The emotional arcs of political narratives

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According to Reagan et al. (2016) all narratives follow the profile of some emotional arcs. The authors, who start from an idea of the writer Kurt Vonnegut (1995), distinguish between the concept of 'plot' – which captures the mechanics of a narrative –, and what they call 'emotional arcs', which capture the emotional experience that is evoked in the reader. In this article we propose a critical analysis of the concept of emotional arcs, and test the model of analysis with which the emotional arcs of a narrative are evaluated in the context of specific situations of political communication. The results suggest that for a better understanding of the emotional content of a speech we need to consider the emotional component of each type of semiotic resources that a political actor performs during a speech.

Key-words: *emotional arcs, political narratives, political semiotics, political communication, TV debates.*

1. Introduction

At first glance, Jonathan Haidt's (2012, 328) statement that "the human mind is a story processor, not a logic processor" might seem surprising. The preference of political actors for describing social reality in the form of narrative structures indicates such a fact. This may be due to the fact that in contrast to the strictly argumentative utterance or discourse, which often contains a predictable message, the narratives "always say more than they say, and often something else than they seem to say" (Pleşu 2012, 13). Andrei Pleşu (2012, 18) states that "while the speech is *argumentative*, the story is *indicative*. It does not *expose* a theory, but *shows* a state of fact, relates a situation, without too explicit demonstrative intentions. It does not provide answers, but stimulates their search".

The ability of political actors to tell stories that resonate with the political message is closely linked to their political success (Silverstein 2011). They are

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constantly looking for a simple and memorable story that will create strong positive emotions among the electorate. In this article we show, on the one hand, how the emotional content of a political discourse can be evaluated, and on the other hand we analyze how the emotional content of the spoken discourse can be correlated with the emotional content of other semiotic resources (gestures, for example) that the political actor performs throughout the discourse.

In the next section of this paper (2), we briefly discuss some key concepts related to narrativity, with particular reference to political narratives. In section 3 we present the theory of the emotional arcs of a story, based on which we will evaluate the emotional content of a political discourse. In Section 4 we detail the research methodology, we present the research results, followed by their analysis and interpretation. Finally, Section 5 presents our conclusions.

2. Political narratives or about narrative structures in political discourse

There are quite rare situations in which, in the Romanian political discourse, the term *story* is used in a positive sense, that of narration which refers to a real fact. Political actors prefer the negative connotations of the term. The story is classified as a fable or invention, as a narrative that is not founded on a real fact. For example, the current president of Romania, Klaus Iohannis, in a press statement from June 2018, stated that:

> So the story of the parallel state is an invention, I don't know if of the PSD[2] members or of the PSD members' consultants, but I can assure the Romanians that in Romania there is no parallel state, and the rest are stories, stories through which PSD tries to validate certain quite questionable approaches. (Presidency.ro, June 12, 2018)

In other words, telling a story means speaking falsely, lying, especially when you refer to the statements of political opponents. The story is perceived as a deliberate misinterpretation of an uncomfortable reality, as a deception, or trick, a distortion of the truth, as we can see in the example above.

In other cases, the dynamics of the meanings of this word are more complex. In an interview for the *HotNews.ro*, at the end of January 2013, the former prime minister, Victor Ponta stated that he will not give up the title of doctor of law after the plagiarism scandal in which he was involved: "The doctorate story was a huge

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[2] PSD, Partidul Social Democrat (Social Democratic Party) defines itself as a center-left party, belonging to the ideological family of social democrats.

blow last year, the wound closed but the scar will remain. The scar will be like Mr. Băsescu's fleet. And 20 years from now, someone will remind me of it". Here, the word 'story' seems to have a real referent. In a previous paper we analyzed the metaphorical mechanism proposed by the political actor in this text (Drăgan 2015). On the one hand, Victor Ponta tries to camouflage the reality of his own deeds (plagiarism) by attributing fictional elements (through the meanings of the word story), and on the other hand he tries to (re)frame the public's perceptions in the vicinity of the facts and actions of his political opponent from that moment (Traian Băsescu with the story of the fleet). Therefore, in this example, the word 'story' borrows the premises of an experiential reality, but is intentionally used with the meanings of misrepresentation, misleading interpretation of reality.

Let's see what happens in other cultural spaces, how political actors understand the relationship with political narratives. The annual speeches delivered by the President of the United States to a joint session of the U.S. Congress – known as *The State of the Union Address* –, over the past 55 years, show a twofold increase in narrative structures (Weber, Jul. 2016). In an interview with CBS News, former US President Barack Obama expressed regret that he did not use more narratives in his speeches in his first years in office:

> The nature of this office is also to tell a story to the American people, that gives them a sense of unity and purpose and optimism, especially during tough times. […] In my first two years I think the notion was, "Well, he's been juggling and managing a lot of stuff, but where's the story that tells us where he's going?" And I think that was a legitimate criticism. (Weber, Jul. 2016)

Basically, political actors engage in the discursive battle for imposing on the public agenda the dominant narratives, which can lead to favorable interpretations of social facts and actions and the reproduction of the dominant meanings in the public space. Viewed from this perspective, the discursive practice of storytelling functions as "the very organizing principle of all discourse" (Greimas and Courtes 1982, 209), a conceptual framework through which people organize and understand reality (Fisher 1984, 1987, 1989; Bruner 1991). Walter Fisher (1987) went even further and proposed the narrative paradigm, as an alternative to the rational model of thinking, based on the scientific and/or philosophical approach to knowledge.

In terms of narrative analysis, research approaches and perspectives are very varied. For example, Vladimir Propp (1928/1968) develops the narrative model built on the hypothesis of the "functions of the characters", Greimas (1966) builds the "narrative scheme" and the "actantial model", while Brémond (1973) thinks of a "narrative logic" based on a repertoire of roles and narrative possibilities. In the

same order of ideas we mention the model of "narrative sequences", and "variationist analysis" developed by William Labov and Joshua Waletzky (1967). In other studies, Tzvetan Todorov (1969, 1977) uses a grammatical model for the analysis of narratives, while Lyotard (1984) talks about the end of the "grand narratives" or "master narrative" of legitimation and the "metanarratives" of postmodernity.

Morphological or structural approaches have meanwhile evolved to cognitivist approaches to narrative, closer to our research perspective. According to George Lakoff (2008, 34) narratives help us understand public figures, framing them in complex narratives that are "fixed in the neural circuits of our brains". Such complex narratives, whose model can be found in various cultural artifacts (fairy tales, novels, or dramas), are made of "smaller narratives with very simple structures that we call 'frames' or 'scripts'" (Lakoff 2008, 22). Frames are cognitive structures that help us think, to build meanings and interpretive scenarios of social facts and actions. Each of these frames "has roles (like a cast of characters), relations between the roles, and scenarios carried out by those playing the roles" (Lakoff 2008, 22). Manuel Castells (2015, 144) has a similar perspective, according to which "narratives are made up of cognitive frames", the language and the human mind communicating through such frames "what structures the narratives that activate the brain networks". Both authors agree that "narratives define social roles in a social context" (Castells 2015, 144). Moreover, observes Castells (2015, 148), "political cognition is emotionally shaped". Strong emotions - especially "enthusiasm" and "fear" - function as a trigger in the process of rational evaluation of political decision: "the emotional component of political cognition conditions the efficiency of processing information about the situation and candidates" (Castells 2015, 150). Such an observation will be particularly useful in our approach to assessing the emotional content of narrative structures specific to political discourse.

Returning to political narratives, we mention the analyses carried out by Francesca Polletta (2006) regarding the role of narrative in civic action and social change. Polletta (2006) states that:

> In telling the story of our becoming, as an individual, a nation, a people, we establish who we are. Narratives may be employed strategically to strengthen a collective identity but they also may precede and make possible the development of a coherent community, nation, or collective actor. (Polletta 2006, 12)

According to Peter Ellerton (Oct. 2016), a successful political narrative has at least three attributes: "(1) has explanatory power; (2) is coherent with what they feel about many things; (3) and offers a way out based on the unfolding of the narrative".

The truth told in the form of a narrative - to paraphrase the title of Pleşu's book (2012) - seems to be more easily assimilated by people's minds. Reality, the nudity of facts, dressed discursively in the clothes of a good narrative by a skilled political actor, talented in the art of storytelling, responds better to individual preferences and the general public.

3. From "shapes of a story" to the theory of the "emotional arcs" of a story

The idea of "shapes of a story", later known as "emotional arcs" of the story, belonged to the American writer Kurt Vonnegut, well known to the public for his works that combine satire, black humor, and science fiction. Of course, he did not think that his master's thesis in anthropology at the University of Chicago, in which he exposed for the first time the idea of the "shape of a story", would be rejected in the Department of Anthropology because "it was so simple and looked like too much fun" (Vonnegut 2010, 274).

A few years ago, a group of students in the *Computational Story Lab* at the University of Vermont in Burlington noticed in the simplicity of Vonnegut's idea an important research potential and discovered that all narratives follow the profile of some *emotional arcs* (Dodds et al. 2011; Reagan et al. 2016). Vonnegut (1995) had intuited that "there is no reason why the simple shapes of stories can't be fed into computers, they are beautiful shapes". From here to testing Vonnegut's idea with the help of computational algorithms was only one step.

In Vonnegut's opinion, stories "have shapes which can be drawn on graph paper, and that the shape of a given society's stories is at least as interesting as the shape of its pots or spearheads" (Vonnegut 1981, 244). An emotional arc was imagined like the graph of a function of a real variable "x" – which designates the time interval of the story (beginning - end) – in a two-dimensional Cartesian coordinate system. The dependent variable (y) can take values in the range "Ill Fortune-Great Fortune", and designates certain emotional states of the main character/characters along the narrative thread of the story:

> The "GI" axis, mathematically similar to the y-axis, places Ill Fortune, defined by Vonnegut as "sickness and poverty" at the bottom, and Good Fortune, "wealth and boisterous good health", at the top. The "BE" axis, the equivalent of the mathematical x-axis, represents the beginning and end of the story. The line flows somewhere in between. (Fusco 2016)

According to Reagan et al. (2016, 1), "Our ability to communicate relies in part upon a shared emotional experience, with stories often following distinct emotional trajectories and forming patterns that are meaningful to us". Such arcs

or emotional trajectories are similar to the story shapes Vonnegut was talking about. Reagan et al. (2016) distinguish between the *plot* (see Propp 1928/1968) – which captures the mechanics of a narrative and which refers to the organization of the events of a certain story in a logical manner –, and what they call *emotional arcs*, which capture the emotional experience that is evoked in the reader.

> While the plot captures the mechanics of a narrative and the structure encodes their delivery, in the present work we examine the emotional arc that is invoked through the words used. The emotional arc of a story does not give us direct information about the plot or the intended meaning of the story, but rather exists as part of the whole narrative (e.g., an emotional arc showing a fall in sentiment throughout a story may arise from very different plot and structure combinations). (Reagan et al. 2016, 2)

Therefore, the procedure for generating emotional arcs is based on a sentiment-type analysis of text segments of uniform length (gap between samples) – a sample of 10,000 words – selected consecutively throughout the text of the story. The next step was to evaluate or measure the emotional content of each such "window" (or interval) of text. For this, the authors use a "happiness index" called *Hedonometer*, developed within the Computational Story Lab (labMT) at the University of Vermont. Hedonometer was chosen for "lexical coverage and its ability to generate meaningful word shift graphs, specifically using 10.000 words as a minimum necessary to generate meaningful sentiment scores" (Reagan et al. 2016, 2). If we are dealing with long texts – such as a book – the procedure continues with a series of other, more complex steps that we will not detail here.

4. Research methodology

The communication situation proposed for analysis in this paper was selected from the final debate for the presidential elections in Romania, broadcast live by Realitatea TV and Antena 3 stations on December 3, 2009. The protagonists of the December 2009 presidential debate, organized by the Institute for Public Policies (IPP) at the Palace of Parliament and moderated by journalist Robert Turcescu, were Mircea Geoană, the political left-wing candidate (PSD+PC)[3] and Traian Băsescu, the political right-wing candidate (PDL)[4], and President of Romania at that time.

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[3] PSD+PC – Partidul Social Democrat (Social Democratic Party) + Partidul Conservator (Conservative Party), was a center-left electoral alliance in Romania between 2008 and 2009.
[4] PDL – Partidul Democrat Liberal (Romanian Democratic-Liberal Party) was a liberal-conservative political party in Romania, founded in 2007 and which merged by absorption with Partidul Național Liberal, PNL (National Liberal Party), in 2014.

The corpus of the research presented here consists of a single communicational sequence with a duration of 2 minutes and 30 seconds, a video fragment taken from the TV debate on December 3, 2009, broadcast by Realitatea TV. In this video communication sequence we catch an exchange of remarks between the two political actors on the topic of 'corruption', respectively 'the fight against corruption' in Romania, one of the fundamental topics on the public agenda of that period. The duration of the interventions of each of the political actors on this topic is approximately equal in the analyzed video sequence, respectively one minute, the rest of the video sequence being interventions of the moderator of the debate.

We are concerned with the following issues, which can also be formulated in the form of research questions:

1. assessing the emotional content – or "emotional temperature" – of the speech for each of the two protagonists of the debate, Traian Băsescu, respectively Mircea Geoană. This is the main research objective of this article.

2. analysis of the emotional content of the relevant narrative structures/narratives of the discourse compared to the usual discursive sequences (which do not contain narratives).

3. sketching a model of multimodal analysis, by which we correlate the emotional content of the discourse (verbal statements) with the emotional content of other semiotic resources, or semiotic modes (gestures, for example) that the political actor performs throughout the discourse.

As we mentioned earlier, to evaluate the emotional content of the speech we use a "happiness index" called *Hedonometer*, developed within the Computational Story Lab (labMT) at the University of Vermont. For the multimodal analysis we used a qualitative data analysis software, respectively NVivo (variant 8), developed by QSR International.

Hedonometer is based on an algorithm that uses

a simple, fast method for measuring the happiness of texts that hinges on two key components: (1) human evaluations of the happiness of a set of individual words, and (2) a naive algorithm for scaling up from individual words to texts. (Dodds et al., 2011, p. 3)

For the primary human evaluation (1), based on which a score of happiness is assigned to each word in the text, "we asked users on Mechanical Turk to rate how a given word made them feel on a nine point integer scale, obtaining 50 independent evaluations per word" (Dodds et al. 2011, 4).

Regarding the automatic algorithm for evaluating the happiness score of a certain text (2),

we merged the 5,000 most frequent words from a collection of four corpora: Google Books, New York Times articles, Music Lyrics, and Twitter messages, resulting in a composite set of roughly 10,000 unique words. Using Amazon's Mechanical Turk service, we had each of these words scored on a nine point scale of happiness: (1) sad to (9) happy. (hedonometer.org, 2020)

The varied corpus used by the authors to evaluate the happiness score of a text – Twitter, Google Books (English), music lyrics (1960 to 2007), and the New York Times (1987 to 2007) – allows us to extend the use of this evaluation tool to the case of political discourses.

4.1. Results

The statements of the two political actors were evaluated, as we mentioned earlier, using Hedonometer. The results thus obtained were represented graphically for each of the political actors involved in the debate (see Figures 1 and 2).

The areas marked in red indicate the presence of relevant narrative structures in the speech of the incumbent candidate Traian Băsescu (see Figure 1, areas numbered 1 to 4). For example, in the last part of the speech, corresponding to the area marked in red (area 4) the incumbent formulates his speech on the narrative of 'the champion' (or 'hero') in the fight against corruption (see example 1, level c):

(1)   a.   *dragi români, în acest mandat nu aţi mai auzit de nici o privatizare frauduloasă.*
          'dear Romanians, in this mandate you have not heard of any fraudulent privatization'
      b.   *Şi pentru acest lucru sunt mulţumit.*
          'And for this I am pleased'
      c.   *Nu aţi mai auzit nici de Petrom, nici de Alro Slatina, nici de Rodipet, privatizate de nu ştia nimeni când şi cum.*
          'Neither have you heard of Petrom, nor of Alro Slatina and Rodipet privatized in a way no one knew when and how'
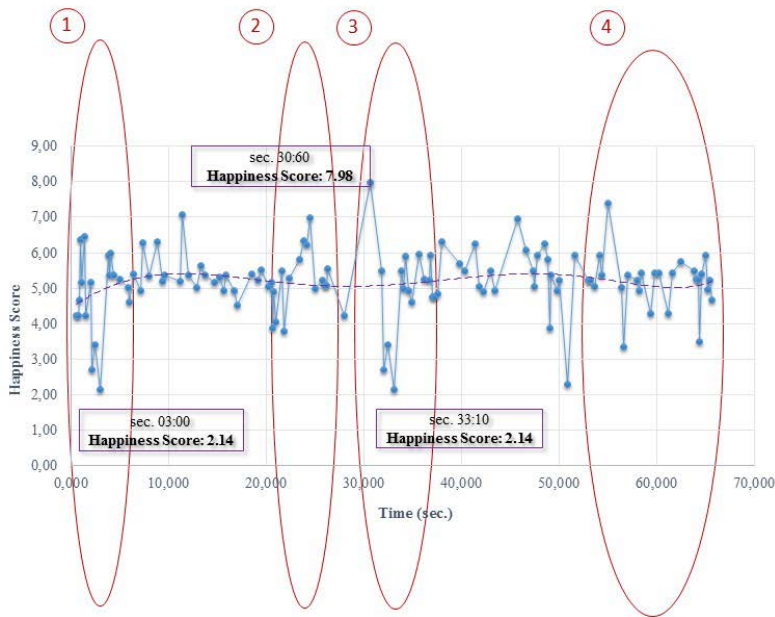
Figure 1. The dynamics of the happiness score during the statements of Traian Băsescu
(PDL), December 3, 2009, Realitatea TV

As far as Traian Băsescu's challenger is concerned, if we consider the same last
part of his speech, we notice that it (re)frames the narrative of corruption using
as a reference a non-governmental organization, *Transparency International*
(TI), headquartered in Germany, an NGO whose purpose is precisely to prevent
and combat the phenomenon of corruption at the international level (see
Figure 2, area 4). The challenger candidate, Mircea Geoană, states that (see
example 2, level a):

(2)   a. *Cea mai coruptă ţară din Europa, la cinci ani de mandat al domnuluii Băsescu.*
              'The most corrupt country in Europe, five years of Mr. Băsescu's mandate'
        b. *Ăsta este tristul adevăr.*
              'This is the sad truth'
        c. *Trebuie să facem ceva.*
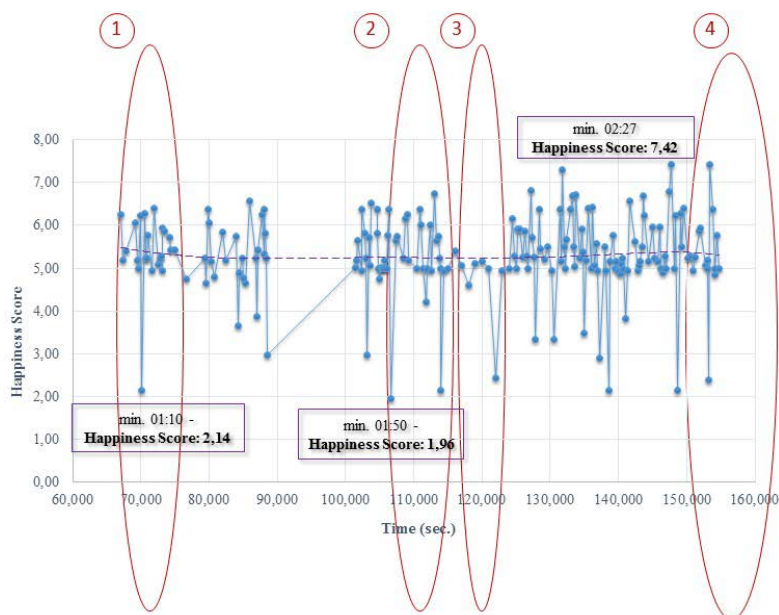   'We need to do something'

Figure 2. The dynamics of the happiness score during the statements of Mircea Geoană
(PSD + PC), December 3, 2009, Realitatea TV

Regarding the second aspect of the research, it can be easily observed that the values of the emotional score corresponding to the relevant narrative structures/narratives of the discourse are above the values of the emotional score corresponding to the usual discursive sequences (which do not contain narratives).

If we refer to the types of semiotic resources that the protagonists of the debate perform during the analyzed communication sequence, corresponding to the moments when the two candidates use narrative structures, we can take into account three categories. The first (1) refers to the speech itself, to the text uttered by the political actor, a text for which we have already evaluated the emotional score. The second category (2) is represented by the gestures of the hand, while the third category of semiotic resources (3) is represented by the gestures of the head/face, more precisely by the direction of the gaze in our case (see Figure 3 and 4) (to be detailed in section 4.2).
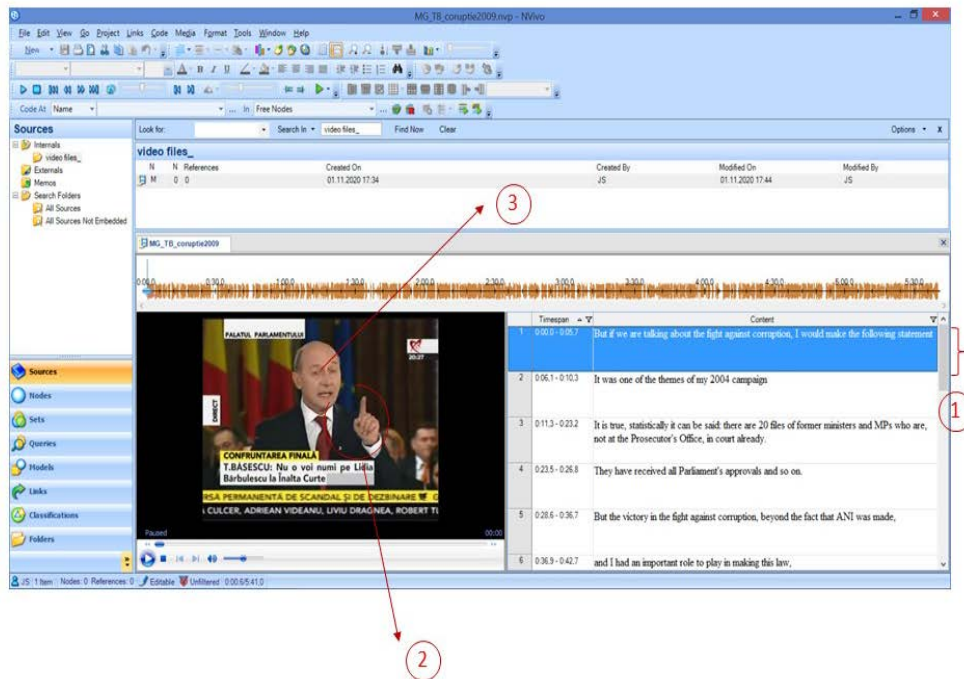
Figure 3. NVivo Interface Frame - The semiotic resources used by the incumbent candidate, Traian Băsescu, in the construction of the first relevant narrative structure in the speech (see Figure 1, area 1), December 3, 2009, Realitatea TV station

Candidate Traian Băsescu performs these types of semiotic resources while making the following statement:

(3)   a.   *Dacă vorbim însă de lupta împotriva corupţiei, aş face următoarea precizare.*
           'But if we are talking about the fight against corruption, I would make the following statement'
      b.   *A fost una din temele campaniei mele din 2004.*
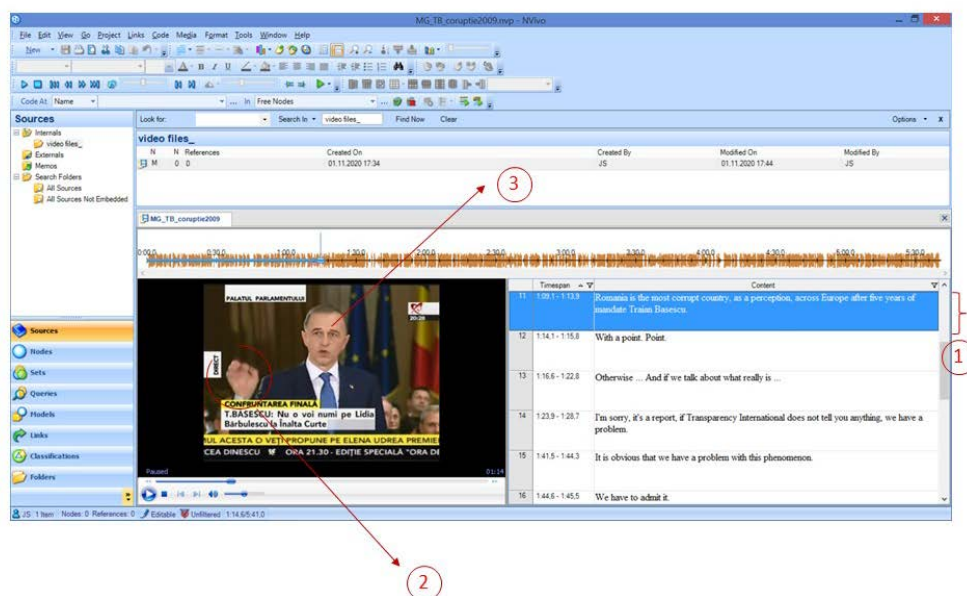   'It was one of the themes of my 2004 campaign'

Figure 4. NVivo Interface Frame - The semiotic resources used by the challenger, Mircea Geoană, in the construction of the first relevant narrative structure in the speech (see Figure 2, area 1), December 3, 2009, Realitatea TV station

On the other hand, the candidate Mircea Geoană performs certain types of semiotic resources while making the following statement (which prefigures the final conclusion, presented earlier in example 2, level a):

(4)   a.   *România este cea mai coruptă ţară, ca percepţie, din întreaga Europă,*
               după cinci ani de mandat Traian Băsescu.
               'Romania is the most corrupt country, as a perception, across Europe after five years of mandate Traian Băsescu'

4.2. Discussions. Interpretation of results

Regarding the first research question, the values of the happiness index and subsequently the average value of the emotional score of the speech of each of the candidates was calculated using the Hedonometer, as mentioned earlier. The results obtained were represented graphically (see Figures 1 and 2). The text corresponding to the speech of the incumbent candidate, Traian Băsescu, lasting approximately one minute, contains 122 words. For this speech, the average value of the happiness score is 5.17. The text corresponding to the speech of the challenger,

Mircea Geoană, contains 198 words and has an average value of the emotional score of 5.29, slightly higher than that obtained for the incumbent candidate.

If we now discuss the second research question, we can see that, for both candidates, the average value of the emotional score is determined in a positive way by the value of the emotional score corresponding to the speech sequences in which narrative structures are present. We have graphically marked some of the moments in which the emotional score has maximum (7.98) and minimum value (2.14) in the area of narrative structures within the speech of each of the candidates (see Figure 1 and 2). The emotional score for some narrative sequences would have been much higher, but its evolution is influenced by the use of words with a low value of the happiness score, as is the case of the word 'corruption', for which the value of the happiness score is 2.14. This is one of the problems of the method of evaluating the emotional score of a text, which cannot distinguish between verbal expressions with positive and negative connotations in certain discourse contexts.

It is well known that words are not enough for making meaning in in discursive interactions. Gunther Kress (2010, 36) argues that "communication is always multimodal". Basically, multimodality is "the normal state of human communication" (Kress 2010, 1). According to Kress (2010, 79), *mode* is "a socially shaped and culturally given semiotic resource for making meaning. […] Different modes offer different potentials for making meaning. These differing potentials have a fundamental effect on the choice(s) of mode in specific instances of communication". In this article we are interested in *gestures*, as a special type of semiotic modes, and the way in which the political actors manage a certain aspect of relationships that are established between the emotional content of the speech and the emotional component with which gestures are loaded. Paul Ekman (1973), for example, mapped six universally recognized types of emotions. Of these, as we mentioned earlier, strong emotions such as "enthusiasm" and "fear" function as a trigger in the process of rational evaluation of political decision. So far, we have only referred to the emotional content of the speech. But what happens when we take into account the emotional component with which gestures are loaded and which the political actor performs while giving the speech?

For this, let us consider the first (1) relevant narrative structure present in the speech of the incumbent candidate, Traian Băsescu (see Figure 3). As we mentioned earlier, we consider for analysis three types of such semiotic resources: verbal speech (1), gestures of the hand (2), respectively the gestures of the head (face), more precisely the direction of gaze (3). Each of them is loaded with a certain emotional content. For the verbal speech we evaluated the emotional score earlier (see Figures 1 and 2).

The hand gesture performed by Traian Băsescu has deictic value, with the help of which he tries to draw the public's attention to an important aspect of the speech (see Figure 3, area 2). This type of gesture belongs to the pointing gesture family. The statement accompanying such gestures expresses ideas with positive value, which refer to the achievements of the incumbent President at the time, on the topic of 'the fight against corruption'.

On the other hand, the challenger Mircea Geoană performs a hand gesture, which belongs to the category of the "ring" type of gestures (R-family gestures), analyzed in detail by Adam Kendon (2004) (see Figure 4, area 2). It is part of the family of gestures with pragmatic function, which can have a significant persuasive effect. This is the gesture where the tip of the index finger is in contact with the tip of the thumb. Such gestures "convey the concept of precision" in certain contexts of communication (Vincze, Poggi, and D'Errico 2014, 181). They have specific meanings as they "specify" or bring "clarifications" to something specific. As a rule, they are used every time this clarification is important in the dynamics of conversational exchange. The person that performs them wants to ensure that "specific information be given prominence" (Kendon 1995, 271). Through such gestures the speaker aims at "gaining the agreement, the conviction or the understanding of the interlocutor" (Kendon 2004, 241). Moreover, by performing such gestures, the speaker "can invite one to infer not that just one is *making* a sharp point, but that one *has* a sharp point to make, or even that one *is* sharp, argumentatively speaking" (Lempert 2011, 243). Therefore, under certain conditions, such gestures can influence "candidate brand" (Lempert 2011, 243). The emotional component of such a hand gesture, which signifies concepts associated with precision, integrates the positive emotional content of the verbal discourse uttered by the political actor, thus amplifying the persuasive potential of the discourse.

Of course, to this is added the emotional component of the gesture corresponding to the direction of the gaze. In our situation, both protagonists of the debate look directly at the camera, maintaining a direct connection with the public (see Figure 3 and 4, area 3).

Therefore, a possible model for assessing the emotional content of a discourse (as a whole) must take into account all the emotional components of the semiotic resources involved in the performance of the discourse by the political actor. Practically, the dynamics of "emotional arcs" (Reagan et al. 2016) associated with the narratives of political actors in the analyzed communication sequences can be correlated with the dynamics of the emotional component of the gestures performed while speaking.

5. Conclusions

In this paper we assessed the emotional content of the political discourse of two candidates involved in the final debate for the Romanian presidential elections in December 2009, using a tool called Hedonometer. We also tried to analyze how the emotional content of the discourse (spoken and transcribed text) can be correlated with the emotional content of other semiotic resources or modes (gestures, for example) that the political actor performs throughout the discourse.

A first conclusion concerns the way in which narrative structures contribute to the emotional content of discourse. We have seen how certain narratives contribute in a positive way to improving the emotional score of a speech, especially when the values for which the characters of the narrative fight are projected in an appropriate way in the explicit message of the speech. In other words, a good, contextually appropriate narrative amplifies the emotional score of a political discourse.

Another conclusion is a consequence of the multimodal nature of any type of discourse. Therefore, a correct assessment of the emotional content of a speech takes into account the emotional component of each type of semiotic resources that a political actor performs during a speech. In our example we saw how we can correlate the emotional component of a certain type of gesture – respectively deictic gestures, or "ring" type of gestures (R-family gestures) –, with the emotional content of the speech, so that a maximum persuasive potential can be obtained. In a previous study (Drăgan 2018) we detailed the relationship that is established between hand gestures and the emotional dimension of messages, or the emotional valence of the message. Of course, our analysis model can integrate other types of semiotic resources, such as paralinguistic features (intonation, rhythm, and volume / booming voice), which also contribute to the degree of emotion conveyed by the political personalities and the credibility of their messages.

Finally, the findings of our research support the idea that the political actor who delivers a speech with an emotional content adapted to the audience's expectations, which contains narrative structures familiar to those with whom he speaks, placed in the area of interest of the public agenda and whose meanings are valuable to the audience, can create a more pronounced sense of preference. In fact, it will look more convincing in front of the audience, and its messages will have a higher persuasive potential.

We would like to mention two limitations of this study. The first refers to the size of the corpus analyzed, in our case a short political speech of only 320 words. It would have been preferable, for the relevance of the analysis, to be able to measure the emotional score of both candidates throughout the approximately 3 hours of the final debate for the presidential elections on December 3, 2009. This study did not allow us such an extension. In this paper we have provided only a

model for the analysis of such a communication problem. We have seen that the Reagan et al. (2016 2; Dodds et al. 2011, 4) suggest larger corpora (over 10,000 words) that mitigate some possible errors in assessing the emotional score of the text. The second aspect concerns the research instrument used, namely the Hedonometer. This tool only assesses the emotional tone of a word - on the axis happiness/sadness -, it does not refer to other types or categories of emotions with which a certain type of gesture is loaded that the political actor performs while speaking. The team that developed the hedonometer is now working to improve this tool, in the sense that it incorporates other categories of emotions "other than happiness and sadness such as fear, anger, and surprise" (hedonometer.org, page about.html, section on Future, paragraph 3).

Through the analysis we have developed in this article we hope to open the way of modeling and evaluating the emotional content of a political discourse, taking into account both the emotional score of the spoken discourse and the emotional components of other types of semiotic resources. We believe that the multimodal model for assessing the emotional content of discourse that we have presented in this paper can be used in a complementary way to the *Facial Action Coding System* (FACS), developed by Ekman and Friesen (1978), for accurately assessing the emotional dimension of political discourse. But, this aspect will be the subject of further research.

Acknowledgment

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