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Tracing the Narrative of Hate in the Rising Greek Far-Right

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Abstract

The recent electoral successes and meteoric rise of the extremist far-right Golden Dawn (GD) party have raised questions over the democratic values of a sizeable proportion of the Greek electorate. While the gains enjoyed by the GD can be attributed, in part, to its strategy of social service provision to vulnerable segments of the population, the appeal of the party's ideology, elements of which resonate across Greek society, also must be considered. To better understand the nature of this ideology, our study conducts a systematic investigation of the public rhetoric of Golden Dawn. Relying on automated text analytic methods and employing a corpus of 17,283 official party news articles, we identify the central themes of the GD narrative and how they have evolved over the period 2012-2015. Our analysis provides insight into how the party has used the immigration issue in its communication since entering Parliament in 2012.

Keywords: *political extremism, far-right ideology, Golden Dawn, Greek politics, text classification, latent Dirichlet allocation*

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1 Introduction

The economic crisis has brought about a profound transformation to the Greek political landscape. Traditional parties which had dominated politics during the post-junta (*metapolitefsi*) era have been decimated, especially the center-left PASOK party. The collapse of the traditional parties in the double general elections of May and June 2012 sealed the fate of the two-party system in Greece for the foreseeable future. New heavyweights to the political arena have emerged, most notably the radical-left SYRIZA party which rose from minor status during the pre-crisis era to leading a government coalition along with the right-wing Independent Greeks party from January to August 2015 (see Dinas and Rori 2013). The other significant winner in the 2012 elections was undoubtedly the extreme right neo-Nazi Golden Dawn party, which won 6.97% of the vote in May 2012 and 6.92% in the June follow-up elections (426,025 votes). The meteoric rise of this once fringe party cannot be overstated if one considers that it received only 0.29% of the vote in the 2009 general elections (19,636 votes). Support for Golden Dawn has proven robust since the 2012 election. It received 9.40% of the vote in the 2014 European Parliament elections (536,442 votes; 3 MEP seats) and 6.3% of the ballot in the January 2015 general election, which yielded 17 seats in Parliament.

The recent gains enjoyed by Golden Dawn come after a series of apparent setbacks. Following the highly publicized murder of an anti-fascist rapper, Pavlos Fyssas, by a GD member in September 2013, a government crackdown ensued, leading to the arrest of its leader and other party members on organized crime charges. The parliamentary immunity of many of its MPs has been revoked. State funding of the party has been frozen. Mainstream media coverage has shifted from half-hearted toleration to outright condemnation. The Greek public has seen images of party members wielding weapons, beating immigrants and political opponents, sporting Nazi symbols, and performing rituals reminiscent of the darkest chapters of European history. A cascade of analyses describing, in detail, the illicit activities of the party has emerged in the press. Party members have been effectively shut out from live appearances on most mainstream television programs. Yet, despite all this resistance, Golden Dawn has proven resilient, while promising even more violence and upheaval.

Although Golden Dawn currently holds a relatively small share of seats in Parliament (17/300), it's political clout cannot be underestimated. There are a number of examples of how Golden Dawn has been able to make a discernible impact on the policy agenda since its entering into Parliament. Halikiopoulou and Vasilopoulou (2012) point to two notable instances. In 2012, a high ranking member and co-founder of Golden Dawn, Christos Pappas, put forward a parliamentary question expressing outrage over a Facebook page that satirized a widely revered holy man. As a result, the owner of the page was arrested, tried and handed a suspended sentence for blasphemy.[1] That same year, another Golden Dawn MP made a parliamentary inquiry towards the Minister of the Interior, asking for data on the number of foreign children in municipal and community nurseries and pre-schools throughout the country. In a move that caused a political maelstrom, the Minister complied and forwarded the request to local government agencies, asking them to inform the Ministry of the country of origin of all children in schools and nurseries.[2] More recently, in late 2014, the then Minister of Education complied with a request by a Golden Dawn MP to investigate reports of some schools holding a minute of silence in memory of Pavlos Fyssas, something which the party describes as "political propaganda".[3]

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[1] *Kathimerini* 'Φυλάκιση 10 μηνών στον «Γέροντα Παστίτσιο».' ["10 month sentence for 'Elder Pastitsio'"] (January 17, 2014) http://www.kathimerini.gr/552256/article/epikairothta/ellada/fylakish-10-mhnwn-ston-geronta-pastitsio.

[2] *Kathimerini* 'ΠΟΕ-ΟΤΑ: Να μην δώσουν στοιχεία των παιδιών οι δήμοι.' ["Municipal workers' union: The municipalities must not give the children data."] (October 12, 2014) http://www.kathimerini.gr/16815/article/epikairothta/ellada/poe-ota-na-mhn-dwsoyn-stoixeia-twn-paidiwn-oi-dhmoi.

[3] *Efimerida ton Syntakton* '«Πολιτική προπαγάνδα» η ενός λεπτού σιγή για τον Φύσσα!' ["'Political propaganda'

Given the stable electoral and public support for Golden Dawn, evidence of a troubling impact on policy, the violent behavior and hateful public speech of its members, and disconcerting evidence of communication and flirting of other right-wing actors with the party,[4] there is an increased need for a deeper understanding of the political preferences of Golden Dawn. This study asks the following questions:

1. What are the prominent topics found within the Golden Dawn discourse? How does the salience of these topics change over time?

2. Has the party used its discourse strategically in response to the current migration crisis?

We approach these question through the prism of the party's ideological narrative as showcased in its online news portal. By studying the party rhetoric found within its official news we are able to focus on information which is being directed toward "internal" audiences and thus information which is produced with less hesitation from fear of alienating potentially more moderate prospective supporters (Mudde 2002, pp. 20-22). We perform this analysis systematically by applying automated text analytic techniques to a corpus of 17,283 official party news articles covering the period May 2012–August 2015. The central objective of the study is to uncover the prominent topics found within the corpus and how the salience of these themes change over time. The data generated from this procedure are then used to investigate how the party has discussed the issue of immigration since its entering into Parliament in 2012.

2   The Ideology of Golden Dawn

To gain a general expectation of what issues Golden Dawn cares about, a first step is to review various aspects of its ideology as expressed within its election program, party documents, and anecdotally from press reports. To organize the process of analyzing the ideology of GD, we proceed with a working definition of party ideology as, "a party's body of normative(-related) ideas about the nature of man and society as well as the organization and purposes of society"(Mudde 2002, p. 19). As discussed in length by Mudde (1995), which conceptual dimensions of this set of ideas one should focus on when studying the ideology of extremist right parties is not entirely clear within the literature. Based on an extensive literature review, the author found up to 58 different features deemed as important to understanding right-wing extremism, with five being discussed in at least half of the studies reviewed. This section employs a revised list of themes, features, and sub-features outlined in Mudde (2002, pp. 187-189) to offer a sketch of the main ideological characteristics of the party.

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the one minute of silence for Fyssas!"] (October 7, 2014) http://www.efsyn.gr/?p=241410.

[4] Linkages among the various actors of the political right and far-right have existing throughout the post-junta era. Some members of New Democracy, for example, have had affiliations with now defunct far-right parties such as EPEN and National Front (Ellinas 2013, p. 546). Beyond just affiliations, some current and former members of New Democracy have publicly endorsed (or not categorically excluded) cooperation between their party and Golden Dawn, even though the official party line continues to exclude any form of cooperation. The most scathing example, though, is the political firestorm which broke out in early 2014 following revelations that Takis Baltakos, a close aide to former PM Samaras and also Cabinet Secretary at the time, had been holding secret meetings with Golden Dawn party members. The *coup de grâce* was the leaking of a video, recorded by Golden Dawn MP Elias Kasidiaris in Baltakos' parliamentary office, which shows Baltakos insinuating political interference in the judicial investigation of the party. More recent evidence shows Baltakos sending text messages to staff members of Golden Dawn MPs which, among other things, instructed Golden Dawn parlimentarians how they should vote. Rather than backing down following his ousting from government, Baltakos justified his actions by calling for a grand coalition from the center- to far-right, "New Democracy, Independent Greeks and Golden Dawn [can] reach 46% [in the polls]. If we unite, will will govern for 50 years. Otherwise, the Left will govern." (April 13, 2014) http://www.real.gr/DefaultArthro.aspx?page=arthro&id=314478&catID=11

First and foremost, Golden Dawn espouses *nationalism* as its central ideological feature, calling it the "third major ideology of History" in contrast to "communism-internationalism" and "liberalism-ecumenism" (Golden Dawn 2014b). In its ideological manifesto, the party conveys a clear *ethnic nationalistic* worldview. The state is understood as an entity whose sole purpose is to serve the "natural principle of the nation-race" and only under these conditions can the idea of a state be respected. The ethnic community is defined strictly along racial/biological grounds. The "true Greeks" are the "racial continuation" of the Greeks from the Classical period (Golden Dawn 2012b). This biological criterion of ethnic membership implies that the community is permanent and that assimilation of immigrants into the community is impossible. As such, the party holds policy positions that call for *internal homogenization*. Moreover, in an attempt to woo conservative segments of Greek society, Golden Dawn has portrayed itself as a movement which upholds *traditional ethical values*. Reactions to foreign-imposed decadence and subsequent corruption of traditional society (see Vasilopoulou and Halikiopoulou 2015) are prominent in the party's rhetoric, although typically couched within a nationalist framework. Beyond this, the nationalist ideology of Golden Dawn also includes elements of *external exclusiveness*. Similar to other Greek far-right parties, GD makes explicit irredentist claims on neighboring areas with significant ethnic Greek populations including northern Epirus (southern Albania) and Cyprus (see Ellinas 2013, Golden Dawn 2012a). Further, the party takes a hardline position on the Macedonia name dispute, rejecting any solution which includes the term "Macedonia" or any variation of the term. Indeed, the party used the name dispute as an opportunity to gain initial substantive support during the surge of nationalist fervor in the early 1990s (Psarras 2012).

The party can be further characterized as having an *exclusionist* and *xenophobic* societal outlook. Distinctions between Greeks and foreigners are explicit, however they are not exclusively along ethnic lines, as political ideology (anti-nationalists are considered "Greek-speakers", not Greeks) and sexual orientation are further criteria of exclusion. In general, the exclusionist philosophy of Golden Dawn can be understood as *racist*, *ethnocentric*, *anti-Semitic*, *homophobic*, and *anti-communist*. Feeding off of very strong anti-Semitic attitudes within the Greek public (Anti-Defamation League 2014, Antoniou et al. 2014), GD remains one of few European far-right parties with a definite anti-Semitic stance, as evidenced by its rhetoric in party documents and public speech (cf. Bunzl 2005, Williams 2010).[5]The *Declaration of Ideological Principles*, for instance, devotes an entire chapter, entitled "Jew, the Parasite of Civilization", to convey its anti-Semitic views (Golden Dawn 1987, pp. 15-19). Party members have, on many occasions, made anti-Semitic declarations within Parliament, ranging from claims of a global Zionist conspiracy to outright Holocaust denialism (see also Ellinas 2013, p. 551).[6]Moreover, members of native groups who do not fit the party's vision of the "ideal Greek", such as political opponents and homosexuals, are also not exempt from abuse. Both these groups have been physically attacked on numerous occasions by supporters of Golden Dawn (see Psarras 2012, pp. 118-122).[7]The culmination of targeting of "other" Greek citizens was, of course, the September 2013 murder of Pavlos Fyssas, a leftist rapper, which spawned a government crackdown and judicial investigation of the party.

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[7]Specifically, results from Anti-Defamation League 2014 suggest that Greece has, by far, the highest level of anti-Semitic agreement on the European continent (69%), including Eastern Europe, and is most similar to countries in the Middle East such as Turkey (69%), Iran (56%), and Saudi Arabia (74%). Examples of stereotypes that respondents were asked whether they agree or disagree with include: "Jews are more loyal to Israel than to the countries they live in" (60% agreement), "Jews have too much power in international financial markets" (82%), "Jews have too much control over global affairs" (74%), and "Jews still talk too much about what happened to them in the Holocaust" (60%).

[7]*Haaretz* "Protocols of the Elders of Zion read aloud in Greek Parliament." (October 26, 2012) http://www.haaretz.com/jewish-world/jewish-world-news/protocols-of-the-elders-of-zion-read-aloud-in-greek-parliament-1.472552; *Naftemporiki* 'Ηλ. Κασιδιάρης: Διάτρητο το όποιο πόρισμα της Προανακριτικής' [El. Kasidiaris: Whichever findings of the preliminary (investigation) are unsubstantiated.] (June 6, 2013) http://www.naftemporiki.gr/story/661890/il-kasidiaris-diatrito-to-opoio-porisma-tis-proanakritikis.

[7]*Efimerida ton Syntakton* 'Τέταρτη ομοφοβική επίθεση στο Παγκράτι.' [A fourth homophobic attack in Pagkrati.] (August 25, 2014) http://www.efsyn.gr/?p=227472.

Golden Dawn's xenophobic tendencies can be crystallized in its 2012 election campaign slogan, "Golden Dawn, to rid the land of filth!", which was not only a blanket statement against the political system but was also widely understood as a signal of its intentions toward immigrants. Much like the case of anti-Semitism, Golden Dawn is able to effectively push its xenophobic agenda by appealing to popular sentiment (see Doxiadis and Matsaganis 2012, Karakatsanis and Swarts 2007, Chtouris et al. 2014). Having gained its first major political victory in the 2010 Athens municipal elections based on an anti-immigration ticket (Dinas et al. 2012), the party has gone to great lengths to "own" the issue of illegal immigration. The party advocates for the immediate deportation of all illegal migrants, who are are viewed as an existential demographic threat to the nation, with the fear of Greeks becoming a "minority within their own country" serving as a frequent rallying cry. While all immigrant groups are targeted, the party espouses particular intolerance towards Muslim migrants. Plans for the construction of a mosque in Athens, for example, have been equated with the "Islamification of Greece" and the "nullification of Hellenism's struggle for liberation from the Ottoman yoke."[8]The party's disdain for foreign immigrants is unfortunately not only limited to hate speech. GD has been responsible for a series of brutal displays of violence against immigrants, especially in recent years, including the January 2013 murder of Shehzad Luqman, a Pakistani immigrant, and the May 2011 "pogrom of Athens" which led to at least 120 injuries, 20 of which were serious.[9]Notably, an aggregation of reported hate crimes from multiple independent sources suggests that, over the period January 2012 through April 2013, there were a total of 281 recorded violent incidents in Greece, resulting in four deaths and 135 injuries—many of these attacks have been directly attributed to GD (Greek Ombudsman 2013, p. 6, see also Human Rights Watch 2012).

The "Popular Association–Golden Dawn" is fundamentally a *populist* movement with *anti-democratic features* and extreme *anti-party sentiments*. By appealing to established mainstream attitudes such as widespread support with political populism (see Pappas 2013, Vasilopoulou et al. 2014) and disenchantment with the political class following the economic crisis, the party seeks to justify its vision of a "popular state", whereby "political power rests with the People, without political party pimps" (Golden Dawn 2014b). The concentration of power at the top of the party hierarchy—a structure which adheres to the *Führerprinzip* or "leader principle"—is a direct reflection of the party's worldview of how the political structure of the country should be organized (see Psarras 2012, Ellinas 2013). "The Popular Nationalist state is the only form of direct democracy [...the People] do not need power but leadership. The People are the true masters, reigning over themselves through their Leader" (Golden Dawn 2014b). This notion of direct democracy through the omnipresent "Leadership" of the party, however contradictory and puzzling, is further expressed in its promise of referendums on all "major national issues". With respect to its views on parliamentary democracy, the party manifesto is committed to weakening the party system through numerous policies: ministers cannot be parliamentarians, the total number of members of parliament should be reduced by one third, all parliamentary immunities and privileges are to be abolished, no state funding of political parties, and party budgets should be subject to governmental oversight (Golden Dawn 2014a).

The economic philosophy of Golden Dawn can be understood in terms of *economic nationalism* and *socialism*. International integration is considered harmful to the national interest and should be scaled back. EU membership, for instance, is deemed as a significant *cause* of Greek economic under-performance and productive incapacity. Further, the adoption of the Euro is described as "catastrophic" and that a reversion to a national currency equates with national independence (Golden Dawn 2014a). The state should exert significant economic control by nationalizing strategic sectors and controlling private property so that "it does not

    [9]*Ethnos* «Οχι τζαμί στην Αθήνα» το βασικό σύνθημα στην συγκέντρωση της Χρυσής Αυγής' ["'No mosque in Athens', the main slogan at the meeting of Golden Dawn."] (December 14, 2013) http://www.ethnos.gr/article.asp?catid=22768&subid=2&pubid=63934084.
    [9]*Eleftherotypia (English Edition)* "Golden Dawn leaders orchestrated 2011 pogrom in Athens, lawyers say." (September 1, 2014) http://www.enetenglish.gr/?i=news.en.article&id=2047.

threaten the survival of the People or be used for manipulation" (Golden Dawn 2014a). In short, the ultimate economic policy goal of the party, according to its manifesto, is an autarkic model. By exploiting its natural resources and "functioning as an independent nation rather than as a sad protectorate", Greece should be able to subsidize the domestic production of strategic goods such as foodstuffs, pharmaceuticals, fuel, and weapons (Golden Dawn 2014a). In doing so, national sovereignty is ensured, according to the party. Furthermore, GD has sought to capitalize politically from the dire economic and social conditions in Greece (see Matsaganis and Leventi 2014, pp. 219-220) by advocating redistributive policies and implementing "shadow" public goods provision programs with exclusionist criteria. Claiming to be the only political party that is not beholden to large economic interests, it seeks to fight against the "plutocrats" who have benefited from the crisis at the expense of society through the "equal redistribution of our national wealth to the entire Greek people" (Golden Dawn 2014a). Golden Dawn MP Elias Panagiotaros spelled out the strategy very clearly in May 2013:

> Golden Dawn wants to become and will become like the Hezbollah in Lebanon which in effect is a second government which helps even its poorest citizen and over time Golden Dawn will do more for our fellow citizens.[10]

Examples of such "shadow government" policies have included blood drives, food distribution rallies, and re-employment services for "Greeks-only". The public policy preferences of the party, therefore, directly reflect the ideological leanings toward traditional extreme right positions such as nationalism, exclusionism, xenophobia, and anti-party and anti-democratic sentiments.

3   Identifying Ideology and Issue Salience from Official Party News

While a broad sketch of the ideological features of the Golden Dawn can be attained by reviewing a selection of relevant electoral literature, determining the "true ideology" of far-right parties (and parties in general) is not a straightforward endeavor. Mudde (2002, pp. 20-22) highlights the limitations of only focusing on the election programs of far-right parties to infer ideological outlook. For political appeal considerations, many aspects of the party ideology may be concealed from the manifesto, which is an outward-focused document, in order to hide distasteful true intentions. The rhetoric employed in the "back stage" may indeed be more radical or genuine than that used in the "front stage" which seeks to attract supporters from the wider public (Fleck and Müller 1998; Mudde 2002, p. 20). In the context of Golden Dawn, Ellinas (2013) argues that to achieve a comprehensive view of the party ideology and, specifically, its neo-Nazi characteristics, the analysis must go beyond an exclusive emphasis on electoral documents. Vasilopoulou and Halikiopoulou (2015) offer a valuable analysis of the broad ideological themes of Golden Dawn by studying approximately 1,000 documents from the party's online news section. The qualitative content analysis yields insight into how the party has sought to diagnose the Greek crisis as being the result of protracted social decadence and how the "solution" to the national dilemma is the "purification" of a fascist "national rebirth".

Our study builds upon previous work on the extreme right and the ideology of Golden Dawn by seeking to systematically identify the full range of ideological and issue-specific themes which are present in the party's online news literature. Next, we wish to uncover how these

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[10] *Special Broadcasting Service* "Thug Politics" (May 21, 2013) http://www.sbs.com.au/dateline/story/transcript/id/601692/n/Thug-Politics

themes relate to each other. Lastly, we are interested in measuring the salience of each of these themes at a given point in time, so as to determine thematic dynamics over a long time period. As will be discussed below, we employ computational and statistical methods to overcome the daunting resource costs involved with classifying such a large set of documents as that of the party's online news archive.

3.1 Data

To create the corpus to be analyzed, we programmed a script to automatically retrieve ("scrape") all online news stories from the official website of Golden Dawn (http://www.xryshaygh.com). This allowed for us to create a digital database of text and meta-data. Specifically, every article posted on its official online newspaper over the period 11 May 2012 to 10 August 2015 were gathered, resulting in a total number of 17,283 documents.

3.2 Preprocessing the Text Data

In an effort to economize computation, it is common when working with text data to perform a number of preprocessing steps before employing a particular analysis technique. Given that a particular analysis is often dealing with thousands of documents and millions of words, some thought needs to go into what words (or "tokens") are absolutely necessary for a particular analysis.[11] To this end, we removed common "stop words," which appear quite frequently in the text, but add little substantive information (e.g. words such as *the*/το , *of*/του, *at*/στο, and *on*/επί). Monotonic (ά, έ, ή) and polytonic (ᾰͅ, ε̆, ἡ̇) diacritics are removed (α, ε, η) and lowercase sigma (σ, ς) is collapsed (σ). Another common approach to reducing the dimensionality of the analysis is to remove the affixes from each word and combine words with common *stems*. For instance, the English language tokens *perpetrated*, *perpetrate*, and *perpetrates* would be combined into the same stemmed token, *perpetr*. In the case of Greek, stemming poses a bigger challenge, both in terms of implementation as well as interpretability. Compared to English, the Greek language has a much larger number of possible suffixes which implies that the grammatical type of the word should be known before stemming, something which has challenged computer scientists involved with developing Greek stemmers. Further, compared to English, there is a higher risk of collapsing words with different meanings onto a similar stem (Adam et al. 2010). There is also the risk of generating significantly abstruse token labels. Although there is an active research area in stemming the Greek language (see Kalamboukis 1995, Tambouratzis 2001, Ntais 2006, Adam et al. 2010), we opt to allow the corpus to include inflected words, trading computational benefits for interpretability.

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[11]Specifically, we seek to "parse" the text so as to convert it into a format in which the computer can readily understand. To achieve this objective, we begin by "tokenizing" the string of words representing each document into a list of individual words (or tokens), removing punctuation, extra white space, and converting each word to lowercase. For instance, Cavafy's "but never a sound of building, never an echo came" would be transformed into {*but, never, a, sound, of, building, never, an, echo, came*} after tokenization. Moreover, consistent with the vast majority of studies in employing text-mining techniques, we represent each text in the corpus as a "bag of words," ignoring word order and representing each document as a vector of unique word types. In keeping with our previous example, the above token list would be represented by [1, 2, 1, 1, 1, 1, 1, 1, 1], where each element of the vector corresponds to the following set of IDs, {*but* = 1, *never* = 2, *a* = 1, *sound* = 1, *of* = 1, *building* = 1, *an* = 1, *echo* = 1, *came* = 1}. The process of tokenizing and vectorizing text into a "bag of words" is repeated for each document in the corpus, leaving a (sparse) "document-term matrix" that represents documents as rows and unique tokens as columns (see Minmo 2012, for an overview). Lastly, tokens that are present in fewer than 10 documents and more than 57% of the corpus are removed.

4 Methods: probabilistic topic modelling

The time and effort associated with reading over 17,000 documents renders traditional content analytic approaches inadequate and/or infeasible and thus the next step is to find a suitable computational model—statistical or otherwise—to help make sense of the data. We approach this step using an *unsupervised* approach, exploring the presence of meaningful clusters of terms that appear across documents in the collected corpus. While there is no shortage of clustering algorithms to examine text in the literature (Grimmer and King 2011), we utilize the latent Dirichlet allocation (LDA) model originally proposed in Blei et al. (2003). LDA provides a statistical framework for understanding the latent topics or themes running through a corpus by explicitly modelling the random process responsible for producing a document. The LDA model assumes that each document is made up of a mixture of topics, as well as a mixture of words associated with each topic. For instance, the document you are reading at this moment includes a mixture of themes such as "immigration" and "text analysis," and these themes tend to use different language—the topic "immigration" is likely associated with the word "refugee," whereas the topic "text analysis" is associated with the word "random." Moreover, this process is probabilistic in the sense that we could have used the term "stochastic" instead of "random" in the previous sentence.

This basic generative story provides the basis for a simple hierarchical Bayesian model based on the following assumptions: 1) each word in a text is exchangeable, each text in a corpus is a combination of a specific number of topics (T_k), and each specific topic is represented as a distribution of words (*w*) over a fixed vocabulary (Blei et al. 2003, Griffiths and Steyvers 2004). The generative structure that produces each document in a corpus is represented as random mixtures of latent topics and their associated distributions of words. Specifically, the LDA assumes that documents are generated from the following probabilistic process:

1. Each of the *k* topics are drawn from a topic distribution by

$$\theta \sim Dirichlet(\alpha)$$

2. The term distribution β for each topic is represented by

$$\beta \sim Dirichlet(\eta)$$

3. For each of the *N* words w_n:

   Randomly sample a topic $z_n \sim Multinomial(\theta)$.

   Choose a word w_n from $p(w_n|z_n, \beta)$.

While this process provides a simple representation of the data generating process for corpus of texts, the model has been shown to preform well in a wide range of areas, from population biology to information retrieval (see Blei 2012, for an overview).

4.0.1 Inferring Topic Structure

We rely on the sparse Gibbs sampler described in Yao et al. (2009) to infer the topic structure.[12] After a good deal of experimentation regarding model's hyperparameters, we found

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[12]Our choice to rely on the sparse Gibbs sampler was driven primary by concerns over efficiency and computational convenience. Note that little changes when using other commonly employed sampling algorithms such as the variational expectation maximization approach discussed in Blei et al. (2003) or the (also quite efficient) collapsed Gibbs sampler discussed in Griffiths and Steyvers (2004).

that the efficient hyperparameter optimization routine utilized in Wallach et al. (2009a) provided the most easily interpretable set of topics.[13]

LDA requires one to specify the number of topics *a priori*. This presents an obvious challenge, as researchers generally do not have strong prior information about the number of topics in a corpus. While a range of methods have been introduced in the literature to estimate the "natural" number of topics for a corpus based on the held-out likelihood (see Wallach et al. 2009b, for an overview), there remains considerable debate on the utility of data-driven approaches for generating interpretable topics. For instance, using a large number of human subjects, Chang et al. (2009) present evidence suggesting models which preform better in terms of held-out likelihood, may actually infer less meaningful topics. The results suggest the need to carefully examine the interpretability of the latent space when employing topic models and provide caution against blindly choosing the model that minimizes held-out likelihood.

In this paper, we employ a balanced approach between "optimal" data-driven methods and a qualitative assessment of the interpretability of the latent space. In terms of data-driven methods, we rely on the selection criteria proposed in Arun et al. (2013). We have found this to be a useful heuristic for deciding a reasonable topic number on both real and synthetic datasets. Using the data-driven approach as a starting point, the next step involved systematically analysing a range of topic solutions in terms of their "stability" across various assumptions regarding the topic number (k). From this exercise we find that $k = 45$ offers a suitable balance between having a manageable number of topics, enough detail to assess core substantive themes in Golden Dawn rhetoric, displaying a reasonable level of "fit" using data-driven methods, and demonstrating stability across a range of solutions.

5 Results

5.1 Model estimation and topic interpretation

After removing eight "junk" topics (AlSumait et al. 2009),[14]our final list includes 37 substantively meaningful topics representing a range of issues related to party-specific issues, the economic crisis, national policy issues, rival political parties, perceived corruption, and political violence, among others. To ease interpretation, we produce a descriptive label for each topic by reading the 10 most probable documents. The descriptive labels not only provide useful information to facilitate topic interpretation, but also offer a first look at one aspect *semantic validity*: the extent to which each topic is coherent in terms of its meaning (Quinn et al. 2010). We also include a set of keywords for each topic based on the word's "frequency-exclusivity" (FREX), as described in Roberts et al. (2014). FREX offers a balance between the probability (or "frequency") of a word being associated with a particular topic and the extent to which a word is unique to a topic (i.e., "exclusivity"). Table 1 provides the topic ID, a short descriptive label, and a list of the 5 most probable keywords based on the FREX score (in English and Greek) for a sample of 10 topics. For a description of the complete list of topics see Appendix A.

As demonstrated in Table 1 and more generally in Table 2, the model uncovers many of the topics that one would expect to see in a corpus of Golden Dawn discourse. Nationalist

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[13]We optimize both the α and β hyperparameter in the results provided below. It is important to note, however, that the topics described below display a good deal of stability across a wide range of specifications.

[14]AlSumait et al. (2009) note that not all topics in an estimated topic model are of equal importance and it is not uncommon to have a set of "junk" topics that pick up common co-occurrences of words with little or no substantive meaning.

ID	Topic Label	Tokens
3	Political scandals	list, Papaconstantinou, Lagarde, have, Financial Crime Unit λιστασ παπακωνσταντινου λαγκαρντ εσχεσ σδοε
5	Immigration	illegal immgrants, illegal immigration, refugees, illegal immgrants, migrants λαθρομεταναστων λαθρομεταναστευσησ προσφυγεσ λαθρομεταναστεσ μεταναστων
10	Bonds & debt	bonds bonds haircut debt loan ομολογα ομολογων χουρεμα χρεουσ δανειο
11	Jews & Israel	Palestinians Jewish Anti-semitism AJC Jewish παλαιστινιων εβραικου αντισημιτισμου ajc εβραιχο
17	Conspiracy against GD	appeals investigators Klapa Dogiakos Dogiakos εφετων αναχριτριεσ χλαπα ντογιαχοσ ντογιαχου
20	Territorial disputes	EEZ deposits deposits gas hydrocarbons αοζ κοιτασματα κοιτασματων αεριου υδρογονανθραχων
25	PASOK	Jeffrey Duce Georgey Pangalos thief τζεφρυ ντουτσε γιωργαχη παγχαλοσ κλεφτησ
26	Leftist terrorism	terrorist nuclei Xiros terrorists Kapelonis τρομοκρατικη πυρηνων ξηρου τρομοκρατων καπελωνη
28	SYRIZA	memorandum Varoufakis Varoufakis referendum lenders μνημονιο βαρουφαχησ βαρουφαχη δημοψηφισμα δανειστεσ
37	Econ. recession	unemployment unemployment poverty story success ανεργιασ ανεργια φτωχειασ story success

ID	Title
3	Pre-election Siemens bribe to the criminal gang PASOK, Mandelis confesses. Προεκλογική μίζα της *Siemens* στην εγκληματική συμμορία ΠΑΣΟΚ ομολογεί ο Μαντέλης.
5	The Aegean is "sinking" from the continuous inflow of illegal immigrants. «Βουλιάζει» το Αιγαίο από την συνεχή εισροή λαθρομεταναστών.
10	NEW OCCUPATION: The banks under the control of the international usurers. ΝΕΑ ΚΑΤΟΧΗ: Υπό τον έλεγχο των διεθνών τοκογλύφων οι τράπεζες
11	The international overlords congratulate Samaras again for his servility. Οι διεθνείς επικυρίαρχοι πάλι συγχαίρουν τον Σαμαρά για την δουλοπρέπεια του.
17	The chronology of the conspiracy against the third political force of the Country. Το χρονικό της σκευωρίας κατά της τρίτης πολιτικής δύναμης της Χώρας.
20	Nighttime "invasion" of a Turkish corvette into territorial waters off the coast of Attica. Νυχτερινή "εισβολή" τουρκικής κορβέτας στα εθνικά χωρικά ύδατα ανοιχτά της Αττικής.
25	When Venizelos demanded that they apologize to Tsochatzopoulos. Όταν ο Βενιζέλος απαιτούσε να ζητήσουν συγγνώμη από τον Τσοχατζόπουλο
26	Samaras and Dendias have absolute responsibility for the double homicide in N. Iraklio. Σαμαράς και Δένδιας φέρουν απόλυτη ευθύνη για την διπλή δολοφονία στο Ν. Ηράκλειο.
28	A new crushing memorandum from SYRIZA. Νέο εξοντωτικό Μνημόνιο από τον ΣΥΡΙΖΑ.
37	Unemployment and poverty are pauperizing the Greek citizen. Ανεργία και φτώχεια εξαθλιώνουν τον Έλληνα πολίτη.

Table 1: *A list of 10 estimated topics*. The table provides information on a sample of the topics estimated by the model. The top panel displays each topic's unique ID, descriptive label, and the English and Greek top 5 keywords based on the FREX score (Roberts et al. 2014). The bottom panel displays the English and Greek title of a highly probable document from each topic.
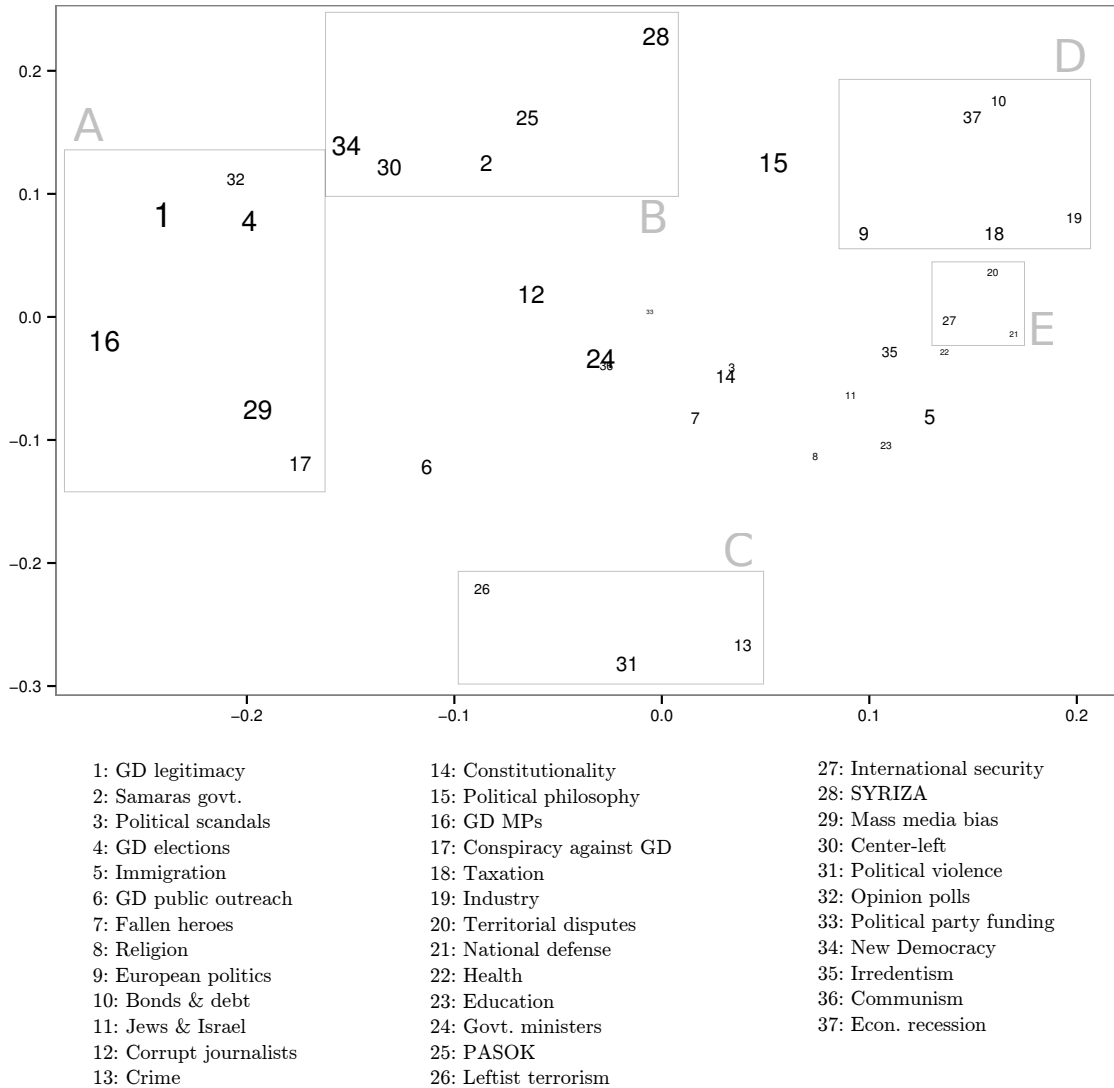
themes such as *Irredentism* (topic 35), *Territorial disputes* (topic 20), and *Fallen heroes* (topic 8) emerge from the corpus. Exclusionist and xenophobic topics are also detected within the news corpus, such as *Immigration* (topic 5). Strong state themes are also pronounced, such as *National defense* (topic 21) and *Crime & punishment* (topic 13). The model singles out a dedicated anti-semitic theme which we label *Jews & Israel* (topic 11). Ethical issues arise within *Religion* (topic 8), *GD legitimacy* (topic 1), and *Political philosophy* (topic 15).

There are a number of anti-party, anti-systemic, and anti-democratic themes which the model classifies as well. For instance, there are dedicated topics that produce documents which are highly critical of rival parties *SYRIZA* (topic 28), *PASOK* (topic 25), and *New Democracy* (topic 34). The political system is shown to be corrupt and illegitimate in *Political scandals* (topic 3), *Govt. ministers* (topic 24), and *Political party funding* (topic 33). Further, Golden Dawn is portrayed as a victim of systemic bias in themes such as *Conspiracy against GD* (topic 17), *Mass media bias* (topic 29), and *Leftist terrorism* (topic 26).

Issues concerning the economic crisis and government policy are also detected within the parliamentary questions corpus. The injustice of austerity and accusations of international conspiracy and domestic treachery are found within themes such as *Econ. recession* (topic 37), *Taxation* (topic 18), *Industry* (topic 19), and *European politics* (topic 9). Lastly, criticisms of existing government policy in other areas are detected, such as *Health* (topic 22) and *Education* (topic 23), as well as populist activities of the party in *GD public outreach*.

5.2   Topic Similarities

While the descriptive labels described in Section 5.1 offer initial support for semantic validity of the predicted topics, an additional means of examining this criterion assesses the extent to which topics relate to one another in substantively meaningful ways (Quinn et al. 2010). Note that a "topic" in the LDA model is represented by a probability distribution—i.e., the distribution of words given the topic—and thus the notion of "topic similarity" centres on the distance between two probability distributions. While there are a number of metrics available for examining the distance between probability distributions, a common approach is to rely on the well-known Kullback-Leibler (KL) divergence or the related Jensen-Shannon divergence (JSD). We examine similarity (or dissimilarity) using the square root of JSD (sometimes referred to as Jensen-Shannon "distance"), which rescales the JSD into a proper metric (Endres and Schindelin 2003, Österreicher and Vajda 2003). Intuitively, when two topic distributions are more similar, they will share a smaller JS distance and vice versa. Figure 1 presents this information graphically by mapping the pairwise distances onto a two dimensional space using classic multi-dimensional scaling (Gower 1966). Topics that address similar themes—and thus rely on similar words with high probability—should be relatively close to one another in Figure 1, while dissimilar themes should be further way.

Figure 1: *Topic similarities*. The figure presents Jenson-Shannon distances projected onto a 2D space via multi-dimensional scaling. The size of a plotted label corresponds to the number of times the topic was sampled in the corpus and thus gives a rough indication of topic importance. Topics using similar words will be closer together in the figure and vice versa. To ease visualization of salient groupings, we draw five boxes which enclose meta-themes related to party-specific issues (A), rival parties (B), political violence and victimization of the party (C), the economic crisis and austerity (D), as well as national security issues (E).

The results of this analysis suggest higher-order themes are present within the corpus. We observe a set of meaningful clusters, with topics related to party-specific issues, rival parties, political violence and victimization of Golden Dawn, the economic crisis and austerity, as well as national security issues located in distinct areas of the figure. We single out five segments of the plot to highlight commonalities among topics predicted by the model. Areas

A and *B* contain topics that are about Golden Dawn specifically or other rival political parties, respectively. As such, the top left area of the overall plot is populated by topics exclusively dealing with politics. On the right side of the plot, where areas *D* and *E* are located, we find more policy-related themes, such as topics involving the economic crisis, austerity measures, and national defense. It should be noted that it is reasonable that these broader themes be close to each other, as typical messages found in documents within these topics suggest that the plight of Greece can be attributed to various external threats. Below and adjacent to these areas are other policy-relevant themes such as health and education policy. Far from most other topics is area *C* which contains topics dealing with political violence. This distance suggests that, by and large, the language used by the party when describing leftist terrorist attacks, anarchist street violence, and crime is unique. Although not labeled, the middle section of the plot also contains a generally cohesive set of topics which mostly focus on corruption and injustice.

While the relative placement of these broader themes is informative, we can gain even further insight by looking *within* the principal areas. For instance, in area *A*, topics associated with elections and public opinion surveys (4 and 32) are situated closer to area *B* which contains themes related to rival parties. At the bottom section of this region, discussions on mass media bias against the party (29) and a wider systemic conspiracy against Golden Dawn are close together, suggesting that the media are associated with the woes of the party following the government crackdown. Taking area *C* as another example, although the region itself is quite far from all other topics, the within-area topic positioning is informative. Discussions on leftist terrorism gravitate closer to area *A* since the party has lost two members to purported leftist terrorists, while general crime-related subject matter is closer to other policy-related discussions found on the right side of the plot. This within-region topic placement reinforces semantic validity of the predicted topics.

6 Fishing for Votes in the Aegean

Europe is currently experiencing a migration crisis of unprecedented in recent memory proportions. Over the past few years, tens of thousands of migrants, refugees, and asylum seekers have undertaken the perilous journey of crossing the Mediterranean to seek a safer and better life in Europe. This influx has been growing markedly, with the total number of illegal border crossings into Europe going from 141,000 in 2011 to 278,000 in 2014.[15] Detection statistics in 2015 suggest that these numbers are likely to grow much more. Over 137,000 people have crossed the Mediterranean into Europe within the first two quarters of 2015 alone.[16]
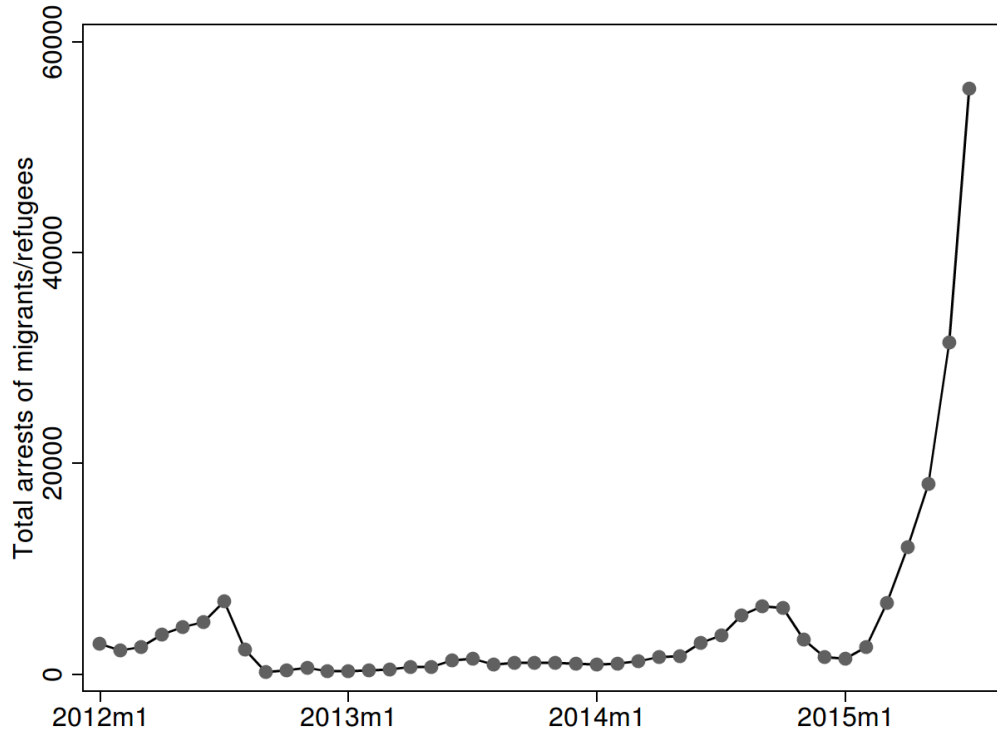
During this period, Greece has been a "frontline" country, having received a considerable share of migrants who chose to enter Europe from Turkey. However, in 2015 there was a major shift in the bulk of the crossing flows from the central Mediterranean (northern Africa to Italy) to the eastern Mediterranean (Turkey to Greece).[17] This shift in weight towards the eastern migration route has had a severe impact on Greece. Figure 2 illustrates the magnitude of illegal border crossings as proxied by the total monthly detentions of migrants/refugees by Greek authorities at the land border in Thrace and the eastern Aegean Sea.[18] From these data it is clear that the sea-change for Greece has been drastic. Further, the Hellenic Coast Guard

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[15]Frontex (2 February 2015) "Latest Trends at External Borders of the EU." Accessed at http://frontex.europa.eu/news/latest-trends-at-external-borders-of-the-eu-6Z3kpC.

[16]UNHCR (1 July 2015) "Mediterranean Crisis 2015 at six months: refugee and migrant numbers highest on record" Accessed at http://www.unhcr.org/5592b9b36.html.)

[17]Frontex (June 2015) "FRAN Quarterly, Quarter 1, January-March 2015" Accessed at: http://reliefweb.int/sites/reliefweb.int/files/resources/FRAN_Q1_2015.pdf.

[18]Data compiled from statistics provided by the Greek police (http://www.astynomia.gr/) and Hellenic Coast Guard (http://www.hcg.gr/).

Figure 2: Total number of monthly migrant/refugee detentions by the Greek police force and Hellenic Coast Guard (January 2012-July 2015).

has reported that there are approximately 2.5 million migrants waiting to cross over to Greece from Turkey.[19] With little help from authorities in Athens, local governments of islands in the eastern Aegean have been overwhelmed with these soaring numbers. In some instances, the number of migrants reached near parity with local populations, as was the case of Leros in August and September 2015.[20] Makeshift camps have been set up in many islands to offer temporary assistance to migrants who await paperwork approval for the journey to mainland Greece and then on to northern Europe. Many residents of islands such as Kos, Chios, and Lesbos–islands bearing the brunt of the migrant surge and whose economies are dependent on tourism–have expressed outrage at the perceived lack of control. Indeed, for these islands, the migration issue has solidly taken the top of the political agenda.

6.1   Ownership of the Immigration Issue

It is in this ripe political environment that Golden Dawn is campaigning for the general elections which are set to take place on 20 September 2015. As discussed in Section 2, Golden Dawn is a fundamentally xenophobic party. Its initial electoral successes have been attributed to boots-on-the-ground vigilante-style activities in areas with large migrant populations such as the Agios Panteleimon district of Athens (Dinas et al. 2012, Ellinas 2013). The party has expended significant effort through its hateful, violent and criminal behavior towards immigrant communities to establish "ownership" of the immigration issue in the eyes of Greek voters. By

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[19]*Kathimerini* 'Εκρηκτική η κατάσταση στο Αιγαίο' ["The situation in the Aegean is explosive."] (10 April 2015) http://www.kathimerini.gr/810965/article/epikairothta/ellada/ekrhktikh-h-katastash-sto-aigaio.

[20]BBC (17 September 2015) "Migrant crisis on Greek islands eclipses election" Accessed at: http://www.bbc.com/news/world-europe-34266601.

doing so, the party is able to emphasize its comparative advantage on the issue relative to other parties which are framed as weak (see Petrocik 1996, Egan 2013, Green and Hobolt 2008, Dennison and Goodwin 2015). There are strong anecdotal indications to suggest that Golden Dawn is seeking to politically capitalize on the current migrant crisis by highlighting its ownership of the immigration issue. The central rallying cry of the party in the weeks prior to the election has been twofold: anti-austerity and anti-immigration. During a campaign stop on the island of Kos, high-ranking MP Elias Kasidiaris told residents:

> Elections are approaching. Kos has a choice. If [inhabitants] choose to vote SYRIZA it will turn into Pakistan. If they choose Golden Dawn and Golden Dawn governs the land, then Kos will become Greece again. And that is our goal.[21]

Fear of a sustained influx of migrants and anger towards the perceived abandonment of the eastern islands by the central governments is widespread. The mayor of Mytilene, for instance, has threatened to shut down polling stations if the central government does not respond to his calls for help.[22] This outrage has already transformed into violence. During a fact-finding mission on the island of Kos, a team from Amnesty International documented a violent attack on migrants by a group of 15-25 bat-wielding Greeks.[23] Golden Dawn seeks to channel this anger into votes.
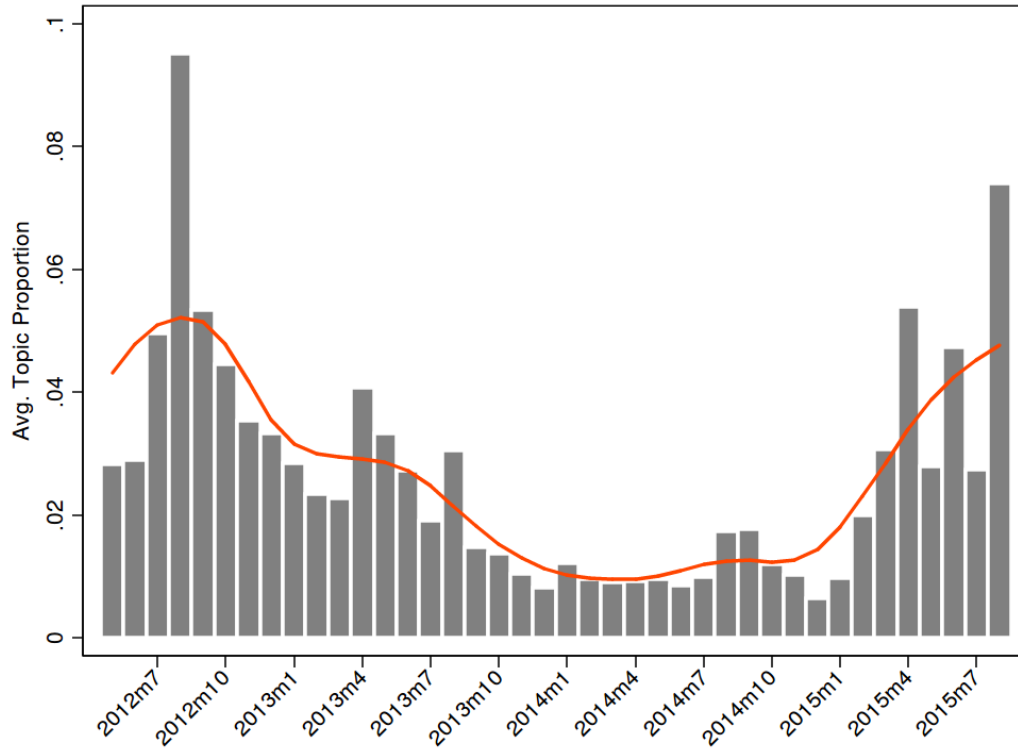
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[21] *The Guardian* (16 September 2015) "Greek election 2015: Golden Dawn rises on austerity-driven despair." Accessed at: http://www.theguardian.com/world/2015/sep/16/greek-election-2015-golden-dawn-austerity.

[22] *Ta Nea* 'Μυτιλήνη: Σε αποχή από τις κάλπες, αν δε λυθεί το προσφυγικό καλεί ο δήμαρχος' ["Mytilene: Abstention from the polls if the refugee problem is not solved, calls the mayor."] (5 September 2015) http://www.tanea.gr/news/greece/article/5271886/mytilhnh-se-apoxh-apo-tis-kalpes-an-de-lythei-to-prosfygiko-kalei-o-dhmarxos/.

[23] *Proto Thema* 'Σήμα κινδύνου από Κω, Μυτιλήνη: Είμαστε στο σημείο μηδέν πριν από την έκρηξη' ["Emergency alarm from Kos, Mytilene: Explosion imminent."] (5 September 2015) http://www.protothema.gr/greece/article/506226/pnigodai-ta-nisia-apo-metanastes-/.
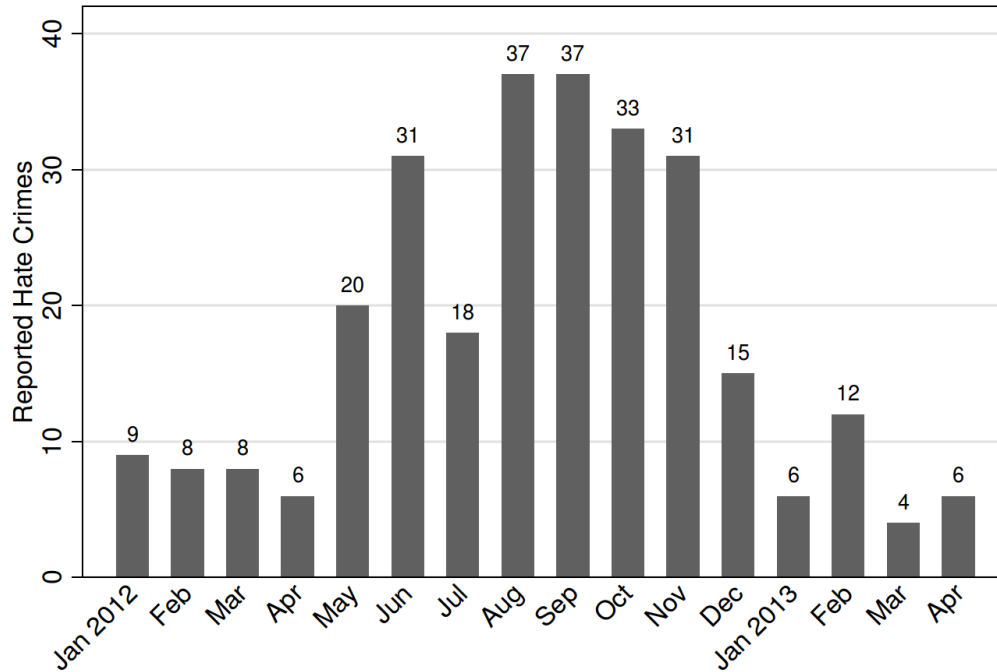
Figure 3: Average monthly topic proportion of discussions surrounding immigration within the online news corpus over the period May 2012–August 2015. A local polynomial trend line is included to assist interpretation.

While recent observations of campaign rhetoric suggest that immigration has taken a high rank on the party's agenda, there are gaps in our understanding of how the salience of this issue has varied since the party entered Parliament in 2012. Has the party devoted so much effort to this issue throughout this period, even during the conservative New Democracy-led coalition government of 2012-2015? Did the party focus on the immigration issue in other election periods?

We shed light on the question of how the party has emphasized the immigration issue by utilizing the *Immigration* topic time-series data which was generated by the analysis in Section 5. To illustrate the saliency dynamics of this issue over the time period of study, Figure 3 displays the average monthly probabilities of the *Immigration* topic from May 2012 to August 2015. Here we can see that an emphasis on immigration by the official party online newspaper has been anything but constant. The model results suggest that at its peak in salience in August 2012, an average article from the corpus devoted about 9.5% of its words to immigration. This average topic probability then slides significantly reaching a sustained period of less than 1% probability during much of 2014. This trend in issue salience is comparable to the incidence rates of racist violence as illustrated in Figure 4, suggesting that the party's words and deeds were inextricably linked in the early period. Following the government crackdown of September 2013, we see another substantive drop in discussions on immigration.

Source: Greek Ombudsman (2013)

Figure 4: Number of reported hate crimes in Greece (January 2012-April 2013). Data accessed from Greek Ombudsman (2013).

This change could be the result of a shift in focus toward the existential threat posed by the Ministry of Justice. However, another likely explanation is that by late 2013, the immigration problem was largely perceived by the public as under control. According to Frontex, the implementation of operations Aspida and Xenios Zeus in August 2012 resulted in detections of illegal border crossings reaching "negligible levels".[24][25] The fact that we do not observe any increase in discussions related to immigration during the May 2014 European Parliament elections is indicative of how the party's "ownership" of the issue may have been severely diminished during this period.

Following the election of SYRIZA in January 2015, however, the anti-immigration season was back in effect for Golden Dawn. Along with the accelerating increases in detentions of migrants and refugees as shown in Figure 2, we also observe an acceleration of emphasis on immigration in the online news corpus. Specifically we find a shift in average topic probabilities from 2% in February 2015 to 7.4% in August 2015. It is likely that Golden Dawn was able to fill a renewed vacuum on immigration as a consequence of the new govenment's poor public relations and immigration policy ineffectiveness. In an April 2015 public opinion poll, in response to the question "How do you grade the performance of the government, from 0-10, on the immigration issue?", the average score was 3, while 35.5% of the respondents gave

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[24]Frontex (2013) "Annual Risk Analysis." Accessed at: `http://frontex.europa.eu/assets/Publications/Risk_Analysis/Annual_Risk_Analysis_2013.pdf`

[25]It should be noted that, although these operations may have been objectively effective in reducing illegal border detections, there is substantial documented evidence to suggest systemic policy brutality and abuse (see Human Rights Watch 2013). This may be yet another reason for why Golden Dawn had reduced its emphasis on immigration during this period, as it was now competing with openly brutal police operations.

the government a zero.[26] It remains to be seen how much of this discontent Golden Dawn will be able to captialize on in the upcoming elections. It is clear from our data, though, that it is investing heavily in regaining its title of "owner" of the immigration issue.

7 Concluding Remarks

Applying probabilistic topic modeling techniques to a large set of online official party news articles, we were able to discern prominent themes and certain informative patterns regarding the semantic similarity of topics within a corpus of over 17,000 Golden Dawn news articles. Each of the documents in this corpus is annotated by the model to reflect the specific mixture of topics present. These probabilities are then used to generate time-series data for each topic over the period 2012-2015. Our key findings include:

1. The analysis yielded a set of topics that correspond with the party's ideological themes, features, and sub-features described in Section 2, such as nationalism, xenophobia, socio-economy policy and others.

2. We were able to generally confirm semantic validity of these topics by evaluating sets of documents with high probabilities of being assigned to each topic. Further, as shown in Figure 1 and discussed in Section 5.2, we uncover interesting and intuitive clusterings of the predicted topics.

3. Using the time-series data of the *Immigration* topic we demonstrate how Golden Dawn has varied its focus on immigration since entering Parliament and offer explanations as to what might explain this variation. We show how the party was likely crowded out of the immigration issue space during the New Democracy-led government, only to return on the scene in full force immediately following the election of SYRIZA into power.

We should note that there are a number of limitations present in the current version of the study. We have not validated the model by comparing the model predictions to human-coded "gold-standard" classifications. Further, while we are able to classify the mixture of topics present in a given document, we have not conducted a sentiment analysis of the corpus. This means that we are not able to infer whether a given issue is presented in a positive, negative, or neutral light. Based on our reading of the corpus, however, as well as our theoretical priors, it is fair to assume that issues such as immigration or leftist terrorism are portrayed negatively, while topics related to Golden Dawn are positively framed. This being said, in providing the corpus of documents and generated thematic time-series data to the wider academic community, we hope to contribute useful information for future qualitative and quantitative investigations of the communication strategies of Golden Dawn.

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[26] *Univeristy of Macedonia* ʽΈρευνα διερεύνησης πολιτικών τάσεων' ["Exploratory research of political trends.] (15-17 April 2015) http://content-mcdn.imerisia.gr/pegasus/Multimedia/pdf/pollapril_id3379052.pdf.

References

Adam, G., Asimakis, K., Bouras, C., and Poulopoulos, V. (2010). An efficient mechanism for stemming and tagging: the case of greek language. In *Knowledge-Based and Intelligent Information and Engineering Systems*, pages 389–397. Springer.

AlSumait, L., Barbara, D., Gentle, J., and Domeniconi, C. (2009). Topic significance ranking of lda generative models. In *ECML*.

Anti-Defamation League (2014). ADL Global 100. http://global100.adl.org/.

Antoniou, G., Kosmidis, S., Dinas, E., and Saltiel, L. (2014). Περί αντισημιτισμού και άλλων δαιμονίων [On anti-Semitism and other demons]. *The Athens Review of Books*, (54). http://athensreviewofbooks.com/?p=1262.

Blei, D. M. (2012). Probablistic topic models. *Communications of the ACM*, 55(4):77–84.

Blei, D. M., Ng, A. Y., and Jordan, M. I. (2003). Latent dirichlet allocation. *Journal of Machine Learning Research*, 3:993–1022.

Bunzl, M. (2005). Between anti-semitism and islamophobia: Some thoughts on the new europe. *American Ethnologist*, 32(4):499–508.

Chang, J., Boyd-Graber, J., Wang, C., Gerrish, S., and Blei, D. M. (2009). Reading tea leaves: How humans interpret topic models. In *NIPS*.

Chtouris, S., Zissi, A., Stalidis, G., and Rontos, K. (2014). Understanding xenophobia in greece: A correspondence analysis. *European Journal of Sociology*, 55(01):107–133.

Dennison, J. and Goodwin, M. (2015). Immigration, issue ownership and the rise of ukip. *Parliamentary Affairs*, 68(suppl 1):168–187.

Dinas, E., Georgiadou, V., Konstantinidis, I., Marantzidis, N., and Rori, L. (2012). New political opportunities for an old party family? the case of golden dawn in greece. In *XXII World Congress of Political Science, Madrid*, pages 8–12.

Dinas, E. and Rori, L. (2013). The 2012 greek parliamentary elections: Fear and loathing in the polls. *West European Politics*, 36(1):270–282.

Doxiadis, A. and Matsaganis, M. (2012). *National populism and xenophobia in Greece*. Counterpoint.

Egan, P. J. (2013). *Partisan priorities: How issue ownership drives and distorts American politics*. Cambridge University Press.

Ellinas, A. A. (2013). The rise of Golden Dawn: the new face of the far right in Greece. *South European Society and Politics*, 18(4):543–565.

Endres, D. M. and Schindelin, J. E. (2003). A new metric for probability distributions. *IEEE Transactions on Information Theory*, 49(7):1858–1860.

Fleck, C. and Müller, A. (1998). Front-stage and back-stage: the problem of measuring post-nazi antisemitism in austria. pages 436–454. Social Science Monogr.

Golden Dawn (1987). Διακύρηξη Ιδεολογικών Αρχών [Declaration of Ideological Principles]. http://bit.ly/ZtSEmT [Accessed: 30/9/14].

Golden Dawn (2012a). Πολιτικές Θέσεις [Political Positions]. http://www.xryshaygh.com/index.php/kinima/thesis [Accessed: 21/7/12].

Golden Dawn (2012b). Χρυσή Αυγή: Ένα Κίνημα Ιδεολογικό [Golden Dawn: An Ideological Movement]. http://www.xryshaygh.com/index.php/kinima/ideologia [Accessed: 30/8/14].

Golden Dawn (2014a). Πολιτικές Θέσεις [Political Positions]. http://www.xryshaygh.com/index.php/kinima/thesis [Accessed: 5/7/14].

Golden Dawn (2014b). Ταυτότητα [Identity]. http://www.xryshaygh.com/index.php/kinima [Accessed: 25/7/14].

Gower, J. C. (1966). Some distance properties of latent root and vector methods used in multivariate analysis. *Biometrika*, 53:325–328.

Greek Ombudsman (2013). Ειδική Έκθεση: Το Φαινόμενο της Ρατσιστικής Βίας στην Ελλάδα και η Αντιμετώπισή του [special report on the phenomenon of racial violence in greece]. http://www.synigoros.gr/resources/docs/eidikiekthesiratsistikivia.pdf.

Green, J. and Hobolt, S. B. (2008). Owning the issue agenda: Party strategies and vote choices in british elections. *Electoral Studies*, 27(3):460–476.

Griffiths, T. L. and Steyvers, M. (2004). Finding scientific topics. *Proceedings of the National Academy of Sciences of the United States of America*, 101:5228–5235.

Grimmer, J. and King, G. (2011). General purpose computer-assisted clustering and conceptualization. *Proceedings of the National Academy of Science*, Inagural Articles:1–8.

Halikiopoulou, D. and Vasilopoulou, S. (2012). Greece's response to austerity has been to say "no to the fourth reich" but yes to the neo-nazism of the golden dawn. *LSE European Politics and Policy (EUROPP) Blog*.

Human Rights Watch (2012). Hate on the streets: Xenophobic violence in greece. http://www.hrw.org/sites/default/files/reports/greece0712ForUpload.pdf.

Human Rights Watch (2013). *Unwelcome guests: Greek Police Abuses of Migrants in Athens*.

Kalamboukis, T. (1995). Suffix stripping with modern greek. *Program: electronic library and information systems*, 29(3):313–321.

Karakatsanis, N. M. and Swarts, J. (2007). Attitudes toward the xeno: Greece in comparative perspective. *Mediterranean Quarterly*, 18(1):113–134.

Matsaganis, M. and Leventi, C. (2014). Poverty and inequality during the great recession in greece. *Political Studies Review*, 12(2):209–223.

Minmo, D. (2012). Computational historiography: Data mining in a century of classics journals. *Journal on Computing and Cultural Heritage*, 5(1):3:1–3:19.

Mudde, C. (1995). Right-wing extremism analyzed. *European Journal of Political Research*, 27(2):203–224.

Mudde, C. (2002). *The ideology of the extreme right*. Manchester University Press.

Ntais, G. (2006). *Development of a Stemmer for the Greek Language*. PhD thesis, Stockholm University.

Österreicher, F. and Vajda, I. (2003). A new class of metric divergences on probability spaces and its applicability in statistics. *Annals of the Institute of Statistical Mathematics*, 55(3):639–653.

Pappas, T. S. (2013). Why greece failed. *Journal of Democracy*, 24(2):31–45.

Petrocik, J. R. (1996). Issue ownership in presidential elections, with a 1980 case study. *American journal of political science*, pages 825–850.

Psarras, D. (2012). Η Μαύρη Βίβλος της Χρυσής Αυγής *[The Black Bible of Golden Dawn]*. Polis.

Quinn, K. M., Monroe, B. L., Colaresi, M., Crespin, M. H., and Radev, D. R. (2010). How to analyze political attention with minimal assumptions and costs. *American Journal of Political Science*, 54(1).

Roberts, M. E., Stewart, BrandStewart, B. D., Lucas, C., Leder-Luis, J., Gadarian, S. K., Albertson, B., and Rand, D. G. (2014). Structural topic models for open-ended survey responses. *American Journal of Political Science*, 58(4):1064–1082.

Tambouratzis, G. (2001). Automatic corpora-based stemming in greek. *Literary and linguistic computing*, 16(4):445–466.

Vasilopoulou, S. and Halikiopoulou, D. (2015). *The Golden Dawn's' Nationalist Solution': Explaining the Rise of the Far Right in Greece*. Palgrave Macmillan.

Vasilopoulou, S., Halikiopoulou, D., and Exadaktylos, T. (2014). Greece in crisis: austerity, populism and the politics of blame. *JCMS: Journal of Common Market Studies*, 52(2):388–402.

Wallach, H. M., Mimno, D., and Mccallum, A. (2009a). Rethinking lda: Why priors matter. NIPS.

Wallach, H. M., Murray, I., Salakhutdinov, R., and Mimno, D. (2009b). Evaluation methods for topic models. In *ICML*.

Williams, M. H. (2010). Can leopards change their spots? between xenophobia and trans-ethnic populism among west european far right parties. *Nationalism and Ethnic Politics*, 16(1):111–134.

Yao, L., Mimno, D., and McCallum, A. (2009). Streaming inference for latent dirichlet allocation. kdd, 2009. *KDD*.

A Full List of Topics

This table provides the results of the 45 topic LDA for the online news corpus, as descried above in section 5.1. We removed eight "junk" topics (AlSumait et al. 2009), leaving a wide range of subjects. For each topic, we present the topic ID, topic label, and the top 5 most probable tokens based on the FREX score (in English and Greek) along with the top 5 most probable tokens without adjusting for exclusivity (in Greek).

Table 2: Topics in the official party online news corpus

ID	Description	Tokens
1	GD legitimacy	Far-right democratic Neo-Nazi democrats put
		ακροδεξια δημοκρατικο νεοναζι δημοκρατες τεθει
		αυγη χρυσα αυγης χρυσης κομμα
2	Samaras govt.	Venizelo-Samaras deception junta goldendawn albeit
		βενιζελουσαμαρα εξαπατησης χουντας συνδεσμοσχρυση εντουτοις
		λαου αυγη ελληνικου λαο χρυση
3	Political scandals	list, Papaconstantinou, Lagarde, have, Financial Crime Unit
		λιστας παπακωνσταντινου λαγκαρντ εσχες σδοε
		ευρω υποθεση λιστα λαγκαρντ πρωην
4	GD elections	struggle victory Long-live faith jailings
		αγωνας νικη ζητω πιστη φυλακισεις
		αυγη χρυση ελληνες αυγης αγωνα
5	Immigration	illegal immgrants, illegal immigration, refugees, illegal immgrants, migrants
		λαθρομεταναστων λαθρομεταναστευσης προσφυγες λαθρομεταναστες μεταναστων
		λαθρομεταναστες λαθρομεταναστων ελλαδα χωρα ελληνες
6	GD public outreach	distribution food team hymn telephone
		διανομη τροφιμων κλιμακιο υμνο τηλ
		αυγης χρυσης χρυση αυγη γραφεια
7	Fallen heroes	ELAM EOKA AKEL heroes memory
		ελαμ εοκα ακελ ηρωες μνημης
		ελαμ εθνικο ελληνες κυπρο ελληνων
8	Religion	church Goudi Vatican church Metropolitan
		εκκλησιας γουδης βοτανικο εκκλησια μητροπολιτης
		αθηνα εκκλησια τζαμι ισλαμ εκκλησιας
9	European politics	MEP Synadinos Epitideios European European
		ευρωβουλευτες συναδινος επιτηδειος ευρωπαικων ευρωπαικου
		ελλαδα ευρωπη ευρωπης ευρωπαικη χωρες
10	Bonds & debt	bonds bonds haircut debt loan
		ομολογα ομολογων κουρεμα χρεους δανειο
		ευρω δισ ελλαδα χρεους τραπεζες
11	Jews & Israel	Palestinians Jewish Anti-semitism AJC Jewish
		παλαιστινιων εβραικου αντισημιτισμου *ajc* εβραικο
		ισραηλ ελλαδα ηπα σορος εβραιων
12	Journalists	Pretenderis expressions top said los
		πρετεντερης εκφρασεις αλλοις λεγομενα ιου
		φυσικα περιπτωση οσα απλως περισσοτερο
13	Crime & punishment	Year-old Year-old perpetrator arrested Pakistani
		χρονη χρονης δραστης συνεληφθη πακιστανος
		χρονος αστυνομια περιοχη σπιτι δραστες
14	Constiutionality	punished code penalty criminal bill
		τιμωρειται κωδικα ποινη ποινικου νομοσχεδιου
		αρθρο νομου αποφαση δικαιωματων νομοσχεδιο
15	Political philosophy	values Dimapoulou nature globalization thoughts
		αξιων δημοπουλου φυση παγκοσμιοποιηση σκεψης
		πολιτικη ελλαδα σημερα πολιτικης λαου
16	GD Mps	immunity, Zaroulia, Koridalos prison, Pappas, Pappas
		ασυλιας ζαρουλια κορυδαλλου παππας παππα
		χρυσης αυγης βουλευτες βουλευτων βουλευτης
17	Conspiracy against GD	appeals investigators Klapa Dogiakos Dogiakos
		εφετων ανακριτριες κλαπα ντογιακος ντογιακου
		αυγης χρυσης δικαιοσυνη δικαιοσυνης υποθεση
18	Taxation	property tax tax Tax-hike income
		ακινητων φορου φορος χαρατσι εισοδηματα
		ευρω εκατ ποσο κυβερνηση δισ
19	Industry	EAS products production HRADF products
		εας προιοντων παραγωγης ταιπεδ προιοντα
		ελληνικη παραγωγης παραγωγη τομεα εταιρεια
20	Territorial disputes	EEZ deposits deposits gas hydrocarbons
		αοζ κοιτασματα κοιτασματων αεριου υδρογονανθρακων
		τουρκια αοζ ελλαδα τουρκιας κυπρου
21	National defense	nuclear, air force, systems, weapons, aircraft
		πυρηνικων αεροποριας συστηματα οπλικων αεροσκαφων

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		δυναμεων ενοπλων αμυνασ δυναμεις ενοπλεσ
22	Health	patients doctors hospital patients hospitals
		ασθενεισ ιατρων νοσοκομειου ασθενων νοσοκομεια
		υγειασ υγεια νοσοκομειο νοσοκομεια νοσοκομειου
23	Education	students school students school teachers
		μαθητεσ σχολειο μαθητων σχολειου καθηγητεσ
		παιδια σχολεια παιδειασ μαθητεσ σχολειο
24	Govt. ministers	minister minister Papoulias Georgiadis Papoulias
		υπουργοσ υπουργο παπουλιασ γεωργιαδη παπουλια
		υπουργοσ υπουργο πρωην προεδροσ θεμα
25	PASOK	Jeffrey Duce Georgey Pangalos thief
		τζεφρυ ντουτσε γιωργακη παγκαλοσ κλεφτησ
		πασοκ παπανδρεου βενιζελοσ χωρασ λαου
26	Leftist terrorism	terrorist nuclei Xiros terrorists Kapelonis
		τρομοκρατικη πυρηνων ξηρου τρομοκρατων καπελωνη
		δολοφονια χρυσησ επιθεση αυγησ τρομοκρατεσ
27	International security	Iran Iraq Ukraine Assad Putin
		ιραν ιραχ ουκρανια ασσαντ πουτιν
		ηπα ρωσια συρια ρωσιασ ιραν
28	SYRIZA	memorandum Varoufakis Varoufakis referendum lenders
		μνημονιο βαρουφακησ βαρουφακη δημοψηφισμα δανειστεσ
		κυβερνηση μνημονιο συριζα μνημονιου μετρα
29	Mass media bias	MEGA jounalists reports television NERIT
		mega δημοσιογραφοι δελτια τηλεοπτιχου νεριτ
		χρυσησ αυγησ αυγη χρυση μμε
30	Center-left	Kammenos Theodorakis Koumoundourou Tsipras SYRIZA
		καμμενοσ θεοδωρακησ κουμουνδουρου τσιπρα συριζα
		συριζα τσιπρα τσιπρασ πασοκ κομμα
31	Political violence	MAT incidents Molotov police stones
		ματ επεισοδια μολοτοφ αστυνομιχων πετρεσ
		αστυνομια αστυνομιασ επιθεση ομαδα ωρα
32	Opinion polls	survey surveys percentages surveys reduction
		δημοσκοπηση δημοσκοπησεων ποσοστα δημοσκοπησεις αναγωγη
		αυγη χρυση ποσοστα συριζα δημοσκοπηση
33	Political party funding	funding suspension regular review recommended
		χρηματοδοτησησ αναστολη ταχτικο αναθεωρηση προτεινεται
		κομματοσ επιτροπησ κομματων επιτροπη κομμα
34	New Democracy	Bakoyianni election Dora Maximou Dimas
		μπακογιαννη εκλογη ντορα μαξιμου δημα
		σαμαρα σαμαρασ εκλογεσ δημοκρατιασ βουλευτεσ
35	Irredentism	Skopje Thrace minority consulate minority
		σκοπιων θρακη μειονοτητασ προξενειου μειονοτητα
		θρακη τουρκια ελλαδα θρακησ τουρκικη
36	Communism	Stalin Radical Lenin KNE Perissos
		σταλιν ριζοσπαστη λενιν κνε περισσου
		χκε σταλιν κομμα αριστερασ κομματοσ
37	Econ. Recession	unemployment unemployment poverty story success
		ανεργιασ ανεργια φτωχειασ *story success*
		ελλαδα ανεργια ελληνεσ χωρα στοιχεια

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