State-controlled Media and Foreign Policy: Analyzing Russian-language News

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Abstract

Authoritarian regimes frequently employ state-owned media to frame and explain their domestic and foreign policies, often referencing national-markers and invoking social identities to justify their actions. We focus on how the Russian government used state-owned media to build public support prior to its invasions of Georgia and Ukraine. Specifically, we analyze the vocabulary structure of news broadcasts for Russia-24, a state-owned news channel, and compare it to that of Dozhd, an independent news source. We adopt a placebo approach to separate event-driven coverage from state-directed propaganda and identify changes in the nature of news coverage using a change-point model. We find that Russian state-owned media significantly increased its coverage of Georgia and Ukraine in the months preceding Russia's military interventions, beyond what would be expected by purely event-driven coverage. Moreover, this increase in coverage is associated with an increase in discussion of traditional Russian geopolitical rivals, such as the US.

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Introduction

State-owned media outlets provide authoritarian regimes with an invaluable resource to frame events and policy decisions.[1] Recent research has evaluated authoritarian regimes' efforts to limit dissent (King, Pan and Roberts 2013, 2017), influence public opinion during political crises (Windsor et al. 2017; Munger et al. 2018), or manipulate negative economic news (Rozenas and Stukal 2018). We build on this research to evaluate the state-owned media outlets with the goal of framing military interventions.

Authoritarian regimes often employ state-owned media to explain and justify their domestic and foreign policies. These policy frames are most effective, however, when they are consistent with existing conceptions of the state and its pre-established social identities (Miskimmon, O'Loughlin and Roselle 2014, 2017). State-sponsored media accounts of current events, in particular, are generally constructed to remain consistent with these pre-existing narratives. The narrative of actions for both the government and foreign states can be placed set of familiar tropes, which can often be condensed into characterizations such as whether either state is a *superpower*, *rising power*, *regional power*, *ally*, *rival*, *subordinate* or some combination (Wendt 1994; Thies and Nieman 2017).

These tropes help contextualize, justify, and make sense of either the regime's, or a rival state's, foreign policy actions. Lo (2004), for example, contends that Russian leadership views itself as a *barrier against a barbarian West*, while Lavrov (2006) and MacFarlane (2006) argue that Russia considers itself a *great power* central to the international order with a *hegemony* in the post-Soviet space. From this vantage point, Russian military action in Eastern Europe fulfills the conflict management obligations of a regional or great power. These characterizations and attributed identities provide a framework that both clarifies and

[1] We refer to "state-owned media" as those state-owned outlets that engage in propaganda on behalf of the governing regime. This definition excludes publicly owned media that adheres to standard journalist practices, such as the BBC or NPR.

constrains the ways in which a government can effectively cast friendly or unfriendly foreign governments to their population.

The goal of the paper is to investigate the use of state-media to frame militarized interventions. Advances in textual analysis have created new research opportunities for systematic analysis of mass media coverage, including manipulation of coverage for the purposes of furthering specific goals of the political elite. McManus (2014, 2016) and Kydd and McManus (2015), for example, examine statements by US presidents to study how leaders signal resolve. Textual analysis has also been widely used to investigate how closed regimes convey (and sometimes manipulate) information for both domestic and foreign audiences. Lucas et al. (2016) and Windsor (2018) use textual analysis to study the process of Islamic radicalzation, while Windsor, Dowell and Graesser (2014) and Dowell, Windsor and Graesser (2015) investigate linguistic patterns of persuasion utilized by authoritarian leaders during crises.

We use these tools to analyze the Russian government's use of state-owned media to frame the public's perception of issues and events. We argue that, in contrast to independent media outlets whose coverage is determined by occurrence/salience of events, state-owned media outlets may be used to shape public response/perception as, or even *before*, a state implements a specific policy. We develop a web-scraping application that allows us to extract and analyze vocabulary structures of both state-owned and independent Russian-language media. The goal is to explore how the Russian government projects both its self-perceptions and its perception of "the West" onto its citizens. By focusing on Russian-language sources, rather than relying on secondary sources or English translations, we directly access government efforts to frame issues for their domestic audience. We find evidence that Russian state-owned media does initiate coverage of targets in the months preceding military interventions. The results have immense practical value as a technique to analyze the signaling behavior of autocratic regimes.

In what follows, we analyze the vocabulary structure of *Russia-24*, a major state-owned news channel, and *Dozhd* (TVRain), an independent news channel, in order to separate event-driven coverage from state-directed propaganda. We use a change-point model to identify shifts in the nature of Russian media coverage. We find that Russian state-owned media significantly increased its coverage of Georgia and Ukraine in the months *preceding* Russia's military interventions. This increase in coverage was often supplemented and associated with an increased focus on traditional Russian political rivals, such as the US.

In the next section, we discuss how state-owned media influences political outcomes. We develop a foreign policy theory of state behavior and media framing, and apply this account to the case of Russia. The following section discusses our data collection technique and displays preliminary evidence. Finally, we describe and present the results of our data analysis, and conclude by summarizing the results, implications, and next steps.

State-owned Media

State-owned media alter the manner in which individuals can process information and affect political behavior. Countries where the state significantly controls the media substantially increase the costs to citizens to gather independent information. In the absence of counter-balancing information, large segments of the population can be influenced by a centralized and orchestrated account of policy or events.[2]

Autocratic regimes frequently use media to cement their own political power, even as the media environment has become more commercial and less centralized since the 1990s. Autocratic regimes are incentivized to restrict media freedom to promote news favorable to the regime and restrict news dis-favorable to it. Autocratic regimes generally have several

[2]Individuals with low political sophistication may change their attitudes when presented with a counter-attitudinal message, whereas politically sophisticated individuals mediate messages that counter their pre-existing beliefs (Zaller 1992; Redlawsk 2002; Taber and Lodge 2006).

strategies to do this. First, in order to reduce public dissatisfaction, autocratic regimes can act prevent the public from knowing of policy failures. A downside to this strategy, however, is that it risks associated with undermining the state capacity to respond to environmental and economic crises by restricting credible information flows of bureaucratic performance to the central regime (Egorov, Guriev and Sonin 2009).

Second, autocrats can overwhelm the public with counter-messaging. For example, Chinese government officials frequently respond to online criticism by raising other issues, rather than responding to specific criticisms (King, Pan and Roberts 2017). Likewise, Maduro used emotionally charged populist rhetoric to distract from poor economic news (Love and Windsor 2018). Similarly, pro-Maduro legislators used Twitter to pose competing narratives in order to obfuscate criticisms posed by opposition officials during the anti-Maduro protests (Munger et al. 2018). A downside of this that it can make rallying support for policies difficult, as some segments of the public may become disenchanted and largely ignore politics altogether.

Third, regimes exert some degree of control over the content of news broadcasts. This approach is an effort to partially gain the benefits of information and public interest, while still minimizing the risk of collective action against the regime (Egorov, Guriev and Sonin 2009; Gunitsky 2015; King, Pan and Roberts 2013). Rather than directly managing content via government-scripted stories and pre-publication censorship, autocratic regimes have increasingly relied on self-censored media to support regime goals (Hassid 2008; Rozenas and Stukal 2018; Schimpfossl and Yablokov 2014; Stockmann and Gallagher 2011)[3], as well as providing a higher-quality product on state-owned and state-affiliated media to maintain viewership (Moehler and Singh 2011; Stockmann and Gallagher 2011).[4] Media self-censorship relates to the choice, distortion, and emphasis of stories covered (or not covered) (Lee 1998).

[3]The threat of coercion, of course, is necessary in order to enforce self-censorship.

[4]Oates (2007) argues that state subsidies offer government's leverage over media coverage and content.

Self-censorship arises from one, or a combination, of mechanisms. First, self-censorship can result from uncertainty regarding what content may result in punishment of journalists and managers. In China, for instance, reporters temper how aggressively to pursue stories because they are unsure how far they can push a story without facing arbitrary and harsh punishment (Hassid 2008, 422). Second, the government may make clear that certain topics that are taboo to cover at all. Coverage critical of Vladimir Putin, for instance, is not allowed on state-aligned networks (Schimpfossl and Yablokov 2014).[5] Third, self-censorship can result from journalists responding to financial reward structures that avoid raising content that the government considers problematic. Finally, media may report negative news, but take steps to limit negative fallout or blame of the regime. In Russia, for example, negative news stories are often attributed (either directly or indirectly) to foreign governments or global processes (Rozenas and Stukal 2018).

The effect of each of these mechanisms is to produce media coverage that toes the party line. At the same time, state-owned media are able to take advantage of relatively high programming quality, and subsequent viewer interest, resulting from reporter creativity.[6] Even non-political shows, including ostensibly entertainment programs, such as legal shows, can be used to push the government's agenda (Stockmann and Gallagher 2011, 453,456).[7] Independent, private-owned media, conversely, are often disadvantaged in financing and may have lower programming quality, on average, than state-owned media outlets (Coyne and Leeson 2009; Vartanova 2012).

That state-media reflect their government's positions and policies is important because

[5]These strategies can serve as substitutes. China has consistently been one of the world's leaders in jailing journalist, but seldom executes journalist. Russia, on the other hand, has consistently seen the most journalists killed (Committee to Protect Journalists 2017).

[6]The existence of multiple state-aligned channels in Russia, for instance, ensures that they must compete, to some degree, for viewers. Thus, to keep viewer interest, they cannot aim solely at brainwashing, as viewers will become bored and change the channel (Schimpfossl and Yablokov 2014, 308).

[7]Huang (2015) argues that, in addition to direct attempts to influence public opinion, the constant presence of government signals strength in effort to maintain political order.

the public often has equal or higher levels of trust in state-owned than independent media outlets (Moehler and Singh 2011). One implication is that viewing independent media does not always affect public opinion when it contrasts with state-owned media (Gehlbach and Sonin 2014; Shi, Lu and Aldrich 2011). Relatively high trust, combined with a lack of well-resourced competition, mean that state-owned media can effectively relay the government's policy positions to the public.

Foreign Policy and State-owned Media

State-owned media can be used to frame and justify a government's policy position. Consistent with China's increasingly cooperative foreign policy towards the US, the state-owned *People's Daily* was more positive in coverage towards the US than independent media (Stockmann 2011). State-owned media can also be used by the government to solidify or coordinate policy with domestic elites. Gunitsky (2015) argues that mass media, and more recently social media, is used to coordinate the interests of central and local elites. He notes that Russia, in particular, has used mass media to central power and limit the authority of local politicians.

State-owned media often manipulate news stories by attributing their causal effect to direct or associational actors (Rozenas and Stukal 2018). This is made easier in the case of international news and foreign policy, as most viewers have less information/interest on such topics relative to news related to domestic/local issues. Thus, they are more susceptible to framing/influence on topics related to international and foreign policies.

The ability of a regime to project policies onto its population, however, is not absolute. Even with state-owned media casting government policies in a favorable light—or attributing negative outcomes to external forces—a government faces some restrictions when presenting information to the public. Both internal and external foes must be easily recognizable if state-owned media is going to be able to frame opposition to a government policy as non-

patriotic, or place blame on negative policy outcomes. Foes must be familiar tropes and scapegoats, widely recognized as 'enemies of the state' whose invocation is immediately associated with opposition to the national interest and the nation's values. States, in other words, are constrained and framed by the messages and identities that a they have previously invoked.

To account for the constraints imposed by national identities and value systems, we adopt a foreign policy approach to analyzing state behavior towards its neighbors. Foreign policy approaches consider both international and domestic features that serve to structure and constrain the choices available to a government regime (Holsti 1970; Thies and Breuning 2012). Through interactions with other states, state leaders adopt perceptions of themselves and assign identities to other states (Walker 1992; Wendt 1994; Breuning 2011). The specific roles/identities that a state assigns to itself—i.e. its *national role conceptions* (NRCs)—reflect domestic elite preferences and their expectations of appropriate state behavior.[8] Adopted and assigned identities/roles provide social constraints on a state's behavior through limiting the strategies a leader can even conceive of undertaking (Thies 2013; Nieman 2016*b*; Thies and Nieman 2017). These identities can be used by political actors, such as autocratic elites, to create narratives of the past in a strategic manner in order to promote their policies, downplay shortcomings, and manage expectations of future behavior (Miskimmon, O'Loughlin and Roselle 2014, 2017).

Governments can use state-owned media to describe themselves, as well as those states identified as foreign friends and foes, as part of an effort to generate a well curated and managed message, or strategic narrative, for the public (Roselle, Miskimmon and O'Loughlin 2014). Governments use their NRCs as part of their strategic narrative, in effort to reify their own influence and to manage how foreign events are perceived domestically. Thus,

[8]The roles that a state assigns to itself may face some domestic contestation from domestic rivals (Cantir and Kaarbo 2012; Brummer and Thies 2015).

states have an incentive to maintain NRCs and frequently use them as a point of reference for making sense of and understanding unexpected events. By operating within a foreign policy theoretical framework, we are able to understand how authoritarian regimes can raise the salience and context of specific issues or interactions with neighboring states within the broader understanding of a state's position within the international system. For instance, following the Maidan protests that resulted in the ouster of Ukraine's President Yanukovych, the Russian government described their intervention in Ukraine and support of militant forces in Donetsk and Luhansk within the broader context of a geopolitical struggle with the US, rather than simply as an attempt to maintain political control of a traditional ally.

Efforts to unite and control domestic (and sometimes foreign) populations through normative influence via mass media is a critical component of state sovereignty, and is a cheaper alternative to state-building and political control than coercion (Warren 2014, 2015). While independent media tend to be event- rather than policy-driven, i.e. their coverage is driven by event-occurrence and salience, state-owned media outlets may be used to shape public response/perception, even *before* a state implements a policy (Roselle, Miskimmon and O'Loughlin 2014; Miskimmon, O'Loughlin and Roselle 2017). While all governments have an incentive to shape the narrative, especially prior to initiating a conflict, state-controlled media can be more easily directed to this function than independent media. As such, state-controlled media can be used to re-assert specific identities in order to support the narrative that a government wants to emphasize. For instance, governments can justify intervention in neighboring state by invoking the role of *great power*, *protector* of a region or co-ethnics, or a regional or global *balancer*.[9] Mass communication can also be used to co-opt potential partisans in neighboring states.

[9]While the *great power* role is well known within the international relations literature (e.g., Chiba, Martinez Machain and Reed 2014), the regional and co-ethnic protector (Frazier and Stewart-Ingersoll 2010; Davis and Moore 1997) and regional and global balancer (Levy and Thompson 2010) roles have also been invoked to explain conflict behavior.

As an example, following the 2013–2014 Maidan protests and subsequent departure of the pro-Russian President Yanukovych from Ukraine, Russian media repeatedly referred to a region in Ukraine—stretching from Donbass in the East, to Crimea and along the coast adjacent to the Black Sea in the South, to Transnistria in Moldova—as *Novorossiya*. In the aftermath of the Maidan uprising, Russia claimed that *Novorossiya* was historically a Russian territory—citing the conquests of Catherine the Great—and referred to the new government in Kiev as a fascist junta, attempting to invoke geographical and political divisions from World War II. Such references could potentially be used to provide justification for intervening in a neighbor in effort to protect co-ethnics, as well as attempt to assert a greater-Russian identify and generate support from those living in southern and eastern Ukraine who may view Russian news broadcasts advocating this perspective.[10]

The Russian Case

In this paper, we focus on the Russian government's use of media in an effort to preemptively build support for their international conflicts. Contemporary Russia constitutes a suitable case for our analysis, as the government directly or indirectly controls much of the media landscape.[11] A privately owned independent channel, *Dozhd*, is a notable exception.

We argue that governments are constrained in the manner in which they can portray both themselves and others depending on their pre-existing NRCs. Governments can manufacture support in the buildup to potential international conflicts by framing the coverage of the target (Roselle, Miskimmon and O'Loughlin 2014). Thus, we expect to see an increase in the number of new stories about a target *prior* to military intervention, as the government

[10]Russian media is popular in many post-Soviet states, as it frequently provides higher quality news and entertainment programming than domestic offerings (Trenin 2009*b*; Vartanova 2012).

[11]Despite the increase in television channels, news coverage is conducted primarily by three national networks, which are directly controlled by the government (Gehlbach and Sonin 2014). Russia's high degree of media control is consistent with theories of information communication and resource allocation (e.g., Egorov, Guriev and Sonin 2009).

attempts to generate support (or, at least, minimize dissent) for the conflict. In order to rally support around the government's cause, state-controlled media frame the dispute within a narrative favorable to the government and consistent with its pre-existing NRCs. In the case of regional or rising powers, such as Russia, constructing support for potential conflict abroad can be relatively easy, if prior NRCs have emphasized an explicit sphere of influence or a security complex. Governments can simultaneously build nationalist sentiment and direct this energy against target states (Miskimmon, O'Loughlin and Roselle 2014, 2017). Governments can direct state-owned media to cover issues and run stories on target states to raise the salience of these states and magnify grievances with them.

To remain consistent with a state's NRCs, governments can invoke similarities between the target of their aggression and other enemies of the state, such as other traditional rival powers. This can be done by stating that a target is in danger of potentially moving under the influence of a traditional rival. Doing so can help reduce domestic aversion to the use of force against co-ethnics. As we demonstrate, state-owned Russian media does precisely this in the months prior to intervening in Georgia and Ukraine by increasingly referencing traditional rivals, such as the US.

Russian NRCs, under President Putin, have emphasized the roles of a *regional power*, an *independent great power*, and an *aspirant global power* (Allison 2008; Lo 2002; Trenin 2009*a*).[12] The creation of the Commonwealth of Independent States (CIS) and Eurasion Economic Union (EEU) have even been described as evidence of *neoimperial* or *hegemonic* role in the post-Soviet space on the part of Russia (Rahr 2007; Frazier and Stewart-Ingersoll 2010). In addition, since at least 2006, the Russian government has once again viewed the US as its primary geopolitical rival (Rahr 2007).

Given these NRCs, one would expect Russia to have an active and interventionist foreign

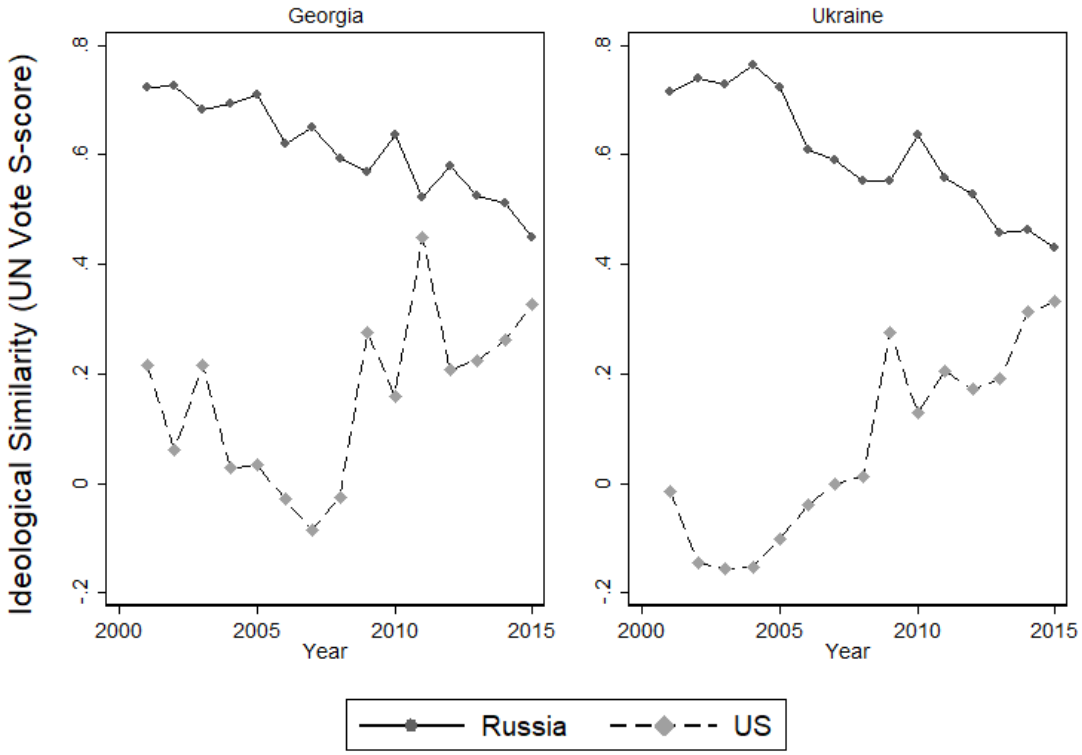
[12]MacFarlane (2006) suggests that Russia, rather than being an emerging power, seeks to reverse its decline and return to *great power* status.

policy towards neighboring states (Thies and Nieman 2017). Russia is directly or indirectly involved in a number of outstanding territorial disputes: the status of Abkhazia and South Ossetia with Georgia, the annexation of Crimea with Ukraine, the status of Transnistria with Moldova, a border dispute with Estonia, and possession of the Southern Kurils with Japan. Russia also has played an active role supporting government regimes or aiding ethnic minorities that are aligned with it politically, using a variety of hard and soft power tools (McManus and Nieman 2018; Truckos 2021). Russia has been invited to send troops to help defend a neighbor's territorial integrity in the cases of Tajikistan and Uzbekistan (Gibler and Sewell 2006). It has also been involved in managing the conflict in Nagorno-Karabakh region between Armenia and Azerbaijan and, more recently, in Syria. Russia has provided material support to governments within its orbit, often helping to prop up a regime when facing domestic opposition (Chyzh and Labzina 2018), most recently in Kazakhstan in 2022. Lastly, Russia has also expressed concern about the welfare of Russian-speaking populations in Estonia, Latvia, Lithuania, Moldova, and Ukraine.

To justify such a foreign policy, the Russian government has created a narrative in which they frame many of these disputes and actions as part of a larger conflict between itself and the US. NATO expansion, for example, has been argued to serve a destabilizing influence on Russia, especially as Russia is increasingly dissatisfied with its global status and faces economic difficulties (Gibler 1999). It is therefore unsurprising that Russia viewed and framed the conflict with Georgia within the broader context of US efforts to undermine Russia's great power status by its involvement in the colored revolutions and NATO expansion (Tsygankov and Tarver-Wahlquist 2009). Similarly, Russian officials accused the US of aiding and orchestrating the Maidan protests, and used this claim to justify potential intervention in the crisis (Higgins and Baker 2014).

To investigate Russia's use of state media in support of their active foreign policy, we examine a time series of Russian media coverage of Ukraine (and, more specifically, Crimea)

Figure 1: Change in Georgian and Ukrainian Affinity towards Russia and the US



Note: UN voting similarity data from Bailey, Strezhnev and Voeten (2017).

and Georgia. The conventional framing of both Georgia and Ukraine as drifting away from Moscow and towards Washington arose, in part, from real policy shifts by the two former Soviet states. As evidenced in Figure 1, which displays the annual UN voting similarity scores of Georgia and Ukraine with Russia and the US, respectively, between 2000 and 2015, it is clear that the foreign policy preferences of Tbilisi and Kyiv have slowly been moving away from those of Moscow.[13] While both Georgia and Ukraine maintained ideological scores closer to Russia than the US throughout the time period, the trend in each has been towards convergence and eventual transition to the US.[14]

[13]Data on UN voting similarity are obtained from Bailey, Strezhnev and Voeten (2017).

[14]Changes arising from domestic policy does not, however, necessarily correlate positively with changes in the degree of support signaled by either Russia or the US. In fact, as we show in Figure 7 in the Appendix, Russian support for both Georgia and Ukraine remained mostly constant between 2000–2012, while US

Efforts to keep both Georgia and Ukraine in Russia's political orbit are often referenced as justifications for the intervention. In the case of Georgia, Russia intervened in Georgia in the summer of the same year that Tbilisi made a dramatic shift towards the US. Conversely, Ukraine had been steadily moving towards the US since the 2004 Orange Revolution, even during the presidency of the Russia-supported Yanikovich.

In each case, the change in foreign policy affinity towards Washington and away from Moscow likely affected both the quantity and content of coverage provided by Russian state-owned media more than that of independent outlets. State-owned media often discussed Ukraine and Georgia as satellite states, squarely within Russia's sphere-of-influence. The warming of Ukraine and Georgia relations with the US, a traditional foe of Russia[15], was viewed skeptically by Russia, with 'US aggression' and Western expansion into Russia's neighbors previously being invoked as a cause of Russia's more active foreign policy within the region (Gibler and Sewell 2006; Rahr 2007; Aksenyonok 2008; Nau and Welt 2013).

We expect that state-owned media news stories discussing the US were increasingly linked and negatively associated (directly and indirectly) with the changing foreign policy orientations of Russia's neighbors. We expect this negative associations to be especially pronounced immediately prior to Russian military interventions into Georgia and Ukraine, as the government sought to build support and justify its policy actions. Conversely, independent media were less likely to frame the Russian government actions in a positive light. Rather, independent media is more likely to focus on observed events to drive its news coverage, as well as to provide a wider range of political analysis regarding the government actions.

Our focus on Russian coverage on Ukraine and Georgia is appropriate because we are interested in *changes* in Russian state-owned media coverage. We expect coverage of each state to shift, from relatively low salience and mostly positive descriptions as Russian sub-

support actually *decreased*. Measures of major power support are obtained from McManus and Nieman (2018).

[15]Thies and Nieman (2017, 86-88) list "US rival" as one of Russia's core foreign policy NRCs.

ordinates, to relatively high salience mostly and negative descriptions as adversaries of the Russian state. Both the Ukrainian and Georgian cases experience interventions in the time series of Russian news coverage in the form of Russian military involvement. Russian interference in Ukraine began with the appearance of "little green men" on 27 February 2014. After initial denials, Russian President Putin admitted that the forces were, in fact, Russian troops (Walker 2015*a*). This military intervention culminated in the formal annexation of Crimea by Russia on 18 March 2014. In addition, Russian "military tourists" entered Eastern Ukraine in March 2014 (Walker 2015*a*). In the case of Georgia, Russia sent military forces into South Ossetia and Abkhazia, two breakaway regions supported by Russia, on 8 August 2008 and 9 August 2008, respectively. From a methodological perspective, these interventions indicate that there are periods of stability in the relations of both the Ukrainian and Georgian governments and Russia, punctuated by significant animosity.

The variation in coverage related to these military interventions allow us to explore how Russian state-owned and independent media differ in several ways. First, we expect to observe increasing new stories involving both the target of Russian aggression, as well as its traditional rivals, by state-owned media *prior* to the onset of military intervention. State-owned media can be more easily utilized to push a narrative that is favorable to the government in the build-up to a militarized intervention. In contrast, independent media is more events-driven and fluctuation in coverage should coincide more directly with events on the ground. In particular, increases in state-owned media coverage should precede the Russian military interventions in Crimea on 27 February 2014 and Eastern Ukraine in March 2014. We also expect increases in media coverage prior to the Russian intervention into Georgia on 8 August 2008. This account leads us to the following hypothesis:

Hypothesis 1: Ukraine and Georgia feature more frequently in Russian state-owned news stories prior *to military intervention.*

Second, to enhance the effectiveness of the government's narrative, state-owned media

coverage is expected to operate within the pre-existing NRCs. In the case of Russia, the familiar account of an aggressive and threatening traditional rival, such as the US, immediately creates a context by which Russia is justified to intervene in the affairs of its neighbors. Rather than being perceived by the public as aggressive actions on the part of Russia, within the narrative of a threatening enemy, military intervention can be justified as a defensive measure. These expectations lead to the following hypothesis:

Hypothesis 2: The US features more frequently in Russian state-owned news stories prior *to Russian intervention in Ukraine and Georgia.*

Data Collection

We focus on Russian-language state-owned media outlets to analyze the Russian government's manipulation of domestic news coverage aimed at maintaining consistency with pre-existing NRCs. Our focus on analyzing primary sources in their original language offers several advantages. By analyzing primary sources, we can assess the impact of Russian media coverage more directly than if we relied on secondary sources compiled by academics, or English-language state-owned media, such as *Russia Today.* Secondary sources may reflect *ex post* rationalizations or critiques in light of subsequent events, while English-language outlets may present an account intended for foreign, rather than domestic, audiences.

Analyzing textual data in the original Russian compared to a translation also provides several advantages. First, while translations are often a practical choice, they are generally a second-best option, as the process of translating a text can only introduce error, compared to working with the original. The second reason is more specific to the current application; the Russian language has a highly inflectional morphology. For example, Москва, Москвы, Москве, Москвой, Москву are translated as the same word *Moscow* in English. Working directly with the original language aids in training the application to recognize each inflection

as the same proper name when stemming, reducing the risk of inadvertently missing data.

Our corpus is news headlines from Russian media websites. We focus on analyzing headlines as they are explicitly written with the intent to succinctly inform the reader of the content of a news report, thus best characterizing the salient focus of the report. Moreover, headlines reach, and potentially influence, the broadest set of viewers of a report. For example, in television reports, headlines are often featured on the screen during the entire duration of a report; hence, even passive viewers not closely following a report are likely to exposed to the featured message, such as people in airports or public service offices who play news programs in the 'background'. Moreover, and importantly in a country as large and ethnically diverse as Russia, those who are not completely fluent in Russian are more likely to understand a headline than audio content. As an example, Table 1 presents ten headlines (and their English translation) from Russia-24, a major Russian media site, on 1 March 2014.

Our corpus is drawn from two sources. The first one is the main state-controlled *Russia-24*. Russia-24, formerly *Vesti* ("news" in Russian), is a state-owned news channel. Russia-24 promotes the official position of the Russian government and serves as one of the Kremlin's propaganda devices that serves to shape the public opinion. Though banned in Ukraine, Moldova, and Latvia, the network is popular among Russian-speaking minorities in several neighboring formerly Soviet republics.

The second source is *Dozhd* ("Rain" in Russian), the only private independent Russian television channel. As an independent media outlet, Dozhd is not privileged to private government information. Thus Dozhd provides purely events-driven news coverage and functions as a placebo to the state-owned news coverage in our analyzes.[16] While there may be differences in the degree of domestic vs. international coverage between the two news sources, we

[16]In a 2015 article in Walker (2015*b*), Dozhd's editor-and-chief described the channel's mission as an independent news source: "Nobody needs counter-propaganda. Our goal is not to fight anything, our goal is just to give people who don't have real information the thing they don't have."

Table 1: Examples of Russia-24 headlines: March 1, 2014

Симферопольский аэропорт вновь начал принимать рейсы Simferopol Airport started receiving flights again
В столкновения в Харькове пострадали 110 человек In collision in Kharkov, 110 people got injuried
Турчинов мобилизует украинскую армию Turchynov mobilizes Ukrainian army
Ввод войск в Крым и отзыв посла: решение – за президентом Introducing troops in Crimea and recalling ambassador: the decision is up to the President
Пан Ги Мун не даст комментариев по Украине до разговора с Путиным Ban Ki-moon will not comment on Ukraine before talking with Putin
"Беркутовцев" возьмут в московскую полицию "Berkuvcy" will become part of Moscow police
Лидер "Правого сектора" обратился к Доку Умарову за помощью Leader of "Right Sector" appealed to Doku Umarov for help
Песков: Путин примет решение о вводе войск на Украину, ишодя из развития ситуации Peskov: Putin will make decision on the introduction of troops into Ukraine, based on situation
Федор Бондарчук: ситуация на Украине – урок для России Fedor Bondarchuk: situation in Ukraine is a lesson for Russia
Тимошенко прилетит в Москву, чтобы обсудить ситуацию в Крыму Tymoshenko will fly to Moscow to discuss the situation in Crimea

Note: Each headline is reported in the original Russian with an English translation below it.

would expect the trend lines of news coverage to remain relatively consistent in the absence of government framing.[17]

We collected our data by scraping all news headlines from the archives available on the web pages of Russia-24 and TVRain.[18] To do this, we developed a web-application in the C# programming language to perform this task. First, our application parses the HTML source of the web-pages. To program our parsing algorithm, we first manually identified tags embedded within headlines and sequentially requested historical information as far back in time as possible. Once the application had collected all headlines, we selected proper names. To do this, we first collected all capitalized words. Next, we stem these words by training

[17]In particular, while Dozhd generally provides less foreign coverage than Vesti, Dozhd has provided important events-driven coverage of the war in Ukraine that is often not reported on state-owned media. For example, the detention of Dozhd correspondent Timur Olevskiy in May 2015 after reporting on the arrest of two Russian soldiers captured in Ukraine (Walker 2015*b*). The report contradicted the official Russian government argument—repeated by state-owned media—that there are no Russian troops in Ukraine.

[18]Russia-24: `http://www.vesti.ru/news/` and Dozhd: `https://tvrain.ru/news/`.

the application to treat all inflections of a word as the same word. This is a critical step while analyzing the text in Russian because, as previously noted, it is a highly inflectional language. Finally, we checked that all our words are the proper names of interest (country, city names, surnames) and discarded the rest.

We then count the frequency of proper names in Russian news headlines from featured on either media outlet's website to identify the salience of that subject (Hopkins and King 2010).[19] We assume that the more frequently a key word appears in the headlines of state-owned media, the more salient the government wants the topic to be to the public.[20] Overall, we examine a total of 585,615 headlines from Russia-24 for the period 1 January 2006 to 30 April 2016 (4,355,263 words). We review a total of 116,895 headlines from Dozhd between 24 February 2011 to 20 September 2016 (1,048,362 words). Data were collected at the daily level, but we aggregate the word counts to the monthly level for our analysis in order to include other covariates.

Changes in Russian News Coverage

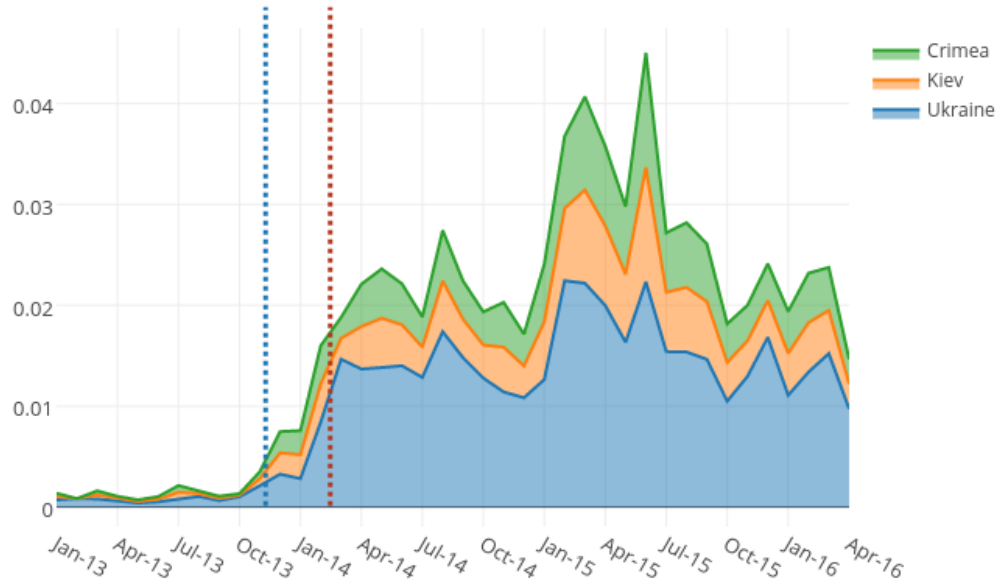
We begin with a preliminary examination of the data. The figures report the frequency of a word count as a proportion of all proper names in the corpus in a given month.

Figure 2 focuses on the frequency of the words *Ukraine*, *Kiev*, and *Crimea*. We focus on *Ukraine* and *Kiev*, as the the frequency of these words may be expected to increase in response to the Maidan protests, given Russia's long-standing interest in, and proximity to, Ukraine. We focus on *Crimea* because it was occupied and annexed by Russia. Examining the frequency of these specific words also let us compare media focus on *unexpected*

[19]We rely on counts rather than n-grams for several reasons. First, since the location of a word's placement does not matter in the Russian langunage, n-grams are not especially useful. Second, the placement of stories near one another is consistent with the concept of selective attribution via association. This is especially true in the case of passive viewers looking at news headlines/chyrons.

[20]Hopkins and King (2010) note that observing counts of key words have consistently been sufficient to extract substantively meaningful features of texts (see also Grimmer and Stewart 2013, 273).

Figure 2: Word Frequencies–Ukraine from Russia-24

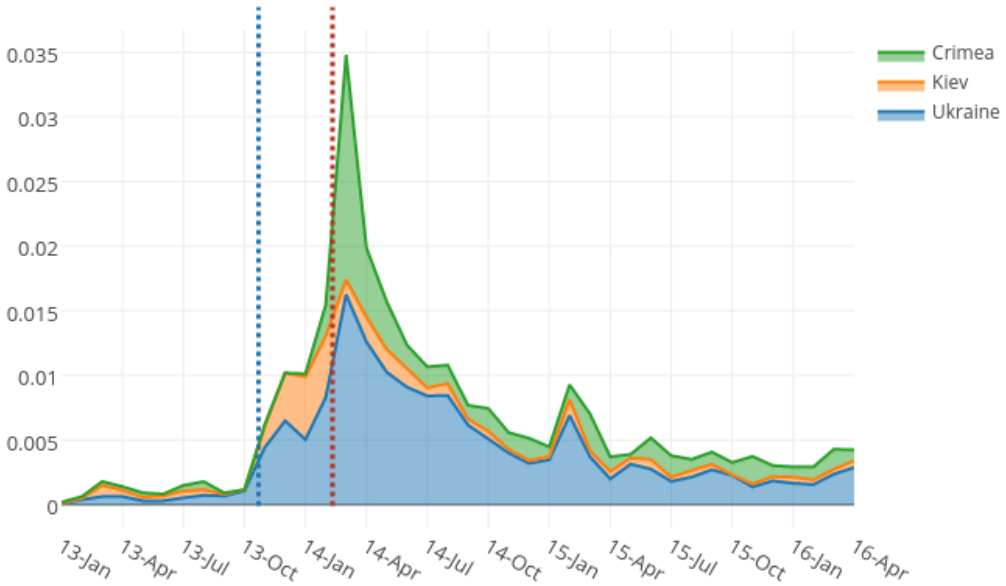


Note: Frequency as a proportion of all proper names in the corpus in a given month. The blue vertical line indicates the start of Maidan and the red vertical line the annexation of Crimea.

compared to *expected* events. The Maidan protests and the eventual overthrow of the pro-Russia Yanukovych regime, for example, would qualify as unexpected events, as the Russian government had no hand encouraging either event. The invasion of Crimea, on the other hand, is an expected event, as a military invasion requires premeditation on the part of the government. In contrasted to unexpected events, state-owned media coverage may presage expected events, as the government attempts to preemptively frame how the public will respond.

A preliminary analysis of the data reveals that frequencies of *Ukraine* and *Kiev* increase at the same time as the start and continuation of the Maidan protests, as would be expected with news coverage of unexpected events. Frequencies of *Crimea*, on the other hand, begin to dramatically increase in February, the month *prior* to the bulk of the Russian invasion and

Figure 3: Word Frequencies–Ukraine from Dozhd.



Note: Frequency as a proportion of all proper names in the corpus in a given month. The blue vertical line indicates the start of Maidan and the red vertical line the annexation of Crimea.

two months prior to the formal acknowledgment of Russian forces and subsequent annexation. Frequencies of the US and EU also increase at this time.

As a point of comparison, Figure 3 displays the word frequencies for *Ukraine*, *Kiev*, and *Crimea* from Dozhd. Frequencies of *Ukraine* and *Kiev* increase with events in Maidan and the removal of the Yanukovych regime. Frequencies of *Ukraine*, *Kiev*, and *Crimea* all peak in March, reflecting the timing of actual events in the conflict.

These data provide initial support for our theoretical expectation. Yet, a simple time series reporting the proporttion of our key words as a function of all proper names within news headlines does not tell us if their observation is systematic or they can explained by other factors. The counts could result, for example, from events-driven coverage, rather than government-directed coverage. In the next section, we systematically analyze the data using

a change-point model to identify sudden changes in its underlying data generating process. In order to separate event-driven coverage from government-directed coverage, we control for Dozhd (TVRain), an independent news source, when estimating counts of the frequency of key words. By controlling for event-driven news coverage, we are able to identify when state-owned media begin to focus on specific topics. We expect that state-owned media will increase coverage their coverage of the targets of Russian aggression prior to the onset of military action, as the government attempts to rally support and justify its behavior.

Data Analysis

In contrast to events-driven coverage of independent media, we expect that the Russian government increases state-owned media coverage of target states prior to military intervention. We also expect that state-owned media increases its coverage, and hence the salience, of auxiliary issues—such as as its rivalry with the US—to frame the imminent militarized conflict within the structure of existing NRCs and government-promoted narratives.

In order to identify sudden changes in the structure of the data, we employ an endogenous Baysian Markov chain Monte Carlo Poisson Change-point model (Chib 1998; Park 2010).[21] The estimator is appropriate because (1) our variable of interest is a count of the frequency of our key words in a given month and (2) it is designed to identify structural breaks in the underlying data generating process of the frequency of word counts. Change-point models are a class of time series analysis in which data are generated from multiple temporal regimes (or states) and the primary quantities of interest are the number and timing of changes in temporal regimes (Martin, Quinn and Park 2011, 12). In other words, the goal of the change-point model is to identify the optimal number of sub-periods within a time series, and

[21] Change-point models have previously been used to identify time-dependent effects for predictors of militarized conflict (Park 2010; Nieman 2016*a*; Thies and Nieman 2017).

estimate parameters within each sub-period.[22] One advantage of a Bayesian change-point model is that, in contrast to a frequentist technique such as a Chow test, the model allows us to calculate measures of uncertainty regarding the specific timing of change-points, i.e. are the sub-periods distinct or do they gradually change from one sub-period to the next.[23]

Identifying the *timing* of change-points allows us to evaluate our first hypothesis concerning changes in the number of stories about a target prior to Russian military intervention. Parameters on covariates are estimated within each of these temporal regimes and are free to vary in both effect and direction between them. Examining the effect of there covariates allows us to assess our second hypothesis concerning whether mentions of the US are associated with increases in the number of stories of a target state during a temporal regime in which a militarized conflict occurred.

The estimator is a Markov model with hidden states and restricted transition properties (Chib 1996, 1998). Changes from latent states follow a first-order Markov process:

$$p = \begin{pmatrix} \mathrm{p}_{11} & p_{12} & 0 & \cdots & 0 \\ 0 & p_{22} & p_{23} & \cdots & 0 \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ \vdots & \vdots & 0 & p_{m,m} & p_{m,m+1} \\ 0 & 0 & \cdots & 0 & 1 \end{pmatrix},$$

where $p_{i,j} = \Pr(s_t = j | s_{t-1} = i)$ is the probability of moving to regime j at time t given that the regime at time $t-1$ is i, and m is the number of change-points. We specify our Bayesian Poisson change-point model as

$$y_t \sim \mathcal{P}oisson\left(\lambda_t\right), t = 1, \ldots, T$$

[22] A Poisson model with covariates does not adhere to a known conditional distribution. Our estimator addresses this by taking the log of time between successive events. Fruhwirth-Schnatter and Wagner (2006) demonstrate that doing so transforms the Poisson regression into that of a linear regression with log exponential (1) error.

[23] Parameter estimates for the Poisson model are drawn from the posterior distribution of the entire state space; that is, the degree of precision of the estimated change-points affect estimates for the parameters in the Poisson model (Park 2010; Nieman 2016*a*).

$$\lambda \sim x_t'\beta_m, \quad m = 1, \ldots, M$$

with prior distributions for the Poisson parameters and temporal regime transitions of

$$\beta_m \sim \mathcal{N}(0, 10), m = 1, \ldots, M$$

$$p_{ij} \sim \mathcal{B}eta(\alpha, \beta), m = 1, \ldots, M.$$

To recover estimates for the model, we estimate 20,000 MCMCs, after discarding a burnin of 10,000 iterations.

We use Bayes Factor to assess model fit and identify the optimal number of change-points (Chib 1996; Park 2010). Bayes Factor compares two models, treating one as the baseline model and the other as an alternative model. That is, $BF_{ij} = \frac{m(y|\mathcal{M}_i)}{m(y|\mathcal{M}_j)}$ where the numerator is the marginal likelihood for the baseline model $\mathcal{M}_i$ and the denominator is the marginal likelihood for the alternative model $\mathcal{M}_j$ is the alternative model. We take the log of the Bayes Factor so that positive values are evidence in favor of the baseline while negative values are evidence against the baseline model (Gill 2009, 209).[24]

Finally, we include several other variables in the model that may influence the frequency of our variables of interest and that may affect the timing of a structural break. We include counts of the frequency of *US* and *EU* in the Poisson model to account for Russia's NRCs, as both have been cast as traditional rivals to Russia by the Russian government. We also include the level of inflation that Russia experiences in a month. Inflation serves as an indicator of the status of the economy. Economic struggles are likely to be of interest to the population and receive media attention at the expense of international news. Monthly inflation data are obtained from the OECD (2016). When appropriate, we include an indicator variable for the months when the Maidan protests took place. The inclusion of this dummy variable accounts for the *immediate* effect of the protests on news coverage. Any long-term effect, of course, would be captured by a structural break leading to a new

[24]Kass and Raftery (1995) provide additional guidelines for interpreting Bayes Factor comparisons; values between 3-20 offer some support for the baseline model while values >20 provide strong support for the baseline model.

temporal regime. Lastly, in both the *Ukraine* and *Crimea* time series, we include a control variable accounting for observations of the dependent variable from the independent media outlet Dozhd.[25] The inclusion of this variable explicitly separate 'events on the ground' from propaganda, in that independent media can only report what is observable while not being privy to government plans. This variable cannot be included in the Georgian time series, however, as unfortunately the Dozhd data are not available at the time of Russian military intervention.

Empirical Results

We analyze three different dependent variables: the frequency of *Ukraine*, the frequency of *Crimea*, and the frequency of *Georgia* in Russia-24 headlines. We use a Poisson change-point model to identify when there is structural change in the frequency of our dependent variable. In each case, we begin by using Bayes Factor to identify the number of change-points that best fit the data. Next, we visualize the posterior density for any identified temporal regimes, as well as posterior probability density of a change-point in a given year, to identify the timing of structural breaks. Lastly, we report summaries of the posterior parameter estimates for each endogenous variable within each identified temporal regime.

Ukraine

We begin by identifying the optimal number of change-points/temporal regimes present in the data. We do this using Bayes Factor to compare the marginal likelihood across models with m change-points. These results are reported in Table 2. They indicate that $\mathcal{M}_1$ has

[25] As Dozhd has a larger number of total headlines on a monthly basis, we include the dependent variable as a proportion of all headline words. An advantage of this approach is that it eases calculations of the marginal likelihood. Parameter estimates are similar regardless of whether the count or proportion measure is used. The correlation of proportion and count measures are greater than $r = 0.9$ for *Ukraine* and *Crimea* for both Russia-24 and Dozhd.

Table 2: Comparing Poisson Change-point Models of the Frequency of *Ukraine* in Russia-24 Headlines.

Log(Bayes Factor)	$\mathcal{M}_0$	$\mathcal{M}_1$	$\mathcal{M}_2$	$\mathcal{M}_3$	$\mathcal{M}_4$
$\mathcal{M}_0$	0.00	-1833.35	-1832.71	-455.20	-418.8
$\mathcal{M}_1$	1833.35	0.00	0.64	1378.10	1414.53
$\mathcal{M}_2$	1833.35	-0.64	0.00	1377.46	1413.89
$\mathcal{M}_3$	455.20	-1378.10	-1377.46	0.00	36.40
$\mathcal{M}_4$	418.8	-1414.53	-1413.89	-36.40	0.00

Note: $\log\Big(BF_{ij} = \frac{m(y|\mathcal{M}_i)}{m(y|\mathcal{M}_j)}\Big)$ where BF_{ij} is the logged Bayes Factor for models $\mathcal{M}_i$ and $\mathcal{M}_j$. Columns are $\mathcal{M}_i$ and rows are $\mathcal{M}_j$.

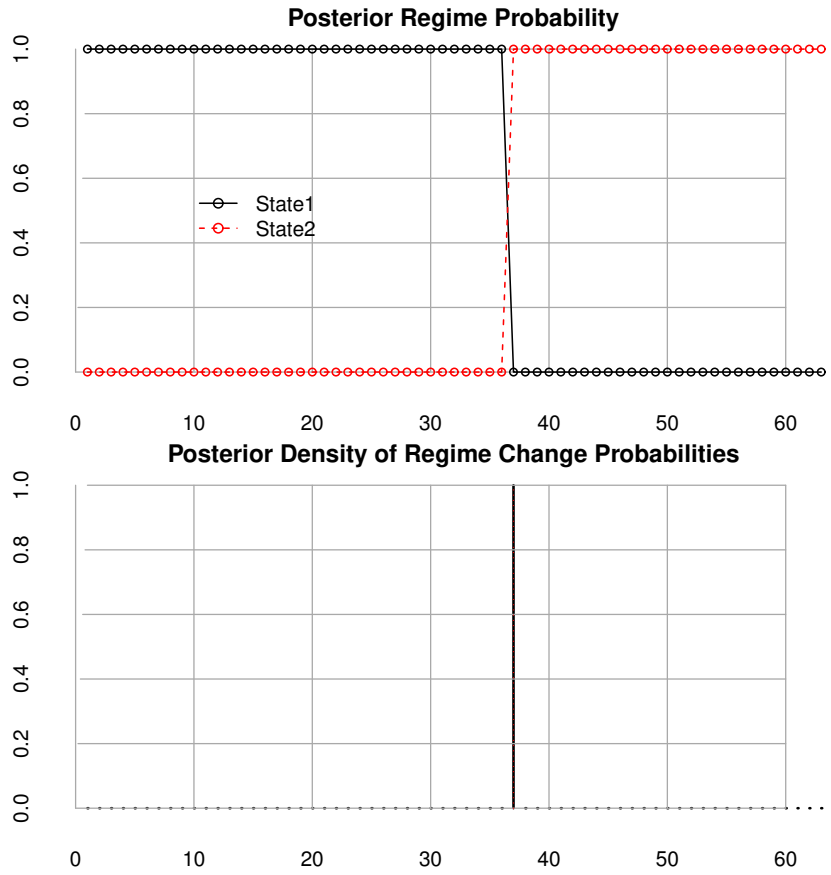
the best model fit.[26] We now focus on the results from this model.

Figure 4 presents the posterior density for the three temporal regimes, as well as posterior probability density of the change-point in a given year. Figure 4 identifies a change-point in February 2014. The results indicate that there is a structural break in the data between January and February 2014. This structural break suggests that the determinants of how frequently *Ukraine* appeared in news headlines changed. Figure 4 also indicates that this break occurred quite sharply. The local means between the temporal regimes increase dramatically (38.1 compared to 236.4). A change-point at this location, along with an increase in the frequencies of *Ukraine* appearing in the headlines, is consistent with our expectations expressed in hypothesis 1, that Russian state-owned news stories feature target states more frequently *prior* to military intervention. In other words, Russian state-owned media increased their news coverage before their military intervention occurred.

Lastly, Table 3 displays the summaries of the posterior distribution for each estimate associated with the covariates. Of primary interest is the regime following the February 2014 change-point—the second temporal regime. The coefficient on *US* is positive and significant at traditional levels, after being negative in the first temporal regime. It is worth

[26]The results from the Bayes Factor suggest that $\mathcal{M}_1$ and $\mathcal{M}_2$ are difficult to separate. Both $\mathcal{M}_1$ and $\mathcal{M}_2$, however, identify a change-point in February 2014 and provide nearly identical parameter estimates for the post-February time regime. See appendix for the results from the $\mathcal{M}_2$ model.

Figure 4: Identifying Change-points in the Frequency of *Ukraine* in Russia-24 Headlines.



Change-point in February 2014. Local means: 38.1, 236.4.

noting that these results hold after accounting for expected media coverage related to the events taking place in a neighboring state (via the independent news *Dozhd* variable). The results indicate that state-controlled media became more likely to write about the US in the second period, as would be expected if these outlets sought to justify Russia's military actions in Ukraine as part of a defensive action against the US. Overall, these results offer support for hypothesis 2, which expected that stories featuring the US would be associated with increases in headlines of Ukraine.

Table 3: Poisson Change-point Estimates for Frequency of *Ukraine* in Russia-24 Headlines.

	Feb 2011– Feb 2014	Feb 2014– Apr 2016
Variable	Mean/SD	Mean/SD
Count US	-0.0027	0.0008
	0.0009	0.0004
Count EU	-0.0008	0.0002
	0.0012	0.0006
Inflation	-0.0318	-0.0227
	0.0181	0.0040
Maidan	1.0338	-0.1019
	0.0725	0.0672
Dozhd	0.5309	36.8044
	3.1904	2.5092
Constant	4.1726	5.3283
	0.1954	0.1023

Note: Estimates of the mean and standard deviation are drawn from the posterior distribution. Results from MCMCs of 20,000 runs after discarding burnin of 10,000 draws.

Crimea

Next, we turn our analysis to exploring changes in the frequency of observing *Crimea* in Russian news headlines. We use Bayes Factor to identify the change-point model with the best fit. Table 4 reports the model comparisons and indicates that $\mathcal{M}_3$ has the best model fit to the data.

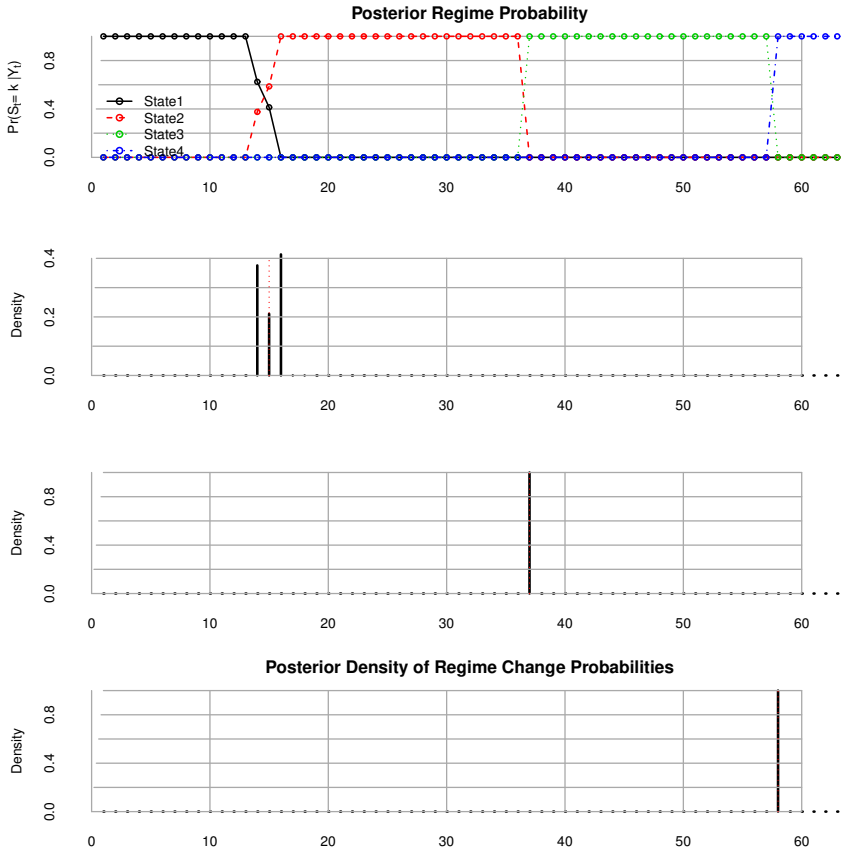
Figure 5 presents the posterior density for the four temporal regimes and the posterior probability density of the three change-points. Change-points are identified in April 2012, February 2014, and November 2015. The structural break in February 2014, the increase in local means between the second and third temporal regimes (10.5 and 68.8), and the sharpness of the break, is consistent with hypothesis 1. That is, there appears to be evidence

Table 4: Comparing Poisson Change-point Models for Frequency of *Crimea* in Russia-24 Headlines.

Log(Bayes Factor)	$\mathcal{M}_0$	$\mathcal{M}_1$	$\mathcal{M}_2$	$\mathcal{M}_3$	$\mathcal{M}_4$	$\mathcal{M}_5$
$\mathcal{M}_0$	0.0	-1282.0	-1749.7	-1894	-1608.6	-1652.1
$\mathcal{M}_1$	1282.0	0	-467.6	-612.0	-326.6	-370.1
$\mathcal{M}_2$	1749.7	467.6	0.0	-144.2	141.1	97.6
$\mathcal{M}_3$	1894.0	612.0	144.2	0.0	285.3	241.8
$\mathcal{M}_4$	1608.6	326.6	-141.1	-285.3	0.0	-43.5
$\mathcal{M}_5$	1652.1	370.1	-97.6	-241.8	43.5	0.0

Note: $\log\left(BF_{ij} = \frac{m(y|\mathcal{M}_i)}{m(y|\mathcal{M}_j)}\right)$ is the logged Bayes Factor for models $\mathcal{M}_i$ and $\mathcal{M}_j$. Columns are $\mathcal{M}_i$ and rows are $\mathcal{M}_j$.

Figure 5: Identifying Change-points in the Frequency of *Crimea* in Russia-24 Headlines.



Changes in April 2012, February 2014, and November 2015. Local means: 1.0, 10.5, 68.8, 64.5.

Table 5: Poisson Change-point Estimates for Frequency of *Crimea* in Russia-24 Headlines.

	Feb 2011– Apr 2012	Apr 2012– Feb 2014	Feb 2014– Nov 2015	Nov 2015 Apr 2016
Variable	Mean/SD	Mean/SD	Mean/SD	Mean/SD
Count US	-0.0135	-0.0205	0.0208	0.0052
	0.0145	0.0059	0.0010	0.0017
Count EU	-0.0388	0.0597	0.0086	0.0078
	0.0155	0.0074	0.0014	0.0042
Inflation	-0.1708	0.2091	-0.0778	0.2119
	0.1857	0.3243	0.0088	0.0252
Dozhd	0.0100	0.3423	6.2267	-0.0127
	3.1584	3.1670	3.0878	3.1597
Constant	6.0511	0.4909	-0.0513	0.2853
	2.4156	1.5503	0.2649	0.6348

Note: Estimates of the mean and standard deviation are drawn from the posterior distribution. Results from MCMCs of 20,000 runs after discarding burnin of 10,000 draws.

that Russian state-owned news began to feature stories about Crimea in the lead up to military intervention.

Finally, Table 5 displays the summaries of the posterior distribution for each covariate. Our focus is on the third temporal regime, which follows the February 2014 change-point. The coefficient on *US* is positive and significant at traditional levels, after being negative in the previous temporal regime. The results hold even after controlling for the expected media coverage from an independent outlet (via the *Dozhd* variable). The results are consistent with those which focused on *Ukraine*, and again offer support for hypothesis 2, suggesting that Russian state-owned media invoke the US in effort to justify Russian actions as part of a defensive effort against a traditional rival.

Table 6: Comparing Poisson Change-point Models for Frequency of *Georgia* in Russia-24 Headlines.

Log(Bayes Factor)	$\mathcal{M}_0$	$\mathcal{M}_1$	$\mathcal{M}_2$	$\mathcal{M}_3$
$\mathcal{M}_0$	0.0	-387.1	-465.0	-416.4
$\mathcal{M}_1$	387.1	0.0	-77.9	-29.2
$\mathcal{M}_2$	465.0	77.9	0.0	48.7
$\mathcal{M}_3$	416.4	29.2	-48.7	0.0

Note: $\log\Big(BF_{ij} = \frac{m(y|\mathcal{M}_i)}{m(y|\mathcal{M}_j)}\Big)$ where BF_{ij} is the logged Bayes Factor for models $\mathcal{M}_i$ and $\mathcal{M}_j$. Columns are $\mathcal{M}_i$ and rows are $\mathcal{M}_j$.

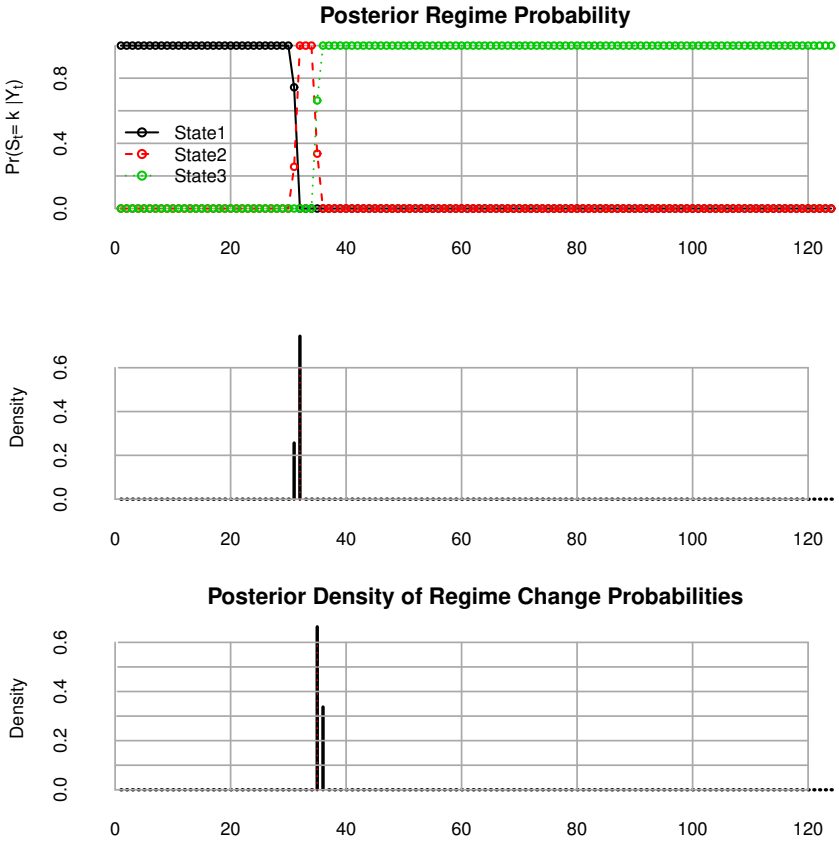
Georgia

In our last set of analyses, we focus on changes in the frequency of observing *Georgia* in Russian news headlines. We identify the change-point model with the best fit using Bayes Factor. Table 6 reports the model comparisons and indicates that $\mathcal{M}_2$ has the best model fit to the data.

Figure 6 presents the posterior density for the three temporal regimes and the posterior probability density of the two change-points. Change-points are identified in Aug 2008 and Nov 2008. The structural break in August 2014 is the same month as Russia's intervention. The increase in local means, from 33.5 to 183.3, and the probability of the break, with a 30% chance that it occurred in July, indicating that increases in Russian news coverage began in mid to late July, is consistent with hypothesis 1. That is, there appears to be evidence that Russian state-owned news began to feature stories about Georgia prior to the military crisis and intervention in the break-away republics of Abkhazia and South Ossetia.

Finally, Table 7 displays the summaries of the posterior distribution for each covariate. Our focus is on the second temporal regime, which follows the August 2008 change-point. The coefficient on *US* is positive and significant at traditional levels, after exerting a negative effect during the previous temporal regime. These results again offer support for hypothesis 2.

Figure 6: Identifying Change-points in the Frequency of *Georgia* in Russia-24 Headlines.



Changes in Aug 2008 and Nov 2008. Local means: 33.5, 183.3, 14.0.

The above results provide strong support for each of our hypotheses. In all three times series—*Ukraine*, *Crimea*, and *Georgia*—there is a change-point in the month *prior* to Russia's intervention. We also find that the local means increase after each of the change-points. Taken together, this indicates, consistent with hypothesis 1, that Russian state-owned media increases the news coverage of military targets prior to intervention, beyond what would be expected by looking just at 'event-driven' news.

In addition, in each of the time series we find that the frequency of the *US* appearing in headlines is associated with an increase in *Ukraine*, *Crimea*, and *Georgia* as well. This is consistent with our expectation that Russian state-owned media would increase its coverage

Table 7: Poisson Change-point Estimates for Frequency of *Georgia* in Russia-24 Headlines.

	Jan 2006– Aug 2008	Aug 2008– Nov 2008	Nov 2008– Feb 2014
Variable	Mean/SD	Mean/SD	Mean/SD
Count US	-0.0027	0.0214	-0.0018
	0.0018	0.0126	0.0008
Count EU	0.0112	-0.0899	-0.0125
	0.0036	0.0214	0.0013
Inflation	0.2065	0.5071	0.0629
	0.0197	0.3704	0.0096
Constant	1.2195	-2.8420	3.1620
	0.1744	4.3175	0.1446

Note: Estimates of the mean and standard deviation are drawn from the posterior distribution. Results from MCMCs of 20,000 runs after discarding burnin of 10,000 draws.

of the US at the same time as their coverage of conflict in their near abroad, to remind the public of the threats and danger arising from a traditional rival. That mentions of the *US* covary positively with those of *Ukraine*, *Crimea*, and *Georgia* in Russian state-owned media headlines is consistent with hypothesis 2.

Conclusion

We argue that authoritarian governments use media to build support in the lead up to foreign intervention, beyond what events-driven coverage would entail. Further, we contend that state-owned media will add context to this by linking target states to other, traditional enemies. We develop a web-scraping application to investigate and analyze Russian-languange media coverage using textual analysis (over 700,000 news stories) of Ukraine and Georgia from 1 January 2006 to 30 April 2016. We analyze this data for changes in news coverage using an endogenous Bayesian MCMC Poisson change-point model.

We find evidence that Russian state-owned media does initiate coverage of targets in the months preceding military interventions. Specifically, we find that Russian state-owned media increased the number of headlines with *Ukraine* and *Crimea* prior to the onset of the March 2014 military invasion of Crimea. We also find that Russian state-owned media increased coverage of *Georgia* before the August 2008 military invasions in South Ossetia and Abkhazia. In both cases, state-owned media coverage intensified *prior* to the onset of actual fighting; this is in contrast to the events-driven coverage from independent media, which increased at the same time as military intervention. Further, there also evidence that Russian state-owned media is more likely to discuss target states as it invokes a traditional rival, the US. These findings are consistent with our expectations. The results indicate that the Russian government directs state-owned media to manufacture support for its foreign military adventures. In addition, it frames these conflicts in a manner consistent with a pre-conceived national roles; namely, as part of a broader geopolitical struggle with the US.

Our analysis contributes the growing literature on foreign policy approaches and role theory by analyzing primary data sources to evaluate hypotheses about a state's national role conceptions. More broadly, our approach offers an innovate way to gather and analyze data from authoritarian regimes. State-owned media can be used to formulate and test prediction about foreign and domestic identities of these states. State-owned media, for example, can be analyzed by outside actors as a signallying device for authoritarian regimes' foreign policy actions. This would be especially useful for policymakers, as authoritarian regimes are less credible than other regiems when sending signals in the international arena. Analyzing the content of domestic state-owned media, however, could help identify when authoritarian regimes are bluffing on the international stage, and when they are mobilizing their resources. Relatedly, future research could also compare differences in content between intended domestic and foreign audiences, and use these divergences to gain traction on separating the preferences of authoritarian regimes from their messaging to external audiences.

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Appendix

Degree of Russian and US Support signaled for Georgia and Ukraine

Figure 7 shows the degree of support signaled by Russia and the US towards Georgia and Ukraine, respectively, from 2000 to 2012. Signaled support is a latent variable based on several foreign policy actions that a major power can take to demonstrate support for a (potential) protégé, such as forming an alliance, selling arms, deploying troops or nuclear weapons, conducting joint military exercises, or having a leader visit or offer public statements of support. Signaled support data are obtained from McManus and Nieman (2018).

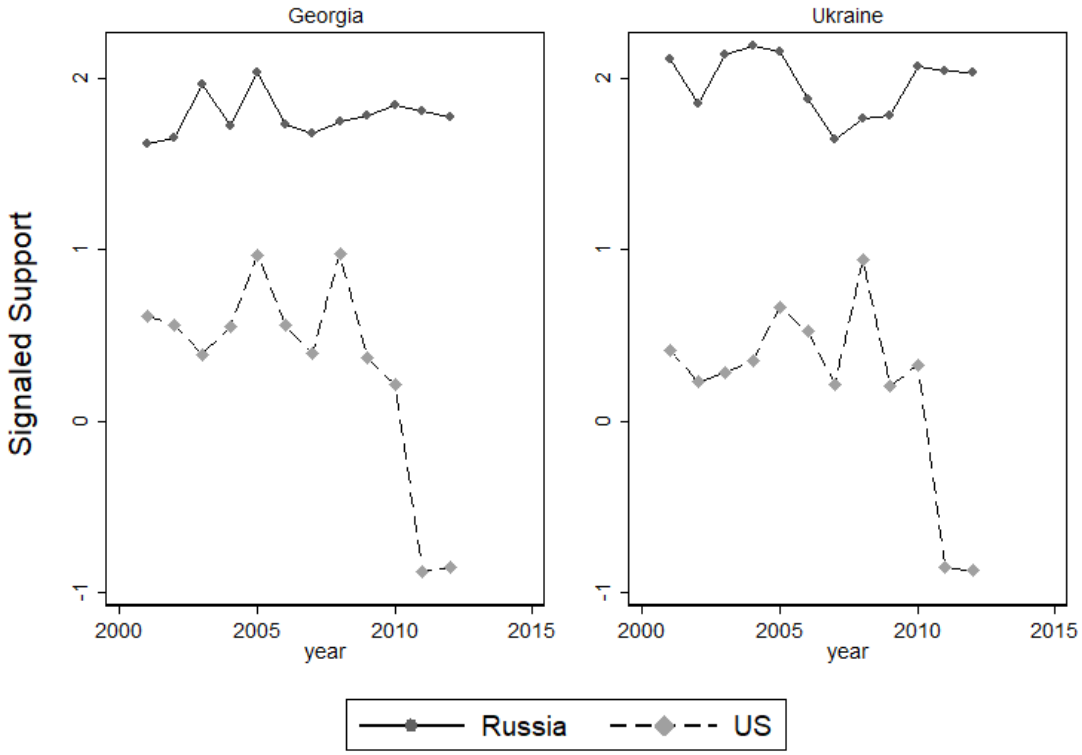
Figure 7 makes clear that while Russian support for both Georgia and Ukraine are relatively constant, US support for each of the former Soviet republics dramatically *decreased* in 2008. The continuity in Russian support, and the decrease in US support, holds despite the gradual shift in foreign policy affinity from Moscow to Washington on behalf of both Tbilisi and Kyiv displayed in Figure 1.

Ukraine: 2 Change-points

Table 2 could not definitively say that $\mathcal{M}_1$ is more likely than $\mathcal{M}_2$ (Kass and Raftery 1995). We report the results from $\mathcal{M}_2$ below.

Figure 8 presents the posterior density for the three temporal regimes, as well as posterior probability density of the change-point in a given year. Figure 4 identifies change-points in January 2013 and February 2014. Consistent with the previous results (i.e. Figure 4), these results indicate that there is a structural break in the data between January and February 2014. Figure 8 also indicates that this break occurred sharply. The local means between the temporal regimes increase dramatically (39.5 compared to 236.4). This change-point and the increase in local means is again consistent with our expectations expressed in hypothesis 1, that Russian state-owned news stories feature target states more frequently prior to military

Figure 7: Degree of Support Signaled by Russia and the US.

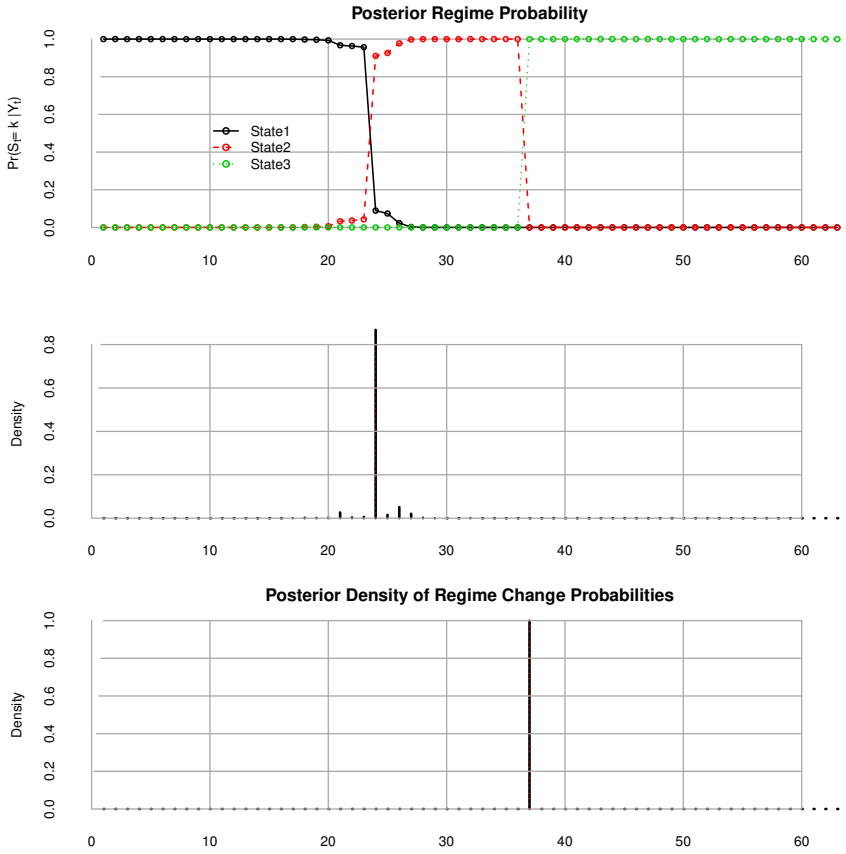


Note: Signaled support data from McManus and Nieman (2018).

intervention.

Table 8 displays the summaries of the posterior distribution for each covariate. Focusing on the third temporal regime—February 2014 to April 2016—it is clear that the coefficient on *US* is positive and significant at traditional levels. *US* is also significant in the second temporal regime—January 2013 to February 2014—suggesting that increasing coverage of the US by Russian state-owned media was associated with increasing coverage of Ukraine during the final year of Yanukovych's government.

Figure 8: Identifying Change-points in the Frequency of *Ukraine* in Russia-24 Headlines.



Change-point in January 2013 and February 2014. Local means: 37.3, 39.5, 236.4.

Table 8: Poisson Change-point Estimates for Frequency of *Ukraine* in Russia-24 Headlines.

	Feb 2011– Jan 2013	Jan 2013– Feb 2014	Feb 2014– Apr 2016
Variable	Mean/SD	Mean/SD	
Count US	-0.0006	0.0052	0.0008
	0.0015	0.0024	0.0004
Count EU	-0.0028	0.0086	0.0002
	0.0013	0.0050	0.0006
Inflation	-0.0185	-0.2525	-0.0227
	0.0180	0.1411	0.0040
Maidan	-0.0118	1.3483	-0.1002
	3.1659	0.1410	0.0675
Dozhd	0.1202	0.2458	36.84861
	3.184	3.1636	2.5235
Constant	4.0084	3.3791	5.3286
	0.2288	1.1181	0.1013

Note: Mean and standard deviation estimates drawn from the posterior distribution. Results from MCMCs of 20,000 runs after discarding burnin of 10,000 draws.