Tomaszczyk, Barbara (1996). *Depth of Negation. A Cognitive Semantic study.* Lodz: Lodz University Press.
- Lewandowska-Tomaszczyk, Barbara. (2010). ”Re-conceptualization and the emergence of discourse meaning as a theory of translation”. In: Lewandowska-Tomaszczyk, B. and M. Thelen (eds.) *Meaning in Translation.* Frankfurt a. Main: Peter Lang. 105-148
- Lewandowska Tomaszczyk, Barbara (2012) "Blurring the boundaries: A Model of Online Computer-Mediated Communication Activities (OCA)". In: Adam Bednarek (ed.) *Interdisciplinary Perspectives in Cross-Cultural Communication.* Muenchen: Lincom Publishers. 8-35.
- Lewandowska Tomaszczyk, Barbara (2012a) ”Mixed feelings an conceptual clusters in communication” *EvoLang* 2012, Kyoto.
- Lewandowska-Tomaszczyk, B. (submitted 2013) "Emergent Identity in Online Discussions" paper submitted for Book 3 *Transforming* volume;
- Lewandowska-Tomaszczyk, Barbara and Katarzyna Dziwirek (eds). (2009). *Studies in Cognitive Corpus Linguistics. Love and hate in Polish and English.* Frankfurt a. Main: Peter Lang.
- Lewandowska-Tomaszczyk, Barbara & Paul Wilson (2011). "Culture-Based Conceptions of Emotion in Polish and English". In: St. Goźdź-Roszkowski (ed.). *Explorations across Languages and Corpora* .Pelcra 2009. Peter Lang: Frankfurt a. Main. 229-239.
- Lewandowska-Tomaszczyk, Barbara and Frauke Zeller (2012). "The media in transforming audiences and societies". In: Piotr Pezik (ed.) *Corpus Data Across Languages and Disciplines.* Frankfurt a. Main: Peter Lang.
- Lewandowska-Tomaszczyk B. and Paul Wilson (in press). "English *fear* and Polish *starch* in contrast: GRID approach and Cognitive Corpus Linguistic methodology" In: J. Fontaine, J. Scherer, & C. Soriano (Eds.), *Components of Emotional Meaning: A Sourcebook*. Oxford: OUP.
- Minsky, Marvin (1975).” A framework for representing knowledge”, in: P.H. Winston (ed.) *The*
- *psychology of computer vision.* McGraw-Hill, New York. Condensed version in: D. Metzing (ed.), (1980). *Frame Conceptions and Text Understanding*, Mouton de Gruyter, Berlin and New York. (1980), 26-45.

- Plato, *Republic* [436] (2012/2013), Loeb Classical Library, transl. by Christopher Emlyn-Jones, William Preddy.
- Postill, John (2011). *Localizing the internet.* New York, NY; Oxford, England: Bergababn Books.
- Scherer, K.R. (2005). What are emotions? And how can they be measured? *Social Science Information, 44*, 693–727.
- Seuren, Pieter A. M. (1985). *Discourse Semantics.* Oxford: Blackwell.
- Sinclair, John McH. (1994) "Trust the text." In: *Advances in Written Text Analysis,* M. Couldhard (ed.), London/New York: Routledge, 12-25.
- Soffer, Oren. (2013). "The Internet and National Solidarity: A Theoretical Analysis". *Communication Theory* 23:48-66.
- Talmy, Leonard (1985). "Force dynamics in language and thought"" in: W. E. Eilfort, P. D. Kroeber, and K. L. Peterson (eds.) *Papers from the parasession on causatives and agentivity,* Chicago: Chicago Linguistic Society, 293 - 337.
- Theunis, Mathias, Küster, Dennis & Arvid Kappas CYBEREMOTIONS poster CERE 2010 (http://www.mtheunis.be/docs/CERE2010poster.pdf
- Turner, Mark and Gilles Fauconnier 1995. "Conceptual integration and formal expression". *Metaphor and Symbolic Activity* 10, 183-204.
- Wierzbicka. Anna (1995). Emotion, language, and cultural scripts. In K. Shinobu & M. H. Rose (Eds.), *Emotion and culture: Empirical studies of mutual influence* (pp. 133-196). Washington, DC, US: American Psychological Association.
- Williams-Whitney, D., Mio, J. S., and P. Whitney (1992). 'Metaphor production in creative writing'. *Journal of Psycholinguistic Research*, 21, 497-509.
- Wilson, Paul and Barbara Lewandowska-Tomaszczyk (2012). 'The nature of emotions'. In: Wilson, P. A. (ed.), *Dynamicity in Emotion Concepts. Lodz: Studies in Language,* Volume 27. Frankfurt a. Main: Peter Lang, 7-30.
- Wittgenstein, Ludwig (1953). *Philosophical investigations.* Anscombe transl. New York: Macmillan.

Appendix 1:

Comment frequency Interconnectivity Value parameter for most active commentators - a subthread in Sample 1. Fig. 2 (see section 10.2. for detailed statistics)

		Freq.
1	TOTALLYMAD	24
2	GREENREVOLUTION	19
3	DUMPLINGS	16
4	CAVEBEAR	15
5	MAYTHEFARCEBEWITHYOU	14
6	COPERNICUSPHOENIX	14
7	OPIUMEATER	14
8	FERLINGHETTI	14
9	ROBI	14
10	BLEEPER	11
11	MADMONTY	9
12	NIKOSTHENES	9
13	NERVOUSENERGY	8
14	GOVE	8
15	CURIOUSALTRUISTIC	8
16	POCCLONDON	8
17	ITSFRED	8
18	UNDYINGCINCINNATUS	8
19	JOEWATERS	7
20	DONBAK	7
21	MASTERBOUFFON	6
22	LARRYJRAY	6
23	JOEBSTAR	6
24	OPENSEAS	6
25	TROLLINGSTONE	6
26	BUDANEVEY	6
27	SCHADENFRAUDE	6
28	PUZZLEDMONKEY	6
29	SHITHOLE	6
30	BURNLEYFC	6
31	RABBLE-ROUSING	6
32	CRILIE	5
33	BULLINGDON	5