Shifting Policies in Conflict Arenas: A Cosine Similarity and Text Mining Analysis of Turkey’s Syria Policy, 2012-2016

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Shifting Policies in Conflict Arenas: A Cosine Similarity and Text Mining Analysis of Turkey’s Syria Policy, 2012-2016

Abstract
Turkish policy towards the Syrian civil war, as operationalized in relation to the implementation of no-fly zones, safe zones or buffer zones, has been the subject of much debate among scholars. As the number of foreign states acting in Syria has steadily increased since the onset of the crisis, Turkish policies have similarly shifted. In order to make sense of Turkey’s actions and reactions in the first five years of the Syrian civil war, this article attempts to draw lessons from quantitative methods and methodologies such as text mining, cosine similarity and cosine normalization of content from the Anadolu Agency (AA), a Turkish state-owned press. These methodologies are utilized in support of content analysis and qualitative analysis that hindsight allows. In doing so, we are able to show that these seemingly inexplicable shifts may adhere to a logic and, in some cases, could have been anticipated. Utilizing such methodologies therefore offers a potentially significant contribution to the literature by defining politically feasible outcomes related to foreign or domestic policies.

Acknowledgements
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Introduction: Setting the Stage

Syria’s civil war has produced a myriad of national security challenges for Turkey. Ankara’s response has oscillated between trying to insulate itself from the effects of conflict to policies seeking to shape the situation in its southern neighbor. During the period of this research, from 2012 to 2016, Turkey’s policies and actions towards Syria appeared contradictory. Many observers had a hard time explicating what was at play. This was certainly the case with Turkish initiatives to establish either buffer zones, safe zones, or no-fly zones—or all three at the same time—in Syria. This research is an attempt to shed light on the best accounts for Ankara’s changeable policy toward various foreign policy options, such as buffer zones and no-fly zones by using methodologies such as text mining and related cosine similarity measures of reporting by the Anadolu Agency (AA), a Turkish state-owned press. In doing so, we are able to show a basic structure of the international relations of Turkey in relation to Syria through the quantitative analysis of related texts. Applying these methodologies in concert with content analysis and qualitative analysis can potentially shed further light on what appear, at first glance, to be Turkey’s seemingly inexplicable policy shifts.

As the Arab Spring gained strength in 2011, protests engulfed Syria and threatened the Ba’athist regime of President Bashar al-Assad. Assad and loyalist forces turned to bombardment and violence in order to cling to power, losing legitimacy with many inside and outside the country. At this early stage, Turkey’s role was arguably constructive and focused. Over a decade of engagement with and investment in Syria, Turkey tried to use its influence by brokering a resolution leaving Assad in power. However, Turkey faced sustained pressure from Washington and other NATO allies to sever ties with Damascus after US President Barrack Obama declared Assad illegitimate. This pressure was comprised of diplomatic efforts and negative reporting in the international press arguing that collusion with Assad made Turkey complicit in Syria’s bloodbath. Additionally, as Turkish public opinion turned against Assad and domestic pressure increased, Ankara desisted in its attempted role as peace broker.

When Turkey cut ties with Assad in September 2011, it immediately became one of the most vocal critics of the Ba’athist regime, demanding Assad’s unconditional exit prior to any resolution in the Syrian crisis. It was also at this time, in September 2011, that Ankara first discussed the establishment of a buffer zone, and formally endorsed this course of action, contingent on international support and approval, in November of that year. By March 2012, then Prime Minister Recep Tayyip Erdoğan was examining the options of both a “safe zone” and “buffer zone.” From that point onward, Turkish policy shifted between safe zones, buffer zones and no-fly zones. From one perspective, it is unsurprising that Turkey would
explore these different policies. There are various options for states attempting to demilitarize an area, and multiple reasons for wanting to do so. These concepts – safe zone, buffer zone, and no-fly zone–have particular meanings in international law and politics and state officials enact them with specific policy purposes in mind, as described in greater detail below.

Safe zones are spaces where civilians or the injured are protected from belligerents. Despite past failures in their establishment in Bosnia and Rwanda, the creation of territorial sanctuaries free of military activity has an enduring appeal for decision-makers. Indeed, in early 2017, US President Donald Trump said he would “absolutely do safe zones in Syria.” Sometimes referred to as safe havens, safety zones, humanitarian corridors, or protected areas, safe zones are, in essence, humanitarian buffer zones designed to shield civilians from violence. As shown below, this is commensurate with how the Turkish media reporting typically interprets the terms. Enacting safe zones is usually a multilateral effort done to protect population clusters, such as whole towns (as in Bosnia) or over wider areas (Kurdish Iraq in 1991). The underlying stated principle behind safe zones is that civilians are outside the realm of conflict and worthy of protection.

A buffer zone is about the spatial delimitation of a strip of territory, either adjacent to a border or in between two warring parties within a state. The US military defines a buffer zone as “a defined area controlled by a peace operations force [. . .] formed to create an area of separation between disputing or belligerent forces and reduce the risk of renewed conflict.” This definition accurately describes multilaterally supervised zoned-off areas, such as in Cyprus. Unilateral establishment aims at creating a cordon sanitaire, insulating a bordering state, for example, from the effects of the neighboring conflict. It can also provide an offensive instrument to stage cross-border operations. However, the legal imprecision of a buffer zone means that it offers strategic flexibility for the side establishing it. A buffer zone’s dual offence-defense characteristic may be attractive to decision-makers wishing to keep options open.

A no-fly zone is implemented either to protect civilians from aerial attack or to ensure that allied rebel groups remain viable against an adversary government. No-fly zones are standalone military tools (such as the no-fly zone over Libya in 2011) or used in tandem with safe havens and buffer zones (Operation Provide Comfort in Northern Iraq in 1991 is an example of all three happening at once). Additionally, no-fly zones can be thought of more as a means of implementing a buffer zone or safe zone alongside ground and naval forces.

Given the distinction between each of these concepts—distinctions largely shared by the Turkish government—explaining what best accounts for
Ankara’s changeable policy towards each option is the goal of this research. Over the course of 2012-2016, Turkey has mercurially swung back and forth between each of the demilitarizing options listed above. Careful qualitative analysis of the period 2012-2016, supported by text mining of Turkish state-owned press (articles from the Anadolu Agency (AA) newspapers), reveals that seemingly inexplicable policy shifts are a reflection of what policy steps had become politically feasible in Turkey vis-à-vis the Syrian crisis. However, before moving onto the analysis sections, the article explains the methodology employed.

Methodology

The research employs cosine similarity figures and normalization as a measure to evaluate the closeness of words. Cosine similarity is relatively simple and lends itself to an intuitive understanding of an issue or question. That is, it is defined by the inner product of two vectors divided by the product of their norms. Thus, cosine similarity represents the angle of two vectors so that it can become one when those vectors have the same direction. In the context of text mining, the vector represents each word in the whole text, namely Corpus; therefore, cosine similarity can be used as a measure of word similarity. As one recent study explains, “A network consists of units and relations, or nodes and edges. The units are references and their relations are similarities. In order to observe the latent similarity structures in the data, the number of co-occurrences must be normalized.”\(^{11}\) Ahlgren, Jarneving, and Rousseau (2003) proposed the cosine as similarity criterion.\(^{12}\) According to Leydesdorff, cosine normalization is preferable has been the subject of increasing consensus among scientometricians over the past two decades.\(^{13}\)

Applying text mining should be considered as a useful methodology in the field of policy analysis, especially in the case of rapidly changing situations. Text mining results should be dealt with carefully even though they can be enlightening when coupled with a time-series analysis and given a supporting role. For example, as shown in Table 1, the number of articles for a particular keyword in a particular year is a tiny fraction of articles issued in a year. Similarly, the number of particular keywords (e.g. “Safe Zone”) may not be large enough for robust calculation of cosine similarity. Numerically assessing the “risk” of applying text mining with the small number of words targeted is impossible because a method for doing so does not exist. The possibility of such a "risk" factor should be kept in mind when examining the cosine similarity in Table 2. Small differences in cosine similarity among keywords may not properly represent the relationship between keywords, if word count of a particular keyword is small. In the same context, time-series analysis about a particular keyword should also be conducted with due attention to its word count shown in Table 2. Still, when researchers are fully aware of possible pitfalls in applying text mining which is recognized as a
methodology for analyzing related texts quantitatively, it should be a powerful tool to show a new dimension of the issues being studied. It should also be kept in mind, when Table 1 and 2 are examined, that

1. a particular keyword usually appears only once or twice in an article, and
2. it does not appear only in a particular context (e.g. official policy proclamation).

We adopt Word2vec as an algorithm of vector representation of words. Briefly speaking, Word2vec can be assumed as the optimization of the conditional appearance probabilities of neighboring words. As a result, researchers can acquire a high dimensional vector space that represents the given corpus, which enables us to calculate the cosine similarity.

Tomas Mikolov and his colleagues developed Word2vec at Google in 2013 and it largely relies on the theory of neural networks.14

Many previous studies have used cosine similarity in text mining analysis. For example, Al-Anzi and AbuZeina examined text classification of Arabic literature using cosine similarity.15 As the corpus, they used articles of Alqabas newspaper in Kuwait. More recently, Kristiansen has analyzed the latent structures of communication in the field of international relations (IR).16 By using citation data from more than 20,000 articles published in 59 IR journals and employing cosine similarity and text mining, Kristensen was able to conclude that IR communication remains centered around American, general and theoretical IR journals and that to practice this method of communication forms a critical dimension of being an IR scholar.

We have attempted to employ cosine similarity in a similar manner to that of some of the existing literature. In doing so, we are able to show a basic structure of the international relations between Turkey and Syria through the quantitative analysis of related texts. For our corpus, we use articles exclusively from AA’s English language publications. We verified that most articles published on AA’s English-language website were translated from the original Turkish independently.17 This key fact had a large impact on our choice of text mining terms given subtle differences or lack thereof between Turkish and English terms. For example, how do we know that the English terms for safe zone, buffer zone, and no-fly zone mean the same thing in Turkish, and, more to the point are translated consistently? The Turkish phrase tampon bölge has a clear translation as buffer zone. No-fly zone is usually translated as either uçuşa izin verilmeyen bölge or uçuşa yasak bölge. Both share the meaning that flight is prohibited and would be translated as no-fly zone in the English version of AA. When referring to safe havens in general, Turkish speakers may use the terms güvenli liman or sıkınamak liman. There is, however, a term for safe haven that has more specific military connotations güvenli bölge. When referring
to safe zones, the term *güvenli bölge* is also used. We can assume, therefore, that in the case of establishing a militarily protected safe zone or safe haven, *güvenli bölge* would be used in Turkish. Additionally, the fact that the term *güvenli bölge* can refer to either safe haven or safe zone as well as the overwhelming prevalence of the term in Turkish-language reporting, regardless of media source, and general confusion over the differences between terms had direct implications in our calculations of cosine similarity. That is, while our text mining analysis used the terms safe zone and safe haven, we combined the two in calculating cosine similarity. As noted, we did this because AA reports are often based on press releases by or the statements of Turkish government officials. As such, AA writers and reporters, writing in Turkish and most often using the term *güvenli bölge*, likely translated that term as either safe zone or safe haven in English-language reporting.

We chose articles from AA for another reason: The media outlet is operated as an arm of the Turkish state. Established in 1920, AA has a mandate to provide news of Turkey and the Turkish government to the rest of the world. State-dominated media can provide a useful means through which to monitor, and perhaps scrutinize, the evolving policy and actions of a government. Governments that dominate the main media organs in a country do so to control editorial content. The power of editorial omission is often used to limit any discussion of alternative policies. As a corollary, media content in such countries conveys pro-government narratives about unfolding policy decisions. Outside observers have long paid close attention to the content of foreign state-run media organs in order to make inferential judgements about what that government is thinking. The level of confidence observers attach to these inferences depends on the character of the state media, which varies considerably from state to state. In tightly controlled state media, often as much can be deduced from what is not said as from that which is. It comes as little surprise that during the Cold War, Western watchers of the Soviet Union assiduously read *Pravda*, the mouthpiece of Communist Party of the Soviet Union (CPSU). When it comes to state control over the media, Turkey is not Soviet Russia. However, while Turkey has arguably enjoyed a relatively open public space since the late 1980s, press freedoms have been curtailed in recent years. The result has become a quasi-commercial media environment in Turkey in which the ruling AK Party has an increasingly influential editorial hand, especially over the two state-owned media outlets: The Radio-TV giant TRT and the AA news agency. Especially through the appointment of new board members, AA in now more closely connected to the AK Party. Because of its increasing politicization and its focus on growing its international audience akin to China’s CCTV and Russia’s RT, we assess AA is a sound repository for mapping and gauging the evolution of Turkish government foreign policy preferences and actions. By utilizing the
methodology detailed above, the remaining sections analyze Turkish policy towards the Syrian civil war.

2011-2012: Turkish Foreign Policy and the Syria Crisis

After Turkey severed relations with Assad and committed itself to regime change, it strengthened ties with select opposition groups in Syria in concert with a range of regional and international actors. These included the US, France, the UK, Saudi Arabia and Qatar, which backed various, often-competing non-state armed actors. With little common ground between groups and their outside supporters besides opposition to Assad, Syria became a stage set for the enactment of a number of small civil wars pitting groups against each other with clashing policy agendas set variously in Ankara, Riyadh, and Washington. While the rhetoric emanating from these capitals and opposition summits was unequivocal regarding Assad’s departure, there were no correspondingly cooperative efforts on the ground.

Iran became an increasingly important player, and Iranian soldiers and Shi’a militias deployed from Iraq supplied critical manpower in support of Assad. Iran also helped ensure the Assad regime’s survival by mobilizing its ally Hezbollah and supplying critical weapons and services. Russia was also keen to see the Assad remain to keep its base at Tartus, the only Russian presence in the Mediterranean. However, Moscow largely played a waiting game throughout 2012. Yet the unwavering vocal support of Russia and material support of Iran for Assad would prove critical to the regime’s survival and was the polar opposite of disjointed efforts, often at cross-purposes, of the umbrella of opposition.

As Turkey tried to develop coherent and proactive, rather than reactive foreign policies, it began to feel the effects of fighting across its 822km border in two distinct ways. First, it became a direct target of Assad regime attacks. Second, refugees began to flee to Turkey as the humanitarian disaster unfolded in Syria. However, it attempted to provide succor by combining the resources of the Turkish Red Crescent with those of Turkish and foreign NGOs, Turkey possessed neither the money nor the scale of services necessary to host what was still a trickle of refugees.

During the course of 2011-2012, most of Syria’s territory contiguous to the Turkish border remained under regime control. This partially impeded the movement of refugees into Turkey, but it also meant that forces loyal to Assad were able to act with a large degree of impunity on both sides of the border. Ankara viewed the establishment of a buffer zone positively as a method to help contain the refugee influx without drawing in other states. Ankara proposed the creation of a buffer zone in September 2011 intending to create a safe haven for both rebel forces fighting against the Syrian government and refugees fleeing the fighting.
ensure Syria’s territorial integrity. Ankara repeated calls for international humanitarian support. “We expect the UN to step in,” said then foreign minister Ahmet Davutoğlu. “When refugee numbers reach thousands, this problem goes beyond being an internal issue and becomes an international one. No one has the right to expect Turkey to take on this international responsibility on its own.”

Ankara assessed Assad would fall within six months to a year and therefore stopped short of calling for the creation of a no-fly zone such as that seen earlier in Libya. Instead, Turkey publicly opposed external intervention and signaled it would act unilaterally in the creation of a buffer zone or safe zone. However, Ankara never adequately defined the concept of a “buffer zone,” instead referring to it as both a safe zone and a buffer zone with the aim of ensuring Syria’s territorial integrity.

By 2012, text mining figures compiled from AA demonstrate that semantic confusion had become even more pronounced, and the policy confusion that resulted therefrom led Ankara to push for the establishment of buffer zones that also would have included elements of a safe zone policed by a no-fly zone (Table 1). In effect, Ankara was pushing for a larger, but limited intervention in Syria aimed at protecting its borders, shoring up internal opposition to the Assad regime, and stemming the flow of refugees. This is further demonstrated by and consistent with our cosine similarity calculations in 2012, where AA articles on buffer zones and no-fly zones demonstrated the greatest degree of cosine similarity [0.73] followed by buffer zone and safe zone [0.67] and no-fly zone and safe zone [0.59] (Table 2). This indicates not only possible confusion over which direction to take, but also over differences in terminology that a layman or even government official would not notice but military personnel would. This also demonstrates a basic convergence of interest in establishing buffer zones coupled with calls for a no-fly zone to be policed by Turkey in concert with other international actors, namely the US.

At this point in time, there were indications that at least some Turkish officials assessed the US, perhaps in concert with other NATO allies, would intervene militarily in Syria after the November 2012 US presidential elections. Turkey also continued to play a visible if less-than-robust role in multi-party international negotiations. Additionally, Turkey began to respond more forcefully to the Syrian army’s border incursions and shelling. Yet as 2012 ended with shells continuing to fall on Turkish cities and Assad’s army continuing to strafe and bomb civilians, ever more domestic pressure began to pile on Ankara to act unilaterally.
Table 1: Number of Anadolu Agency (AA) articles issued in 2012 to 2016 and number of words appeared.

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Articles</td>
<td>4121</td>
<td>6474</td>
<td>9269</td>
<td>10988</td>
<td>12723</td>
</tr>
<tr>
<td>Number of Articles with &quot;Syria&quot;</td>
<td>1002</td>
<td>1386</td>
<td>1323</td>
<td>1790</td>
<td>2708</td>
</tr>
<tr>
<td>Number of Articles with &quot;Safe Zone&quot;</td>
<td>8</td>
<td>1</td>
<td>25</td>
<td>40</td>
<td>49</td>
</tr>
<tr>
<td>Number of Articles with &quot;Buffer Zone&quot;</td>
<td>16</td>
<td>13</td>
<td>38</td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>Number of Articles with &quot;No-fly Zone&quot;</td>
<td>13</td>
<td>10</td>
<td>44</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td>Number of Articles with &quot;Safe Haven&quot;</td>
<td>4</td>
<td>5</td>
<td>55</td>
<td>25</td>
<td>29</td>
</tr>
<tr>
<td>Word count of &quot;Syria&quot;</td>
<td>1496</td>
<td>2020</td>
<td>6225</td>
<td>7978</td>
<td>12987</td>
</tr>
<tr>
<td>Word count of &quot;Safe Zone&quot; &amp; &quot;Syria&quot;</td>
<td>16</td>
<td>0</td>
<td>49</td>
<td>83</td>
<td>124</td>
</tr>
<tr>
<td>Word count of &quot;Buffer Zone&quot; &amp; &quot;Syria&quot;</td>
<td>33</td>
<td>10</td>
<td>64</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Word count of &quot;No-fly Zone&quot; &amp; &quot;Syria&quot;</td>
<td>15</td>
<td>24</td>
<td>72</td>
<td>40</td>
<td>46</td>
</tr>
<tr>
<td>Word count of &quot;Safe Haven&quot; &amp; &quot;Syria&quot;</td>
<td>5</td>
<td>3</td>
<td>71</td>
<td>8</td>
<td>20</td>
</tr>
</tbody>
</table>

2013-2014: Internationalism, refugees and the Kurdish question

Refugees swamped Turkey in early 2013. They not only affected southeastern Turkey and the region contiguous to Syria’s borders but also tipped the demographic balance in Turkey’s cities.38 There were additional refugees’ camps on the Syrian side of Turkey’s border because Turkey felt
it could no longer absorb refugees and efforts were made to keep at least some in Syria. The Turkish Red Crescent and other NGOs attempted to offer these refugees–housed in over 70 makeshift camps strung along the border–some succor, but access to the camps was dependent on the shifting positions and fortunes of rebel groups and Syrian government forces. Substantive assistance from governments or the UN was in short supply–largely on account of the collective action crisis mentioned above. There was little way for Turkey, as a sovereign state, to ensure even a modicum of access to humanitarian relief and shelter in Turkey let alone safety, for the refugees in Syria. After all, Syria remained a sovereign state with all the rights and obligations inherent to such states under international law.

Table 2: Cosine similarity and normalization figures from 2012 to 2016

<table>
<thead>
<tr>
<th>Cosine Similarity of AA articles with &quot;Syria&quot; in 2012</th>
<th>Safe zone</th>
<th>Buffer zone</th>
<th>No-fly zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syria</td>
<td>0.16</td>
<td>0.27</td>
<td>0.18</td>
</tr>
<tr>
<td>Safe zone</td>
<td></td>
<td>0.67</td>
<td>0.59</td>
</tr>
<tr>
<td>Buffer zone</td>
<td></td>
<td></td>
<td>0.73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cosine Similarity of AA articles with &quot;Syria&quot; in 2013</th>
<th>Safe zone</th>
<th>Buffer zone</th>
<th>No-fly zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syria</td>
<td>none</td>
<td>0.14</td>
<td>0.06</td>
</tr>
<tr>
<td>Safe zone</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Buffer zone</td>
<td></td>
<td></td>
<td>0.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cosine Similarity of AA articles with &quot;Syria&quot; in 2014</th>
<th>Safe zone</th>
<th>Buffer zone</th>
<th>No-fly zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syria</td>
<td>0.48</td>
<td>0.20</td>
<td>0.43</td>
</tr>
<tr>
<td>Safe zone</td>
<td>0.73</td>
<td>0.95</td>
<td></td>
</tr>
<tr>
<td>Buffer zone</td>
<td></td>
<td></td>
<td>0.75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cosine Similarity of AA articles with &quot;Syria&quot; in 2015</th>
<th>Safe zone</th>
<th>Buffer zone</th>
<th>No-fly zone</th>
</tr>
</thead>
</table>
Throughout 2013 and into 2014, Turkey continued to request UN support and/or US or NATO support to establish safe zones.\textsuperscript{40} Ankara felt it required international legitimacy and consensus in order to cross the Syrian border and establish such a zone. However, US officials fended off Turkish requests because they would entail no-fly zones and a wider American military commitment.\textsuperscript{41} This appeared to change when chemical weapons were used in attacks in August 2013 and the US appeared to reassess its largely non-interventionist stance in Syria. Deft diplomacy by Moscow in the form of agreeing to monitor the destruction of Assad’s chemical weapons cache, however, quickly defused the crisis and allowed the US to avoid any military action in Syria.\textsuperscript{42} It also demonstrated to the Russians and others just how deeply reticent the US was to get involved in Syria.\textsuperscript{43}

In October 2014, as Turkey attempted to address the volatile situation AA published a map showing Ankara’s proposed safe zones.\textsuperscript{44} The zone would stretch from the Mediterranean Sea in the west to the Akçakale border crossing, encompassing land on both sides of the Euphrates.\textsuperscript{45} Turkey then publicized its willingness to send ground troops into Syria to establish the safe zone, potentially with US air support.\textsuperscript{46} However, the zone’s establishment became more complicated when the Obama administration decided to support Kurdish fighters of the People’s Protection Units (YPG), the military arm of the Democratic Union Party (PYD) and the Syrian affiliate of the Kurdistan Workers’ Party (PKK). Branded as a terrorist group by Turkey, the US, the EU, and other states, Turkey has considered the PKK an existential threat and has combatted a PKK-led insurgency since 1984.

Turkey confronted US support for the YPG with disbelief and outright anger. Turkey had attempted to gain US support for various interventions in Syria since 2012 to no avail. When the US did decide to intervene, it did
so by using the one group fighting in Syria that Ankara viewed as potentially the most dangerous to Turkey. Turkey felt betrayed by its ally.

### Cosine similarity and normalization figures and analysis

Cosine similarity results based on figures from AA’s 2013 English-language articles mentioning the various terminologies were inconclusive. That is, cosine similarity was either extremely low as in the case of Syria and buffer zones [0.14] or non-existent. This changed in 2014 when AA articles on safe zones and no-fly zones demonstrated a much greater degree of cosine similarity [0.95], followed by buffer zones and no-fly zones [0.75], which were followed by buffer zones and safe zones [0.73]. With the benefit of hindsight as well as the cosine figures, we therefore posit that Turkish policy makers showed equal interest in no-fly zone/safe zones, as well as the possible establishment of a combination of safe/buffer/no-fly zones because this was what was politically feasible in Turkey at the time.

Related cosine similarity findings reflected Turkey’s contradictory policy signals vis-à-vis Syria in 2014. These demonstrated a shift in trajectory from a foreign policy that was largely unilateral in 2012 and therefore focused on the establishment of buffer zones to secure the border, stem refugee flows and guarantee Syria’s territorial integrity. Yet by 2014, Ankara was clearly emphasizing multilateral partner solutions and safe zones. Turkey did this in order to convince international partners to participate in efforts to assist refugees and rebel forces, downgrade the Islamic State of Iraq and the Levant (ISIL), and remove Assad. Additionally, it did so in order to de-emphasize any perceived unilateral aims of Turkey. To put it colloquially, Ankara and therefore the AA articles that provided explanations and announcements of government policy, were throwing terms at the proverbial wall in an effort to see what would stick. For example, then-prime minister Ahmet Davutoğlu insisted, “We have never used the term buffer zone. We have used the term safe haven.” However, Numan Kurtulmus, the Deputy Prime Minister contradicted Davutoğlu, noting, “We [Turkey] want a no-fly zone and a buffer zone [in Syria].” This semantic confusion, by no means confined to Turkey alone, is further reflected in cosine similarity results for 2014 where the cosine similarity for all terms is consistently high—an indication that Turkey’s leaders were themselves confused by the terms and unsure as to which policies to pursue given the uncertainty of action by the US, the UN and others.

In hindsight, Turkey’s rhetorical change mattered little. Turkey’s calls for safe zones or safe havens were met with grudging support or downright rejection. The US still considered Syria a low priority while Iran and the Syrian regime warned against the move. Russia also signaled its opposition to the plan, particularly as it filled the power vacuum left by the
absence US forces in the region. Moscow and Damascus realized they had much-increased military and political opportunity spaces in which to operate, though Russia remained a largely invisible actor throughout 2014. However, Assad and his main ally, Iran, attempted to turn the tide against various rebel forces. This resulted in some hard-won gains that by the close of 2014 resulted in a fluid stalemate characterized by fluctuating battle lines but no clear momentum. This changed rapidly in 2015 Syrian government forces suffered a series of military setbacks.

2015-2016: Russia’s Entry into Syria and Turkey’s Calculations

In July 2015, Assad made a formal request to Russia for military assistance, to include air strikes. Russia duly complied sending warplanes, tanks, and combat troops. Ships of the Black Sea Fleet were there by September.

As Ankara touted the establishment of safe zones in concert with some type of no-fly zone in public, in private it again mulled the establishment of buffer zones through unilateral military incursions. Erdoğan favored this strategy given recent advances by YPG fighters, but Turkey’s military was less sanguine. Turkey now counted both Iran and Russia as its southern neighbors in Syria, further complicating an already difficult position. Suspicious of Russia’s motives, Turkey took a strongly defensive position against Russian actions in Syria. Things came to a head in November 2015 when Turkey downed a Russian aircraft. Russian anger over the downing of its jet and the subsequent murder of its pilot boiled over as protesters burned Turkish flags and broke windows at the Turkish Embassy in Moscow. President Vladimir Putin immediately issued a restrictive visa regime and a blanket travel ban on Turkey and a battery of economic sanctions.

Turkey’s economy, already pummeled by a strong dollar, loss of significant trade with Syria and hosting millions of Syrian refugees sustained a further blow when Russian tourists and businesspeople vanished. Additionally, Turkey had become the target of deadly terrorist attacks by ISIL beginning in mid-2015. Not only had the Russians departed, but other visitors also avoided Turkey. When an attempted coup d’état sought to remove Erdoğan from power in July 2016, it shook the Turkish Republic to its foundations. Turks were not only shocked by the coup attempt, with many believing that coups d’état were longer possible in Turkey, but fed up with Ankara’s inability to stem the flow of refugees and limit the violence in Syria. As Ankara attempted to recover and formulate a response, international reactions to the attempted coup largely informed Turkey’s new stance vis-à-vis Syria. Prime Minister Binali Yıldırım officially announced Ankara’s new Syria policy in late August 2016. Importantly, it included working with Iran, Saudi Arabia, the United States, and Russia as well as Syria’s Assad for a settlement to the crisis.
In the charged post-coup atmosphere, Ankara realized its Syria policy of supporting opposition militias against Assad underestimated his staying power and had “…overlooked the fact that [Assad] had over the years gained a status over and above ethnic and sectarian divisions.”

Ankara’s newfound willingness to work with Russia was also driven by pragmatism and Moscow’s condemnation of the attempted coup. Turkey also realized Iran, which had also condemned the coup, was a difficult partner, but one that shared Turkey’s interest in stopping the establishment of a Kurdish state. In contrast, NATO allies were slow to condemn the coup and sent mixed signals to Ankara.

As relations with Russia improved, Turkey quickly sought Russian support for a safe zone stretching approximately 40 km into Syria that would act as a buffer between two Kurdish-held areas to the east and west and against ISIL to the south. Though relations between Moscow, Ankara, and Tehran had improved, Ankara remained formally opposed to President Bashar al-Assad staying in power and was unhappy about Russian operations against anti-Assad fighters as well as Iran’s efforts to bolster the regime.

Cosine similarity and normalization figures and analysis

Regardless of the political and strategic differences on the ground, Turkey and Russia and, to a lesser extent, Iran appeared to work quickly in the latter half of 2016 to institute safe zones policed by no-fly zones. Our cosine similarity calculations from 2015 support this as a consensus formed in Ankara that safe zones bolstered by no-fly zones should form one of the cornerstones of Turkey’s Syria policy. Cosine similarity results from 2015 (Table 2) appear to demonstrate almost equal support in Ankara for a combination of safe zones and no-fly zones [0.76]. A combination of safe zones and buffer zones [0.70] closely followed. A combination of buffer zones and no-fly zones [0.56] came last. In essence, cosine similarity results in 2015 arguably point to a “gelling” of views in Ankara that distances 2015 from the confusion of the previous three years and marks a turning point in Turkey’s Syria policy options and strategic choices.

By 2016, cosine similarity was again highest in relation to safe zones policed by a no-fly zone [0.64], but that number dropped from a high in 2014 of [0.95]. Similarly, in 2016, cosine similarity figures indicate a further hardening of Ankara’s stance vis-à-vis pushing for a combination of safe zones [0.33] and no-fly zones [0.28]. The cosine similarity calculations also adequately reflected Ankara’s acceptance of realities on the ground and its rapprochement with Russia that continued into 2017.
Conclusion

Syria’s ongoing civil war has been a source acute instability in Turkey. Turkish foreign policy in relation to the crisis has appeared to be largely reactive in nature, as Ankara has shifted policy and state action to address the changing situation on the ground and as the number of foreign states acting in Syria steadily increased in the years 2011-2016. This research is an attempt to shed light on what best accounts for Ankara’s changeable policy towards various foreign policy options such as buffer zones and no-fly zones by utilizing methodologies such as text mining and related cosine similarity measures of reporting by the Anadolu Agency (AA), a Turkish state-owned press. Applying these methodologies in concert with content analysis and qualitative analysis, we have demonstrated that Turkey’s seemingly inexplicable policy shifts at times adhered to a logic and, in some cases, could have been anticipated. Utilizing such methodologies therefore offers a potentially significant contribution to the literature by defining politically feasible outcomes related to foreign or domestic policies. The accompanying time-series analysis conducted has shown numerically and vividly how the use of keywords by the Government of Turkey has changed over time. While these findings are valid, reliable, and generalizable, a note of caution is required. The number of articles for a particular keyword can represent on a fraction of articles issued in a year. Similarly, the number of particular keywords (for example, Buffer Zone) may not be large enough for robust calculation of cosine similarity. Numerically assessing the “risk” of applying text mining with the small number of words targeted is impossible because a method for doing so does not exist. In short, further testing should be performed using these same methodologies and these should never stand on alone but rather support time-series analyses as well as primary and secondary sources. In the case of this article, our attempt has further demonstrated that the use of text mining in a supporting role with robust qualitative analysis of state-run media sources can yield valuable results and insights in the field of foreign policy analysis and security studies.
Endnotes


2 Christopher Phillips, Into the Quagmire: Turkey’s Frustrated Syria Policy (London, UK: Chatham House, 2012)


5 De-escalation zone is the term used more recently. However, this was not current until late 2016 and found favor in the Astana Process supported by Russia, Iran, and Turkey. As such, this term was not included in our cosine similarity tests and remains outside the scope of this analysis.


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17 Online communication with AA staff, December 12, 2017.

18 Rather than being operated directly by a government entity, Anadolu Agency is connected to the government by its Board of Directors. For example, the current Director General, Şenol Kazancı, previously served as the head of corporate communications department at the Turkish Presidency. He also served as an advisor of President Recep Tayyip Erdogan. He was also the principal consultant when Erdogan was the prime minister.

19 Reaching 11 million readers daily at its height, Pravda was arguably the clearest bellwether of Soviet thought and, in its pages, contained what mattered most to its leaders.


21 The AK Party has consistently neutralized opposition to its rule and policies by firing or arresting bureaucrats across governmental ministries—to include the judiciary, the police, and the military—and replacing it with AK Party allies. Refer to E. Fuat Keyman, “The AK Party: Dominant Party, New Turkey and Polarization,” Insight Turkey 16, no. 2 (2014): 19-31, http://web.b.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authntype=crawler&jrnid=1302177X&AN=96813734&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r

crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r
crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r

crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r

crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r

crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r

crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r

crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r

crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%26scope%26site%26authntype%26crl=c&r


For example, in mid-June 2012, Syrian government forces shot down a Turkish F-4 fighter jet and reportedly, both pilots lost their lives. On October 3, 2012, Syrian shells hit a house in Akçakale. Three children aged between eight and 14 years, their mother and another woman died. Thirteen others were injured. The attacks from Syria continued throughout October, with shells hitting Aşağıpulluyazı village in the Yayladağı district of Hatay Province on October 5, 2012, Altınözü on October 8, and an anti-aircraft shell hitting a health center in Reyhanlı on October 23, 2012 among other incidents.

For example, after the shelling in Hatay Province, artillery of the Turkish 3rd Border Battalion stationed in Yayladağı reportedly fired on Syrian military targets. Additionally, on October 17, 2012, Turkish artillery fired into Syria after another Syrian mortar shell landed on Turkish territory in Hatay province. Some of Turkey's western allies, such as the United States, voiced their concern for Turkey but cautioned against an escalation in the conflict. Ivan Watson, “Turkey Strikes Targets in Syria in Retaliation for Shelling Deaths,” CNN, October 4, 2012, accessed May 21, 2018, http://edition.cnn.com/2012/10/03/world/europe/turkey-syria-tension/index.html.

39 Interview with a Turkish government official, October 8, 2017.


45 A key objective of this safe zone was the securing of the Tomb of Suleyman Shah (c. 1178–1236), grandfather of Osman I (d. 1323/4), and founder of the Ottoman Empire. Because Turkey never gained international support for the proposed safe zones, it unilaterally moved the tomb to a new site in Syria, about 180 meters from the Turkish border in early 2015. Umut Tütüncü, “Türk Ordusu’ndan Süleyman Şah Türbesi için smur ötesi operasyon,” *HaberTurk* February 23, 2015, accessed May 17, 2018, http://www.haberturk.com/dunya/haber/1045770-turk-orдушundan-suleyman-sah-operasyonu.


49 Bekdil, “How Turkish Enchantment.”


Bülent Arınç is a conservative Turkish politician who served as Speaker of the Parliament of Turkey from 2002 to 2007 and as a Deputy Prime Minister of Turkey between 2009 and 2015, stated in 2012 that the history of coups d’état in Turkey was over and that deep structural change made future coups impossible. TRT Haber, “Bülent Arınç- Türkiye’de artık darbe olmaz,” YouTube November 30, 2012, accessed May 29, 2018, https://www.youtube.com/watch?v=Xm0gcFOwDAY.


