



Analyzing the United Nations Speeches with a Neutrosophic Approach to Text Mining in The Context of Türkiye's Foreign Policy

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Abstract

Document clustering is an integral and important part of text mining. In case of classical clustering, data item belongs to only one cluster, whereas in Plithogenic approach to fuzzy clustering, data point may fall into more than one cluster. Thus, Plithogenic approach fuzzy clustering leads to wherein each data point is associated with more than one membership function that expresses the degree to which individual data points belong to the cluster. Additionally, his speeches at the UN will be analyzed with a neutrosophic approach. With the help of this approaches, in this study, speeches of the UN sessions attended by Turkish diplomats in the United Nations (UN) will be analyzed to understand the priorities of the country in international politics, the change and continuity in these policies. The texts of the UN sessions attended by Turkish diplomats between 2015 and 2023 were taken as data set. Such a large volume of data was analyzed with the help of text mining. For this purpose, each year's data was analyzed separately using word frequencies and clustering analysis, and then topic modeling was performed for each year's data using the Latent Dirichlet Allocation (LDA) method.

Keywords: Neutrosophic sets; Plithogenic sets; Plithogenic approach; Neutrosophic Approach; Turkish Foreign Policy; Text Mining; LDA.

1. Introduction

States use international organizations from daily practices in their foreign relations to legitimize their foreign policy approaches, including international conflicts. These organizations, which started to function as institutional and specialized institutions in the 20th century, instead of conference series that lasted for months, are being accepted as the important actors of international relations. These organizations, which serve the formation of international norms as well as the achievement of states' own interests, have developed their functions over time. States have gained an important platform in achieving their foreign policy goals by using these diversified functions of international organizations. While the countries that have a claim in world affairs try to gain effectiveness in these organizations, many other countries have the opportunity to express themselves with these platforms. The United Nations (UN), which is the international organization with the highest number of member countries, comes forward in this context. The UN, of which Türkiye has been a member since its establishment, has been a platform for her to increase its international influence. Although Türkiye's activity in the UN is important to achieve its foreign policy goals, studies focused in this field are limited. Considering the contribution, that the activities of the actors acting on behalf of Türkiye on this platform can make, to achieve its foreign policy goals the importance of studies in this field increases. In this context, besides qualitative approaches to the country's statements in the UN, quantitative studies can provide a clearer view in determining Türkiye's foreign policy tendencies.

The increasing number of data sources and types has made it necessary to use new data analysis methods. As a result of the fact that texts are now seen and handled as important data, the analysis of data texts today has provided the opportunity to obtain a lot of new information that has not been discovered so far. That is why the proposed

framework is based on the plithogenic set. plithogenic approach fuzzy clustering leads to wherein each data point is associated with more than one membership function that expresses the degree to which individual data points belong to the cluster. This is why text mining methods are frequently used today. Considering the volume and number of speeches made at the United Nations, it is seen that there is a necessity to utilize these new methods. In this study, we started from this necessity and analyzed all the speeches of the UN meetings in which Turkish officials took the floor by using text mining methods.

2. Literature

There is a growing interest to use text as data in political research. Scholars who adopt the approaches which is automated content analysis methods in their works generally use written and spoken worlds as data. Written and spoken worlds show the conflict and collaboration between factions and favourites in political life. The unique side of written and spoken worlds provides a data to understand politics. [1] (p. 268), introduce this new approach “text as data”. Text as data approach includes the using of text which acquires political speeches in various forms such as undigitized and electronic text also existing corpora via automated content analysis methods. These methods enable to work with large- scale text collection for researchers in various disciplines. For instance, [2] use large scale parliamentary corpora from Britain, Canada, and United States. By using word embedding model, the writers analyse ideological placement in the parliament through capturing latent concepts. In a similar line, [3] analysed emotions in parliament’s corpora via using natural language processing and digitized text. To measure emotional language is also concerned by [4]. The writers that mentioned above address the relationship between emotion and political attitudes by taking into the consideration large-scale parliaments corpora. In addition to large scale parliament’s corpora, text as data approaches also used in party politics. [5] investigates relationship between party and interest group via party and interest group corpora. Media studies also interest the text as data approach extensively. Using of language, framing and representation of image is analysed by automated content analysis methods in the discipline. For instances, media studies use these approaches to understand general attitudes to subject such as refugee crisis [6] or political protests [7]. Using of language is also problematized in political science research. As language shows that the attitude of actors, emotion and political placement, scholars extensively use the language to understand political events [8].

Extended literature on quantitative analysis of large-scale corpus is also taken into the consideration by IR scholars. Using the speeches UN General Debate, scholars try to analysis governments’ perspectives and preferences. This studies also include estimation on countries’ position on different political situation [9]. This text as data approaches also embraces the complexity of politics. [10] emphasizes the complexity by using corpora in the UK House of Commons between 1975 and 2014. The writers have used dynamic topic modelling and topological data analysis to find out complex dynamics of political life. Topic modelling has also been used to measure of foreign policy analysis as we do in the context of Turkish diplomats’ speeches in UN General Debate. In a similar line as we do, [11] use neural word embedding (Word2vec) model for this aim. Another text as data approaches sample in IR studies focus on the Afghanistan’s political situation. The writers use the United Nation Security Council speeches on Afghanistan between 2001 and 2017 through unsupervised topic modelling [12]. To, increase the preciseness, [13] introduced plithogenic. Plithogenic is a powerful tool which is generic of crisp set, fuzzy set, intuitionistic fuzzy set and neutrosophic set is collectively called as Plithogenic. Plithogenic is the base for all the plithogenic functions (plithogenic set, plithogenic probability, plithogenic statistics and plithogenic logic). These sets are characterized by a single appurtenance is plithogenic set. As in many evaluations and decision-making problems, there is a defect of uncertain, vague, and incomplete information that may lead to a non-optimal decision. Thus, integrating the plithogenic set with neutrosophic set’s triple components (truth-membership, falsity-membership, and indeterminacy-membership) should provide more accurate assessment results. Plithogenic set increases the accuracy and efficiency of decision-making. Plithogeny, introduced by Florentin Smarandache in 2017, is a generalization of neutrosophy. The plithogenic set is a set of elements, such that each element x is characterized by attribute values v that have a corresponding contradiction degree $c(v, D)$ between them and a dominant attribute value D , and by an appurtenance degree $d(x, v)$ of element x to the plithogenic set [20, 21]. To handle uncertain and qualitative information, different methods they worked in [22-26]. Fuzzy sets [27], intuitionistic fuzzy sets [28], and their generalizations are normally used to handle the incomplete and imprecise information. However they are not considered to be suitable to deal with indeterminate and inconsistent information which frequently exists in reality. To overcome the issues, Smarandache [29] introduced a powerful formal general framework as a new branch of mathematics called as neutrosophy which deals with “the origin, nature and scope of neutralities, as well as their interactions with different ideational spectra”. The idea of neutrosophy has a core concept which states that along with the certain degree of truth, every concept has a degree of falsity and indeterminacy.

3. Methodology

The main aim of the study is to analyse the speeches of Turkish diplomats. However, it is very difficult to extract only the speeches of Turkish diplomats from a very large text. For this reason, firstly, the speeches of Turkish

diplomats were compared with all speech texts in which Turkish diplomats gave speeches. For this purpose, the speeches of Turkish diplomats for the year 2022, which contains relatively less data, were obtained by filtering from all the speeches in the meetings where Turkish diplomats spoke. The two data sets were then analysed using both word frequencies and topic modelling techniques and the results were compared with the help of graphs. The relevant comparison can be seen in Figure 1 (since the speeches of Turkish diplomats in 2022 were fewer in number, they were taken as bigrams). Accordingly, we see that there is no need to take only the speeches of Turkish diplomats, and that all the speeches in the meetings where Turkish diplomats gave speeches clearly overlap with the speeches of Turkish officials. From this point of view, we can say that the results obtained in this study are representative in terms of the speeches of Turkish diplomats and thus in terms of Türkiye's policy.

In this study, the texts were subjected to 3 different analyses and tried to be understood and explained from 3 different perspectives. The first one is to find word frequencies. By finding the most used words in the meetings on the basis of each year, it was seen which words were mentioned in which year and thus what the focus of the speeches was. Secondly, it was tried to discover in which years the speeches were closer to each other by including all the words, regardless of whether they were the least or the most used words. This was done with the fuzzy clustering method, which is not frequently seen in the literature. Thirdly, topic modelling technique was applied on a yearly basis to see how the spoken topics changed in which years. In summary, firstly, the focal points of the conversations with frequencies, secondly, the similarities of the words on the basis of years, and thirdly, their contents are explained by considering their meanings.

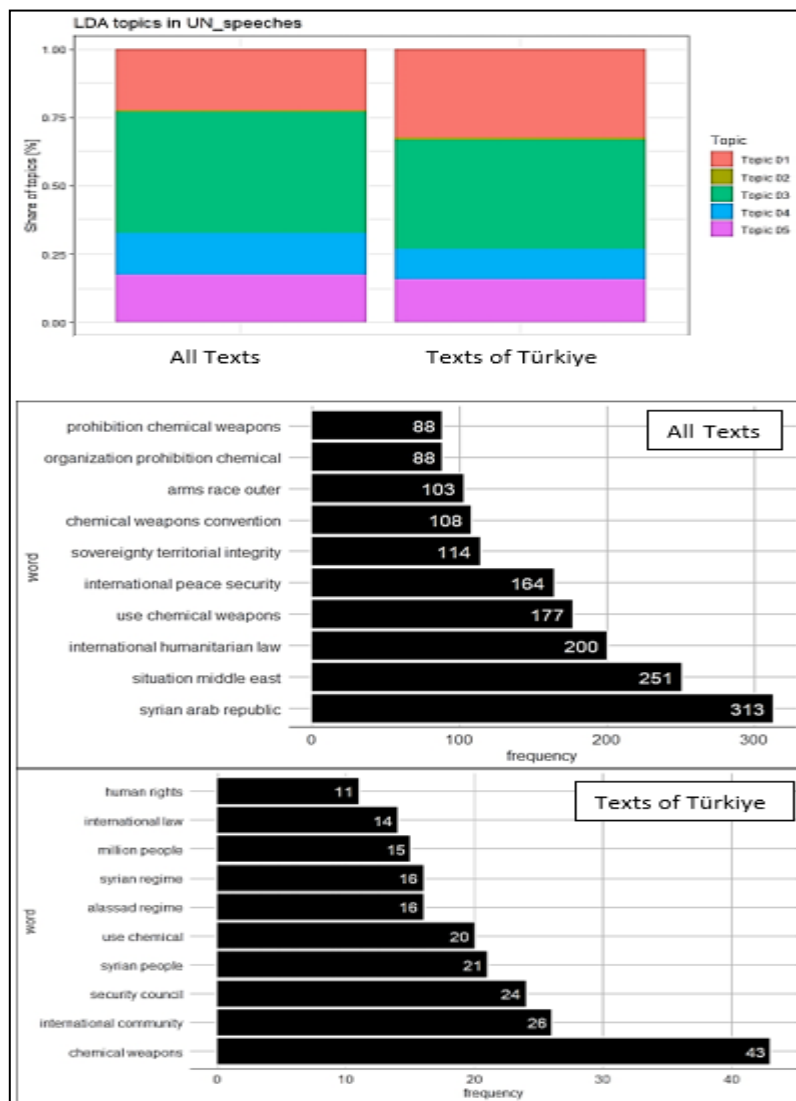


Figure 1: Comparison of the speeches of Turkish diplomats and speeches in the meetings where Turkish diplomats spoke

3.1 Data

In the study, the texts of all speeches in the recordings of Turkish diplomats' speeches at the United Nations between 2015 and 2022 were taken as data. Accordingly, a total of 542 transcripts were obtained, including 90 transcripts in 2015, 90 transcripts in 2016, 71 transcripts in 2017, 71 transcripts in 2018, 76 transcripts in 2019, 55 transcripts in 2020, 65 transcripts in 2021 and 24 transcripts in 2022. Considering that the text of each transcripts is 20 pages on average, it can be said that a total of over 10000 pages of data was included in the analysis. The data was downloaded from the UN Digital Library using the necessary filters.

3.2 Text Mining

With today's technology, text mining is one of the most effective and efficient ways to analyse texts. The technique of extracting previously undiscovered, possibly helpful, structured, and organised material from unstructured, disorganised electronic text stacks is known as text mining. Relationships or structures that are not readily apparent in the analysed text sources are attempted to be discovered using the information gathered.

Textual analysis begins with the compilation of texts and then pre-processing of these texts. For this purpose, firstly, the data obtained were classified on the basis of years and converted into txt format in order to perform a more consistent analysis. Then, the text pre-processing stage was started. At this stage, firstly, the texts on a year basis were brought together and a corpus was created. On this corpus, unnecessary gaps were first eliminated. Then, punctuation marks were removed from the text. Dates, years, monetary amounts and rates are included in the corpus with many expressions. However, since it is not known exactly what each of these numbers corresponds to, the numbers were also removed from the corpus. In order to ensure standardisation, all words were converted to lower case. Finally, prepositions, conjunctions, interjections and similar words that actually have a function but have no meaning on their own, i.e. stopwords, were removed. In addition, words that actually made sense but were not included in the analysis were also removed from the corpus. For example, in this study, words such as "copy", "record", "give", "spoke", which frequently appear in the texts, were removed from the texts in order to prevent them from overshadowing other words.

The word stemming stage, which is one of the data preparation phases, was not used for the study's purposes. When looking at English root words, [14] notes that the word stemming step may increase the likelihood of meaning being lost or lead to the encounter of non-English terms. The text is transformed into the Document Term Matrix or its transpose, the Term Document matrix, depending on the structure of the analysis that will be utilised once it has been cleaned up and made useable by the data pre-processing phases. Each row in the document term matrix represents an article, each column a word, and each value in the matrix reflects the frequency with which the term appears in the article. The opposing representation is used in the termdocument matrix. The value "zero" predominates in document word crossings in most cases because these matrices are sparse. They are frequently employed in a regularised form because of this. Depending on the text mining approach to be used, using n-grams can be quite helpful in various situations. The expression's n-value reveals how many words it contains. A "unigram" is a set of words that are considered as singular when $n=1$. The term "bigram" refers to the binary word pair treatment of the words when $n = 2$. It is obvious that when $n=3$ it is expressed as a trigram. The ratio of bigrams to unigrams in a corpus is, as is obvious, lower for bigrams. This is due to the fact that the frequency of odd words in a corpus is larger than the frequency of consecutive pairs. Bigrams or trigrams are therefore more practical in huge text collections. Unigrams obviously do not give as much significance as bigrams do. One may discern how a word adds to the meaning of the text by observing the word pairings in which it frequently appears in a corpus. Since the data size used in the study is large, $n=3$ was taken, and trigrams were used in this study and frequency graphs were presented as trigrams.

3.3 A Plithogenic Approach to Fuzzy Clustering

Data with comparable properties are grouped together in a data set using cluster analysis. To put it more precisely, it is a classification method that divides data that may be categorised by a number of numerical measurements into groups that share similarities but differ from one another [15]. It is one of the unsupervised learning techniques used in machine learning. Cluster analysis does not need predefined training sets, in contrast to classification approaches [16] (p. 445). By computing the distances between the data, it performs the clustering process.

The fuzzy clustering analysis algorithm, which uses the method developed by [17] to determine which years of speech are close to each other based on the words used, was found appropriate for the study. Because this algorithm has features such as accepting dissimilarity matrix and being more robust to clustering global objects than other fuzzy clustering methods [18]. By using fuzzy clustering analysis, both the position of each year's speech within its own cluster and its closeness with other (year) clusters can be seen. In this way, it is possible to see the relationships between the speeches more clearly on the basis of years. This makes it possible to interpret the results in a more meaningful way.

The research was carried out in a R environment. The R program's "cluster" package, one of its packages, was chosen since it is better suited for the study's data set. The choice of this package was also significantly influenced by the inclusion of a large number of detailed arguments and the ability to apply Square Euclidean distance in

fuzzy clustering analysis. Data was taken from the corpus that was collected for each year after it had undergone text pre-processing and been cleaned. The analysis is repeated with different degrees of fuzziness. Therefore, the "membership exponent" in the algorithm, which indicates the fuzziness, is run (repeatedly) with values of 2 and 3.

The algorithm is run separately with different cluster numbers (k=2 and 3) for the data sets and the average silhouette statistic (ASC), Dunn partition coefficient ($F(U)$), the normalized Dunn Coefficient ($F_k(U)$) are obtained for each number of clusters. Then, these values are tabulated and compared to determine the appropriate number of clusters for each year (Table 1). As a result of fuzzy clustering analysis, the number of suitable clusters is found as two clusters.

Table 1: Numbers of Clusters

Cluster Number	Membership Exponent	Average Silhouette Statistic	Dunn Coefficient	Normalized Dunn
2	2	0.785	0.859	0.719
2	3	0.785	0.659	0.318
3	2	0.447	0.645	0.468
3	3	0.447	0.442	0.164

3.4 Neutrosophic Approach

Smarandache defined neutrosophic logic and neutrosophic set [29] in 1998. In neutrosophic logic and neutrosophic sets, there are μ degree of membership, ν degree of indeterminacy and ω degree of non-membership. These degrees are defined independently of each other. It has a neutrosophic value (μ, ν, ω) form. In other words, a condition is handled according to both its accuracy and its inaccuracy and its uncertainty. Therefore, neutrosophic logic and neutrosophic set help us to explain many uncertainties in our lives. In this section, a method of construction of neutrosophic set from fuzzy set given by Bakbak and Ulucay [30] is presented. In this method we represent the truth-membership, indeterminacy-membership and falsity-membership degrees of each element.

Definition 1. [29] Let T be a universe of discourse, with a generic element in T denoted by t , then a neutrosophic (NS) set A is an object having the form

$$A = \left\{ \left\langle t, (\mu_A(t), \nu_A(t), \omega_A(t)) \right\rangle, t \in T \right\}$$

where the functions $\mu_A(t), \nu_A(t), \omega_A(t) : T \rightarrow [0, 1]$ define respectively the degree of membership (or Truth), the degree of indeterminacy, and the degree of non-membership (or Falsity) of the element $t \in T$ to the set A with the condition.

$$0 \leq \mu_A(t) + \nu_A(t) + \omega_A(t) \leq 3.$$

Definition 2 [30] Let $A_F \in FS(T)$ where $FS(T)$ denotes the set of all fuzzy sets in the universal set T and let $\sigma, \gamma : T \rightarrow [0, 1]$ be three mappings. Then

$$N = \left\{ \left\langle t_i, f(\mu_{A_F}(t_i), \sigma(t_i), \gamma(t_i)) \right\rangle : t_i \in T \right\}$$

is a neutrosophic set corresponding fuzzy set A_F , where the mapping

$$f : [0, 1]^2 \times [0, 1] \rightarrow L^*$$

given by $f(x, y, \gamma) = (f_\mu(x, y, \gamma), f_\nu(x, y, \gamma), f_\omega(x, y, \gamma))$, where

Table2: Neutrosophic approach

Turkish diplomats speeches	Fuzzy Value	Neutrosophic Value	Score (Topic)
Topic 1	0,11	(0.98,0.79,0.90)	0.43
Topic 2	0.14	(0.12,0.74,0.88)	0.167
Topic 3	0.15	(0.13,0.72,0.87)	0.18
Topic 4	0.16	(0.13,0.70,0.87)	0.18
Topic 5	0.16	(0.13,0.70,0.87)	0.187
Topic 6	0.20	(0.16,0.64,0.84)	0.226
Topic 7	0.21	(0.17,0.62,0.83)	0.240
Topic 8	0.24	(0.18,0.57,0.81)	0.266
Topic 9	0.26	(0.21,0.64,0.84)	0.243
Topic 10	0.43	(0.18,0.57,0.81)	0.267

$$f_{\mu}(x, y, \gamma) = x(1 - \gamma y),$$

$$f_{\nu}(x, y, \gamma) = 1 - x(1 - \gamma y) - \gamma y$$

$$f_w(x, y, \gamma) = 1 - f_{\mu}(x, y, \gamma),$$

$$L^* = \{(x, y) : x, y \in [0, 1] \times [0, 1] \text{ and } x + y \leq 1\}.$$

(The smallest element of L^* is $0_{L^*} = (0, 0, 1)$ and the greatest one is $1_{L^*} = (1, 0, 0)$.) satisfies that

i. If $y_1 \leq y_2$ then $\sigma(f_{\mu}(x, y_1, \gamma)) \leq \sigma(f_{\mu}(x, y_2, \gamma))$ for all $x, \gamma \in [0, 1]$

ii. $f_{\mu}(x, y, \gamma) \leq x \leq 1 - f_{\mu}(x, y, \gamma)$ for all $x \in [0, 1]$

iii. $f(x, 0, \gamma) = (x, 1 - x)$

iv. $f(0, y, \gamma) = (0, 1 - \gamma y)$

v. $f(x, y, 0) = (x, 1 - x)$

vi. $\sigma(f(x, y, \gamma)) = \gamma y$

Definition 3 [31] Let $A = (\mu, \nu, \omega)$ be a single valued neutrosophic number. Then the score function $s(A)$, Accuracy function $a(A)$ and certainty function $c(A)$ of an SVNN are defined as follows:

i. $s(A) = \left(\frac{\mu + 1 - \nu + 1 - \omega}{3}\right)$

ii. $a(A) = \mu - \omega$

iii. $c(A) = \mu$

Neutrosophic values are calculated with the formulas in Definition 2 and are given in Table 2.

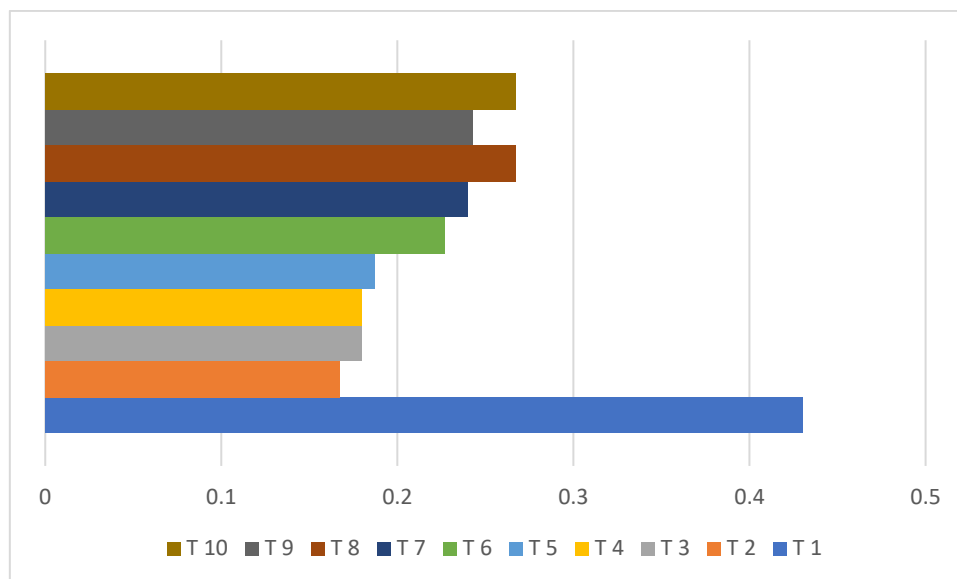


Figure 2: Neutrosophic approach of Turkish diplomats' speeches

3.5 Topic Modelling

Finding "topics" in a text document is done using topic modelling, a technique for organising, comprehending, and summarising massive volumes of text data. It uses unsupervised machine learning to automatically classify related terms into vocabularies that best describe the document collection.

Words that commonly appear together and typically have a shared theme compose topics. Therefore, the sentences that best represent the entire document may be made from these specified subjects with predefined sets of terms. The Working Principle is essentially as follows: To create abstract subjects, statements that may be close to one another are grouped in semantic space. Then, these documents are clustered based on the groups established and the words they include.

There are various topic modelling techniques. The Latent Dirichlet Allocation (LDA) approach created by [19] is the one that is most frequently employed. According to this approach, each document is thought of as a collection of topics, and each word in the text is associated with a particular topic. As a result, given a text, LDA groups every topic group into topic groups with a set of words that best describe that group in light of the text.

In this study, `quanteda`, `topicmodels` and `ldatuning` packages from R packages were used for topic modelling. Text data were handled separately for each year and cleaned corpora were created by passing through text preprocessing stages. The number of topics was determined as 10.

4. Results

The frequency of the words in the texts of all speeches at the meetings where Turkish diplomats made speeches at the United Nations was examined on a yearly basis and presented in Figure 2 and Figure 3. When these figures are analysed, it is seen that some words are always used frequently, while the frequency of use of some words decreases and increases on a yearly basis. Between 2015 and 2019, the most frequently used phrase was "international peace security", while the most frequently used phrase in 2020, 2021 and 2022 was "syrian arab republic". "situation middle east" "international humanitarian law" are among the most frequently used words almost every year. While the phrases "sustainable development goals", "maintenance international peace" and "children armed conflict" are frequently used from 2015 to 2019, they are not among the 10 most frequently used phrases from 2020 onwards.

Word groups such as "women peace security", "sexual violence conflict" were among the most frequently used words from 2016-2017 until 2019. Looking at the most frequently used words, it is seen that there is a serious difference in 2020, and it is generally seen that country names are frequently repeated. It is noteworthy that it is especially on the axis of North Korea, USA, UAE and UK. In 2021, words related to coronavirus were used quite frequently. This can be seen as an indicator that the results are consistent over the years. Another frequently used word group that attracts attention in the last two years is those related to chemical weapons. When we evaluate all

the results together, it shows that the main focus of the speeches in the meetings where Turkish diplomats took the floor has changed in the last 2-3 years.

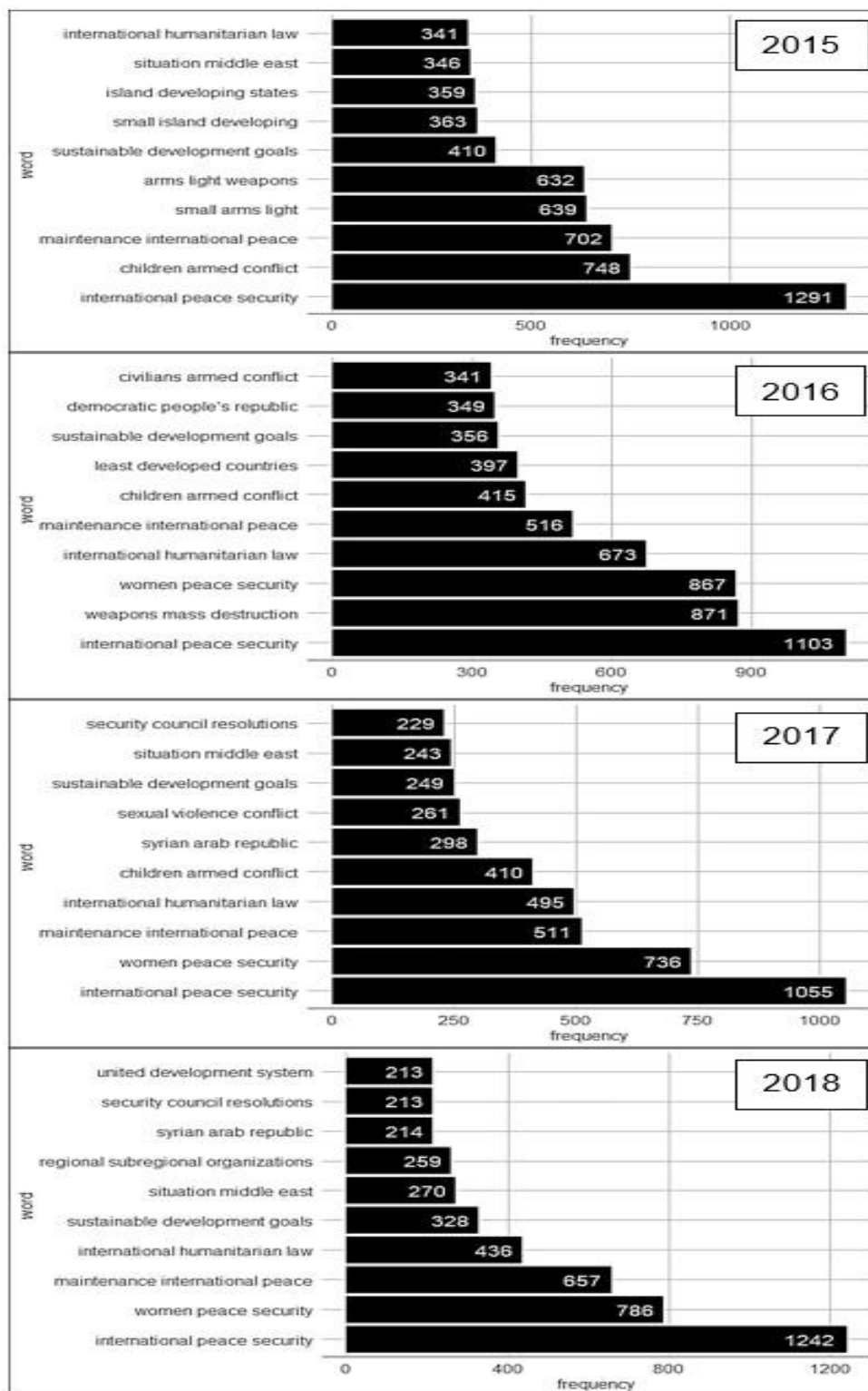


Figure 3: Word frequency of the speeches between 2015 and 2018

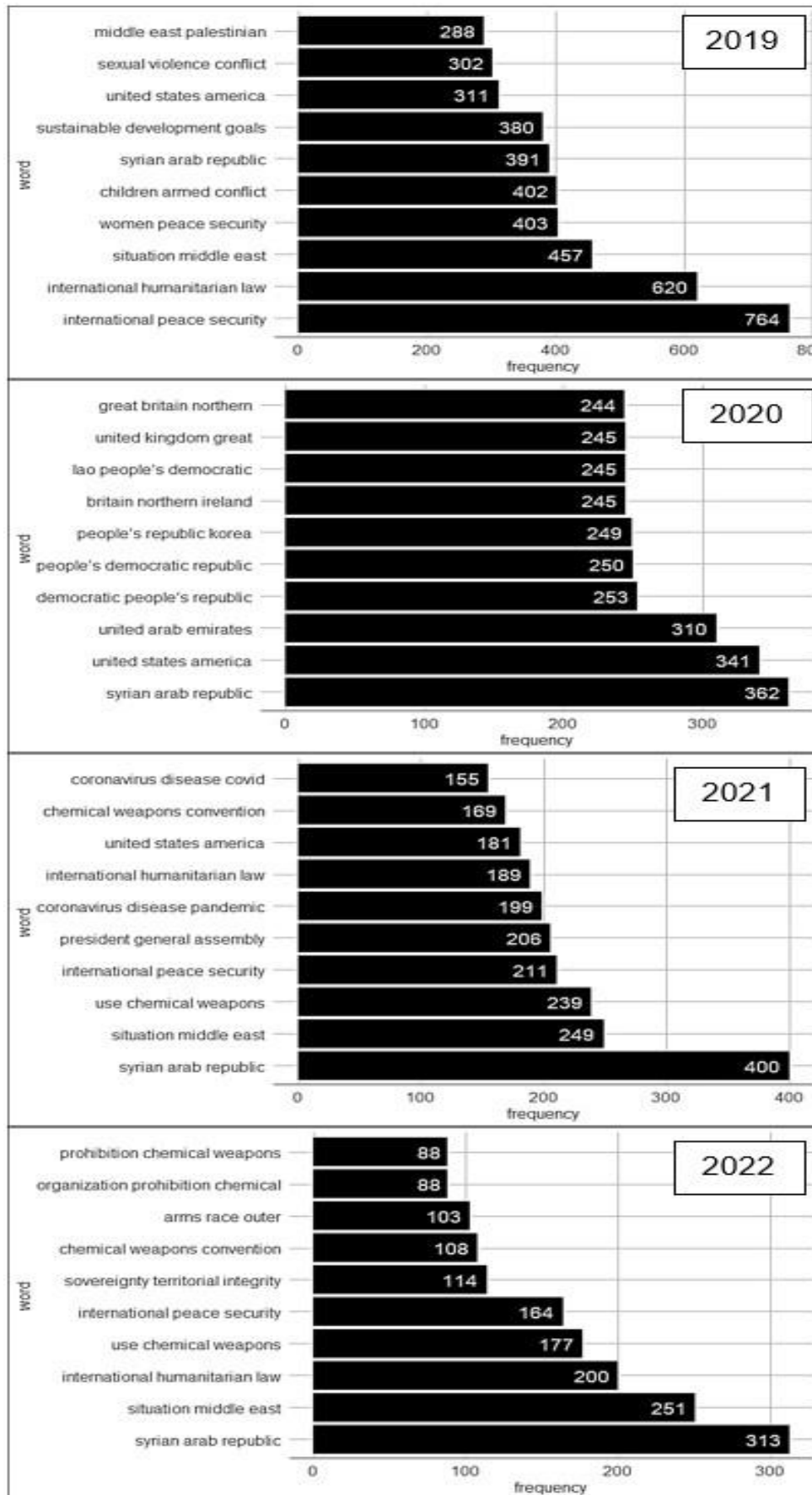


Figure 4: Word frequency of the speeches between 2019 and 2022

The results of the similarity of the speeches in terms of years using the approach neutrosophic are presented in Figure 2. The results of the similarity of the speeches in terms of years using the approach plithogenic to fuzzy clustering method are presented in Figure 4. As can be seen in Figure 4, the speeches are basically separated into 2 clusters on the basis of years. The first cluster consists of only 2015 and 2016. It is understood that the speeches in these years are generally similar to each other in structure and content, but quite different from the speeches in other years. This shows that there was a break in 2016 in terms of the diversity of the speeches. On the other hand, although it is seen that all speeches from 2017 to 2022 are included in a cluster, it is noteworthy that the size of the cluster is quite large. When this cluster is evaluated within itself, it is seen that the speeches in 2017, 2018 and 2019 are more similar to each other but more different than those in other years. A similar situation is also valid for the years 2020, 2021 and 2022. In terms of these results, it can be said that the findings are generally consistent with the word frequency graphs.

As a third dimension of the study, the topic distribution of the speeches of Turkish diplomats between 2015 and

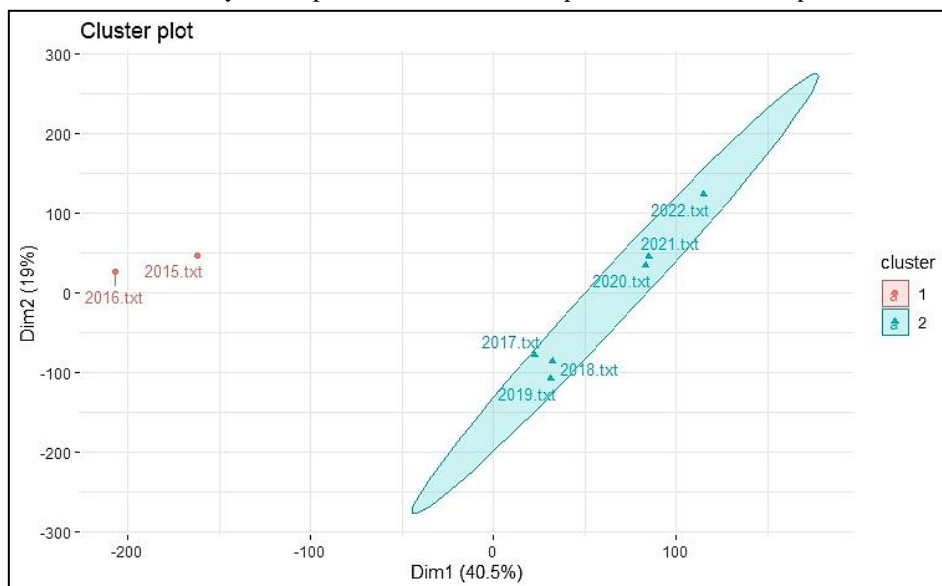


Figure 5: Results of Plithogenic Approach to Fuzzy Clustering

2022 was analyzed with the help of the topic modeling method. The keywords related to each topic obtained as a result of the analysis are presented in Table 2. The results of the topic modeling analysis, which examines the change in the topics of the speeches on a yearly basis, are comparatively shown in Figure 5. The results should be explained by analyzing Table 2 and Figure 5 together.

Table 3: Contents of Topics

Topic 1	Topic 2	Topic 3	Topic 4	Topic 5	Topic 6	Topic 7	Topic 8	Topic 9	Topic 10
Afghanistan	children	development	women	humanitarian	security	weapons	assembly	draft	development
peace	human	sustainable	violence	people	nations	nuclear	council	resolution	countries
security	rights	countries	sexual	peace	united	disarmament	united	republic	humanitarian
government	terrorism	world	security	Syria	conflict	chemical	nations	law	health
support	trafficking	global	gender	security	peacekeeping	use	general	committee	pandemic

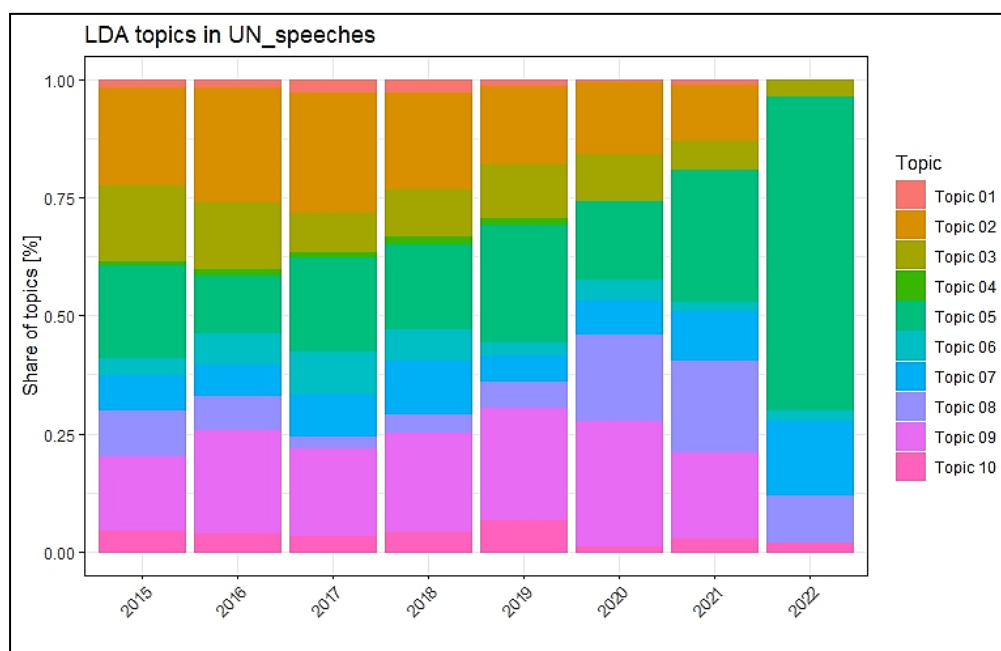


Figure 6: Distribution of Topics According to Years

It is seen that Topic 1 is generally related to Afghanistan and occupies very little space proportionally, even almost never mentioned as a topic since 2020. In other words, the issue of Afghanistan is in Turkiye's focus to a very small extent. It is seen that Topic 2 consists of terrorism, human rights and children's issues and is proportionally significant for all years. However, it is seen that it is almost never mentioned in 2022. According to the words in Topic 3, it is seen that this topic is related to sustainable development issues, and it is almost equally present in all years except 2022. Topic 4 includes topics such as women's rights and sexual violence and is one of the least mentioned topics in the meetings in which Turkiye participated on a yearly basis. It is seen that Topic 5 consists of speeches on the Syria axis and is the most agenda-forming topic for all years. It would not be wrong to say that it was the main agenda of 2022. In Topic 6, it can be said that the words UN, peacekeeping, security are at the forefront, emphasizing the peacekeeping aspect of the UN, and that these topics have found a place in equal proportions on the basis of each year. It is easily understood from the words that Topic 7 is about the use of nuclear and chemical weapons. Although the rate of this topic is generally equal over the years, it has shown a significant increase especially in the last 2 years. It can be said that Topic 8 consists of general topics of conversation and represents topics other than these topics. It can be said that Topic 9 is the topic focusing on law and solutions and has found a significant place for itself except for the year 2022. Finally, Topic 10 is a topic related to health and aid and has very little coverage.

5. Conclusions

If we evaluate all the issues together; it is concluded that the main agenda of Turkiye is the Syria issue and this has increased in recent years, and the issues such as law, human rights and terrorism have been seriously addressed except for the year 2022. The political, security related, economic and social effects of Syrian conflict to Turkiye as a neighboring country brought the issue more often to the agenda on different platforms. It is understood that Turkiye's engagements on Syria have a decisive effect on other bilateral and multilateral relations as well. Beyond the regional effects of the migration waves that emerged with the war, the international impact of the conflict has led to more discussions on the humanitarian side of this issue. Another issue that can be considered as continuity in Turkiye's stance in the period analyzed is that humanitarian issues such as development, prevention of violence, promotion of peace, respect for human rights, humanitarian and emergency aid are the leading agenda topics. This is an indication of Turkiye's desire to highlight the humanitarian diplomacy discourse that the country has been carrying out for many years in international organizations. Emphasizing the UN as a solution center to the conflicts and problems faced by humanity and the demand for the restructuring of the organization is a continuous foreign policy approach of Turkiye.

When we consider the results of word frequencies, an approach plithogenic to fuzzy clustering and topic modeling results together, it is seen that there has been a serious change in the speeches of the UN which Turkish diplomats participated, especially in recent years, focusing on more regional hard political issues rather than global problems

such as environment and gender issues. Also, which topic in the United Nations speeches in recent years has more impact on real life has been examined with a neutrosophic approach. In the sessions where Turkey expressed its views, a security discourse such as armament, fight against terrorism, violence and conflict comes to the fore more. It is seen that the hot conflicts in Syria, Iraq, Palestine, Libya, Azerbaijan, Ukraine and Russia, which are geographically close to Turkey, are more on the agenda. These conflicts, which took place in the immediate neighbor region of Turkiye in the period under evolution, also became the leading agenda topic of the international arena. Especially massive increase in refugee influx to the Western countries became hot topics of international organizations. It is understood that Turkiye put forward both hard power and soft power instruments to ensure peace and stability in the region.

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