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Emotions in the political discourse of Romania. A corpus-driven analysis of multiword expressions

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Emotions in political language use can have considerable repercussions on a society, especially on the expression of solidarity and ostracism, which are closely connected to the emotions of trust and aversion. Driven[2] by a sub-corpus of spoken presidential texts from 1992 to 2004, this analysis constructs on the basis of multiword expressions emotion profiles of the political actors. To do so, it draws from Robert Plutchik's wheel of emotions[3] and the Romanian Emotion Lexicon (RoEmoLex)[4] and focuses on hints for trust and aversion. The findings indicate a high degree of expressions of trust while aversion is nearly non-existent. Moreover, an increase of emotions during the three presidential terms of Ion Iliescu and Emil Constantinescu is remarkable from a diachronic perspective and constitutes a transition from the topics of internal stability and security to global cooperation and responsibility.

Key-words: *political discourse, post-communist era, diachrony, multiword expressions, sentiment analysis*

1. Preliminary remarks

The present paper is part of a larger project and represents the current state of the author's doctoral thesis, the overall aim of which consists of providing an analysis of the last 75 years of political discourse in Romania. Here, the first findings on the three presidential terms from 1992 to 2004 are presented.

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[2] The term 'driven' is used in contrary to 'based'. While corpus-based methods search for concrete phenomena in order to verify hypotheses, the results in a corpus-driven method remain rather open until the data is generated from the corpus. After the inquiry of these evidences, it is possible to formulate hypotheses and to verify them by switching to the corpus-based method so that they do not seclude themselves (Bubenhofer 2009, 99–102).

[3] For further information about Robert Plutchik's wheel of emotions see Plutchik (1980).

[4] For further information about the Romanian Emotion Lexicon (RoEmoLex) see Briciu and Lupea (2017, 2019).

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Since the post-war era, the Romanian society has experienced the Kingdom of Romania, the People's Republic under Soviet influence, the dictatorial Socialist Republic and finally the democratically shaped semi-presidential Republic – a period short enough for a lifetime. This political variety makes the Romanian political discourse a recommended research object in various fields of study. However, many research projects confine themselves to the communist era from the 1960s to 1989 and, especially in linguistics, the post-communist period recently came to be the subject of a growing number of research enterprises.

To represent such an extensive discourse, the largest possible corpus of texts that have a potential influence on the Romanian society is needed. The whole corpus consists of approximately 6,500 texts with about 10 million words. Around 15 per cent thereof were selected for a test-corpus to adjust and optimise the computational analysis. The methodology as well as the results based on the test corpus will be depicted in this paper.

According to Fuchs, politics is the regulation of matters of a community through firm decisions (Fuchs 2009, 205–209). These matters involve several fields that act in the political discourse like sub- or side-discourses and are mostly linked to each other. Through this close link to other types of discourse like the economic, health or educational discourse, the political discourse can hardly be isolated for the purposes of analysis (Morris 1981, 242). To the contrary, if we have a closer look at the topics of democratic politics, it can be said that the political discourse avails topics of other discourses and incorporates them to make decisions for the common good. These decisions are made according to the ideals of the ruling party or person and are conveyed to the society in a consensus-oriented way by explaining, informing, convincing or persuading.

An everlasting point in politics is choosing persons, institutions, plans and values one can trust in or one refuses. Although political communication from a democratic and rather European resp. 'Western' perspective should be consensus-oriented, political agents tend to express some kind of black-and-white thinking – the undifferentiated emphasis of contrasts. This labelling of the own ideas as 'good' and the ideas of others as 'bad', however, is not consensus-oriented at all. It can facilitate solidarity for the own group and the own ideals and ostracism or even discrimination for the other group and the ideals of others – especially if a discourse is increasingly based not on facts but on emotions.

This paper presents the first findings of an analysis of emotions in the Romanian political discourse, that refer most of all to solidarity and ostracism, in

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three sub-corpora of which each represents the presidential speeches of one term: of Ion Iliescu from 1992 to 1996, of Emil Constantinescu from 1996 to 2000 and of Ion Iliescu from 2000 to 2004. The ascertained emotions will be searched in multiword expressions and projected on a modified model of Robert Plutchik's wheel of emotions. The analysis focuses on hints for solidarity and ostracism, the components of which can be classified by their function. To explain the identified phenomena, the expressions will be associated with their historical context. Due to the diachronically almost gapless corpus, developments in the expression of emotions can be identified and conclusions for the further analysis can be drawn. After bringing emotions and political language use together, a chapter is dedicated to an in-depth computational inquiry of emotions in multiword expressions. The findings, both on emotions in general as well as on solidarity and ostracism in particular, will be reviewed before providing final remarks and discussing the next steps for advancing the whole project.

2. Emotions in political language use

The analysis of multiword expressions aims to detect emotions and for this a framework is needed to categorise them and to make them quantifiable by the use of computational methods. The framework used in this project is Robert Plutchik's wheel of emotions that is based on eight emotions constituted in four opposing pairs: joy and sadness, anticipation and surprise, fear and anger, trust and disgust. The emotions can be mitigated or enhanced so that every basic emotion consists of three intensities that represent a continuum. Moreover, the emotions can be combined with any other for the purpose of modifying emotions to new feelings (Plutchik 1980).

If a political agent enunciates one or a combination of these emotions, this can reflect his current political condition or at least the one he or she wants to present to the public. Thus, the enunciation of fear means that the speaker might be in danger whereas anger can stand for the willingness to use violence; while certainty and dynamism is expressed by anticipation, surprise can be a reason for suspense and inaction; joy or sadness can stand for the stability or instability of a political agent; finally, trust can express solidarity whereas disgust stands for ostracism.

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Quantified and adjusted to the political discourse, these emotions in multiword expressions will be projected on a modified wheel of emotions in order to generate a general emotional profile of each political agent. The modifications concern the intensity of the emotions that will be replaced by the quantity of the emotions. Furthermore, the model will be inverted so that a low quantity is represented by the inner part while a high quantity is projected on the outer part of the model. With this, the entirety of basic emotions can be illustrated in one figure. The following four figures of prototypical political agents should clarify the intension of the modified wheel of emotion:

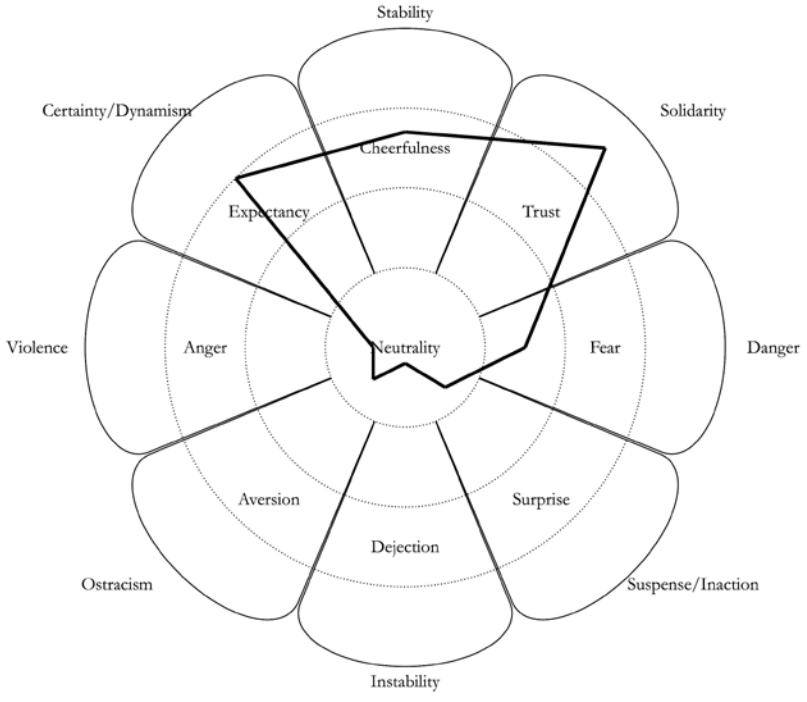


Figure 1: *Prototypical emotion profile of a politician in a democracy*

Prototypical emotion profile of a politician in a democracy (Figure 1): In a stable democracy, the politician expresses most of all trust, cheerfulness (joy) and expectancy (anticipation) which stands for stability, solidarity and certainty/dynamism. When occurring jointly, they can result in optimism/courage, friendliness and hope. Fear and with it danger is reduced to a minor degree in

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order to avoid a feeling of dominance over others as it can be combined with the other three common emotions to modesty, guilt and anxiety.

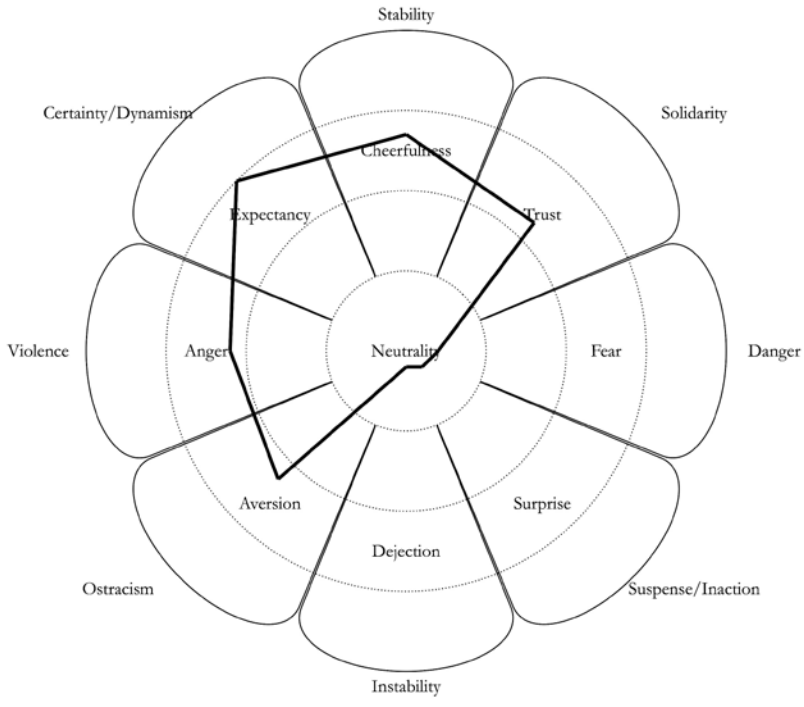


Figure 2. *Prototypical emotion profile of a dictator*

Prototypical emotion profile of a dictator (Figure 2): The dictator relies on cheerfulness, expectancy and anger to express stability, certainty/dynamism and the readiness to use violence. Their combinations result in optimism/courage, aggressiveness and pride. With trust and aversion (disgust) on a medium level, this agent creates also an ambivalence. On the one hand he can convey friendliness, hope and dominance to favoured groups and concepts and on the other hand contempt, cynicism and derisiveness to rejected groups and concepts.

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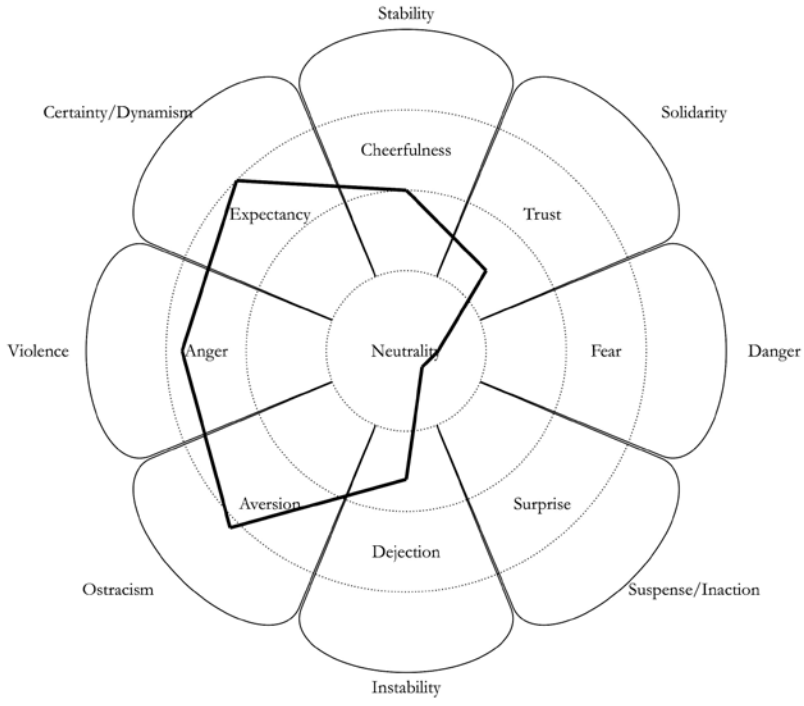


Figure 3. *Prototypical emotion profile of a revolutionist*

Prototypical emotion profile of a revolutionist (Figure 3): The revolutionist prefers expressing certainty/dynamism, violence and ostracism by expectancy, anger and aversion. Related to each other, those can lead to aggressiveness, contempt and cynicism. To a minor degree, utterances of cheerfulness also indicate a stable character that can result in optimism/courage, pride and derisiveness.

Prototypical emotion profile of an overthrown ruler (Figure 4): The ruler, who expects to be or already is overthrown, utters most of all dejection (sadness), surprise as well as fear and expresses with it instability, suspense/inaction and danger. The combinations of those three emotions lead to disapproval, worry and despair. A high level of aversion can give to the utterances the character of remorse, unbelief, and shame.

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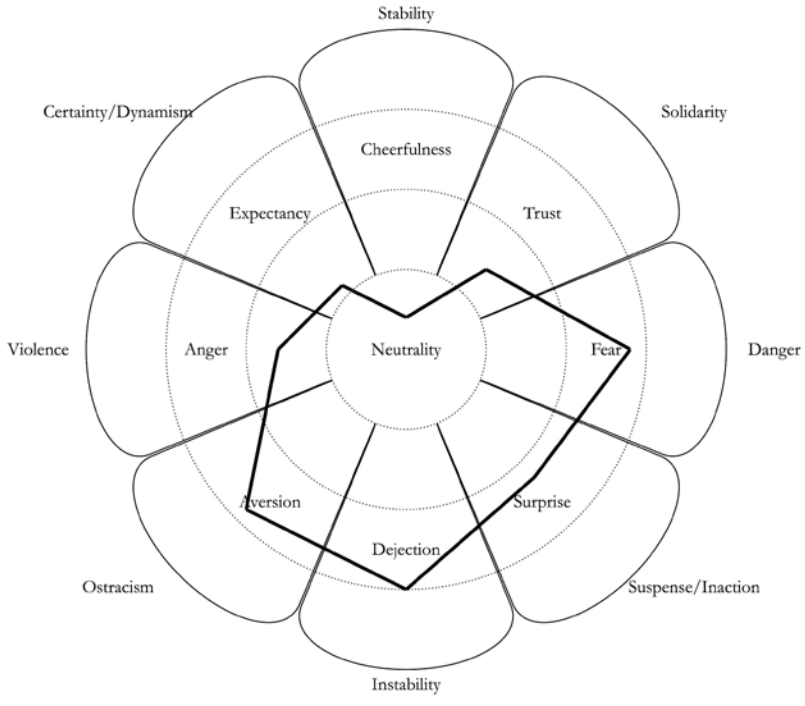


Figure 4. Prototypical emotion profile of an overthrown ruler

These prototypes are based on a more or less subjective perception of very unspecific characters and thus cannot serve as fix models for the subsequent analysis. Instead, they should show where the general evaluation of emotions leads and exemplify how an emotion profile can look like. As the further analysis concentrates on solidarity and ostracism and with that on the expression of trust and aversion, the following combinations of emotions are considered:

Basic Emotions	**Cheerfullness**	**Dejection**	**Expectancy**	**Surprise**	**Fear**	**Anger**
Trust	Friendliness	Sentimentality	Hope	Curiosity	Modesty	Dominance
Aversion	Derisiveness	Remorse	Cynicism	Unbelief	Shame	Contempt

With the emotions being determined and the expression of solidarity and ostracism through emotions being defined, it now needs to be elucidated which words can be

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associated with the emotions. Therefore, the analysis avails the Romanian Emotion Lexicon (RoEmoLex) Version 3 that includes almost 10,000 Romanian words and idioms which are related to positivity, negativity as well as to the eight basic emotions of Plutchik's wheel of emotions (Briciu and Lupea 2017; 2019).

3. Computational analysis of multiword expressions

In politics, the expression of emotions, especially of solidarity and ostracism, is mostly connected to an ideology that is determined by the values of a particular society or political party. To identify emotional expressions with a persuasive character in the corpus, it is necessary to look for ideologically bounded vocabulary that consists of three components: The denotative component that names something, the evaluative component that evaluates the named and the deontic component that claims something from the named (Girnth 2015, 60). The evaluative and the deontic component refer to the denotative component so that the denotative one can be considered the basic component. Referring to solidarity and ostracism, one can say that the denotative component names the thing one solidarises with or ostracises, the evaluative component says if it is positive or negative and the deontic component says what to do with the named, for example to agree with it or to criticise it respectively to defend or to attack it. As all three or at least two of the components are difficult to identify within one single word, the analysis will use multiword expressions to find denotative components that are represented by nouns in combination with evaluative components represented by adjectives or deontic components represented by verbs.

With word units that contain a noun and at least an adjective or a verb, emotions become quantifiable. That said, in a corpus of several millions of words, it is necessary to precisely define the steps and constituents for the inquiry of multiword expressions. Of course, such an ample corpus cannot be analysed manually, so that computational support in the form of software tools is availed.

For this reason, it is necessary that the orthography of the texts, especially the diacritics, is strictly correct. This is not the case in the texts from the archive of the website, because diacritics are missing often. To correct the texts, the tool AutoCorect was used 'semi-automatically' for the orthography and 'fully automatically' for the diacritics.[5]

[5] AutoCorect Version 4.1.5 was developed by Cosmic Ciupercă and Daniel Morlova from SoftSet. The 'semi-automatically' correction means that orthographical mistakes are indicated automatically with several possibilities for the correct orthography of which the right one has to be chosen manually.

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To find only words of the mentioned word classes, the texts have to be part-of-speech tagged, what is done with the tool TreeTagger.[6] In view of the further processing, where the multiword expressions are collated with a lexicon for a sentiment analysis, the words are lemmatised and the word class is tagged with a capital letter at the beginning of every word.

In the following step, frequency lists of multiword expressions that can consist of two, three or four words are generated. Based on the concept of n-grams and their upgrading of concgrams, the units of words are called in the following n-part-of-speech-concgrams or n-PSCs, as they include also word classes. Here, 'n' stands for the number of words the multiword expressions contain. Like in concgrams, their word order is indifferent and they can stand within a particular span regardless of which words appear between them in the text (Cheng et al. 2006).[7] For the analysis, a span of 12 resp. 13 words was defined. Setting the span to 12 resp. 13 words has neurological reasons as the human working memory is supposed to save five to eight items at the same time. Are the items logically chunked, like it is the case with words in sentences, the number of saved items can increase up to 15 (Baddeley 2003 and Klingberg 2009). As this number is not yet established with finality, the size of the span was lowered to 13. For 2-PSCs that consist of two words, the span was defined with 12, because proceeding from one word the other can only be in front or behind of it, contrary to 3- and 4-PSCs where they can appear in front as well as behind the outgoing word at the same time.

For the analysis, only n-PSCs that consist solely of nouns, adjectives and verbs were saved, whereby the units have to include at least one noun and one adjective or verb. To increase the possibility that the society became aware of the expressions and that they had some kind of influence on the public, the minimum frequency was defined in accordance to the size of each sub-corpus: for the corpus of the first presidential term of Iliescu to five appearances, for Constantinescu's term in office to three appearances and for the second presidential term of Iliescu to nine appearances. For every presidential term, one frequency list was generated for each 2-, 3- and 4-PSCs.

[6] TreeTagger is a tool for annotating text with part-of-speech and lemma information. It was developed by Helmut Schmid in the TC project at the Institute for Computational Linguistics of the University of Stuttgart. The tool as well as the parameters for several languages, including Romanian, are available e.g. on the website of The Center for Information and Language Processing (CIS) at LMU Munich.

[7] For generating the n-PSCs, the tool ConcGram© was utilised. The tool was developed by Chris Greaves at the English Department at The Hong Kong Polytechnic University and provided by the Research Centre for Professional Communication in English (RCPCE). For further information see Greaves (2005).

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At this point, the references for the emotions are still missing. To tag them automatically, the n-PSCs were collated with the RoEmoLex and the emotions added to the words so that e.g. a 3-PSCs now exists in the following form:

Vavea Nvecin Abun 8 (-) (1,4) (1,2)[8]

The lemmatised words are tagged with their word class in the beginning by using a capital letter: V for verbs, N for nouns and A for Adjectives. The following number without gaps corresponds to the frequency of the 3-PSC in the respective sub-corpus within a span of 13 words – irrespectively of which order they were found in the texts or which words were between them. The numbers in the gaps represent the emotions according to the RoEmoLex – the first gap of the first word, the second gap of the second word and the third gap of the third word. In the example, this means in concrete terms: *avea* (have) was not found or is not related to an emotion in RoEmoLex, *vecin* (neighbour) is connected to trust (1) and expectancy (4) and *bun* (good) is associated with trust (1) and cheerfulness (2).

As nouns constitute the basic part of n-PSCs and the analysis especially aims to reveal solidarity and ostracism, *vecin* (neighbour) represents the denotative component that is 'solidarisable' as it is related to trust. The evaluative component is occupied by *bun* (good) which is able to modify the trusty emotions of *vecin* (neighbour) since it is also associated with another emotion. Like all emotions of the wheel of emotions, trust and aversion (disgust) can be combined with any other emotion in order to modify resp. specify them. As both words *vecin* (neighbour) and *bun* (good) are related to trust, they can be seen as 'definite' solidarity, but also correspond to the sub-category of affection as *bun* (good) is associated with cheerfulness. *Vecin* (neighbour) itself is also related to expectancy so that the sub-category of hope has to be taken into account too, but not primarily because trust is more important to be 'solidarisable' for the denotative component. Thus, *avea* (have) builds in this 3-PSC the deontic component that is optional, for a n-PSC requires at least an evaluative or a deontic component and *avea* (have) is not associated with any emotion in the RoEmoLex so that it has no effect on the emotions of the unit. Therefore, to 'have' a 'neighbour' and to rate him or her as 'good' expresses solidarity and friendliness towards him or her with a tendency to hope.

The results of the 2-, 3- and 4-PSCs of the sub-corpora will be converted in the rate of the size of the respective sub-corpus, so that the frequencies of the three corpora become comparable.

[8] The English equivalent is: Vhave Nneighbour Agood.

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4. Corpus

Political texts exist in various genres. Those need to be determined for the corpus in line with the aims of this project by their function, medium and social range. Language use in high-level politics is characterised by publicness and mass mediality, group relatedness and representation, institutional dependence as well as discursive dependence (Girnth 2015, 39–43). As this research is looking for hints of solidarity and ostracism that could have a remarkable effect on society, the publicness, mass mediality, group relatedness and representation seem to be the most important criteria for the compilation of the corpus. To have an impact on the society, the utterances should be wide-spread. Hence, public speeches of politicians with a high rank seem to be pertinent to this analysis.

A suggestion for a categorisation of political texts is offered by Klein. In particular, his class of text types 4.2.2 is appropriate for the corpus, i.e. political speeches that are orally propounded by politicians. This class includes dissent-oriented texts (e.g. contributions to a debate, government declarations, convention speeches, election speeches), consensus-oriented texts (e.g. commemorative addresses, television addresses) and texts that can be both (e.g. opening speeches). Moreover, conversational formats like discussions and debates, especially in TV-shows, and inquiry-response formats like interviews fit the corpus (cf. Klein 2000).

Taking the class of texts types into account, the relevant medium has to be spoken, no matter whether the conception of the texts is spoken or written. According to Koch and Oesterreicher's Proximity-Distance-Model, the medium of a text can be clearly distinguished: it is either spoken or written. In contrast, the conception can only be defined on a continuum, because it depends on the degree of colloquial and standard language that causes a close familiar or a distant character of a text (Koch and Oesterreicher 1994). While in a TV-show discussion, where the political agent has to act more spontaneously, the language use can be more colloquial and rather conceptionally spoken, a well-prepared presidential speech contains nothing but standard language and is rather conceptionally written.

Yet, the definition of the medium is not as simple as it seems to be. Milizia and Spinzi compiled a corpus of speeches of George Bush and Tony Blair in order to analyse 'terroridioms'. They observed that "[…] the language in formal speeches and statements in particular, is clearly pre-prepared, written-to-be-spoken […]" (Milizia and Spinzi 2010, 60) and the same problem presents regarding the available corpus. The texts have been prepared as a written medium to be published as a spoken medium but the medium in which they exist for the research is written again. Sauer describes this kind of texts as 'hybrid forms' (Sauer 2002).

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Since the most important function of political texts – the wide spreading in society – underlies the oral propounding of the texts, they will be treated as a spoken medium. To guarantee that the texts have a wide range in the Romanian society, the political speeches will be limited to speeches that were propounded by (future) heads of state.

The analysis presented in this paper is based on a corpus that consists of speeches and conversationally oriented formats during the presidential terms of Ion Iliescu and Emil Constantinescu. All texts have been officially published in the archive of the presidential website so that they reflect what the political agent wanted to share with the public and not necessarily refer to the reality of their political agency.

The corpus is divided into three sub-corpora that represent Iliescu's first term in office (338 texts with 507,615 words), Constantinescu's only presidential term (110 texts with 142,125 words) and Iliescu's second term in office (738 texts with 888,391 words).

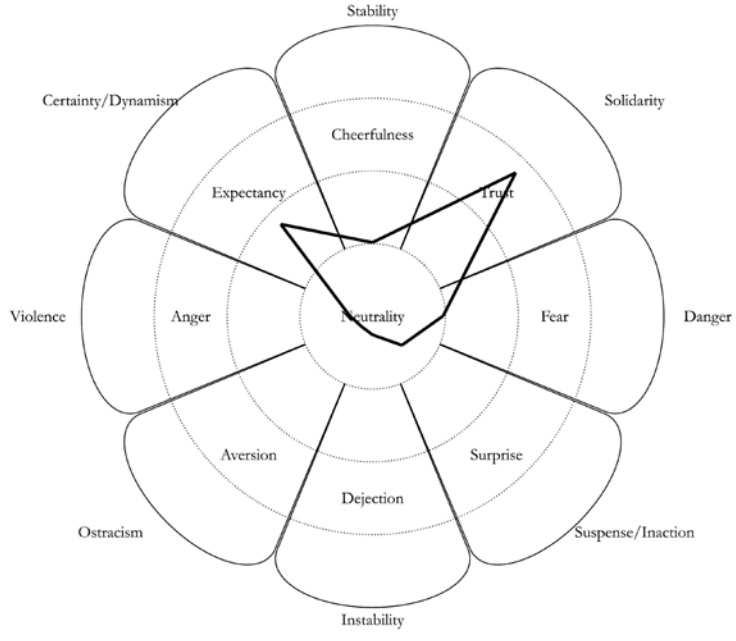


Figure 5. *Emotion profile of Ion Iliescu's first term*

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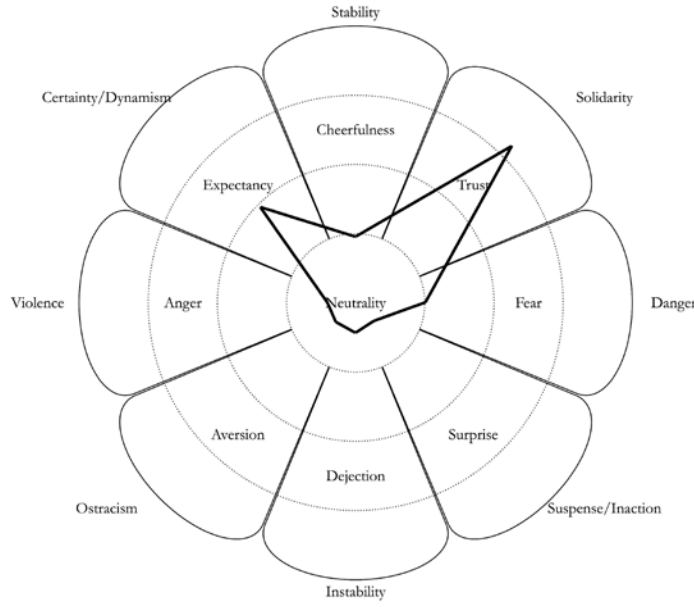


Figure 6. *Emotion profile of Emil Constantinescu's term*

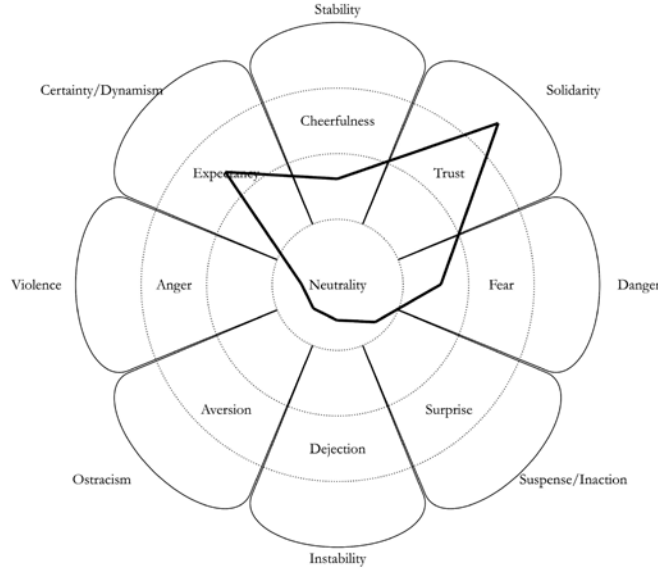


Figure 7. *Emotion profile of Ion Iliescu's second presidential term*

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The three sub-corpora that are relevant for this paper are part of a larger corpus that moreover contains texts of Gheorghe Gheorghiu-Dej (1945–1962), Nicolae Ceaușescu (1965–1987), Traian Băsescu (2004–2014) as well as Klaus Iohannis (2014–2020) so that the whole corpus represents 75 years of political discourse in Romania. As the three sub-corpora from 1992 to 2004 were chosen as a testing-corpus, they already passed through all necessary steps of the computational part of the analysis and can hence serve as a representation of the post-communist era for this paper.

5. Findings

5.1. Emotions in general

The results of this first chapter are based on all multiword expressions that exceed the minimum frequency depending on the size of each sub-corpus. To make the results comparable, the frequencies were divided by the total number of words of the respective sub-corpus. The frequencies are visualised in modified wheels of emotions in order to create general emotion profiles of the political actors. Figures 5 to 7 show the profiles of the three presidential terms from 1992 to 2004 of Ion Iliescu and Emil Constantinescu.

The first thing to recognise is the increase of emotions in a diachronic perspective. From the first presidential term of Iliescu to Constantinescu's period in office, the increment of the expressed basic feelings is higher than 13 per cent and, from Constantinescu to Iliescu's second presidential term, again at almost 32 per cent. This means an increase of nearly 50 per cent during the three terms.

Furthermore, four emotions play only a minor role in all three sub-corpora: surprise, anger, dejection, and aversion. Cheerfulness and fear reach an average value while expectancy and trust play a major role in the public political communication. It is not entirely coincidental that the four emotions with low values are exactly the opposed emotions of the four with high values. On closer consideration, a constant amount of the four opposed pairs in all three sub-corpora can be identified.[9] This means that a higher amount of e.g. trust results in a lower amount of aversion and respective emotional 'topics' or pairs are more present than others. To both political agents, it is more important to express solidarity or ostracism as well as certainty/dynamism or suspense/inaction than to talk about danger or violence and stability or instability, whereby the first mentioned expression of every pair is the dominant one. For a closer analysis of solidarity and

[9] Amount of the opposed pairs in the entirety of emotions: cheerfulness/dejection: 16,0–18,8%; fear/anger: 16,3–18,6%; expectancy/surprise: 26,7–28,9%; trust/aversion: 34,6–41,1%.

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ostracism respective of trust and aversion, this signifies that solidarity and trust will play a much greater part than ostracism and aversion.

5.2. Trust and aversion

The following results are based on the n-PSCs that, in accordance to RoEmoLex, contain at least two words that are associated with trust or aversion of which one has to be a noun that represents the denotative component and one has to be an adjective that includes the evaluative component or a verb that represents the deontic component. The frequencies of the n-PSCs are again divided by the total number of words of the respective sub-corpus they emerged from in order to ensure the comparability of the results. Furthermore, the examples preferably concentrate on multiword expressions with a higher frequency as they seem more significant for a memorisation in the society.

The findings of trust in the three sub-corpora can be divided in two groups: words that are preferably used by one of the political agents and words that become more or less frequent in a diachronic perspective. An example for the first category is *cadru* (frame, but often used for administration units) which appears in both presidential terms of Iliescu at least twice as often as in Constantinescu's term. By reference to the 2-PSCs, it becomes clear that Iliescu uses *cadru* (frame) often with *didactic* (didactic), *legal* (legal), *militar* (military) or *parlamentar* (parliamentary) and speaks of it as an administration unit. Its positive evaluation is marked by *bun* (good), *favorabil* (advantageous), *fundamental* (fundamental) and *important* (important). Its deontic component is taken by *a asigura* (to ensure), *a constitui* (to establish), *a dori* (to wish) and *a stabili* (to determine). This can be confirmed by 3-PSCs like *oferi cadru responsabil* (offer frame responsible) and by 4-PSCs like *oferi dezvoltare cadru responsabil* (offer development frame responsible). Moreover, *cadru* (frame) is often combined with words that are associated with cheerfulness and expectancy what signalises stability and foresight. According to the wheel of emotions, the appearance of trust and expectancy also stands for hope which can be explained by Iliescu reconstructing the state after the Romanian Revolution with a high confidence in administration units. In order to take up 'his' subject and to build an antipole to Constantinescu, who hardly mentions *cadru* (frame), he revisits the topic in his second presidential term.

An example for a continuous increase in a diachronic perspective is *aderare* (accession) which doubles its frequency from Iliescu's first term to Constantinescu's and increases twelvefold from Constantinescu's presidential term to Iliescu's second term. Why *aderare* (accession) becomes so important and to what it applies becomes clear with the evaluative component. In Iliescu's second term in office,

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aderare (accession) mostly appears in 3-PSCs with *european* (European) and *economic* (economic) and in 2-PSCs also with *bun* (good) and *important* (important). Romania's accession negotiation to the European Union has been well underway in the early 2000s what is confirmed by multiword expressions like *aderare uniune european* (accession union European), *vrea aderare uniune* (want accession union) or *face aderare proces* (make accession process). In contrast, Romania's parallel proceeding accession to the NATO is less present in the n-PSCs like *vrea aderare nato* (want accession NATO) which exhibits not even half of the frequency as the equivalent example with *uniune* (union).

Both examples *cadru* (frame) and *aderare* (accession) display that the evaluative component can be divided in two categories as well: Some act as a functional limitation like *didactic* (didactic)*, military* (military)*, economic* (economic)*, european* (European) and others as a qualitative evaluation that becomes positive in combination with trust, such as *bun* (good)*, favorabil* (advantageous)*, fundamental* (fundamental)*, important* (important). Between the two categories, there is also a difference concerning the emotions. The functional limiting adjectives are related at the most to one emotion, in this case to trust. Often they are not associated with any emotion so that they only appear as some kind of attachment in 3- and 4-PSCs and can be seen as a descriptive or specifying part of the denotative component. The qualitative evaluating adjectives are related to at least one but mostly several emotions and as a result have a less specific character.

Something similar can be observed for the verbs that represent the deontic component. While *cadru* appears frequently with verbs like *asigura* (ensure)*, constitui* (establish) or *stabili* (determine), *aderare* (accession) is combined with verbs like *face* (do) or *vrea* (want) that have a less specific character in the context of trust. Here, too, the more specific verbs can only be related to trust whereas the less specific verbs can be associated with several emotions.

In order to categorise the denotative components, which are represented by nouns, the six nomination sectors according to Girnth (2015, 70f.) seem to be useful for the purpose of this analysis. In the following, they will be illustrated by reference to examples of multiword expressions that have a relatively high frequency in dependency on the total number of words of their respective sub-corpus:

1. Nominations of political groups and persons: This sector is less present in the n-PSCs than others, because it requires rather specific denotative components. Merely concepts like *uniune* (union) as a nomination of the European Union or *comunitate* (community) can be included in sector. Nominations of persons are inexistent in the n-PSCs. Only *domn* (mister),

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that here relates to a respectful contact to both men and women as the words are lemmatised, occurs in a high frequency, but is mostly surrounded by unspecific components and appears in forms of address, so that it is not significant. The only two concrete nominations in the multiword expressions in Iliescu's second presidential term are *moldova* (Moldova) and *albania* (Albania) which are mainly combined with *loc* (place) and *uniune* (union). In the text passages, it is indeed remarkable that, during his second term in office, Iliescu frequently emphasises that the European Union is not an exclusive project and the Republic of Moldova as well as Albania have to find their place there.

2. Nominations of politically relevant activities and action contexts: In this sector, it is conspicuous that nominations which are related to the future have high frequencies. *Plan* (plan) is preferably used by Iliescu, whereby the topic of internal security seems to be important in his first presidential term *(avea plan pace, fi plan securitate, plan militar politic, plan stabilitate regional)*[10] while the topics of economic plans and foreign affairs seem to be more relevant in his second term *(vrea plan economic, plan diplomatic economic, plan cooperare economic, plan cooperare bilateral)*[11]. These n-PSCs can be linked to the historical context in which Romania had to be internally stabilised after the revolution and was able to concentrate on economic relations only step-by-step. Nominations like *obiectiv* (aim) and *schimb* (change), that increase in a diachronic perspective and are higher-priced in Iliescu's second term in office, indicate this development too as they are often connected to a durable development and the European Union.
3. Nominations of politically relevant attitudes: Within this sector falls e.g. *stabilitate* (stability) which is frequently mentioned together with peace and security. Concerning Romania's opening towards other states, it is interesting that Iliescu in his first term in office as well as Constantinescu use *stabilitate* (stability) with *regional* (local), whereas Iliescu combines it only in his second term with *global* (global) as well. Distinctive of Constantinescu is *putere* (power) which appears in multiword expressions together with state, law and authority. This expression of power is not to be found in the n-PSCs that emerge from Iliescu's texts.
4. Nominations of politically relevant intentions and interests: This sector has a high value for both political agents. *Drept* (right), *libertate* (liberty), *pace*

[10] English translation: have plan peace, be plan security, plan military political, plan stability regional.

[11] English translation: want plan economic, plan diplomatic economic, plan cooperation economic, plan cooperation bilateral.

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(peace), *securitate* (security) and *valoare* (value) are very present in all three presidential terms. The nominations frequently appear together in n-PSCs and are combined with adjectives like *uman* (human), *social* (social) and *public* (public). The increasing opening regarding foreign affairs is remarkable at *pace* (peace) that appears only after the year 2000 together with *global* (global). Moreover, *cooperare* (cooperation) and *sprijin* (support), that are mainly related to economics and foreign affairs, gain a higher value in Iliescu's second term. *Solidaritate* (solidarity) increases diachronically and, especially after 2000, becomes frequent in combination with *responsabilitate* (responsibility). With 4-PSCs like *solidaritate presupune responsabilitate politic* (solidarity presuppose responsibility political) and *solidaritate europa responsabilitate comun* (solidarity Europe responsibility mutual), it becomes clear that Romania wants to assume responsibility in the European Union in order to identify itself with other countries of the union or to be able to expect solidarity from the other countries.

5. Nominations of politically relevant systems and institutions/nominations of forms and approaches of political sovereignty: There is a clear and remarkable dinstinction between the two political agents concerning this sector. While Iliescu uses preferably general nominations like *cadru* (frame) and *sistem* (system) and limits them by specialised adjectives, such as *legal* (legal)*, parlamentar* (parliamentary)*, economic* (economic)*, military* (military)*, didactic* (didactic) and *European* (European), Constantinescu uses more specific nominations like *guvern* (govern), *consiliu* (council), *lege* (law) and *buget* (budget) instead. Based on the collected data, a reason for this strategy did not yet become apparent, but it is possible that Constantinescu tries to foreground qualitative adjectives instead or that language economical aspects simply come into effect.
6. Nominations of poetically relevant events and issues: Like the first sector, this one also requires rather specific denotative components to identify events and issues. This is possible e.g. with *aderare* (accession) which is associated with the European Union and increases diachronically for the already mentioned reasons. Two more events seem to be of importance in Iliescu's second presidential term: *monterrey* (Monterrey) relates to the International Conference on Financing for Development of the United Nations in 2002, *johannesburg* (Johannesburg) refers to the World Summit on Sustainable Development in the same year. *Monterrey* as well as *johannesburg* appear in 4-PSCs with the same words: *abordare* (approach), *corectiv* (corrective), *dezvoltare* (development), *necesitate* (necessity), *responsabilitate/responsabil* (responsibility/responsible) and *mondial*

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(worldwide). According to Iliescu, both events are approaches to broach or to avoid grievances in the whole world and to cause responsibility for a necessary development.

The identification of trust in verbal expressions can be exposed versatilely on the basis of multiword expressions. Between the two political agents, only refined distinctions are remarkable like Constantinescu's use of precise nominations where Iliescu prefers functional limiting evaluations. Furthermore, Constantinescu focuses more on finance and the expression of power, as n-PSCs that contain *buget* (budget) and *putere* (power) appear predominantly during his presidential term. The deontic component seems to play a minor part in the emotion of trust, because mainly unspecific verbs are used. Solidarity is expressed primary by the denotative and the evaluative components.

In contrast to trust, aversion is barely existent in the multiword expressions. In the first term of Iliescu and of Constantinescu, no noteworthy hint to ostracism is available dependent on the given parameters. Only in the second term of Iliescu, the emotion of aversion rises sharply. There, however, the n-PSCs mostly refer to one topic: environmental pollution.

To specify the results on this topic, a glimpse into the 4-PSCs is sufficient, since these are dominated by two nouns that appear in all combinations concerning environmental pollution, because only *degradare* (degradation) and *poluare* (pollution) can be associated with aversion. That degradation and pollution are related to the environment, is specified by *natural* (natural), *mediu* (*poluare a mediului* = environmental pollution) as well as by *ozon* (ozone) and *strat* (layer). In combination with other words, the construction of causal chains is possible: *poluare → efect → degradare → natural; poluare → fi → fenomen → degradare; poluare → afecta → degradare → ozon*[12]. This topic became rather acute in the early 2000s, what is emphasised by *palpabil* (palpable) and *realitate* (reality). According to the RoEmoLex, *realitate* (reality) is associated with trust and results in some kind of ambivalence within adverse multiword expressions, although it reinforces the presumption that the environmental pollution is already visible. The sudden appearance of this topic can be due to the increase of mining at that time, which utilised environmentally harmful methods in order to win gold. Iliescu granted a concession for mining in Roșia Montană to a Canadian concern, but the resistance in the population was tremendous. In the year 2000, a dam break near a gold mine in Baia Mare caused a massive ecological disaster. Thus, Iliescu probably

[12] English translation: pollution → effect → degradation → natural; pollution → be → phenomenon → degradation; pollution → affect → degradation → ozone.

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adopted a hostile stance on the topic to facilitate a consensus-oriented communication that has a remarkable impact on the expression of aversion during his second presidential term.

6. Final remarks and further research

Considering these findings, it is possible to hypothesise on the further analysis of this project. While a steering towards internal topics, especially security and stability, is characteristic in times of crisis, a contrary development of emotions like in the three test-corpora is expected for the texts of Ceaușescu‘s period as, in the beginning, he was very popular in Western Europe as well, whereas Romania’s economical and security situation became unstable in the 1980s. Furthermore, a higher degree of the emotion of aversion is not expected during the dictatorially period as trust is needed in combination with anger to express dominance. In view of the present age, a further opening of Romania towards global topics might be expectable with the accession to the European Union during Băsescu’s term in office and the EU Council Presidency during Iohannis’ presidential term. Because of Iohannis’ strict fight against corruption, it is possible that the degree of aversion concerning this topic and with it the attention for internal topics increases from the year 2014 onwards.

Regarding the further analysis based on the insights presented in this paper, an extension of the study on texts from 1945 to 1987 and from 2004 to 2020 seems promising. The processes of the part-of-speech tagging, the inquiry of the n-PSCs and their comparison with the RoEmoLex can be easily done for the thousands of texts from these periods. Moreover, the integration of 5-PSCs in the further analysis seems useful in order to specify the outcomes that arise from the inquiry of the multiword expressions.

The assembly and preparation of the corpus required much effort. This is especially true for the texts from 1945 to 1987 as they originate from about 30,000 book pages which had to be scanned and processed with an optical character recognition software (OCR)[13]. Therefore, it is desirable that the texts will be provided for other research projects. An appropriate platform has to be found in order to make the corpus accessible to researchers on an open source basis.

[13] For the optical character recognition AI-based Software Development Kit FineReader Engine by ABBYY was utilised. It also contains a character recognition for the Romanian language.

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