From Ukraine to Gaza:

Watching One War Displace Another on the U.S. Cable News Agenda

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ABSTRACT

Agenda-setting theory expects issues that appear more often in media coverage to hold greater prominence in the public mind, especially when large segments of the public take interest in, and feel uncertainty about, those issues. The theory assumes limitations on the informational capacity of both the public mind and media coverage. Questions remain, however, about how those limitations operate. Based on empirical analysis of data drawn from a comprehensive cable news content archive using custom code developed by the authors, this paper documents how the volume of coverage between early 2022 and late 2024 by MSNBC, CNN, and Fox News about the war in Ukraine dropped when the networks scrambled to report on the outbreak of war between Israel and Hamas, then subsequently rebounded, although only somewhat, as the volume of coverage about the Israel-Hamas conflict moderated. The findings offer theoretical insights into how issues compete for shares of the cable news content stream's limited capacity.

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By the time their U.S. audiences went to bed on Oct. 6, 2023, cable news networks MSNBC, CNN, and Fox News had collectively spent around 20 minutes of the day mentioning Russia or Ukraine, the former of which had invaded the latter just over a year and a half earlier. The following day, the networks aired only about half as much, sprinkling it among a staggering 15 hours of collective coverage mentioning Gaza or Israel. All wars are immediate and devastating for those involved in them or directly affected by them. In terms of pixels-per-minute on the networks' screens, however, the war between Russia and Ukraine might as well have vanished that day, replaced by a new war on a different continent some 1,200 miles to the south. Drawing upon agenda-setting theory and empirical analysis of data from a comprehensive cable news content archive, this paper documents how news about the war between Gaza and Israel displaced news about the war between Russia and Ukraine, both on that first shockingly violent day and for many days after, and offers insights into how issues compete for shares of the cable news content stream's finite volume.

The events of October 2023 confronted the world with circumstances it had not witnessed in at least several decades. When Gaza-based Hamas attacked Israel and Israel subsequently declared war (Levush, 2023), the world found itself simultaneously watching two conventional military conflicts that both threatened to spiral into regional or global conflicts and perhaps even trigger nuclear war. Approximately a year-and-a-half earlier in February of 2022, Russia had launched a full-scale invasion of Ukraine to pry away territory and initiate regime change (Ramzy, 2022). After the outbreak of the Israel-Hamas War in Gaza, Hezbollah fired rockets into Israel from Lebanon, opening a second front in that conflict (Baker, 2024). The Russian invasion

of Ukraine was subsequently characterized as the most significant war in Europe since World War II and thus threatened to initiate a conflict between Russia and members of the North Atlantic Treaty Organization (NATO; Nagourney et al., 2023). The final sum of destruction, human suffering, and death caused by these ongoing wars remains unknown as of this writing.

The outbreak of two such terrible conflicts in the same timeframe presents difficult choices for media organizations. On any given day since the beginning of Israel's war with Hamas and Hezbollah, that conflict has, in a sense, competed with the Russo-Ukrainian War for time and space in news media. Editors, news directors, and journalists must decide how much attention and other resources to allocate to each conflict. News values including balance, conflict, human interest, importance, cultural and geographic proximity, novelty, recency, and violence influence these decisions (Djerf-Pierre, 2012; Elmasry, 2024; Entman, 2004; Tzika, 2024). As a result, one war is likely to receive more coverage than the other.

This research was designed to assess how coverage of the Israel-Hamas war and Russo-Ukrainian War varies across three major, U.S. cable television news channels. How has coverage of the Russo-Ukrainian War been impacted by the outbreak of the Israel-Hamas War? How has relative coverage of the two wars changed over time? Are news outlets divergent from each other in terms of the coverage dedicated to each conflict, or consonant in their coverage?

Literature Review: Issue Displacement, Stasis, and Media Consonance

As the name indicates, agenda setting theory posits that different issues hold different relative positions of importance and amount of attention on the media agenda, which is consonant across news outlets. As a media effects theory, agenda setting indicates that the media agenda relates to the public agenda, or how people perceive the relative importance different issues (e.g. McCombs & Shaw, 1972; McCombs & Valenzuela, 2021). Over time, issues enter,

rise in, fall on, and leave the media agenda (Dearing & Rogers, 1996). Research on agenda setting conducted from the *natural history* perspective (McCombs, Danielian & Wanta, 1995) explores patterns in how issues move through media and public agendas over time. Among other things, the natural history approach has found that temporal spikes in the agenda salience of a given issue (Geiß, 2011) can correspond to stronger agenda-setting effects (Geiß, 2022). Furthermore, issues compete to move up the agenda in terms of importance and attention (Hilgartner & Bosk, 1988).

Peng and Zhu (2022) recently examined how issues relate to each other in agendas in terms of competition, cooperation, or coexistence. They found that "…the issue ecosystem of the American public is essentially competitive and that the balance of competition and cooperation has remained unchanged over time," (p. 952). However, their research is focused on evidence from public opinion polling rather than on evidence from media content. Zhu (1992) previously considered both the agenda perceived by the audience and the media agenda. These agendas are *zero-sum*, with many issues and a finite agenda space that cannot accommodate them all, resulting in competition among issues. The introduction of new issues onto the agenda must, therefore, necessarily *displace* other issues (Zhu, 1992).

Research has examined how issue displacement in the media agenda is driven by issue salience spikes. For example, in the health media space, Hertog et al. (1994) repeatedly found negative correlations between AIDS and cancer coverage. However, the relationship was imbalanced. Cancer coverage fell a little and sporadically, but AIDS coverage spiked dramatically, increasing five-fold or more in a two-year period.

At around the same time, Brosius & Kepplinger (1995) tested two models of how rising media salience for one issue might affect media salience of other issues: an *equal-displacement*

model in which rising salience for one issue would correspond to an equivalent sum of falling salience in all other issues, and a *restructuring* model in which a single, highly salient *killer issue* can remove several other *victim issues* from the agenda entirely. Their findings indicated that the restructuring model was probably likelier than the equal displacement model, with the latter possibly being an oversimplification of the varied and complicated processes involved in producing media and public agendas. More recently, Rauchfleisch et al. (2023) found that climate change grew ascendent on Switzerland's media agenda in 2019, only to practically disappear from the agenda in early 2020 as the COVID-19 outbreak began to dominate coverage. Similarly, and more directly relevant to the present research, Djerf-Pierre (2012) found that, like COVID, war *crowds out* or displaces environmental issues from the limited news agenda. Thus, restructuring appears to be the better of the two models at explaining agenda dynamics, even though it is still only tentatively supported.

It is important to note that most of the agenda displacement studies referenced above share a common conception of agenda issues as massive, broad categories of concern, like public health, the economy, the environment, and perhaps the most newsworthy issue of all, war. Only Hertog et al. (1994) examined specific items within a single domain – AIDS, cancer, and sexually transmitted diseases within the broad area of public health news. Their findings were among the most compelling in favor of the model where agenda restructuring is driven by issue salience spikes.

Wood and Peake (1998) analyzed foreign policy issue agenda setting from the mid-1980s to late 1990s. Importantly, they found "that both media and presidential attention to the Soviet Union diminished for some time after a positive shift in Arab-Israeli events…" (p. 179). Thus, we would expect coverage of the Russo-Ukrainian war to decline significantly concurrent with

the outbreak of Israel-Hamas war and the following spike in news coverage thereof. Accordingly, we hypothesize that:

H1: The overall volume of coverage about war between Russia and Ukraine dropped significantly after the outbreak of war between Hamas and Israel.

But competition among issues on the media agenda isn't necessarily, or even typically, resolved once and for all at a single moment. Attention to issues is volatile, oscillating from one issue to another (Djerf-Pierre, 2012). Issues rise and fall on the agenda in a cyclical manner (Downs, 1991).

As discussed above, issues hold places of status in the agenda, and when a major new issue breaks, it may displace other issues' status, casting them downward on the agenda. The new issue may even enjoy a disproportionate surge of coverage for some time. The outbreak of a new crisis understandably draws news media attention in the form of a salience spike, and this is likely to be especially true in the case of a declaration of war that threatens to engulf an entire region of the world. However, as the initial shock wears off and attention is drawn back to other, competing issues, the media agenda is expected to return to stasis: a more settled, if different, state than before (Boydstun & Russell, 2016).

Pointedly, after their observation mentioned above that Arab-Israeli events had displaced attention to the Soviet Union, Wood and Peake (1998) found that "…media attention to the Arab-Israeli conflict diminished sharply when there was a positive shift in Soviet events," (p. 179), while also noting that sizable temporary shifts are tempered by more stable, long term issue importance. Mindful of the dynamic nature of competition among issues on the media agenda, we hypothesis that:

H2: The overall volume of coverage about war between Russia and Ukraine rose significantly after the overall volume of coverage about war between Hamas and Israel leveled off.

Finally, agenda setting theory conceptualizes news media as generally consonant in the amount of attention paid to issues on the agenda (McCombs & Shaw, 1972). Research supports the existence of news media agenda consonance at the national level (Peter, 2004; Shehata & Strömbäck, 2013). Thus, we hypothesize that:

H3: The patterns anticipated by H1 and H2 were evident in coverage by MSNBC, CNN, and Fox News separately.

Method

Data

Data for the study came from the GDLET 2.0 TV API ("GDELT television 2.0 API debuts!", n.d.) provided by the Global Database of Events, Language and Tone (GDELT) digital news database. GDELT is a comprehensive collection of global news sources, monitoring news from print, broadcast, and web media worldwide in over 100 languages ("The GDELT Story", n.d.). It translates all content into English in real time. GDELT 2.0 updates every 15 minutes, offering near real-time monitoring of global news. The database currently includes news coverage from January 1, 1979, to the present, and is freely available for research and analysis.

The TV API, in particular, accesses transcripts from selected broadcast news outlets curated by the Internet Archive and makes the transcripts searchable by user-specified keywords and date ranges. For the keywords and date range specified, the API returns the volume of 15-second segments that include the keywords per hour, day, week, month, or year. The API can express this volume either as a simple total of all matching segments the outlet aired during the

hour, day, week, month or year, or as a percentage derived by dividing the total number of matching segments for the period by the total number of all segments the outlet aired during the period. The API can represent the counts or percentages as an interactive graphic. Alternatively, though, the API can provide the data in a range of database formats including the comma-separated value (.csv) format.

Using a custom script (See Appendix) developed in the R programming language (R Core Team, 2024), we searched between February 14, 2022, and October 11, 2024, for segments that mentioned either (russia OR ukrain) or, separately, for segments that mentioned either (gaza OR israel). The API ignores capitalization and recognizes partial matches, so the term "russia" would capture segments that include "Russia," "Russia's," "Russian," "Russians," etc. The code combined the search results into a data frame in which each row represented a particular day and outlet, with columns containing the number of matching segments for each topic.

Dependent variable

Coverage volume of the war in Ukraine served as the study's sole dependent variable. As described above, the study operationalized this variable as daily counts of the number of 15-second segments that included words containing the character strings "russia" or "ukrain," regardless of capitalization. We concede that this operationalization likely produced an estimate, rather than a perfectly accurate count, of the number of segments about the war in Ukraine. For example, a 15-second segment could describe fighting in "Donbas" without mentioning either Russia or Ukraine but clearly would still be about the conflict. In such a situation, our coding scheme would produce a false negative. The reverse could happen as well: a 15-second segment could mention "Russian President Vladimir Putin" but be about something other than Russia's war with Ukraine in particular. In this case, our coding scheme would produce a false positive.

But our hypotheses focus on relative coverage volume more than on absolute coverage volume. We consider our approach sufficiently valid for investigating relative volume.

Independent variables

Meanwhile, the study considered two independent variables. The first, "Period," identified four distinct phases in the volume of coverage about the war in Ukraine:

- **Period 1**: From the outbreak of the war in Ukraine to the "leveling off" of initial coverage about the war (February 14, 2022, to June 6, 2022).
- **Period 2**: From the "leveling off" of initial Ukraine war coverage to the outbreak of war in Israel and Gaza (June 7, 2022, to October 6, 2023).
- **Period 3**: From the outbreak of the war in Israel and Gaza to the "leveling off" of initial coverage about this war (October 7, 2023, to January 22, 2024).
- **Period 4**: From the "leveling off" of coverage about the war in Israel and Gaza to the latest available week (January 23, 2024, to October 14, 2024).

The two "leveling off" points in coverage volume were identified by plotting the coverage volume for both wars over time, then looking for the date on which each war's coverage volume seemed to stabilize after dropping from the initial burst of coverage about each war's outbreak. Data for plotting coverage volume about the war in Israel and Gaza were extracted from the GDELT API using a procedure identical to the one for extracting coverage volume data about the war in Ukraine, except that "gaza OR israel" was used as the search criteria. Figure 1 shows the coverage volume for each conflict and the boundaries of each period.

Our second independent variable indicated which outlet – MSNBC, CNN, or Fox News – had aired the segment under analysis. The GDLET 2.0 TV API supplied source information automatically. The study aggregated segment counts across all sources for its test of the first two

hypotheses. Content source was relevant only to the test of the study's third hypothesis, which asked whether coverage volume patterns anticipated by the first two hypotheses would be consistent across separate media outlets.

The analysis compared the continuous dependent variable, coverage volume of the war in Ukraine, across the four categorical time periods described, then repeated the comparison for the subset of coverage produced by each of the three networks: MSNBC, CNN, and Fox News. Given the characteristics of the data, the comparisons were made using the Kruskal-Wallis rank sums test available in base R and the post-hoc Dunn's test procedure available in the FSA package (Ogle, Doll, Wheeler & Dinno, 2023). Various descriptive statistics and data visualizations were also produced using R.

Results

The collected dataset included 971 daily estimates of Ukraine war coverage per outlet, for a total of 2,913 estimates. These estimates showed an average of 78.5 segments across all rows but a substantial overall skew, as evidenced by a standard deviation of 116.0, a minimum of 0 and a maximum of 850, and a median of 38. Although our search requested coverage through November 14, 2024, GDELT was able to supply data only through October 11, 2024 due to a series of cyberattacks that caused a temporary shutdown of the Internet Archive, the source of GDELT's television news data (Bowman, 2024). We are hopeful the API will resume normal operation soon.

As Figure 1 shows, coverage volume of the war in Ukraine skyrocketed initially, as news of Russia's invasion was breaking, then settled into a lower volume punctuated by occasional spikes, none matching the height of the initial coverage's volume. Furthermore, initial coverage

volume of the war in Ukraine, even at its most intense, amounted to only about half of the Gaza war's initial coverage volume.

Examining the distributions of Ukraine war coverage volume across the four time periods revealed that the data did not meet the necessary assumptions for one-way analysis of variance, the more familiar statistical procedure for comparing a continuous dependent variable across three or more levels of a categorical independent variable. Specifically, the group distributions lacked comparable variances and exhibited nonnormality due to substantial outliers, as illustrated by Figure 2. Accordingly, we used the Kruskal-Wallis test, followed by Dunn's post-hoc test, to assess the hypotheses.

Specifically, H1 posited that coverage of the Russia/Ukraine war decreased significantly after the outbreak of the Hamas-Israel war, while H2 proposed that it increased significantly after coverage of the Hamas-Israel war leveled off. The Kruskal-Wallis test revealed significant differences in the weekly average coverage across the four periods: $H(3) = 938.08$, $p < .001$. During Period 1, the mean was 296 (SD = 190) 15-second segments. In Period 2, the mean decreased to 62.1 (SD = 67.6). Coverage continued to decline in Period 3, with a mean of 22.1 (SD = 19.0). In Period 4, the coverage volume slightly increased, with a mean of 39.4 (SD = 47.0). Dunn's post-hoc test further confirmed that the coverage volume in Period 2 was significantly greater than that in Period 3 ($Z = 14.91$, $p < .001$), and the coverage volume in Period 3 was significantly less than that in Period 4 ($Z = -5.76$, $p < .001$). These findings provide strong support for both H1 and H2.

In H3, the change patterns in coverage volume by MSNBC, CNN, and Fox News were examined separately. For MSNBC (Figure 3), the Kruskal-Wallis test identified significant differences in coverage across the four periods: $H(3) = 286.23$, $p < .001$. Dunn's post-hoc test

indicated that the coverage during Period 2 (M = 53.3 , SD = 70.6) was significantly higher than in Period 3 (M = 19.9, SD = 18.4, Z = 7.26, p <.001), and the coverage in Period 3 was significantly lower than in Period 4 (M = 36.2, SD = 45.1, Z = −3.28, p <. 001). For CNN (Figure 4), the Kruskal-Wallis test also revealed significant variation in coverage related to the Russia/Ukraine war across the period: H(3) = 407.76, p < .001. Dunn's post-hoc test showed that the coverage volume in Period 2 (M = 88.7, SD = 76.6) was significantly greater than in Period 3 (M= 23.9, SD = 23.6, Z = 11.77, p < .001). Coverage volume in Period 3 was significantly less than in Period 4 (M = 52.5, SD = 57.5, Z = −5.00, p < .001. Similarly, for Fox News (Figure 5), the Kruskal-Wallis test again confirmed significant differences in weekly average coverage across the four periods: H(3) = 307.18, p < .001. Dunn's post-hoc test confirmed that the coverage volume in Period 2 (M = 44.4, SD = 42.2) significantly exceeded that in Period 3 (M = 22.3, SD = 13.7, Z= 6.71 , p < .001, and the coverage volume in Period 3 was significantly less than in Period 4 (M= 29.4 ,SD = 31.9, Z = −1.21, p < .001. The patterns anticipated by H1 and H2 were consistently evident in coverage by MSNBC, CNN, and Fox News. Therefore, H3 was supported.

Discussion

Our findings lend support to the *restructuring* model of issue displacement described by Brosius & Kepplinger (1995) by suggesting that the outbreak of war in Gaza may have behaved as a "killer issue" that all but swept a "victim issue," the war in Ukraine, from the coverage agenda constructed by MSNBC, CNN and Fox News. Furthermore, like Djerf-Pierre (2012), we found that war can be a powerful killer issue, one that, in keeping with Hertog et al. (1994), can displace an issue within its own topical domain – specifically, another high-profile war.

But as Djerf-Pierre (2012) and Downs (1991) suggested, media agendas can be dynamic, with issues continually gaining and losing salience as time goes by. Such is the case in our data, too. Coverage volume of the war in Ukraine never fully regained the levels it had reached prior to the Gaza war's outbreak. But it did rebound significantly once the volume of coverage about the Gaza war declined to a stable level. Thus, like Boydstun & Russell (2016), we found that media agendas can regain a stable, if altered, stasis in the wake of a sudden, shocking event.

Finally, our results bolster the longstanding notion that media agendas tend to show consistency across individual media outlets, at least where issues with high and widespread salience are concerned (McCombs & Shaw, 1972; Peter, 2004; Shehata & Strömbäck, 2013). Despite their varied ideological perspectives, MSNBC, CNN and Fox News showed essentially the same displacement patterns: The volume of coverage about the war in Ukraine shrank significantly when the war in Gaza broke out, then rebounded somewhat coverage of the Gaza war subsided in volume.

In the modern media era, times marked by the conduct of two simultaneous wars with potentially worldwide consequences have been rare – and we certainly do not wish it were otherwise. Nonetheless, the period we have examined offers a valuable opportunity to examine how agenda displacement works under such conditions. This study also illustrates the value of the GDELT 2.0 Television News as a cost-free source of high-quality data for research about broadcast news media agendas, assuming the API can recover from the suspension caused by the October 2024 cyberattack on the Internet News Archive. Notably, GDELT's other main API, which provides similar volume data about content from online news sources, does not depend on the Internet News Archive.

Limitations & future research

As noted above, our confidence in the validity of our coverage volume estimates could have been higher had our search criteria been more refined. Some experimentation with other queries might be in order. Additionally, we discarded data from the API about coverage volume from several other networks: Bloomberg, CNBC, three C-SPAN channels, and Fox Business. Expanding the research's scope to include these outlets could yield insights. Another limitation involves our reliance on four broad time periods as our key independent variable. Figures 1 and 2 both point to substantial daily coverage volume spikes within these four broad time periods. A more granular approach to operationalizing "time" could reveal important interactions between Ukraine and Gaza coverage volume or parse our conclusions into those that pertain to "typical" and "atypical" news cycles within the period under examination.

Perhaps the most promising avenue for additional research would involve adding coverage volume data for other major issues on the media agenda during the timeframe under study. Between the start of the war in Ukraine and the last day in our dataset, the U.S. Supreme Court overturned Roe v. Wade; the United States held a midterm election and prepared for a presidential election in which the Democratic nominee, incumbent Joe Biden, stepped aside to make way for a bid by his vice president, Kamala Harris; several mass shootings occurred; inflation soared, both in the United States and around the world; and climate change continued its acceleration, disrupting weather patterns worldwide. Including coverage volume measures for these and perhaps other issues could allow investigation of whether the Gaza war, as a "killer issue," displaced "victim issues" other than the war in Ukraine.

Moreover, both the war in Ukraine and the war in Gaza remain unresolved as of this writing. Either conflict, or both, could escalate or otherwise change in some highly newsworthy way. Our results may turn out to be the first chapter of a story that is nowhere near complete.

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Figure 1. Daily news coverage volume of the Russia/Ukraine war from MSNBC, CNN and Fox News

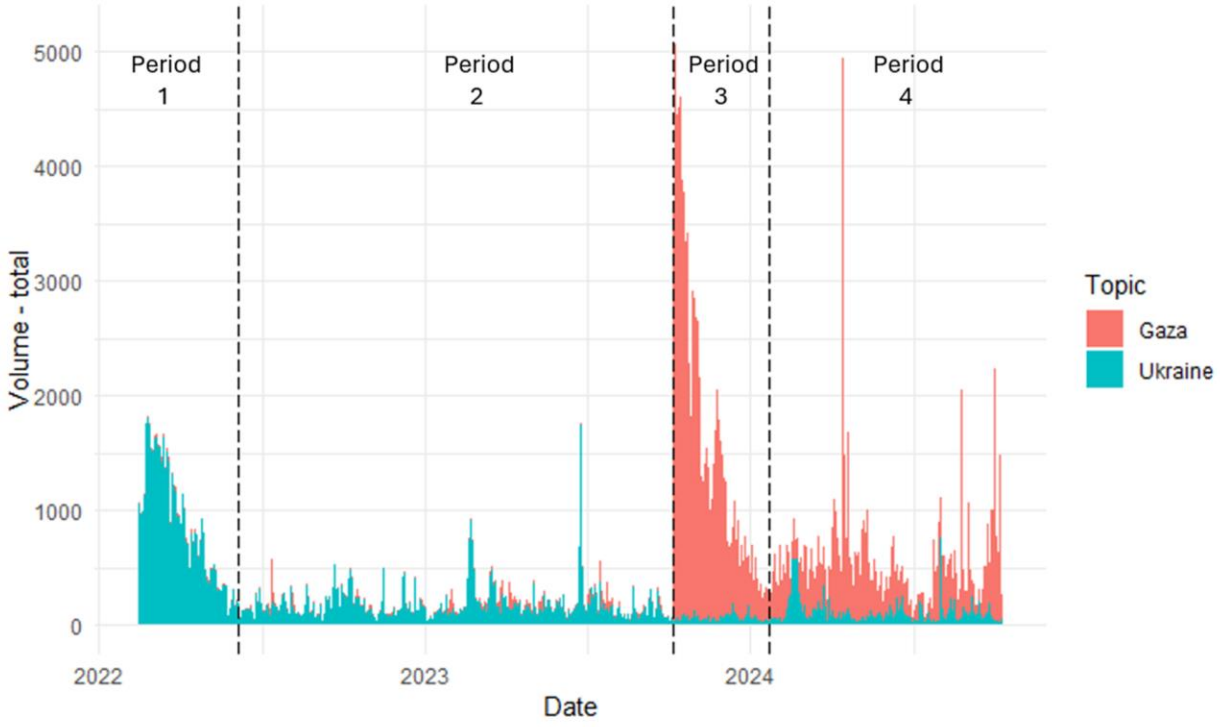


Figure 2. Distributions of Russia/Ukraine war coverage volume by time period, MSNBC, CNN and Fox News combined.

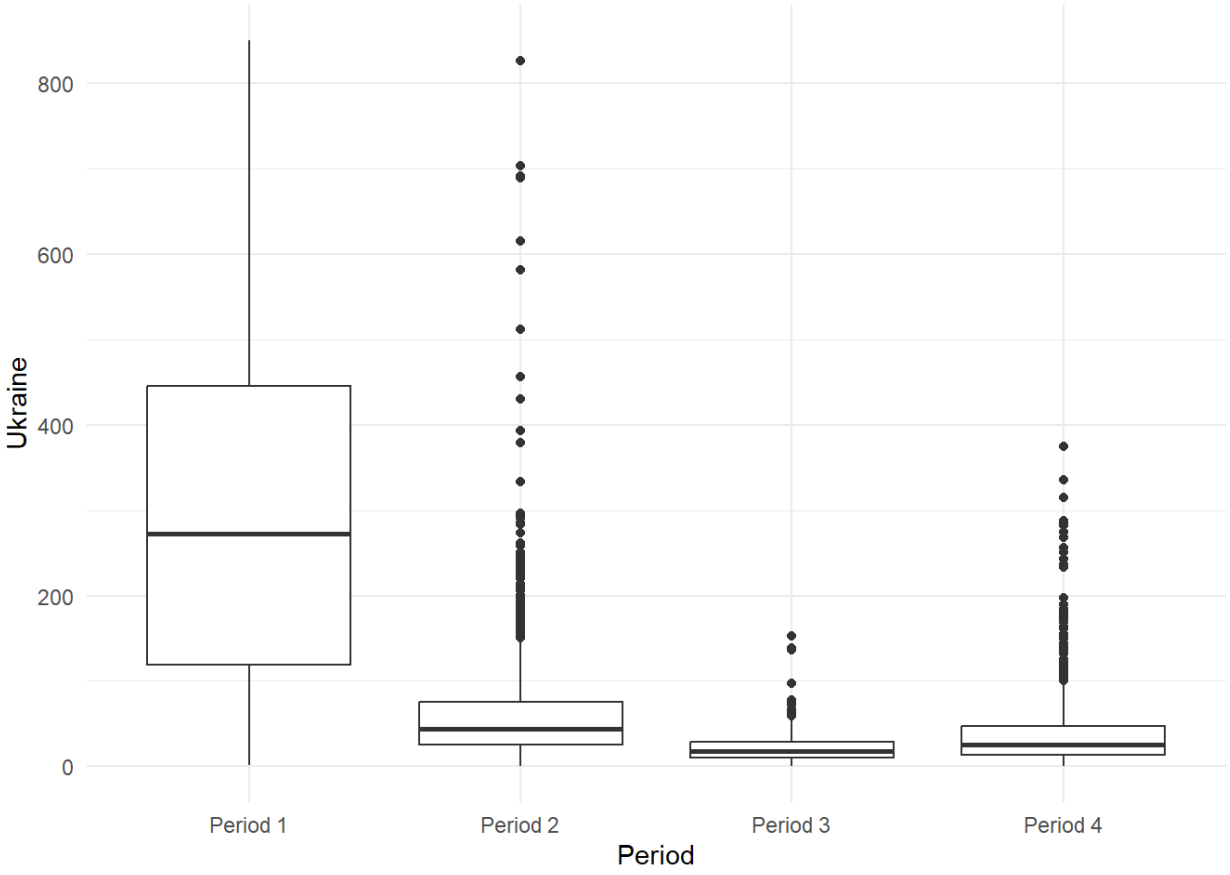


Figure 3. Daily news coverage volume of the Russia/Ukraine war by MSNBC

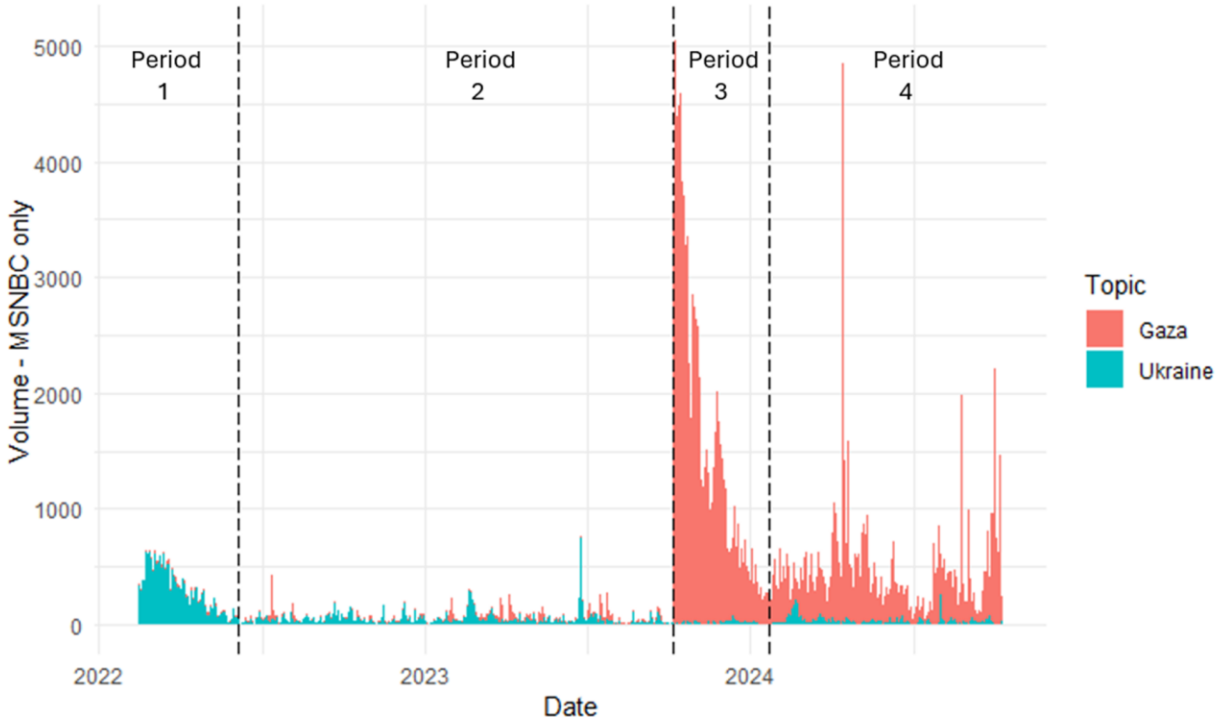


Figure 4. Daily news coverage volume of the Russia/Ukraine war by CNN

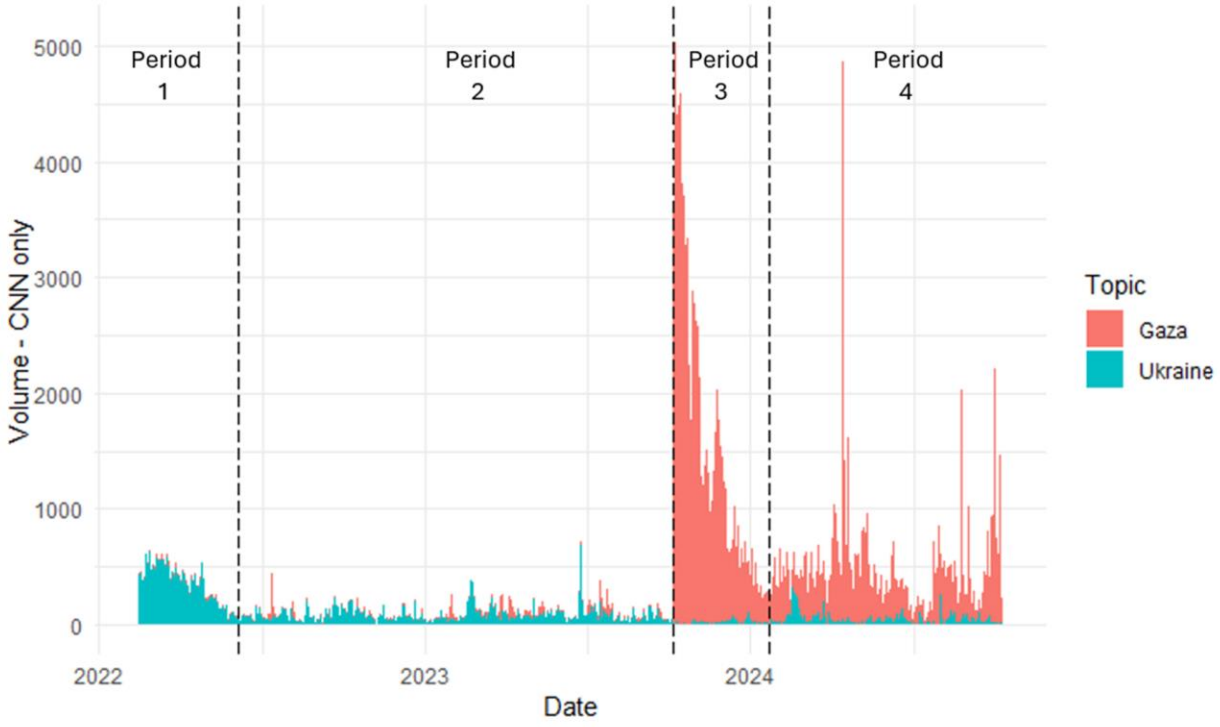
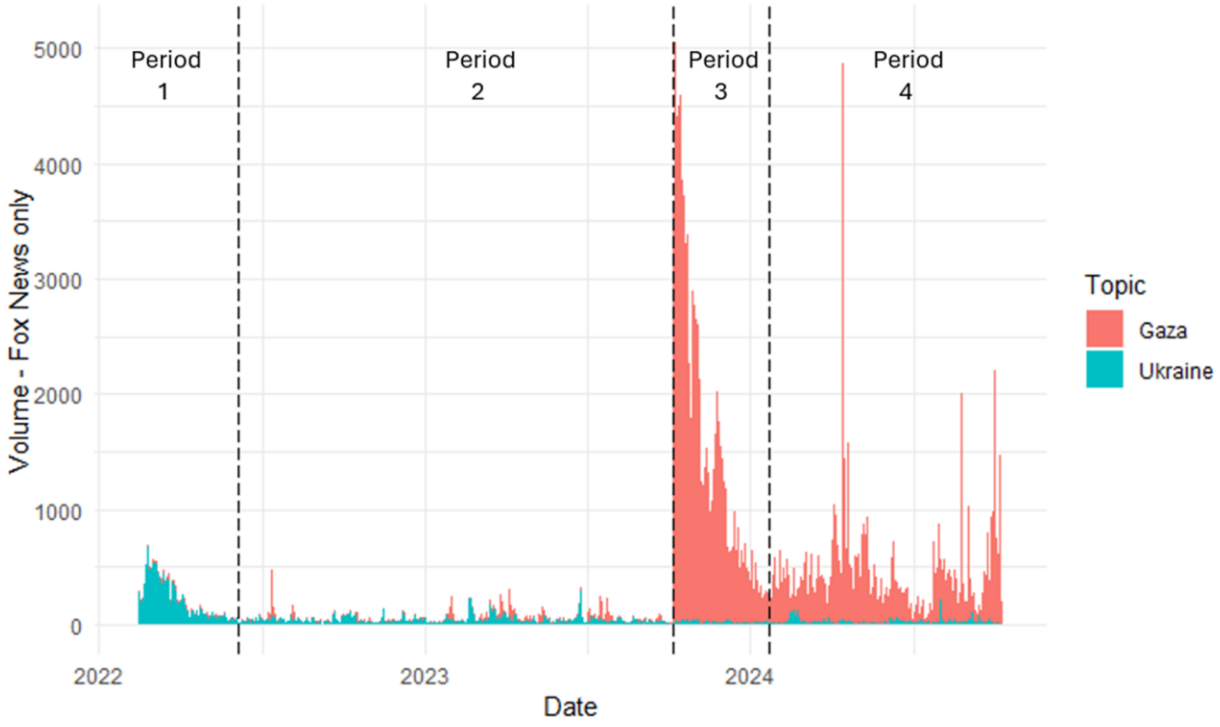


Figure 5. Weekly news coverage volume of the Russia/Ukraine war by Fox News



Appendix: R script

```
if (!require("tidyverse"))
  install.packages("tidyverse")
if (!require("plotly"))
  install.packages("plotly")
library(tidyverse)
library(plotly)

# Defining date range

startdate <- "20220214"
enddate <- "20241114"

# Defining query

query <- "(russia%20OR%20ukrain)"

# Building the volume dataframe

vp1 <- "https://api.gdeltproject.org/api/v2/tv/tv?query="
vp2 <- "%20market:%22National%22&mode=timelinevol&format=csv&datanorm=raw&startdateti
me="
vp3 <- "000000&enddatetime="
vp4 <- "000000"
text_v_url <- paste0(vp1, query, vp2, startdate, vp3, enddate, vp4)
v_url <- URLencode(text_v_url)
v_url
Ukraine <- read_csv(v_url)
Ukraine <- Ukraine %>%
  rename(Date = 1, Ukraine = 3)

### Gaza

# Defining query

query <- "(gaza%20OR%20israel)"

# Building the volume dataframe

vp1 <- "https://api.gdeltproject.org/api/v2/tv/tv?query="
vp2 <- "%20market:%22National%22&mode=timelinevol&format=csv&datanorm=raw&startdateti
me="
vp3 <- "000000&enddatetime="
vp4 <- "000000"
text_v_url <- paste0(vp1, query, vp2, startdate, vp3, enddate, vp4)
v_url <- URLencode(text_v_url)
v_url
Gaza <- read_csv(v_url)
Gaza <- Gaza %>%
  rename(Date = 1, Gaza = 3)
```

```r
AllData <- left_join(Ukraine, Gaza)

# Filter AllData for Fox News, CNN, and MSNBC

AllData <- AllData %>%
  arrange(Date) %>%
  filter(Series == "FOXNEWS" |
           Series == "CNN" |
           Series == "MSNBC")
```