Sharing a Playbook?: The Convergence of Russian and U.S. Narratives about Joe Biden

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Abstract

This paper uses a combination of human coding and artificial intelligence to measure the similarity of Russian propaganda narratives with discussion of Democratic Presidential candidate Joe Biden in social and mainstream media in the United States. The research found the presence of the same five narratives across Russian English-language outlets, Fox News, rightwing websites, and leftwing Twitter. Four of the five narratives were present in rightwing Twitter. The research found a particularly strong convergence between the use of Biden attack narratives on Russian English-language sites such as RT and Sputnik with Fox News coverage. While this project did not identify specific Russian influence on key U.S. narratives about the Democratic candidate, it did find that Russian propaganda narratives generally differed only in quantity, rather than theme, from U.S. content. Across all these outlets, there was much discussion that Biden was corrupt, too old, a sexual deviant, and a placeholder for leftist conspiracy. All the sources aside from rightwing Twitter highlighted that Biden was also the frontrunner in the presidential race. This paper does not seek or find a 'smoking gun' that suggests specific planting of propaganda or disinformation from the Russians; rather, the analysis demonstrates in particular the similarity in narratives between Russian propaganda and right-leaning Fox News. This is worthy of discussion, in particular as Russia has traditionally been viewed as a threat to Western democracy and one might expect a greater difference in coverage between sources such as RT and Fox. At the same time, the five narratives also were present on leftwing Twitter, albeit in a different pattern. The analysis was carried out by the MarvelousAI StoryArc system, which measures news narratives by combining human coding, natural language processing, and machine learning.

Keywords: U.S. presidential elections, Joe Biden, Russian propaganda, narratives, machine classifiers, Twitter, Fox News

Introduction

While there have been a plethora of reports about Russian disinformation in U.S. social media, it is difficult to establish either the full scope or effect of these messages on U.S. news in general. For example, Kathleen Hall Jamieson (2018) carried out an in-depth scholarly study of the effect of Russian social media posts on the 2016 U.S. presidential election, finding it was impossible to gauge exactly how much these ads affected the victory for Donald Trump. In part, the inability to answer the question of precise influence was due to how difficult it is in general to measure the effect of media messaging on vote choice, particularly when trying to narrow that effect to a single election in swing states. At the same time, Jamieson highlighted that it was often difficult to separate Russian propaganda from pro-Trump narratives. In other words, there were so many variables that isolating the effect of Russian social media posts on

Trump's victory is essentially impossible, particularly when Russian propaganda and Republican campaigning looked so much alike.

There is ample evidence that Russia continues to interfere in U.S. elections with propaganda techniques. The Digital Forensics Lab at the Atlantic Council has many carefully researched reports showing disinformation campaigns from Russia and other countries. In 2020, the analytics company Graphika published a "Secondary Infektion" report that showed a persistent pattern of attempts to leverage faked documents published on platforms such as Medium as damaging "leaks" against Russia's enemies in the West (Nimmo et al.). The Secondary Infektion report highlighted how Russian disinformation tactics resonated with its historical roots in disinformation, notably the Operation Infektion project that accused the U.S. of creating the AIDS virus (Nimmo et al., p. 92).

The evidence listed above, along with many other reports and studies of Russian disinformation, amply demonstrates that the Russians produce and distribute material in an attempt to influence U.S. politics. The challenge lies in moving from the evidence of Russian interference to a more dynamic understanding of where and how that material might affect U.S. media narratives. As the Secondary Infektion report noted, there often appears to be almost no dissemination of the material beyond a handful of small websites or social media users. However, without the ability to tag and trace the core messages found in Russian propaganda, it is impossible to measure the spread of Russian propaganda in general.

Our original approach with this research was to identify particular stories and frames that fit within key Russian strategic narratives -- in this case mostly the Russian campaign to undermine democracy itself -- to gauge how much Russian messaging was challenging or changing the information for citizens in the U.S. relating to elections. What we discovered instead with our linguistic analysis of Russian English-language propaganda is that the anti-Biden narratives that emerged there match existing narratives circulating in U.S. sources. We set out to find whether propaganda travelled from Russian sources to U.S. news and social media; instead we discovered that they echoed each other in a far more organic way. While we did not find Russian influence in the classic propaganda sense, we did find a particular confluence between Russian and Fox News messaging about Biden.

Just as Jamieson did, we should be careful to delineate how this approach fits into the general understanding of political communication. It is useful to think about the study of the role of the media in elections on three different levels: news production, content and distribution, and the audience (Oates, 2008). While these categories are somewhat broad and interdependent, there are significant bodies of research at each of the three levels that it is important not to conflate. For this study, we accept the premise that Russian content such as that found on RT.com and Sputnik.com has a mission to support the strategic communication aims of the Russian Federation (Nelson, Orttung, and Livshen, 2015). We also make no speculation about audience effects. While conceding news production and audience response are key parts of the efficacy of propaganda, this study analyzes content and distribution.

Our approach to analyzing the relationship between Russian propaganda and the U.S. media ecosystem builds on important projects such as those listed above, which leverage in-depth knowledge about political communication, Russian information strategy, and online forensics. While this work has made us aware of the attempts by Russia to spread disinformation via social media, we cannot know how these messages have affected the U.S. news or social media conversations. This paper takes the approach of identifying and tracing specific narratives to

see if we can identify whether these narratives appear in parts of the U.S. news ecosystem (and beyond circulation on social media platforms). In this research, we focus on both news and social media to analyze whether particular narratives present in Russian English-language propaganda -- such as Biden is senile or Biden is corrupt-- find their way into U.S. news and online conversation.

From frame to narrative to machine learning: The future of content analysis

A key challenge was to operationalize narrative so that it could be coded both by human and artificial intelligence. This entails updating the classic research tool that is content analysis. Neuendorf (2016) notes that content analysis has been used for more than 60 years in a range of disciplines in research that is concerned with the "generation, flow, and impact of *messages*" (p xv, emphasis in original). Riffe, Lacy and Rico (2005) define content analysis as "the systematic assignment of communication content to categories according to rule, and the analysis of relationships involving those categories using statistical methods" (p. 2). The collected data can be "analyzed to describe what are the typical patterns or characteristics or to identify important relationships among the content qualities examined" (Riffe et al, p. 3). In particular, content analysis of media allows us to define and measure frames, "organizing principles that are socially shared and persistent over time, and that work symbolically to meaningfully structure the social world" (Carter, p. 1). As Carter notes, given that people rely on the media for information about events ranging from local to global, "news stories are essentially narratives and interpretations" (p. 1). Given that the media tend to focus on selected aspects of certain events (through reasons ranging from convention to resource to bias), media work to "construct reality" (p. 1). Content analysis is a remarkably powerful and illustrative tool. Examples of work in measures of media framing range from Hallin's research (1989) that showed the frame that the Vietnam War was unwinnable originated from U.S. leaders rather than from derogatory news reports to Patterson's demonstration that Hillary Clinton received unfair news coverage in her bid for the presidency (2016).

Framing

Robert Entman created a useful and influential definition of framing, noting that "to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote problem definition, causal interpretation, moral evaluation, and/or treatment recommendations for the problem described" (1993, p. 52). Card et al. (2015) note that frames can be a simple phrase with a high degree of resonance, such as "War on Terror" or "more complex, perhaps unstated assumptions, such as the rights of individuals, or the responsibilities of government. The patterns that emerge from these decisions and assumptions are, in essence, what we refer to as framing" (p. 439).

The current media studies field, however, faces significant challenges in deploying traditional content analysis, which has relied on human reading and interpretation, in the internet era. The explosion of content and the dynamic nature of a "hybrid" media system (Chadwick) in which news travels from social media to internet site to news site in unpredictable and rapid ways makes traditional methods of content analysis ineffective. At the same time, there has been a rising interest in the potential of computational linguistics to take on the challenge of rapid, dispersed media content to identify frames. Card et al. proposed that "framing can be understood as a general aspect of linguistic communication about facts and opinions on any issue" (p. 438) and developed a corpus of three policy frames that could be measured by AI after using human coders to annotate news articles on three policy issues. Thus, Card et al.

demonstrated the ability of computational linguistics to use the concept of framing successfully. This has enormous promise for the ability to use AI to both detect and measure frames, although Card et al. and others have important caveats. As Card et al. note, two of the most important issues are that there is a "degree of subjectivity" in framing analysis and that human annotators take a while to learn how to code for frames effectively. This means they improve over the course of a project, which skews the reliability of the coding.

In a study of how humans (college students) learned to identify frames, Card et al. found that while training did improve inter-coder reliability, frames remained complex for coding because they can be very nuanced and complex. Card et al. do note other approaches to close the gap between human and machine analysis of text, including by highlighting the approach of Leskovec et al. (2009) to identify, tag, and trace verbal 'memes' such as "lipstick on a pig." The success of this work, however, relies on a particularly resonant or "sticky" (Xu 2018) linguistic expression that has a relatively unambiguous cultural meaning (i.e. build a wall, lock her up, etc.).

Narrative

For our study, we chose to look at narratives, which we operationalize as a concept broader than a frame, yet still detectable and measurable in news and Twitter content. This reflects earlier work by the researchers (Oates et al. 2019, Oates and Steiner 2018, Steiner and Oates, 2019). Halverson et al. (2011) help to operationalize the concept of narrative by analyzing "master narratives" of Islamic extremism. They note that narratives are "powerful resources for defining cultures and framing actions, and it is particularly important to understand how they operate if we hope to understand and counter them" (page 1). They also find that the term "narrative" is not used consistently in scholarly analysis and is often used interchangeably with "story." Halverson et al. define a story as "a particular sequence of related events that are situated in the past and recounted for rhetorical/ideological purposes" (page 13) while a narrative is "a coherent system of interrelated and sequentially organized stories that share a common rhetorical desire to resolve a conflict by establishing audience expectations according to the known trajectories of its literary and rhetorical form" (page 14). They call for defining narrative as a "system of stories" and delineating between a narrative and a master narrative by defining a master narrative as something that "is deeply embedded in a culture, provides a pattern for cultural life and social structure, and creates a framework for communication about what people are expected to do in certain situations" (page 7). These master narratives have components that include story forms and archetype characters (page 7). The storylines within narratives must have both appeal and a type of unity (Halverson et al., page 13).

How does the well-developed concept of framing fit within the burgeoning idea of narrative analysis that would seem to better embrace Russian information strategy? The difference in frame and narrative is that framing operates within an organized view of reality and essentially accepted fact-based journalism. A narrative is more about a story that may or not may not be grounded in facts; while a frame highlights the organization of material, a narrative resonates with a particular way of looking at the world. It can be argued that the power of a narrative often transcends language or logic; it becomes so resonant and embedded within societies, texts, and the minds of citizens that it can act as an inoculation against inconvenient truths. It allows people to navigate complex and often frightening realities. This can be positive, for example in rallying a population to action to overcome a war or an epidemic through acts that operate against their self-interest (sending their children to fight, staying away from work, self-isolating etc.). But it also can become a very powerful tool that mitigates against democracy

because it creates a disconnect between information and governance, making it impossible for citizens to be reasonably informed. This then turns elections into conduits for power for authoritarian leaders with little regard or interest in serving the citizens or the public good. In other words, while frames could lead -- or mislead -- citizens with regard to policies, actions, individuals, etc., narratives can become more powerful and persuasive agents of particular world views. Specifically, viewing the transmission of information through the lens of narratives could illuminate how specific stories fit into compelling and widely shared narratives. Thus, while scholars such as Starbird (2017) have been justly puzzled by the prevalence of demonstrably false conspiracy theories having surprising popularity in the online sphere, the existence of "false flags" conspiracies makes more sense within the narrative of a lack of trust in governance and media.

Defining the difference between a narrative, a frame, and a story is more of an art than a science. For example, narratives can have many different stories within them (Paletz et al., 2018, page 3). In this context, narratives refer to coherent stories that are shared with multiple people rather than isolated pieces of information (Green and Brock 2005, Hinck et al. 2018). Defined in this manner, a narrative might describe an activity or conflict consisting of a storyline with a beginning, middle, and end, rather than a single fact, and it may imply or state a context, how, and why (Van Krieken and Sanders, 2016). Miskimmon, O'Loughlin, and Roselle (2017) offer a range of approaches in their edited volume on how to specifically define narratives by narrowing the concept of narrative into a particular category: "strategic" narrative used by countries for propaganda. According to Miskimmon et al., strategic narratives have the following components (page 7): character or actors, setting/environment, conflict/action, tools/behavior, as well as a resolution (either suggested, realized, or merely a goal) (p. 7). For example, the Russian strategic narrative that democracy is fatally flawed may include stories about media bias, examples of media corruption, lack of fair coverage, etc. Roselle, Miskimmon, and O'Loughlin argue narratives are "more important for ordering the chaos" in a world "with leaders who are ill-prepared for its complexities" as we develop into a more globalized community (2014, page 74).

While scholars emphasize that one must study how strategic narratives are formed, projected, and received, this paper focuses on the detection and (to a lesser extent) projection of *campaign* narratives. This also made it relatively easy to identify the specific content we wished to analyze as we could use the keyword "Biden" to identify content across all platforms. This was an important reason we chose to look at narratives about Biden rather than about Trump. Although Trump was running for re-election during the time of our analysis (summer 2020), it would have been much more difficult to tag his content as related to the election.

While we claim a difference between the concept of frame and narrative, it must be noted that content analysis is the tool through which we can identify either. In our work in attempting to measure narratives, we have found this hierarchy useful, moving from the narrowest to the widest elements of a narrative:

1. Artifact: Typically an individual, place, movement, quotation, or action that is linked to a particular story. For example, for a crime story, this could name a suspect, type of crime, or a place of the crime. This can be identified by keywords (or sometimes a single keyword).
2. Story: A telling or retelling of a discrete event, such as a crime, arrest, protest, etc., i.e. the story of a crime, such as the robbery of a convenience store in a particular city.

3. Frame: Entman posits that a frame promotes a "problem definition, causal interpretation, moral evaluation, and/or treatment recommendations for the problem described" (p. 55). Here, we would look for more general statements, such as how often convenience stores are robbed in poor neighborhoods (making a moral statement about poor places and even poor people).
4. Narrative itself: This would be a broader statement about life in general, such as "crime is taking over our cities." This overlaps, to a degree, with a "city crime" frame, but is broader and less based in specific facts.

Defining Russian Narratives on the Biden Campaign

While there has been considerable public attention to Russian interference in U.S. election campaigns, it's important to understand this within the history and nature of Russian information strategy. After a brief experiment with Western capitalism, the Russian state has become progressively more nationalistic and antagonistic toward the West. In particular, Russia has become more critical of NATO, which it views as an aggressor in its borderlands and an existential threat. Russia also has engaged in border and internal conflicts, including in Ukraine, Georgia, and Chechnya. Several scholars, including Hinck et al (2018), Orttung and Nelson (2019), Ramsay and Robertshaw (2019), Roselle (2017), Schafer (2018), and Szostek (2017) have studied Russian narratives. It is useful to think of the creation of Russian strategic narratives not as the output of a particular group or agency within Russia, but as an organic construction framework in which many public-facing actors on many levels of the Russian government and media work together to construct narratives along strategic goals as well as in response to current events. Vilmer et al. refer to Russian narrative building efforts as a "coordinated campaign" rather than "an orchestrated operation" (2018, p. 21).

While there is ample evidence of a coordinated, coherent campaign, the study of Russian strategic narratives is aided by a concentration of power in President Vladimir Putin. Putin, unlike Trump, is extremely consistent in his messaging about his country. As there is little power in any other branch of the government or even any politicians (except in as much they speak for Putin) in Russia, presidential speeches and statements during appearances (such as in his annual phone-in question show) are clear indications of state policy. At the same time, electoral autocracies such as Russia have the luxury of message stability: Given that Putin has now led Russia for 20 years and has just overseen a constitutional mandate to keep him in power until at least 2036, there is no need to adjust between administrations. There is really only one voice that matters: Putin.

Reviews of Russian strategic narratives (Oates and Steiner, Steiner and Oates) suggest there are four main narratives, with multiple stories and frames contained within each:

1) The West fails to respect Russia and undermines Russia at all turns;
2) Russia is a rising great power;
3) Russia will protect Russians no matter where they live (this is a key one to explain the invasion of Georgia, the Transnistria conflict, the seizure of the Crimean peninsula from Ukraine, threatening Baltic security, and the invasion of Eastern Ukraine).
4) Democracy is corrupt and failing.

As is clear, these strategic narratives interact to a certain degree -- as the West fails, Russia will rise, for example. Russia is held up as a successful state, while the United States is shown to

be weak and failing. Lately, that frame has focused on the internal political division in the United States as a sign the country will collapse (unleashing havoc and possible violence on the rest of the world). The coronavirus pandemic is woven into different narratives, for example as Russia sends "aid planes"[1] to other countries to demonstrate its superiority while playing down its own struggles to contain the outbreak and provide adequate medical care.

Operationalizing Narrative via Russian coverage of Joe Biden

It is one thing to be able to identify broad trends in Russian state strategic communication. It is another thing to track how those messages are spread. This paper looks at key English-language outlets funded by the Russian state: RT (formerly Russia Today), Sputnik, and TASS, the Russian state information service. While earlier work has focused on narratives around Russian foreign policy (Oates and Steiner 2018, Steiner and Oates 2019), this paper looks at a very American story: the coverage of Biden as part of the "failed democracy" strategic narrative. How do these three English-language Russian sites structure reporting on Biden so that it supports the "failed democracy" strategic narrative? In this paper, we convert the concept of "strategic" narrative into that of "campaign" narrative, although the Russian approach to the campaign narrative is nested into their broader strategic narratives as outlined above.

We did not expect the Russian media to be supportive of Biden. The favoring of 2020 U.S. Democratic presidential candidate Bernie Sanders over Biden in Russian state-directed media outlets was explored by Burrett (2020), who found that "Russia's aversion to Biden stems from his strong commitment to NATO, support for Ukrainian sovereignty, and tough line on Russian election meddling" (p. 12). While these specific dislikes were logical, Burrett found that "spreading distrust in U.S. democracy was the main aim of Russian interference over and above preference for a particular candidate" (p. 12). In this way, we can see the guiding hand of strategic narrative.

Burrett identified a consistent "pro-Bernie" and "anti-Biden" bias in Russian media, finding that RT and Sputnik focused on Biden's gaffes, bad language, alleged corruption in Ukraine as well as links to Wall Street and the Washington establishment (p. 12). Burrett notes that Biden is portrayed in the Russian media as a "compromised candidate who nonetheless receives establishment backing." Burrett found similar narratives on key Russian television channels that are controlled by the state (First Channel and NTV).[2] While Burrett notes that this could be an attempt to sway American voters given that Biden will take a harder line with Russian foreign policy, this coverage also plays into the "Democracy is corrupt and failing" narrative as it constantly highlights that Biden is a flawed candidate. In keeping with a Russian tradition of *kompromat*, half-truths and unsubstantiated statements to bolster negative stories about politicians, the key story about Biden was to repeat "widely discredited claims that he sought the removal of Ukraine's prosecutor … to shield his son Hunter from an investigation into his work for the Ukrainian gas firm Burisma" (p. 12). Burrett notes that the Russian media was critical of all of the candidates to some degree, including comparing the elderly Biden, Sanders, and Bloomberg to "enfeebled, elderly leaders of the Soviet Union" (p. 13). It's interesting to note that Trump did not make this list.

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[1] For example, see https://www.rt.com/russia/483796-russian-military-coronavirus-aid-italy/
[2] These networks have different ownership arrangements, with 51% of First Channel owned directly by the Russian state. However, neither network has the ability to report freely in key strategic areas due to a number of legal and financial controls held by the state (Oates, 2013).

Coding Russian Narratives Summer 2020

Initially, this project was interested in analyzing how Russian strategic narratives resonated into the U.S. social and traditional media via English-language sites such as rt.com and sputnik.com. However, we encountered three significant problems. While Russian strategic narratives listed above are both coherent and enduring , the volume of coverage is relatively low on RT and Sputnik. For example, the Russian narrative about NATO is that it is a tool of the Americans that is out to destroy the Russian nation. When there is coverage of NATO in Russian English-lanuage text, that narrative is often apparent and consistent. However, there is not sufficient volume to create a robust language classifier for NATO or even issues such as Ukraine, Crimea, or Syria (all areas in which there are clashes over sovereignty among Russia, the native population, and the West). The second issue is that (unsurprisingly) Russian news and U.S. news care about different things. There is almost no coverage of NATO in the U.S. media or discussion on social media. As a result, even if you had a classifier that could identify the NATO narrative on RT and Sputnik, there would be very little U.S. content onto which to project it. In other words, the Russians care about NATO, but most Americans don't, so it's not a good test of influence. There could be an argument made that RT and Sputnik have outsized influence in the discussion of NATO as there is essentially an information void about it on mainstream and U.S. social media, but that would be another type of research project.

We pivoted to analyze content that was relevant to both countries and covered in sufficient volume: the race for U.S. presidency. We focused on Biden so that we could be relatively sure that we were looking at campaign coverage, rather than the general coverage that also surrounds Trump. Here we encountered our third problem: When it came to coverage of Biden, an issue of great interest and volume in the U.S. media, it was difficult to distinguish Russian coverage from that of on the Right in the United States.

One author (Oates) reviewed coverage of Biden on RT, Sputnik, and TASS from mid-May to late July 2020, using the MarvelousAI system that scraped the website content from the three sources. She then devised a codebook that identified key narratives within stories about Biden, with many stories having two or more narratives. An original list of about 20 narratives was refined to five narratives (for details see appendix). The narratives were: Creepy, Corrupt, Old, Radical, and Biden is Winning (which was the only non-attack narrative obvious in the coverage).

Using methods outlined in earlier work (Oates et al, 2019), we were able to identify specific Biden campaign narratives on RT, Sputnik, and in TASS, the English-language newswire from Russia. Our approach was to scope the content through reading articles; create initial definitions of narratives; attach keywords (artifacts) to narratives, and provide examples of stories or frames within the narrative. One author (Oates) coded about 200 stories and refined the coding scheme. Another author (Anderson) then coded a sample for a test of inter-coder reliability, which yielded updates to the final narrative list and definition. Oates then coded mentions of Biden in about 200 (mentions of Biden pulled within context) from RT, Sputnik, and TASS in the MarvelousAI application.

There were a few important lessons learned in attempting to define narratives in RT, Sputnik, and TASS. First, not all content lends itself to inclusion into a narrative. This can be frustrating for coders, who tend to have a default setting to try to code everything into a category. Both linguistically and realistically, however, some statements or news just don't fit into a narrative. For example, there was a fair amount of coverage of routine campaign events or statements

that didn't have any particular resonance. This led to a second insight about coding content that is emotive or designed to be more persuasive than strictly informative: It is useful to include a sense of tone for a coder. While these are qualitative in nature, they rise above the essentially uncodable categories of negative, neutral, and positive. Finally, human coders need to adapt to both the promise and limitations of computational linguistics. Just as it is difficult to fit some content into a particular narrative, a machine classifier needs a sufficient quantity of content to build a valid and reliable model of a narrative. While there may be one or two fascinating stories that appear to demonstrate an interesting point of view, a small quantity of content will not train a classifier. It was also noted that while much of the content on Sputnik and TASS was essentially descriptive, more of the content on RT was analytical in nature, where it was easier to detect tone and find more overt expressions of narrative.

MarvelousAI was able to train a classifier on the annotated news snippets to create automated classifiers, but our first and most significant finding was that the Russian narratives did not differ from existing narratives from a much larger corpus of thousands of Biden tweets that had been annotated for months by MarvelousAI. In other words, there was key overlap between the Russian English-language Biden narrative with the U.S. Biden social media narrative. While this ruled out the ability to use the Russian annotation to measure the spread of Russian-based narratives -- because we could not tell the difference -- it provided evidence in the convergence of Russian and U.S. narratives about Biden.

Using labelled tweets as training data, we build supervised machine-learned models for the most common Biden narratives, and then used these models to automatically label news data from Russian and US news sources. For model training, we computed vector representations of each labelled tweet using a pre-trained neural network (DistilBert adapted for semantic similarity, cf. Reimers and Gurevych 2018), followed by Principal Component Analysis to reduce the number of dimensions. These resulting vectors were fed into a logistic regression binary classifier, one per narrative. We found that this approach allowed us to build narrative models with about 80% precision and recall with only a few hundred labelled examples.

Findings

The findings of the narrative detection are presented in Table 1 and Chart 1 below. We identified five robust narratives that could be measured by both human and machine classifiers. Four of these were attack narratives and were identified with following labels (for full definitions see Appendix A): corrupt, senile, sexual deviant, and placeholder for leftist conspiracy. As noted above, we found it easier for the human coders code if we identified a tone for each narrative, linking moral outrage to the corrupt narrative, pathos to senile, disgust to sexual deviant, and fear for leftist conspiracy.[3] We also noted the presence of a narrative that Biden was the front-runner. When coding this narrative, we looked for statements that Biden was going to win, not just a straight reporting of numbers (i.e. the writing was suggesting victory).

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[3] This tone was used by the human coders to establish narratives. We did not attempt to seed the machine classifiers to recognize a particular emotion or tone.

Table 1

Narrative	Right-wing Twitter (08/23-08/30 N=945391)	Russian (05/01-08/30, N=356)	FoxNews (08/01-08/30, N=806)	Right-wing sites (08/01-08/30, N=904)	Left-wing Twitter (08/23-08/30, N=1064797)
Biden is corrupt.	19.36%	15.17%	12.78%	12.72%	12.64%
Biden is the front-runner.		14.33%	7.94%	13.38%	16.74%
Joe Biden is senile or sun-setting	28.34%	11.24%	6.45%	4.09%	20.44%
Biden is a sexual deviant.	20.05%	7.87%	4.22%	1.55%	12.39%
Biden is a placeholder for leftist conspiracy	23.21%	7.87%	7.44%	8.63%	13.76%

Note that a correlation test (Pearson) identifies the highest correlation between narrative percentage scores in Russian content and Fox News (.766 with a significance score of .131, which is not particularly robust). There is a very similar correlation score between the right-wing web content and Russian content (.761 with a significance score of .135). The correlations are weaker between the Russian content and content either on the Right or the Left on Twitter.

Chart 1

Biden narratives across different media
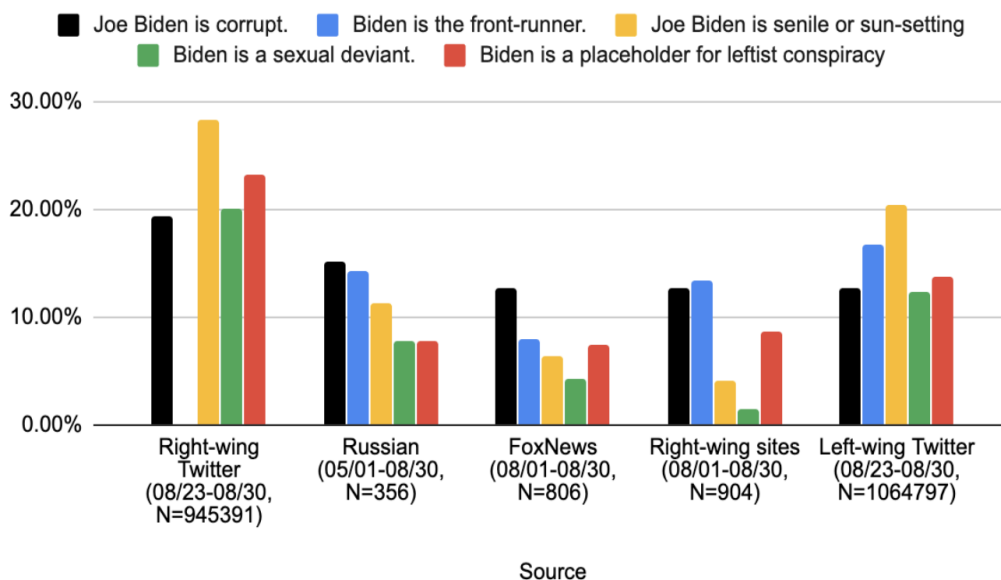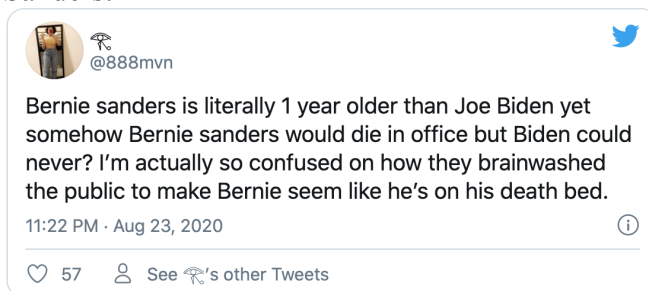
Below, we give examples of narratives.

Corrupt

"US President Donald Trump has predicted that if his Democratic rival in the 2020 race for the White House wins, his country's relationship with China will become quite different. President Trump: "China owns Joe Biden."" Sputnik, 08/24/2020

Senile

"Other Twitter users pointed out the contradiction, noting "Your justice department said his shooting was justified. You don't remember that Joe?" Another said, "Biden doesn't remember what he did six hours ago, let alone six years ago. His DOJ said the shooting was justified." So, Mr. Biden, as someone who's been helping run the "system" for nearly 50 years, tell me again how you plan to take on "systemic racism"? Biden is likely looking to bolster his support among black voters after two gaffes last week at an event hosted by black and Latino journalists." RT, 08/10/2020

Left-wing twitter mostly refutes accusations of senility, or compares Biden with Bernie Sanders:

@888mvn

Bernie sanders is literally 1 year older than Joe Biden yet somehow Bernie sanders would die in office but Biden could never? I'm actually so confused on how they brainwashed the public to make Bernie seem like he's on his death bed.

11:22 PM · Aug 23, 2020

♡ 57   See 𐎂's other Tweets

Sexual deviant

"At the time, his ex-staffer had come forward claiming he cornered and inappropriately touched her while he was Senator for Delaware, which Biden denied. On Friday night users took Twitter to trend the hashtag #AlyssaMilanoIsALie, and it has since kicked into high gear, initially starting with a fiery politically-themed exchange between actress and well-known left-winger Alyssa Milano and her Charmed colleague Rose McGown." Sputnik, 08/22/2020

Placeholder for Leftist Conspiracy

"At a campaign stop in Wisconsin on Monday, Trump drew comparisons between his centrist Democratic rivals, Joe Biden and Kamala Harris, and the Bolivarian Republic of Venezuela." Sputnik, 08/17/2020
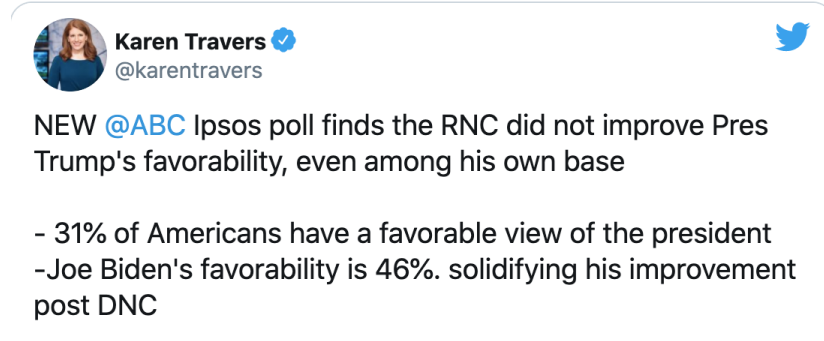
Front-Runner

Right-wing and Russian propaganda mention Biden's poll standings, but with much skepticism.

"Biden and running mate Kamala Harris will take on Donald Trump and Mike Pence in November but where are the main battlegrounds? Joe Biden is currently ahead of Donald

Trump in the opinion polls but there is almost three months to go until the election so a lot could change. One factor that could conceivably make a difference is whether singer and music mogul Kanye West makes it onto the presidential ballot." Sputnik, 08/19/2020.

On left-wing Twitter, the front-runner narrative is much more supportive of Biden:

Karen Travers ✔
@karentravers

NEW @ABC Ipsos poll finds the RNC did not improve Pres Trump's favorability, even among his own base

- 31% of Americans have a favorable view of the president
-Joe Biden's favorability is 46%. solidifying his improvement post DNC

We were most successful at categorizing narratives on rightwing Twitter, although the machine classifier worked on picking up narratives across five distinctive corpora. It is important to note that a given tweet could be coded into more than one narrative. Content was scraped from Russian English-language sources (RT.com, sputnik.com, TASS.com), from foxnews.com and selection of right-wing websites (Breitbart.com, InfoWars.com, ZeroHedge.com, and GlobalResearch.ca). We used network analysis to identify the bias and credibility ratings of Twitter users, which allows us to gauge the nature of the audience commenting on specific candidates on Twitter. The Media Bias Fact Check project uses a team of journalists to evaluate major English-language online news sites in terms of their political bias (left - centrist - right) and "commitment to facts" (credibility; factual - mixed - questionable). The ratings are done by professional journalists and are based on the behavior of a site as a whole, rather than on a per-article basis. Using ratings for news sites, we infer the bias and credibility scores for the link behavior of Twitter users in our corpus. This is how we established right-wing and left-wing Twitter corpora.

In right-wing Twitter, almost 30 percent of close to a million tweets from August 23 through August 30 were linked to the senile narrative. This outperformed the other narratives, although Biden was attacked for being a placeholder for leftist conspiracy in more than 20 percent of the tweets in the sample and for being corrupt in almost 20 percent as well. The sexual deviant attack narrative was present in about 20 percent of the tweets. What is particularly striking is the absence of any mention of Biden as the front-runner. One would expect it to be much lower among right-wing Twitter users, but given that Biden was the front-runner in polls at this time it is surprising there is no mention at all. This makes the right-wing Twitter corpus the only place this narrative is absent in this study.

The Russian corpus, which included 356 articles in English mainly from RT and Sputnik, including all five narratives, with the corruption attack narrative and the front-runner support narrative present in almost equal measure. This makes the Russian outlet corpus distinctive from the right-wing Twitter corpus, but closest to the Fox News corpus in the distribution of narratives. While the measurement is somewhat asymmetrical because the Russian outlet corpus stretches over a longer time period in order to capture enough content (from May 1 to August 30, 2020), it's still striking to see the resonance between Russian content and Fox News (which shows an analysis of 806 stories from August 1 through August 30). The Biden corruption narrative was somewhat lower on Fox. By the same token, a 'balancing' support narrative of Biden as the front-runner was also less prevalent on Fox. Fox also spent less time

on the senility narrative. Where Fox differs most from the Russian content is on the sexual deviant narrative, which is present but less prominent than in Russian sources.

The right-wing websites analyzed in this study were pragmatic about Biden, with the most common narrative being about his status as a front-runner. While there was also significant focus on him as corrupt, it is interesting to note the difference between rightwing Twitter and the rightwing sites in terms of the three other attack narratives: The rightwing sites gave much less attention to all of them, showing much less attention to the sexual deviant narrative.

Finally, we analyzed more than a million Tweets on the Left for the same week as the rightwing Twitter analysis to see how well the narrative detection categorized conversation on both the Left and Right. This dataset exhibited some of the same attack narratives as in the right-leaning corpus, but they were overshadowed by pro-Biden narratives that were not present elsewhere (see Chart 2).

Chart 2

Left-wing twitter narratives about Biden (08/23-08/30)

Percentage of tweets (N=1,064,797)
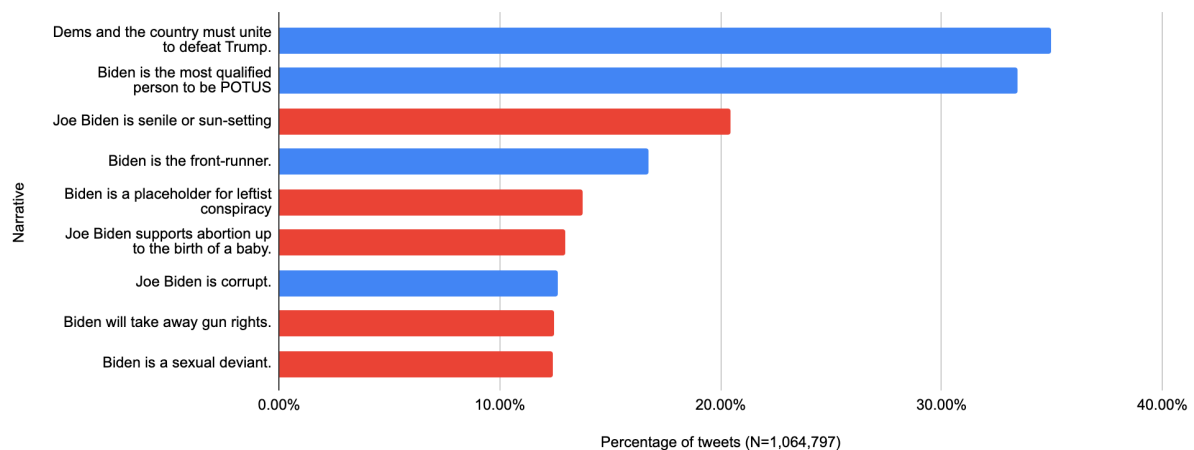
The most striking (and rather unsurprising) difference is the presence of the supportive front-runner narrative in about 17 percent of the tweets analyzed. People on left-wing Twitter showed plenty of criticism of Biden, but it was not as prevalent as more supportive narratives as indicated on the table above. Twenty percent of the tweets could be coded into the senile narrative. The presence of the attack narratives on the Left could be linked to three particular factors: 1) the general nature of the Left to be more self-critical; 2) specific criticism of the more radical wing of the party such as supporters of Bernie Sanders and 3) legitimate concerns about the candidate, especially his age. It would be useful to compare how Trump is discussed on right-wing Twitter to ascertain, in particular whether right-wing Twitter also is critical of their leader at times. From qualitative observations in coding Twitter at MarvelousAI, this would seem unlikely. However, the coding of Trump narratives so they could be developed into machine-classified narratives was beyond the scope of this project.

As noted by Benkler, Faris, and Roberts (2018), Fox News presents the news through a pro-Right, pro-Trump slant. This made it an important outlet to study in terms of Russian influence, given concerns over links between Trump's campaign and Russian influence. Fox News also is a particularly important and influential news outlet for Republicans, as they trust it much

more than any other U.S. news source and rely on it for political news.[4] However, it would be very useful to measure the presence of the Biden campaign narratives on center or left-leaning media in the United States and we plan to do this in future analysis.

Conclusions

In this research, we set ourselves theoretical and methodological challenges. We were attempting a type of "cyborg" coding, by starting with human annotation of tweets and news stories to build a machine classifier. We were particularly interested in creating a tool that operationalized and measured campaign narratives, building on earlier work that operationalized Russian strategic narratives. We wanted to be able to detect whether Russian narratives about Biden were present in U.S. Twitter or news.

After an initial period of trial and error in defining and coding narratives by hand, we were able to train a machine classifier to recognize five central narratives about Biden's bid for the U.S. presidency in the summer of 2020. Four of these were attack narratives: Biden as corrupt, senile, a sexual deviant, or leftist conspirator. We also identified and successfully coded a narrative of Biden as the frontrunner in the 2020 elections. We discovered that the narratives in the Russian English-language outlets had a particularly strong resonance with Fox News as well as other U.S. sources to a lesser degree. We cannot know if this is apparent across other major U.S. news outlets that were not analyzed, although we plan to measure these in the future. However, the resonance we found is very interesting. Hence, while we are unable to detect a particular Russian 'seeding' of narratives on Fox, right-wing sites, or on right-wing Twitter, this similarity is interesting. What does it say about democracy if Russian propaganda and U.S. news on Fox appear to be framing Biden in a very similar way?

That being said, there is also the presence of the same narratives on left-wing Twitter, although in a different configuration. All of this requires more study, particularly the issue of whether right-wing Twitter is more 'loyal,' i.e. less balanced in discussion as there was no mention of Biden as the front-runner in almost a million tweets.

While surprising to us as researchers, this finding is important evidence of the convergence of the Russian and Fox News narratives in an election campaign. The question of how much influence the Russians had in the 2016 victory of Trump has galvanized the nation for the past four years, culminating in a final report in August 2020. In the conclusions, the Democrats found the Trump campaign complicit with the Russians, while Republicans did not.[5] The story of the actions and motivations of the Republicans (and the Russians) is important and interesting, but it is not the story told here. Rather, here we are presenting evidence that no matter what happened behind closed doors, Russians and the right-leaning Fox News are making many of the same arguments against Biden. It has important implications for American democracy that a sitting President and major political party is agreeing with a traditional enemy of the United States.

As Burrett noted in her study of Russian propaganda about Sanders and Biden, "Russia's disinformation campaigns against the U.S. rely on deep political discord among Americans. Unwittingly assisted by America's partisan press, Russian propagandists, with relatively little

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[4] According to a November 2019 survey conducted by Pew Research, see
https://www.pewresearch.org/fact-tank/2020/04/08/five-facts-about-fox-news/
[5] https://www.nytimes.com/2020/08/18/us/politics/senate-intelligence-russian-interference-report.html

effort, coopt real, vitriolic American voices to spread disinformation and division. Many Americans are too busy fighting among themselves to see they are being manipulated. The purpose of the Russian media's framing of the Democratic primaries has been to plant doubts and conspiracies and have them amplified by U.S. voters on social media. So far, the strategy seems to be working." (p. 14).

We need more evidence to make clear conclusions about the resonance between Russian propaganda aimed at the U.S. audience and domestic conversations about Biden. We can use our methods to find a convergence and we believe our automated narrative detection can be an important tool in measuring media coverage in real time across multiple social and traditional news platforms. In particular, this tool can be deployed to detect and counter propaganda strategies aimed at attacking specific candidates or -- even more importantly -- at undermining democracy itself. While we need a more granular and nuanced ability to distinguish how the narratives are being deployed, in particular as we suspect that the conversation in left-wing Twitter might be attempting to refute some of the attacks in Biden, but this will require further study. However, we believe that our demonstrated ability to operationalize narratives identified and annotated by human coders into machine-classified narratives is an important first step in merging traditional content analysis with the power of artificial intelligence.

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Appendix: Biden Narratives

Narrative	Description and key frames	Keywords (adjectives, actors, places, acts, etc.)	Examples of text in Russian English-language media
Creepy TONE: Disgust	Joe Biden is at worst a sexual predator and, at best, treats women oddly by smelling their hair, touching them, etc. Includes off-color remarks. Includes Tara Reade story	Creepy Tara Reade double standard pervert pedophile	Tara Reade paints a very graphic picture of her claim of being sexually assaulted by Joe Biden. Biden should have been muzzled years ago, so he would no longer be capable of being an olfactory pervert, constantly sniffing little girls and women.
Corrupt TONE: moral outrage	Joe Biden is corrupt. Includes story of Hunter Biden/Burisma. Also includes charges of "plagiarism" of ideas, etc. Scandal Joe: Linking Biden to a scandal (widely defined). Also includes Biden as complicit with all the crimes of the Democratic Party. Includes references that equate him to the Obama administration and/or claim he will re-create the Obama White House.	Corrupt Hunter Biden Burisma Ukraine Poroshenko (former president of Ukraine) Kyiv Plagiarism	Leaked tapes of Poroshenko-Biden calls fuel suspicions post-Maidan Ukraine is effectively US client state At the same time, it has not gone unnoticed by many Americans – particularly by members of the Democratic Party – that Biden has done little to help the black community on the justice front throughout his lengthy political career.
Old TONE: Pathos, exasperation, disappointment	Joe Biden is too old and too incompetent to be president. Gaffes, misstatements, etc.	Dementia Joe Sleepy Joe "Hiding in his basement" Gaffe Weak Impaired Starts to be about avoiding debates in late June etc.	Biden, who will coincidentally celebrate his 78th birthday just 17 days after the election, would have the dubious honour of being the oldest-ever president to serve his country. Jun 11 "It's not just a matter of incompetence or laziness," Biden said, calmly if slurring his words a bit, in a "virtual rally" video released on Thursday.

			Then there's Joe Biden's snafu of saying that if you don't vote for him " you ain't black ."
Radical TONE: Fear	Biden is a socialist (includes mentions of him in Sander's camp	Socialist Anarchy Sanders Guns -- includes threats to gun rights	Biden would go even further and defund not only the police but the US military as well, the president wrote on Twitter, insisting the Democrats were "controlled by the radical left." Biden would go even further and defund not only the police but the US military as well, the president wrote on Twitter, insisting the Democrats were "controlled by the radical left."
Biden is winning (no apparent tone)	Biden is surging ahead OR coverage of his campaign that spreads his message.	Includes surveys Also where Trump's lead is shrinking (Texas) Includes positive endorsements/surrogates (such as Kamala Harris)	