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Discourse and Cognition in Political Psychology. How Political Language Could Shape Emotions and Beliefs?

Abstract. The aim of this article is to underlie the role played by the political discourse in creating social and political beliefs, emotions and attitudes. However, at the theoretical level we can observe the role played by the emotional structure in generating "hot cognition". Thus, the relation between political cognition and emotional stimuli was described in the field of the cognitive neurosciences through fMRI (functional magnetic resonance imaging). Moreover, researchers have observed a strong relationship between the limbic system and political stimuli. Also, in the field of the cognitive sciences we have to stress the role played by the "mental contexts" in shaping social and political cognition. Thus, the main catalyst for generating mental contexts is represented by the political language/ political discourse. This article realizes the qualitative analysis of the discourse sustained at Mansion House by the Prime- Minister Theresa May. The theme of the discourse regards the future of UK after Brexit. Also, the discourse presents the economic and social challenges for the future of the UK. In correlation with the theoretical framework, we tested if this kind of discourse generates rational beliefs or emotions. Empirical findings demonstrate the equilibrium between rational beliefs and emotional stimuli. If we refer to the emotional sphere we have to underline the presence of the words which generate emotions as: patriotic feeling (national pride), freedom, independence and need for security and protection.

Keywords: political cognition, Brexit, "mental context", Theresa May, political discourse

1. Beyond political cognition. Challenges from neurosciences

This section aims to create a comprehensive framework for understanding the challenges of the social and political cognition. Beyond the classical perspectives from the cognitive sciences and psychology, we introduce a new type of approach based on the relation between brain-

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mind and political behaviour. Thus, one of the most important issues in the field of the cognitive psychology regards the relation between mind and reality. This reflects the possibility of human mind to compute all the stimuli (tangible or intangible) from reality. Until now, it's not very clear how human brain (or in philosophical view: human mind) generates reactions in accord with the reality challenges. However, the epistemological evolutions from neurosciences could offer a biological answer regarding the brain anatomy and physiology. But, in practice, human behaviour couldn't be reduced to the biological reactions. Beyond, all these discussions about the role played by the neural basis of the human behaviour, we can define cognition in terms of processing, with a high level of accuracy, all the information. This general approach is useful for understanding different behavioural reactions in different social or natural situations. In a general meaning, the social perspective of cognition reflects that this process refers to "the capacity to appreciate that another individual has a mind like one's own. The essence of the phenomenon lies in the more conventional cognitive mechanisms that make these kinds of inferences possible, but social cognition should properly be seen as the emergent property of the system when these more fundamental cognitive processes are applied explicitly to social contexts" (Dunbar 2011, 25).

In a minimal definition we can stress that: "cognition refers to all the processes by which the sensory input is transformed, reduced, elaborated, stored, recovered, and used. It is concerned with these processes even when they operate in the absence of relevant stimulation" (Neisser 1967, 4). The cognitive system refers to the human brain mind to compute information. This thing involves the existence of the physical infrastructure (represented by the brain) and the operatory system (all the conscientious and mental processes: thinking, attention, memory). In the field of the cognitive psychology the research approach is crystallized around several questions as: "What are cognitive processes? [...] Are we able to characterize cognitive processes in such a way that they can be ontologically distinguished from physical and biochemical processes?" (Newen 2015, 4251-4268).The main role of the cognitive system is to create different patterns of information and to react in accord of these patterns (Zlate 2006).

One of the main theses in the field of the cognitive psychology is represented by the connectionist perspective of the cognition. Thus, the cognitive process is seen as a network based on the interaction between its elements. Moreover, Fodor and Phylysyn theorised the connectionist

architecture of the cognitive system in terms of the interactions between particular units. "Connectionist systems are networks consisting of very large numbers of simple but highly interconnected 'units'. Certain assumptions are generally made both about the units and the connections: Each unit is assumed to receive real-valued activity (either excitatory or inhibitory or both) along its input lines." (Fodor and Pylyshyn 1988, 2).

In the connectionist perspective we can stress the fact that the changes in one unit could generate changes in the general architecture of the connectionist system (Fodor and Pylyshyn 1988, 8-9). For understanding the functions of the human cognition we can observe that this kind of system has: i. computational level; ii. algorithmic level; iii. implementation level (Miclea 2003, 29-33). The first two levels are characterized by the mind possibility of computing, representation and processing different information. The third level is represented by the physical architecture of the brain, neural interactions, brain architecture and brain chemistry (the role played by neurotransmitters in the cognitive processes).

A particular case of the human cognition is represented by the social and political cognition. In this meaning we have to make the difference between social cognition and political cognition. Social cognition reflects the individual's ability for understanding, processing and computing social stimuli. Political cognition has the role of transferring political values and creating mechanisms for ideological orientation and assessing different aspects of the political life. If we try to define social cognition we have to identify the main directions of study. Thus, "what is social cognition? If the social is ubiquitous, we face the problem of including all aspects of cognition as social. If it is special, we have to explain why and how. As a matter of practice, social brain science has indeed carved out a restricted domain of cognition" (Adolphs 2003, 165). Synthesising, we can observe that social cognition is based on both emotional and motivational factors. Emotional dimension regulate the brain processes and also, the neural responses and reactions in different social situations.

In the sphere of the social cognition, one of the most important directions of research is represented by the relation between socialisation and cognition. In this respect, "shared reality" is the key-concept around which is configured this analytical perspective. Social beliefs and emotions are transferred when individuals are placed in common situations which generate the same mental context for understanding the social world. Researches from molecular biology and genetics show a moderate correlation between attitudes and "shared environment". Moreover, we can emphasize that the hybrid model based on "shared

environment" and genetics explains, with a very high level of likelihood, the most partof the variance regarding the social cognition. In a general view, genetics explain around 60% from social attitudes in different experimental groups, with r = 0.6 and p = 0.05 (Fowler and Schreiber 2008, 913). Although there are several methodological limits, we can agree that social and political attitudes are formed in a mixed model based on familial genetics and environmental factors. "Still, the substantive findings we present here offer a direct challenge to common assumptions and interpretations that political attitudes and behavioural tendencies are shaped primarily or even exclusively by environmental, especially familial, factors" (Alford, Funk and Hibbing 2005, 164). In practice, it's very difficult to create a deterministic mechanism for genetically structure and social cognition and behaviour. But, empirical evidence shows that „attitudes higher in heritability are manifested more quickly, are more resistant to change, and increase the likelihood that people will be attracted to thosewho share those particular attitudes" (Alford, Funk and Hibbing 2005, 164). Other perspective from molecular biology and genetics demonstrate the relative influence of shared and unique environmental influence on liberalism-conservatism during childhood and adolescence. In this respect, the cross- age correlation over time in unique environmental effects on the liberalism-conservatism index has moderate impact ($r = 0.57$, $p < 0.01$). Cross-age correlations show that shared environment effects on the political index has a high value, with $r = 0.8502$, $p < 0.01$ (Hatemi et al. 2009, 1148-1151). In other researches Hatemi illustrated the real impact of the genetics in shaping political attitudes: "The findings suggest that while genes undoubtedly matter in the aggregate for the development of political attitudes, individual common variants will have small effects on ideology" (Hatemi et al. 2014). An interesting hypothesis for testing the relationship between genetics and social and political behaviour take into consideration the influence of the inherited neurological architecture in generating social or political feed-backs. From this point of view, empirical findings confirm the connection between genetics, neurotransmitters, cognitive and emotional processes and political behaviour.

Beyond the genetically perspective, we can sustain that „shared environemt" has also an important impact in generating social or political attitudes and beliefs. Thus, "shared reality" could be seen as the main catalyst for generating social cognition. In this respect, "people share reality both to connect with others and to know. Firstly, social relationships are established and maintained to the degree that participants

in the relationship achieve specific, mutually shared understandings of themselves or the world about them" (Moscowitz 2001, 8). This perspective shows the main impact of the social proximity in shaping social or political acts of cognition. Moreover, other researchers have demonstrated the impact of the familial environment in configuring the vote decision. They have estimated a strong positive coefficient of regression between social proximity and political decision (Rowden, Lloyd and Gilbert 2014).

In the sphere of neurosciences, researchers have demonstrated the functional relationships between brain anatomy and social responses. The main goal of the neuroscience approach is "to explain behaviour in terms of the activities of the brain. How does the brain marshal its millions of individual nerve cells to produce behaviour, and how are these cells influenced by the environment, which includes the actions of other people?" (Kandel et al. 2000, 5).Moreover, the field of neurosciences aims to understand the mental structures which facilitate us perception, learning or memory. The key-questions which define the research approach in neurosciences are "mental processes localized to specific regions of the brain, or do they represent emergent properties of the brain as an organ? If specific mental processes are represented locally in different brain regions, what rules relate the anatomy and physiology of a region to its specific role in mentation? Can these rules be understood better by examining the region as a whole or by studying its individual nerve cells?" (Kandelet al. 2000).

Regarding political cognition, the field of neurosciences tries to identify, from empirical evidence, what particular brain regions are important for political attitudes and sophistication (Lieberman, Schreiber and Ochsner 2003, 681-703). Ryota Kanai demonstrated with fMRI (functional magnetic resonance imaging) that there are different regions of the brain involved in political cognition: "Substantial differences exist in the cognitive styles of liberals and conservatives on psychological measures. [...] Recent work has shown a correlation between liberalism and conflict-related activity measured by event-related potentials originating in the anterior cingulated cortex" (Kanai et al. 2011, 677). At the empirical level, researchers discovered a positive association between anterior cingulated cortex (ACC) and preferences for liberalism ($r = 0.27$, $p < 0.01$). Another significant statistical correlation refers to the gray matter volume from right amygdale and preferences for conservatism ($r = 0.23$, $p < 0.05$). The same fMRI technique was used by Amodio and other neuroscientists for measuring the correlation between brain structure and

political cognitions and attitudes. Thus, they observed the statistical correlations between neurocognitive index of conflict monitoring and political orientation. They discovered a positive correlation between ACC activity, measured using functional magnetic resonance imaging or event-related potentials (ERPs) and political orientation. Moreover the statistical correlation between error-related negativity (ERN) is $r = 0.59$, $p < 0.001$. Political orientation is related to the mechanisms for cognitive control and self- regulation (Amodio et al. 2007, 1246-1247).

In the sphere of the neurosciences other studies demonstrate an emotional reaction and cognitive bias regarding political candidates. Using both tools from social sciences and fMRI, at the experimental level researchers observed a strong association between the activity of the cerebral amygdala and emotional responses to the preffered political candidates. When individuals from the experiment are faced to several contradictory information about theirpreffered political candidate, researchers have registered a high electric activity in anterior cingulated cortex (ACC) and in medial prefrontal cortex (mPFC) (Westen et al. 2007, 1947-1958).

Starting to all these theoretical and empirical premises we can stress the hypothesis that political cognition is hybrid model of social cognition based on both emotional responses and rational beliefs. In the neurosciences literature, this type of cognitive model is associated to "playground cognition". Thus, using the same neuroimaging tools, we can observe two different cerebral ways for generating social and political feed-back. For political actors which are involved in political activity (party membership/ partisanship) researchers discovered a strong positive association between the activation of the medial prefrontal cortex and medial parietal cortex and political orientation. For political novices we can stress the deactivations of these regions, fact which is typically for technical cognition (Fowler and Schreiber 2008, 914).

The role of the brain structure, especially of the anterior cingulated cortex (ACC), is obvious when individuals are placed in the situations which need an assessment based on cost-benefit: "This study and others suggest that the ACC responds disproportionately to outcomes considered aversive or signalling reductions in reward. It has been proposed, further, that the overall function of the ACC might involve the use of outcome, and particularly reward-related, information to guide action selection [...] A particularly interesting suggestion is that this cost – benefit analysis might take into account the effort associated with candidate actions" (Botvinick et al. 2004, 544).

Beyond the brain anatomy, in the field of neurosciences we can notice several discovers regarding the role played by neurotransmitters in cognition. Moreover, in this context we can stress the role played by noradrenalin with origins in *Locuscoeruleus* which filters the inputs and plays the role of arousal. In addition, dopamine with origins in *Substantianigra* energizes the outputs, playing an activator role of the neuropsychological process (Dietrich and Audiffren 2010, 1310). Also, in this context we can integrate the role played by the oxytocin in generating overestimation (Elster 2013).

Synthesizing, all these normative reflections and empirical findings shape a new analytical framework for understanding and explaining the behavioural reactions in correlation with biological architecture. Moreover, this field of research could generate new technologies, tools and methods for scanning and interpreting human behaviour in political space. As Jost wrote, the relation between politics and neurosciences is „the beginning of a beautiful friendship" (Jost 2014).

2. "Mental contexts", political discourse and cognitive feed-back

In this part of the study we focus on the relation between political language and political cognition. Regarding the research directions in the field of the cognitive studies, we intent to develop the relationship between objective situations and mental contexts. If in the first section we have presented the neuropsychological aspects of the social and political cognition, in this part we try to create a comprehensive framework for cognition starting from the importance of the political language. The main vectors in the sphere of the political cognition are represented by the political discourse and political ideology (with a discursive structure).

In the neurosciences approach political cognition depends on both genetics and social environment. In this context, we try to present an approach based on the relevance of the political experiences. Political attitudes and political cognition are learned by individuals. Their exposure to political stimuli could be a good strategy for developing mental strategies for processing information about politics. Albert Bandura has emphasized the role played by the learning process for shaping social behaviours: "Except for elementary reflexes, people are not equipped with inborn repertoires of behaviour. They must learn them. New response patterns can be acquired either by direct experience or by observation. Biological factors, of course, play a role in the acquisition process. Genetics

and hormones affect physical development which in turn can influence behavioral potentialities" (Bandura 1977, 16).

Social cognition is the result of both genetics and socialisation. In many empirical findings, researchers observed that the first response in social cognition has emotional basis. Public opinion and mass-media generates emotional responses regarding the dynamics of the public life. Also, several perspectives emphasized the role played by implicit attitudes in shaping opinion or beliefs about public space. In this field, researchers have stressed the role played by "hot cognition". Thus, they "demonstrated that the activation of consistent responses and the inhibition of inconsistent responses were stronger in the case of participants with more polarized attitudes and with more sophisticated political ideas" (Arcuri, Castelli and Galdi 2008, 372). In this respect, Arcuri and his team have tested the EEG signals. They have observed that individuals with implicit attitudes have developed emotional responses when they were faced to political stimuli.

Regarding the rhetorical impact of the political stimuli, in our case the political discourse, researchers have tested the relationship between the persuasion and the changes and influences both in human brain and cognition. The main guideline of this type of research starts from the assumption that: "the immediate objective of the mind is the correct reproduction of reality in mind, while the mediate goal is the subordination of such reality to the human needs" (Spirkin 1965). For applying this guideline researchers have used the environmental variables. Thus, they considered that the ecological dimension is very important in processing information. The empirical design has been based on two texts transmitted by both human being and computer. Researchers have measured the EEG signals in both cases (when a message is transmitted by a professor and when the same message is transmitted by a machine). The empirical results show a high level of correlation between brain senility and rhetorical discourse presented by the professor: "Results showed that some areas of the subject's brains behave with more sensitivity according to the changes in the rhetorical component of the listened discourses. Other areas appear to be more resilient and barely affected by the stimulus sequence, while some common elements are also observed" (Cañete et al. 2015).

In correlation with the neurological and psychological aspects of the both sensitivity and receptivity of the discourse, we have to present the role played by the political language and the ideological vectors in shaping

political cognition and sophistication. For attending this objective we have to make the difference between objective situations and "mental contexts".

Thus, "To illustrate the relevance of such an integrated approach, I shall briefly show how to account for the important notion of *context*. The contextual approaches referred to above generally assume a more or less direct relationship between situational, societal, political or cultural aspects of the 'environment' of text and talk, on the one hand, and the structures of discourse itself, on the other" (Van Dijk 2006 a, 161). Van Dijk realises the distinction between situations and contexts. Situations are the attribute of objective reality. Each social and political phenomenon could be interpreted as a particular situation. Then, contexts refer to the mental representation of the particular situations. Mental contexts are the main framework in which is crystallized the particular act of the social or political cognition.

As mental representation contexts facilitate the psychological junction between real situations and mental projections. Moreover, when we speak about contexts, practically we emphasize the idea of subjectivity. Teun Van Dijk underlines the fact that "contexts defined as participant definitions, that is, as mental constructs, are able to function as the interface between situational and societal structures and discourse structures, because they subjectively 'represent' relevant aspects of situations and society and directly interfere in the mental processes of discourse production and comprehension" (Van Dijk 2006a, 163). Mental contexts are the metal representations of the relevant social or political situations and influence what people transmit through natural language or what they do in different social situations (Van Dijk 2006a, 165). Each subjective or psychological construction could be defined in terms of the mental models. Language, in our particular case the political discourse, shapes different mental models. These mental models depend on the emotional mood or individuals' cognitive process. Political discourse and political language could also generate political attitudes and political reactions (Chiriac 2016, 86).

One of the most important way for transferring emotions, attitudes and values is represented by the political ideology. Political language is the main channel for spreading ideological prescriptions and therapies: "For social representations such as ideologies, knowledge and attitudes to have any specific impact at all on concrete discourses and social practices, a very important cognitive interface is still missing: mental models. Whereas social representations are traditionally located in social memory (or semantic memory) as shared by groups, mental models constitute the

personal, episodic memory of individual people" (Van Dijk 2001, 16). In this respect context models generate a kind of pragmatically understanding of the different social and political situations. In every communicational act we can identify a common sharing of the social knowledge. But, this common psychological experience is influenced by particular manner of generating mental contexts: "There is a close relationship between discourse, ideology and politics, in the sense that politics is usually discursive as well as ideological, and ideologies are largely reproduced by text and talk" production" (Van Dijk 2006 b, 739).

Synthesizing, we can stress the idea that the cognitive feed-back depends on the mental contexts. Moreover, political language could be seen as the main vector for creating social representations through mental contexts. The nexus between "hot cognition" and political sphere is realized through political discourse and political ideology.

3. "Mental maps" and content analysis of the political discourse. Theresa May' discourse after Brexit: UK and the future partnership with EU

In this section we analyse the relationship between political discourse and cognitive sphere related to this type of political language. In this respect, the main research question is related to: "how political discourse could generate mental contexts, emotions or beliefs?" For answering to these theoretical challenges, in practice we have several research objectives as: i. to identify the main guidelines of the political discourse; ii. to create a kind of the "discourse map" starting from the content analysis of the political discourse; iii. to identify beliefs and emotions which are transferred through political language. The main hypothesis of the empirical analysis, related to our theoretical framework, is that political language is used for generating emotions and cognitive mechanisms correlated with "hot cognition".

For attending our research objectives and testing the research hypothesis we choose a contemporary political discourse. In this case we have opted for the Theresa May Mansion House speech. After Brexit, the UK Prime-Minister, Theresa May, sustained a public speech on 2 March 2018 at the Mansion House. The Prime-Minister speech was related to the future partnership between U.K. and E.U. after the Brexit[1]. Moreover, we

[1] Video discourse at: https://www.gettyimages.com/detail/video/theresa-may-mansion-house-speech-england-london-mansion-news-footage/929030510 and text: https://www.civilservant.org.uk/library/2018-03-02-PM's_Brexit_Speech.pdf

can understand all the political changes and challenges starting from the structural interdependences between EU and its memberships. This kind of proximity and interdependency facilitates new frameworks for understanding the dynamics in the information society (Chiriac 2017).

We use as tools for content analysis several software specific for qualitative research as: NVIVO12 PRO, TEXTALYSER and UCINET6. Through these tools we try to create the map of the discourse and also to identify several emotional issues which could influence the cognitive process of the citizens.

The main theme of the discourse is related to the economic future of the UK after the vote for Brexit. In this respect, we can identify several directions or secondary themes as: i. Brexitas a crucial moment in the contemporary EU politics; ii. the existence of the several economic models which doesn't work in practice; iii. the structure and dynamics of the future economic partnership between UK and EU; iv. the problems related to goods, agriculture and fisheries and economic services; v. the future of UK after Brexit.

At the descriptive level we can observe that the discourse contains 3479 words with a lexical density (the number of nouns, verbs, adverbs and adjectives/ total number of the words) of 37.1%. We can identify simple words composed by 2 syllables (average is 1.68). At the linguistic level we can observe the prevalence of the long phrases based, in general, on attributive propositions. Thus, the main intention of the discourse is to clarify the main topic/ subject: *The future partnership between UK and EU*. The Gunning-Fog index as measure of receptors' ability of understanding a message has a low value: 10.6. This fact reflects the accessibility of the political message and, also, the large mass of the citizens with 10 years of formal education (middle educated people) which could understand and compute the political message.

Total word count :	3479
Number of different words :	1291
Complexity factor (Lexical Density) :	37.1%
Readability (Gunning-Fog Index) : *(6-easy 20-hard)*	10.6
Total number of characters :	39974
Number of characters without spaces :	23497
Average Syllables per Word :	1.68
Sentence count :	430
Average sentence length (words) :	20.15
Max sentence length (words) :	67
(so we want to limit the number of barriers that could prevent uk firms from setting up in the eu and vice versa and agree an appropriate labour mobility framework that enables uk businesses and self employed professionals to travel to the eu to provide services to clients in person and that allows uk businesses to provide services to the eu over the phone or the internet)	
Min sentence length (words) :	1
(goods 49)	
Readability (Alternative) beta : *(100-easy 20-hard, optimal 60-70)*	44.5

Table 1: Descriptive Indicators for the Discourse Analysis

Regarding the frequency of the key-concepts in the political discourse we can stress the fact that this message regards the whole citizens. Theresa May tries to create the feeling of familiarity and the membership to the same values and social or political community using with a very high frequency the pronoun “us”. The word “us” has a simple frequency of 136. In the same context we can notice that in the list of the most frequent words we can integrate the concepts: “want” (with a frequency of 48) and the words “agreement” and “need” with equal frequencies (31). Thus, we can stress that the “short cut” of the political message could be understand in terms of “need and want for a common agreement”. This “common agreement” refers to “trade” and “market”.

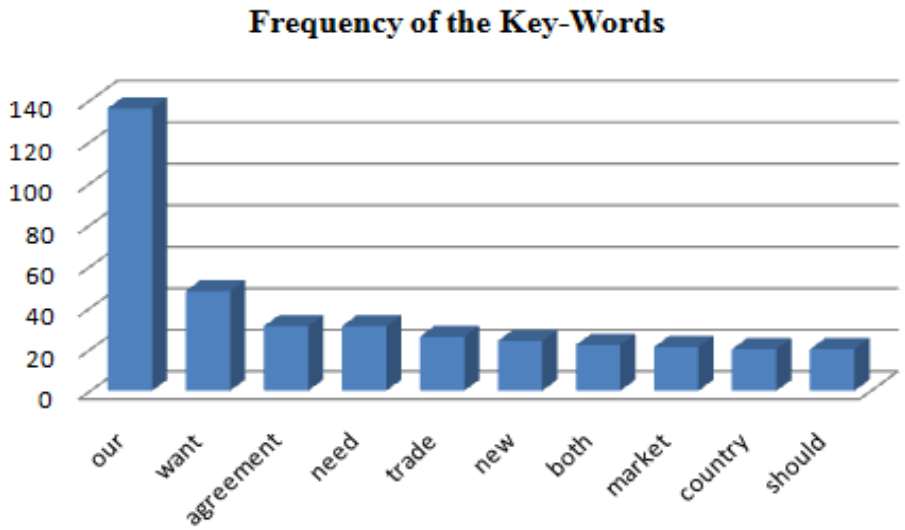

Figure 1: The simple frequency of the key-words

At the correlation level we can observe that the map of the discourse is structured on several items like: i. negotiations with EU; ii. a better common future; iii. future economic partnership; iv. new positive role in the world; v. a modern country in a democratic Europe; vi. the best way forward both UK and EU; vi. EU decisions will affect UK.

The "core" of the political message is represented by the minimum flow from the network below. In this respect, the minimum pathway in the network is represented by the following nodes:

1. **THE BETTER FUTURE**: "After Brexit both the UK and the EU want to forge ahead with building a better future for our people, not find ourselves back at the negotiating table because things have broken down".

2. FUTURE ECONOMIC PARTNERSHIP: "As in other areas of the future economic partnership, our goal should be to establish the ability to access each others' markets, based on the UK and EU maintaining the same regulatory outcomes over time, with a mechanism for determining proportionate consequences where they are not maintained".

3. **VOTE FOR A NEW RELATIONSHIP WITH EUROPE**: "People in the UK voted for our country to have a new and different relationship with Europe, but while the means may change our shared goals surely have not – to work together to grow our economies and keep our people safe".

4. **EU DECISIONS**: "EU law and the decisions of the ECJ will continue to affect us".

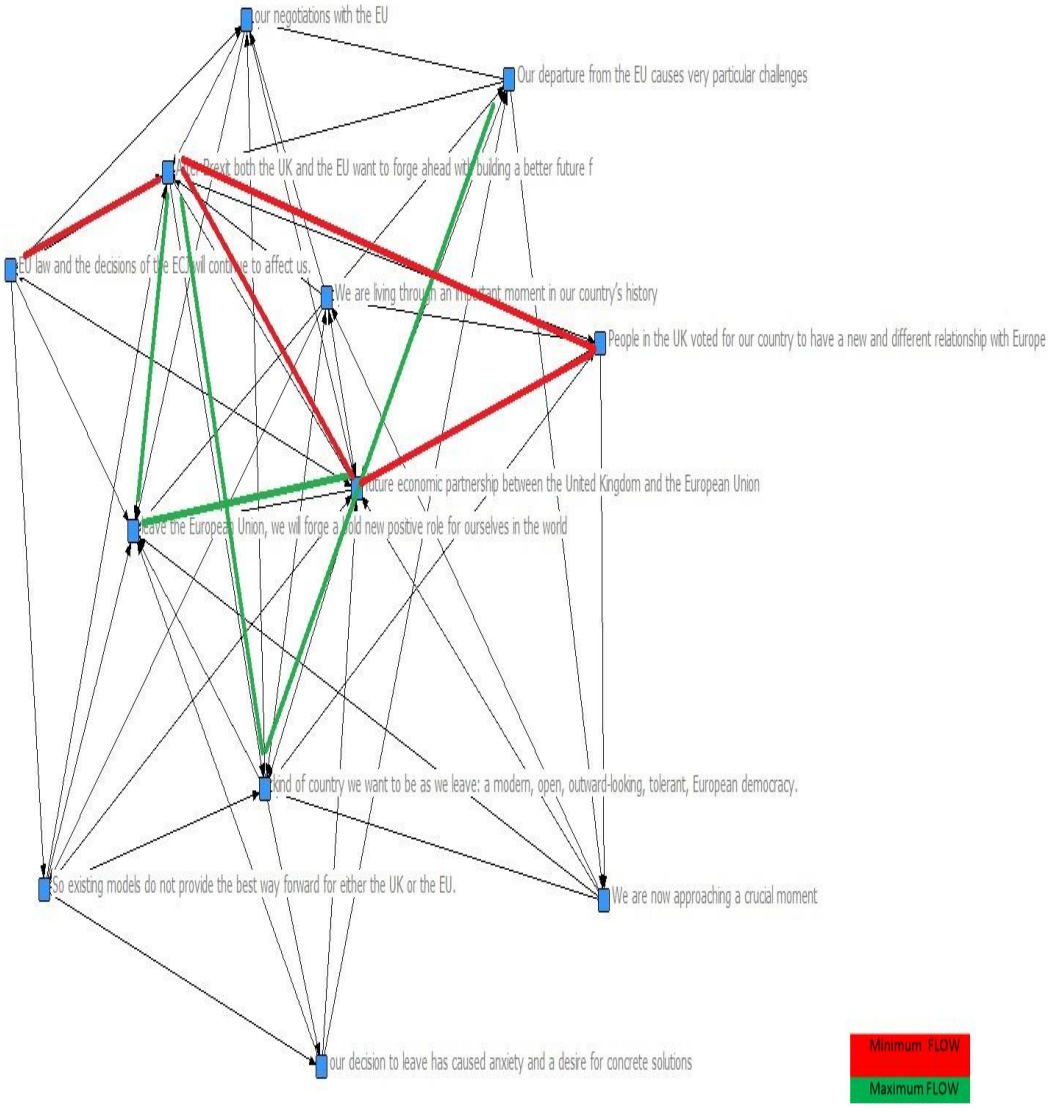

Figure 2: The "map" of the political discourse with minimum and maximum flows

Regarding the estimation of the maximum flow in the current political discourse we have to emphasize that the main theses and

arguments used by Teresa May are represented by the particular challenges after Brexit, the new positive role played in international system by both UK and EU, the future economic partnership and the new strategy for development assumed by UK in a new European democracy.

		1	2	3	4	5	6	7	8	9	10	11	12
		f	w	l	o	A	P	k	W	o	o	S	E
1	future economic partnership between the United Kingdom and the European Union	0	4	7	5	6	3	5	2	3	2	2	2
2	We are living through an important moment in our country•s history	6	0	7	5	6	3	5	2	3	2	2	2
3	leave the European Union, we will forge a bold new positive role for ourselves in the world	0	0	0	0	0	0	0	0	0	0	0	0
4	our negotiations with the EU	1	1	2	0	1	1	1	1	1	1	1	1
5	After Brexit both the UK and the EU want to forge ahead with building a better future f	4	4	5	4	0	3	4	2	3	2	2	2
6	People in the UK voted for our country to have a new and different relationship with Europe	3	3	3	3	3	0	3	2	3	2	2	2
7	kind of country we want to be as we leave: a modern, open, outward-looking, tolerant, European democracy.	4	4	5	4	4	3	0	2	3	2	2	2
8	We are now approaching a crucial moment	3	3	4	3	3	3	3	0	3	2	2	2
9	Our departure from the EU causes very particular challenges	4	4	4	4	4	3	4	2	0	2	2	2
10	our decision to leave has caused anxiety and a desire for concrete solutions	2	2	3	2	2	2	2	2	2	0	2	2
11	So existing models do not provide the best way forward for either the UK or the EU.	4	4	5	4	4	3	4	2	3	2	0	2
12	EU law and the decisions of the ECJ will continue to affect us.	4	4	5	4	4	3	4	2	3	2	2	0

Output actor-by-actor maximum flow matrix saved as dataset maximumflow

Table 2: Matrix of the maximum flow in the "map" of the political discourse

Thus, Theresa May's discourse reflect the main future direction of UK after the vote for Brexit. In this context, the main challenges are represented by the new economic partnership and the new role played by both EU and UK in the world economy. Moreover, May has emphasized the historical moment represented for the citizens' vote for Brexit. In this context she has presented a brief future perspective about what kind of country will be UK after leaving EU: a modern one, a tolerant country and a model for European democracy.

At the cognitive level, this discourse could be seen as a hybrid one between emotional issues and rational beliefs. We have analysed 96 paragraphs which compound the whole written discourse. In this sphere, we use two quantitative values: value 1- emotional moods, feelings or other subjective approaches and 2- rational beliefs.

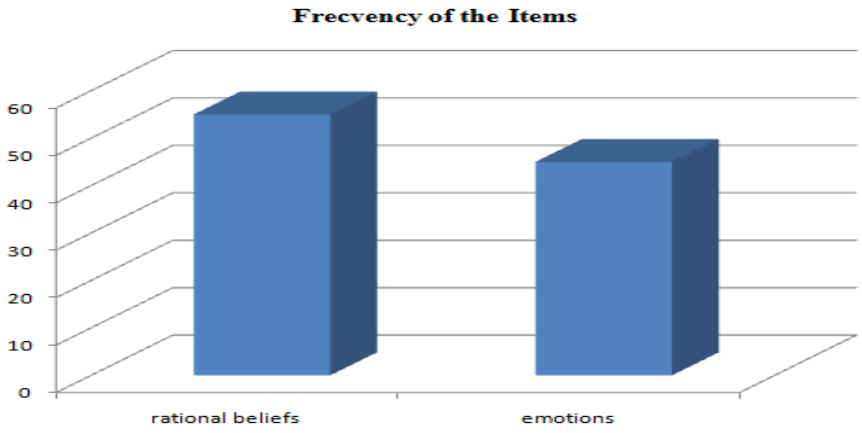

Figure 3: The structure of the discursive items

At the descriptive level we estimate that in 45% from the analysed paragraphs we can mention emotional issues and in 55% we can identify rational beliefs. Moreover, all these rational beliefs are almost met in the paragraphs which are related to economic goals.

It's obvious that Theresa May has a balanced speech with several emotional implications. In this respect, both the beginning and the end of the political discourse are characterized by emotional implications. The emotional basis is structured on the several political emotions as: *patriotism*, *cooperation*, *interest* and *hope*. Thus, we have observed that we have a nonlinear distribution of the paragraphs which contains emotions during the whole discourse. We can stress the fact that emotional references could be seen, in mathematical terms, as a function which has a period. In our case the first part of the discourse is characterized by the alternation between rational beliefs and emotional terms. In the second part of the discourse we can notice the presence of the rational convictions and beliefs. In this part Theresa May speaks about the economic issues, the economic future, the goods and services and the importance of the free market. In this part we assist to rational sentences and technical approach on political economy.

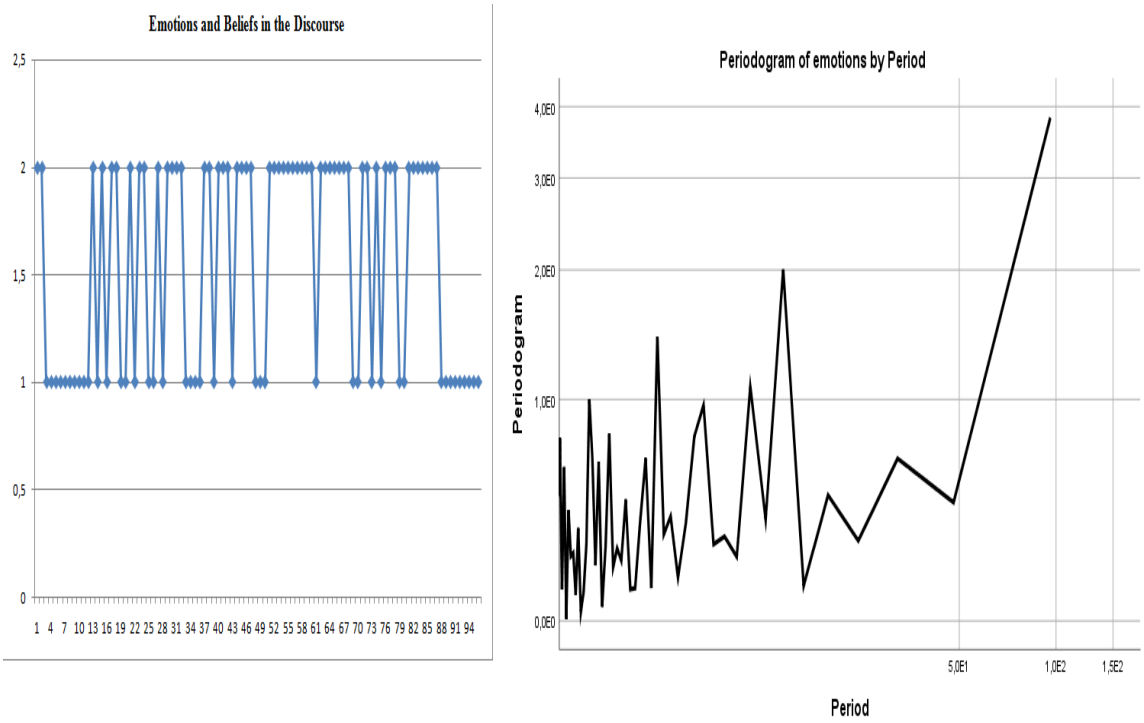

Figure 4: Emotions and Beliefs in the Discourse.
The periodogram of the emotions

In periodogram we can observe that a high density of the emotional references is met in the first part of the political discourse. The average of the paragraphs with emotional references is 43, 2. From the total of 96 paragraphs we can notice that in 43 paragraphs we can identify emotional issues or references. In 53 paragraphs we identify either rational beliefs or technical approach. We can estimate a recurrence of the emotional issues with the average of 1.54 paragraphs and a standard deviation of 0.50.

In the field of the emotional issues Theresa May emphasized the patriotic feeling. In 17.07% of the cases May underlines the role of the patriotism and also the importance of the national and patriotic feeling for leaving the EU. Another important emotion which could derived from the political discourse of Theresa May is represented both by the feeling of protection/ safety and cooperation. In 9.75% of the paragraphs we can observe the recurrence of the "freedom" and "hope". In the graph below are presented the main emotional issues which are recurrent during the whole political discourse:

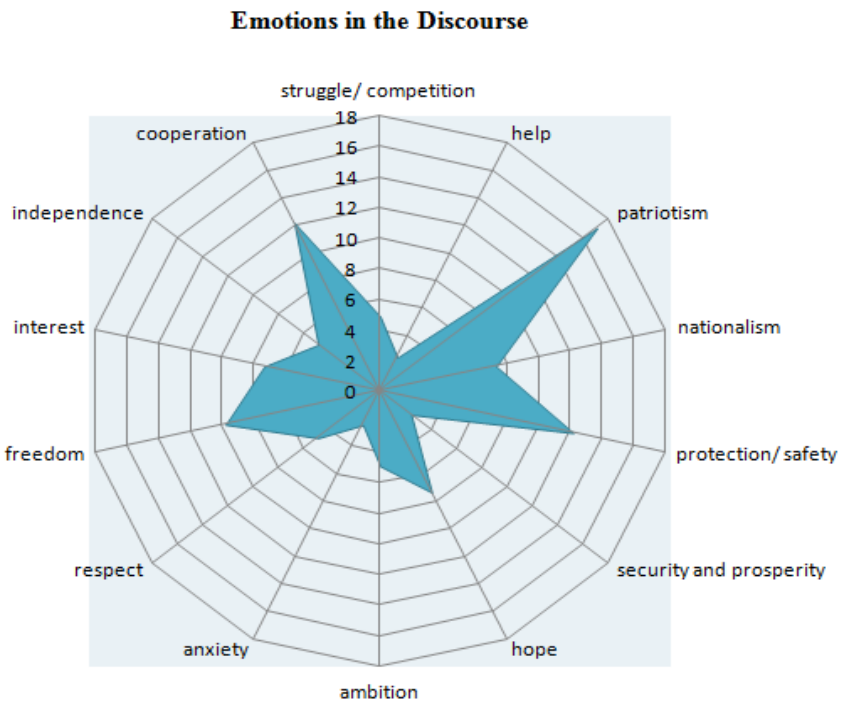

Figure 4: Political Emotions in Theresa May's discourse

The emotional framework is crystallized around several political emotions as: patriotism, protection/ safety, freedom, cooperation and hope. All these emotions are used for creating a psychological response based on subjectivity and affect. Theresa May stimulates the patriotic feeling and the need for protection and freedom in the field of the political cognition. Other important emotions which are transmitted through this kind of political discourse are: security/ prosperity, ambition, respect, interest, cooperation and competition. Thus, citizens should understand Brexit in emotional terms like patriotic feeling, national independence, freedom and need for protection and security.

Synthesising, Theresa May' Mansion House discourse combines both cognitive style and emotional patterns. This kind of the political discourse creates the equilibrium between rational and emotional triggers. This discourse is focused on both understanding rational arguments (economic thesis) for Brexit, and for transferring emotional stimuli (as patriotic feeling or freedom/ independence). At the linguistic level, this discourse is based on the periodicity of emotional stimuli during the whole paragraphs. It has a very large area of addressability, being both

simple and accurate. Although it seems to be a rational political discourse, subsidiary we have to underline the role played by this type of language in shaping emotions and, therefore, political attitudes and behaviours.

4. Concluding remarks

The empirical findings demonstrate that the *intentio auctoris* consists in transferring, during the political discourse, both beliefs and emotions. Moreover, in this sphere we have to emphasize the main role played by the mental contexts in political cognition. The equilibrium between beliefs and emotions demonstrates the "hot cognition" which characterise the psychological process of computing political information and stimuli. In this respect, the structure of the political discourse, the typology of the phrases and the presence of the several key-words are the main vectors for creating feelings and mental contexts. The recurrence (periodicity) of the emotional stimuli could generate emotional responses, attitudes and behaviours. Except the technical and economical part of the discourse we have to stress Theresa May' interest in generating the feeling of patriotism. In addition to the theoretical framework, this article demonstrates the presence of the emotional stimuli in political language. Political discourse is the main vector for generating mental contexts and, also, for shaping emotions and beliefs about proximal political reality.

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