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Abstract:
The main aim of this paper is to explore Turkish communication and media policies through governmental programs. Governmental programs are valuable sources for tracing the historical development and change of public policies on communication and media. Our research examines 60 governmental programs. We used content analysis methodology in order to examine the communication and media policies in these programs. As unstructured data, the texts of 60 governmental programs (a corpus of 892 pages) are pre-processed (tokenized, stemmed, tagged and cleaned) by KNIME, an open source software for text analysis and data mining. Additionally, we developed a term dictionary for searching communication and media policies. These dictionary terms helped us exploring the themes of governmental policies. Finally, we graphed the data suitably for the historical analysis of themes in order to trace the policy changes. Our research findings helped us to monitor the changes in Turkish communication and media ecosystem with regard to specific technologies such as newspaper, radio, television and internet. We also explored certain policy concepts on communication and media freedoms and rights. The analysis revealed that almost all governments included communication and media related issues in their programs, and the amount of references to communication and media policies increased historically. It is also found that the political differences of governments did not cause much difference in their quantitative references to communication and media issues.

Keywords:
Communication and media policies, Turkish media history, Turkish Governmental Programs, content analysis, computer assisted text analysis, KNIME
1. Introduction

All kinds of texts are valuable sources when exploring and analyzing social phenomena. They reflect not only the perspectives of the writers but also the cognitive traits of the readers who commonly share the peculiar historical moments when these texts were written. Therefore, social scientists can proficiently make use of texts to study the society. In this context, historical texts are particularly important to comprehend social change. Similar to Eagleton’s (1996) discussion on how the literature texts can be both fictional and factual at the same time, Pasco (2004) delineates literature as a historical archive for the study of society. Pasco further refines his point by reminding that literature is not an exact mirror of objective reality but “it is a response to reality, whether by reflection or reaction” (p. 374). Duverger (1990) affirms that not only “social literature” inspired by social problems but also “pure literature” can serve as “indirect documentation” for social inquiry. He counts all kinds of archival texts, parliamentary and governmental publications, directories, biographies and all forms of press as useful written documents for studying social phenomena. On the other hand, most texts have certain political contexts. From the critical discursive point of view (Fairclough, 1988; Jameson, 2002; Storey, 2013), we can further claim that all texts are, in a way political, since they have certain issues of power and reflect power relations in a society. They narrate historical or present day events from a certain political position. As a special type of text, the administrative texts may also be used to explore political changes in a society. Archeologists and historians use administrative texts as primary artifacts in order to understand certain historical eras. Various administrative texts played a very important role in disclosing historical political events in many archaic societies. Administrative texts can suitably be used in understanding modern social change too.

Governmental programs are characteristic and inspiring examples of such administrative texts. Governments, as the top-level political and administrative body in a modern society, produce many administrative texts. Governmental programs are among such texts that are important both politically and administratively. These texts serve as the ultimate administrative guide for the whole bureaucracy and other related political organizations. It is credibly possible to observe the historical change in a society through such texts. This paper offers a textual analysis of the Turkish Republic governmental programs through an historical perspective. Sixty governmental programs between 1923 and 2014 are analyzed to explore their emphasis on communication and media policies.

Governmental programs can be described as pseudo reconciliation texts in a class society. They inevitably inherit and exhibit the tensions of social classes. In the final analysis, we argue that governmental programs are the results of compromises and concessions among the representatives of ruling classes. This is noticeably more apparent in coalition governments. However, even single party governments reflect a compromise of power among the ruling elites of that same party. Governments in “modern” states are outrageous illustrations of the “representative democracy” as a fashionable but unfair game, especially in extremely biased global corporate media age. Political parties are particularly held responsible for this ruinous failure (Mair, 2005). Politicians and scholars have proposed enforcement of civil society intervention as a remedy to this fiasco; but no evident relief was observed by now in any of such societies. However, governments still play a very important role in the resource allocation processes in class societies. The governmental programs are the documents of such politics as resource allocation. It is credibly possible to trace the change in the society through such

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1 In another work of him, Eagleton (1978) clarifies his position more: “The ‘textual real’ is related to the historical real, not as an imaginary transposition of it, but as the product of certain signifying practices whose source and referent is, in the last instance, history itself” (p. 75).
2 Officially known as “Government’s Program for Government”.

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governmental texts which exhibit the details of this resource allocation processes. Several scholars followed this idea and analyzed governmental programs in terms of certain social policies. For example, Ruiza et al. (2007) examined Brazilian governmental programs on energy policies. In a similar fashion, Enli et al. (2013) used the documents of Norwegian parliamentary debates as a corpus in order to trace the periods of television history. Quite a few Turkish scholars also subscribed to this idea and analyzed Turkish governmental programs in terms of women policies (Altan Arslan, 2017); sport policies (Aykın & Bilir, 2013); environmental policies (Güleç Solak & Sürmeli, 2015) and educational policies (Çoban, 2018). However, all these researches were methodologically in qualitative design, while our research is expected to fill the literature gap with its quantitative design.

Based on the assumption that governmental programs are important political texts of reconciliation in a continuously modernizing capitalist class society, we can accordingly develop a research question for the data obtained from our corpus regarding whether the importance given to communication and media policies has increased throughout history in Turkish governmental programs. Here, we base our research questions on development and communication relationship emphasized by many scholars since Lerner (1966) and Schramm (1965).

Research Question 1: Do the Turkish governmental programs, throughout history, give increasingly more importance to communication and media policies issues? As political conciliation texts, governmental programs narrate how the resources are to be allocated in a particular society, in a particular time span. In this respect, we can assume that political tendency of the government may affect the discourse of resource allocation for communication and media policies. This discourse differentiation with respect to political tendencies forms the theoretical base of our second research question.

Research Question 2: Does the discursive importance of communication and media policies in Turkish governmental programs differ in accordance with the political tendencies of the governments.

2. Method

The Turkish Republic was founded in 1923 as an independent state. Since then, almost all governments had issued a program document and read it at the Grand National Assembly. Only provisional and short-term governments for election period did not have such a program document. At the time of starting our research, all of these governmental programs were accessible as PDF files from Turkish Republic Grand National Assembly web site. However, after a recent re-arrangement of web site, these documents became inaccessible. Therefore, some data-mining procedures were done from www.archive.org site. After this data-mining process, sixty of the governmental programs were selected for examination. Finally, we had a corpus of 60 documents, 892 pages, 21,245 sentences and 89,991 words (after stop-words were removed). Therefore, all these documents together constituted a sufficiently large corpus of text, narrating how the political reconciliation at governmental level was realized between 1923 and 2014 in Turkey.

Textual analysis is a broad term that encompasses a variety of methodologies. Textual analysis includes many forms of analyses such as content, similarity, sentiment, frame, discourse, rhetorical and thematic analysis, all being centred on the text. A broader term, artefact analysis, is proposed to include the analysis of all artefacts including the texts. Thomas (1994) designates and praises content analysis as a prime application of cultural analysis in artefact studies. However, primarily focusing on text, textual analysis is more elaborate and wide-ranging than other types of analyses of communication artefacts.

3 https://www.tbmm.gov.tr
Frey et al. (1999) have widen the definition of textual analysis further to include visual messages also. As Mckee (2003) suggests a text is anything that we make meaning from, including a book, television programme, film, magazine, or even a kilt or furniture. Therefore, textual analysis can be conceived as the analysis of all artefacts, textual, visual or material. However, textual analysis even in the form of “text-only” analysis has a great potential for the analysis of communication messages. After carefully showing the misunderstandings on the goal and reach of textual analysis, Fürsich (2009) clearly explains why journalism scholars would benefit from “text-only” analysis if they were aware of the limitations and strengths of this type of methodology. Particularly, when it comes to larger amounts of data, the analysis of “text” has a great analytical value. Digital and online forms of texts can be analysed comprehensively with computer assisted textual analysis tools, generally known as computer-aided text analysis (CATA) software.

2.1. Content analysis

Content analysis is a very valuable research method for extracting data about social phenomena. Max Weber was among the first scholars promoting this method for social analysis. He suggested that the content analysis of newspapers is a valuable task for understanding social change (Weber, 1998). Content analysis is a particular form of textual analysis. Holsti’s (1969) definition of content analysis emphasizes that it must be both objective and systematically. Berelson (1952) had previously underlined these traits also. However, Krippendorff (2004) challenges Berelson’s insistence on the manifest attribute of content analysis and defines content analysis as the research technique for making replicable and valid inferences from latent content as well. Content analysis, therefore, is counting the systematically coded words, terms, sentences, idioms, themes, paragraphs, articles etc. in order to draw statistical inferences. Computer Assisted Content Analysis (CACA) software help the analysts in coding and designing more transparent and statistically advanced research techniques for unstructured data with ease.

2.2. Computer Assisted Content Analysis

History of computers usage for scholarly research in textual analysis goes back to early 1960’s. The General Inquirer is the earliest content analysis software for an IBM 7090 program system that was developed at Harvard in the spring of 1961 for content analysis research (Stone & Hunt, 1963). Early computer programs for content analysis assigned words and phrases to predefined categories to count and infer statistically reliable results. However, many programs came equipped with ready-made dictionaries that had been developed and used with some success by other researchers. Dictionary vocabulary can be derived either inductively from a text or deductively from more general constructs (Mergenthaler, 1996).

This lexical approach to computer assisted content analysis is quite common in many software (Evans, 1996). For instance, Yoshikoder, an open source multilingual content analysis software, developed as part of the Identity Project at Harvard, allows predefined or user developed dictionaries (Lowe, 2015). Yoshikoder is also able to deliver key-word-in-context (KWIC) lists in the form of concordances. Other open source software alternatives, such as KH Coder (Higuchi, 2016), provide co-occurrence analysis to specify the maximum distance between two words that will be judged to co-occur. KH Coder also provides clustering authorship based on the measure of the distance of texts as dendrograms. Another open source software, the General Architecture for Text Engineering (GATE), developed by The University of Sheffield since 1995, is a more comprehensive alternative to multilingual text analysis, providing information extraction, semantic annotation, fake news analysis, and many other natural language processing (NLP) applications (Cunningham et al., 2002).

NVivo, MaxQDA and Atlas-ti, the three proprietary software that are famous among academic circles, position themselves as qualitative analysis gears. However, these three software are also well known for their textual analysis capabilities. They provide many content analytic tools for
mapping word frequencies, co-occurrence lists, key-word-in-context lists, word clouds, concept maps etc. for unstructured data such as interviews of focus group transcriptions. Moreover, these three software can also process audio-visual data and exhibit certain capabilities for network analysis. Other well-known proprietary data analysis software SPSS and SAS have also NLP modules for unstructured data analysis. All of these proprietary software claim that they have multilingual processing properties, though this is not valid for agglutinative languages such as Turkish.

2.3. Konstanz Information Miner (KNIME)

KNIME is developed by a research group in Konstanz University, Germany, in 2004 (www.knime.org). Written in JAVA, KNIME is a modular open-source data manipulation and visualization program. It runs on Linux, MacOS and Windows operating systems. The KNIME user can create workflows, which consist of connected nodes that process data (Berthold et al., 2009). KNIME, formerly known as Hades, is a very versatile data mining, cleaning and analysis package. It is quite similar to Rapid Miner, a proprietary software with a free version option (RapidMiner Basic Edition). KNIME allows users to utilize several computing languages such as C, C++, R, Python, Java, JavaScript and R through snippets. It also integrates all WEKA algorithms and may use many properties of Tableau. KNIME can retrieve data from multiple online and offline sources. Text can be input in many formats including flat txt files, pdf, word format, csv etc. It can also process audio and video for future extraction and image processing applications. Parallel and distributed data pipelining is also possible with KNIME Server, which also provides additional functionalities for organizational usage.

KNIME offers many nodes for machine learning and neural networks algorithms, which can be used for many interesting solutions for big data analytics. Certain machine learning nodes can be used for text recognition and classification solutions. KNIME has also strong text-processing features that enable it to retrieve, mine, process, analyse and visualize textual (unstructured) data. It also provides much functionality for natural language processing (NLP). KNIME has strong capabilities for sentiment analysis with certain specialized algorithms. Network analysis is also possible with KNIME. It can be used for many social network analysis (SNA) tasks. Due to the fact that KNIME is a modular open source software, it is very convenient for analysts to use it. The workflows can be designed, modified and shared easily. A large amount of information is available from KIME Forum. Users and companies may develop nodes for certain data analysis problems. Some companies have contributed with specialized nodes that made KNIME a very strong data processor for bioinformatics and chemistry. Users may connect several nodes to each other and create loops so that a workflow can easily be edited for different tasks. A group of nodes may also be created and saved as meta-nodes, which can be used later in different tasks.

We developed a KNIME workflow for analysing Turkish governmental programs. The workflow is composed of several meta-nodes and nodes that are connected sequentially. It has three parts: the first part is for text preparation and pre-processing. This part also includes a Turkish stemmer based on a dictionary replacement node. The second part is for content analysis and the third part is for network analysis of the concepts used in the texts. Many of the procedures that are used in our workflow are brilliantly explained in detail in Bakos (2013) and Tursi and Silipo (2018).

3. Findings

The results of a general quantitative content analysis of all Turkish Government program texts are shown in Table 1. The table displays the frequency distribution of top 10 mostly used terms in 60 programs between 1923 and 2014. All frequencies are absolute term frequencies.
Table 1: Frequency Distribution of Top 10 Terms

Table 2 shows the frequency distribution of communication and media related terms used in the programs. The terms in the list are actually a combination of several terms to encompass the variations through Turkish history. For instance, the term “press” is searched for “basın” + “matbuat” + “gazete” and their other grammatical forms. As it can be seen from the table, conventional communication and media terms are mostly used in the corpus. However, new communication and media technology terms are also used in recent years. This tendency can be traced from Figure 1. As shown in the figure, conventional media terms such as press and radio were used since 1946 while television is used since 1965. Although originally a conventional media term, cinema has recently become in the focus of governmental programs probably due to its successful industrialization process. On the other hand, new terms such as satellite and internet were used in last decades. Likewise, the term media, which become fashionable in Turkish politics since 2000’s, was also used in the last five government’s programs.

Table 2: Frequency Distribution of Communication and Media Related Terms
Figure 1: Distribution of Selected Communication and Media Terms by Years

Research Question 1 can be answered with the examination of Figure 2, which plots the distribution of all concatenated communication and media related terms. As can be seen from the figure, the corpus increasingly incorporates communication and media related terms, meaning that starting from 1937, all governments included various types of communication and media policies. The linear slope (red dotted) indicates that the trend is steadily increasing in compliance with the literature of development and communication relationship paradigm ($y = 0.3087x + 2.5405; R^2 = 0.2443$).

Figure 2: Distribution of Communication and Media Related Terms by Years

In terms of the second research question, we could not find any evidence that the discursive importance of communication and media policies in programs differ in accordance with the political tendencies of the governments. The divide was on the old and the new, rather than right and left. As can be seen from the network analysis illustrations of Figure 3 and Figure 4, newness of the government determines the type of communication and media policies it refers, not the political tendency.
Similarly, there is no evidence that policies on communication and media freedoms differ according to the political tendency of the governments. As can be seen from the network analysis illustration of Figure 5, classical concepts such as Press Freedom and Freedom of Thought are
mostly referred by the old governments, while the new governments mostly refer to the recently fashionable concept of Information and Communication Right. Table 3 shows this division in more detail.

Figure 5: Governments Referring to Press Freedom, Freedom of Thought and Information and Communication Right

<table>
<thead>
<tr>
<th>Year</th>
<th>Press Freedom</th>
<th>Freedom of Thought</th>
<th>Information and Communication Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>1949</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1951</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>1954</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1960</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1962</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1963</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1965</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1974</td>
<td>3</td>
<td>0</td>
<td>0</td>
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<tr>
<td>1977</td>
<td>1</td>
<td>0</td>
<td>0</td>
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<tr>
<td>1978</td>
<td>2</td>
<td>0</td>
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<tr>
<td>1979</td>
<td>2</td>
<td>0</td>
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<td>1991</td>
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<td>1993</td>
<td>2</td>
<td>0</td>
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<tr>
<td>1995</td>
<td>2</td>
<td>1</td>
<td>0</td>
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</table>
Table 3: Frequency Distribution of Press Freedom, Freedom of Thought and Information and Communication Right Concepts

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<td></td>
<td>1</td>
<td>2</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

4. Discussion and Conclusion

This paper offers a textual and historical analysis of Turkish governmental programs in terms of their communication and media policies between 1923 and 2014. We obtained a corpus of 60 governmental programs in PDF, comprising of 892 pages, 21,245 sentences and 89,991 words. This adequately large corpus of governmental programs is used as data for analyzing communication and media policies between 1923 and 2014 in Turkey. Our research showed that starting from 1937, the governmental programs increasingly incorporated communication and media related terms. All governments included various types of communication and media policies and the trend was steadily increasing year by year, in compliance with the literature of development and communication relationship paradigm. However, we could not find any evidence that the discursive importance of communication and media policies in programs differ in accordance with the political tendencies of the governments. The divide was on the old and the new, rather than right and left. Similarly, in the governmental programs there is no evidence that policies on communication and media freedoms differ according to the political tendency of the governments. Further research is obviously needed to analyze the same corpus in terms of discourses. This can be achieved quite easily by utilizing qualitative analysis software. Additionally, n-gram analysis and concordance analysis could also be helpful for analyzing the concepts used in the corpus semantically. Enhancing the corpus with the addition of parliamentary discussions and development plans is also another possibility for improving this research. Comparison to other topics such as education, health policies etc. and inclusion of other nations’ governmental programs may also improve the explanatory potential of our research. However, all these ideas require new research agendas.

List of References


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