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Blaming it on NATO? Framing the role of NATO in the full-scale Russian invasion of Ukraine on Twitter

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Introduction: Since social media has become a significant tool for conflict communication amid the full-scale Russian invasion of Ukraine, researchers have grown more interested in the digital content citizens are exposed to.

Methods: To further investigate the role of social media in the ongoing invasion, we conducted a manual content analysis to examine tweets in English, Russian, and German that explicitly mentioned NATO in the context of the full-scale invasion during February to May 2022. Our analysis explored how these language-specific Twitter communities framed NATO's role in the conflict.

Results: We found that English-speaking tweeters were more likely to hold NATO responsible for finding a solution and least likely to blame NATO for the war compared to German and Russian speakers. We also observed that the Russian-speaking Twitter community exhibits a comparatively lower tendency to hold NATO accountable for the ongoing war as compared to their German-speaking counterparts, and they are also notably the least likely to expect NATO to bring an end to the war. Finally, English-speaking Twitter users who attribute blame to NATO for the ongoing war tend to adhere to a preconceived notion, rather than arriving at an interpretation based on the situation at hand. This is in contrast to the Russian-speaking community, where the opposite is true. German-speaking users fall somewhere in between these two perspectives.

Discussion: Our research contributes to the literature by providing a novel integration of conceptual and methodological perspectives on the framing and stance-taking of social media users during wartime, addressing known research gaps in the comparative analysis of these discussions, i.e., adding “non-English” perspectives. It also highlights the importance of cultural and linguistic sensitivity when addressing responsibility in armed conflicts and the need to consider the diverse perspectives derived from divergent problem definitions and evaluative standards.

KEYWORDS

Russian invasion of Ukraine, content analysis, framing, NATO, comparative analysis, armed conflicts, conflict communication, Twitter

1. Introduction

Since Russia started its full-scale invasion of Ukraine on 24 February 2022, Russia's war against Ukraine has reached a tipping point. Right after Russia's president Vladimir Putin announced a “special military operation” in a televised address, Russian forces began to sweep into northern, eastern, and southern Ukraine. Rhetorically, Russia justified the

invasion as an operation to “protect the people” of Donbas through the “demilitarization” and “denazification” of Ukraine ([kremlin.ru](https://www.kremlin.ru), 2022). These accusations date back to 2014 when Russian-sponsored uprisings in parts of the Donetsk and Luhansk regions of Ukraine were met with an Anti-Terrorist Operation (ATO) by the Ukrainian forces. As a result, Russia accused the Ukrainian government of “carrying out a ‘genocide’ against the Russian-speaking population of the Donetsk and Luhansk regions” ([aljazeera.com](https://www.aljazeera.com), 2022). While Western media have debunked these messages as part of Russian propaganda lacking any substantive foundation (see [Weber et al., 2022](#), for an overview), Western journalists have also argued that NATO is (partly) to blame for Russia’s invasion of Ukraine (see [Carpenter, 2022](#); [Friedman, 2022](#), for some examples). They essentially echoed Putin’s narrative during the buildup of Russian forces around Ukraine and his ultimatum two months prior to the invasion: NATO is to blame for any escalation because of its expansion to Russia’s borders (e.g., northern Norway, eastern Latvia, and Estonia) and for failing to refuse prospective Ukrainian membership ([Stemplowska, 2022](#)).

These arguments surrounding the full-scale Russian invasion have extended to social media, where supporters of opposing sides engage in an information battle to disseminate information or coordinate resistance ([Specia, 2022](#)). Social media discussions may revolve around the causes of the conflict, the success of military operations, and the appropriateness of diplomatic, economic, and military measures. As such, these discussions have the potential to shape the public’s perception and support for the conflict ([Dimitrova and Strömbäck, 2005](#)), as well as affect evaluations of which parties are responsible for the armed conflict and which are working toward peace ([Hammond, 2018](#)). As social media platforms have gained the power to shape public opinion, they have also become a significant arena for conflict communication ([Fisenzou, 2019](#); [Jungblut, 2020](#)). For instance, previous research has highlighted that conflict parties actively seek to influence discussions on social media platforms. This influence is evident in the prevalence of Russian propaganda on Twitter and the extent to which Russian narratives have taken root in foreign language communities ([Nikolayenko, 2019](#); [Golovchenko, 2020](#); [Linville and Warren, 2020](#); [Zannettou et al., 2020](#)), emphasizing the importance of understanding the impact of conflict parties on shaping public opinion on social media during times of war.

Against this backdrop, it seems crucial to investigate the social media discussions surrounding the full-scale Russian invasion of Ukraine in different language communities. This study aims to analyze the portrayal of NATO’s role as either an instigator or a peacemaker in the context of the 2022 full-scale Russian invasion of Ukraine in three distinct social media language communities: the Russian-, English-, and German-language Twittersphere. Despite not being an official conflict party, NATO’s role in the ongoing invasion has been heavily debated in traditional media, and we expect similar patterns on Twitter, but these patterns may vary depending on the language community.

To this end, we proceed in three steps: First, we rely on a combination of framing theory ([Entman, 1993](#)) and interpretative repertoires ([Baden and Springer, 2014, 2017](#)) to derive a content analytical framework that allows us to measure social media frames in armed conflicts. Second, we use an open-access dataset of English

($N = 23,384,107$), Russian ($N = 1,808,828$), and German ($N = 7,395,587$) language tweets posted between 1 February and 31 May 2022, containing the hashtag or word “Ukraine.” Third, we draw a sample from this data containing NATO-related tweets and, using this data, conduct a manual framing analysis (English: $n = 650$, Russian: $n = 600$, German: $n = 650$). Based on our content analytical framework, we then analyze how the perception of NATO as an instigator or peacemaker in the full-scale Russian invasion of Ukraine is derived from distinct problem definitions, causal attributions, and evaluations in the three language communities.

2. Background

2.1. The role of Twitter in Russia’s war against Ukraine

Even before the onset of Russia’s war against Ukraine in 2014, Twitter, Facebook, and especially Vkontakte¹ played an important role in protesters’ mobilization and self-organization ([Tucker et al., 2014](#); [Onuch, 2015](#)). While Ukrainian citizens had already protested against electoral fraud in the 2004 presidential election, the protests in 2013/2014 became even more heated. This time, citizens gathered in Independence Square (Maidan) to protest the Ukrainian government’s decision to withdraw from an anticipated trade and association agreement with the European Union. On the one hand, the protests of 2004 and 2013/2014 are similar in the sense that Russia’s influence on Ukraine was being negotiated. On the other hand, both protests differ remarkably in terms of the state of technological development. [Gruzd and Tsyganova \(2015\)](#) eloquently depict this development in their paper on the social media involvement of pro- and anti-Maidan groups in Ukraine during the 2013/2014 protests:

“The ability to leverage social media identifies a striking difference between the 2013/2014 Ukraine Crisis and the Orange Revolution of 2004 . . . armed with these new information and communication technologies, Ukrainians across the country were able to follow the protests in Maidan in real-time. . . . Politicians and elected officials in Ukraine also used social media to share timely updates and political statements with the public. Law enforcement agencies monitored social media posts to anticipate where the next rally would occur. Ukrainian dissent and activist journalists used social media to shape the public’s perception of Yanukovich’s pro-Russian government and ensure accurate reporting of Pro-Maidan demonstrations in Kyiv” (p. 122).

After Vkontakte became known for being heavily monitored by the Russian government ([Menn, 2022](#)), new platforms became substitutes for coordinating the Ukrainian resistance. This trend started during the Maidan protests when Facebook and Twitter were used extensively to coordinate anti-government protests ([Ronzhyn, 2014](#)) and attract and mobilize the international

1 A popular social networking site across the Russian-speaking world and beyond at that time, including Ukraine.

community by tweeting in English (Tucker et al., 2014). The migration to Twitter grew dramatically during the full-scale Russian invasion of Ukraine in February 2022, when the micro-blogging service became a platform to disseminate information, influence campaigns, and mobilize resistance (Chen and Ferrara, 2022). For instance, Ukraine's minister of foreign affairs, Dmytro Kuleba, used Twitter to ask "foreigners willing to defend Ukraine and world order as part of the International Legion of Territorial Defense of Ukraine . . . to contact foreign diplomatic missions of Ukraine" (Kuleba, 2022).

Because of its crucial role for the Ukrainian public and its use as a tool of conflict communication (Fisenzou, 2019; Jungblut, 2020), researchers have also investigated Twitter's role in Russia's warfare (e.g., Nikolayenko, 2019). In fact, Russia's strategy has been identified as a form of hybrid warfare, i.e., military activities are being supported by cyber disinformation campaigns that are aimed at spinning the narrative of the war, confusing the enemy, distracting allies, and "achiev[ing] strategic advantage at minimal cost" (Snegovaya, 2015, p. 9). In this context, studies have tried to shed light on the dissemination of Russian political disinformation on Twitter (Nikolayenko, 2019; Linvill and Warren, 2020; Zannettou et al., 2020). According to their findings, the Russian Internet Research Agency made attempts to impact the political agenda of foreign nations between 2014 and 2018, showing "surprising consistency in mean output" (Linvill and Warren, 2020, p. 8). Additionally, the dissemination of pro-Russian imagery on Twitter was found to coincide with real-world, polarizing political events in Western democracies, such as right-wing rallies (Zannettou et al., 2020), suggesting the targeted anti-Western nature of their creation. This "anti-Western information war" (Tsygankov, 2018, p. 6) reflects Russia's evolving perception of NATO from a potential partner to a renewed military threat, as noted by Tsygankov (2018). According to Russia's perspective, NATO is attempting to change regimes across the world, including Ukraine, which had undergone the colored revolutions with the assistance of the United States' democratization strategy (Tsygankov, 2018). This view portrays NATO as an indirect party of Russia's war against Ukraine and may have spread to international social media discussions.

Considering Twitter's significant role in the past 9 years, especially in Ukraine's efforts to attract and mobilize the international community and in Russia's hybrid, anti-Western warfare, the micro-blogging platform offers a promising avenue for investigating how NATO's role in the context of the 2022 full-scale Russian invasion of Ukraine is being perceived and justified in different language communities. We will investigate these perceptions and their justifications using framing analysis.

2.2. Framing of armed conflicts

Framing is the most prominent mass communication theory of the present millennium (Bryant and Miron, 2004), which is one of the reasons why political conflict researchers have increasingly turned to this theoretical paradigm to investigate mediated portrayals of war (e.g., Dimitrova and Strömbäck, 2005; Jungblut and Zakareviciute, 2019; and the special issue "Framing

war and conflict" by Al Nahed and Hammond, 2018). *Framing* can be defined as the process of selecting certain parts of reality and making them more salient, i.e., "promot[ing] a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation" of events (Entman, 1993, p. 52). Due to this, frames become organizing principles that give a meaningful structure to both media content (media frames; Scheufele, 1999, p. 115), and the world (recipient frames; Matthes, 2014, p. 18). In political conflicts, media frames can advance "particular definitions and interpretations of political issues" (Shah et al., 2002, p. 343) by simultaneously excluding other parts of reality (Entman, 1993). As a result of the framing process, media frames can become socially shared recipient frames that persist over time (Reese, 2001).

Against this conceptualization, frames can play a significant role in armed conflict and war, for instance, by influencing who or what is considered to be the cause of the conflict and what the appropriate response should be (Hammond, 2018). Furthermore, frames can potentially affect the course of conflicts by encouraging people to engage in violent behavior (Hamelink, 2008) or, on the contrary, decrease hostilities and contribute to peace and reconciliation (Bratic, 2008). It is not surprising then that political conflicts and wars such as the Arab Spring or the 2003 invasion of Iraq have generated a rich body of content analyses on how armed conflicts are covered by mass media (Jungblut, 2023). However, not all armed conflicts have attracted equal scholarly attention (see Gabel et al., 2020, for an overview of armed conflicts in Tunisia, Egypt, Turkey, Israel and Palestine, and Ukraine). Most studies on conflict and war framing have looked at the English-language media sphere with very few cross-country and even fewer cross-language comparisons. Existing cross-country comparisons tend to focus on English-speaking countries or media networks. Some notable exceptions include a study by Kolmer and Semetko (2009), where the authors looked at how the Iraq War was framed in the main TV news programs in the United Kingdom, the Czech Republic, Germany, South Africa, the United States, and in the Arab-language Al-Jazeera network. Dimitrova and Strömbäck (2005) looked at the framing of the 2003 invasion of Iraq in prominent Swedish and US newspapers, and Dimitrova and Connolly-Ahern (2007) analyzed the online websites of the elite newspapers in the US, UK, Egypt, and Qatar to understand how they framed the Iraq War. Yang (2003) did a comparative study of the framing of the NATO air strikes on Kosovo in 1999 in Chinese and US newspapers. These studies, however, are exceptions. Much of the existing literature on framing investigates how Western media frame foreign conflicts while essentially neglecting the framing of those conflicts in domestic and non-Western settings (Vladislavjević, 2015).

When it comes to war and conflict framing in online environments, specifically social media, cross-national and cross-language comparisons are even rarer. Little is known about how armed conflicts and their respective conflict parties are framed in social media across language-specific communities. In addition, armed conflicts are frequently depicted with a small selection of frames that focus on violence like military actions and casualties, but not on diplomacy and economy (Fröhlich et al., 2007; Baden, 2014). Filling this research gap seems particularly important when the involved parties are deemed ambiguous by the public, i.e., when framing can determine who is considered a conflict party in the first

place, who is blamed for starting or escalating the war, and what justifications are raised for this escalation.

2.3. Identifying narrative bias that results from ethnocentrism

Shared language and identity play an important role in mobilization through collective and personalized action frames (Bennett and Segerberg, 2013). From a social psychology perspective, frames can be understood as cognitive schemata of interpretation that provide individuals with shared labels for events and information, and they can generate support for mobilization (Goffman, 1974, p. 21). In times of war, shared frames have the potential to connect people with similar identities, views, and goals. This kind of frame alignment “is a necessary condition for movement participation” (Snow et al., 1986, p. 464), and can serve as a critical tool for managing both obedience and resistance. However, creating a frame alignment within language communities inevitably leads to a narrative bias tied to national identity. Since framing analysis of armed conflict aims at “identify[ing] media bias that for example can be the result of ethnocentrism” (Jungblut, 2021, p. 1), investigating different language-specific communities and the frame alignment within and between these communities is warranted (Entman, 1991). However, there is a notable paucity of research examining how various language groups discuss armed conflicts on social media. As Dimitrova and Strömbäck (2005) have already argued eighteen years ago:

“[Such a lack of comparative studies] is unfortunate because comparative studies more than single-nation studies have the potential to provide an antidote to naive universalism, to enhance the understanding of one’s own country by placing its familiar characteristics against those of other systems, and to cast more light on questions concerning the way media coverage is affected by the positions of the political elite within countries” (p. 400).

Despite eighteen years of research, this quote is still very much relevant since personalized action frames in different languages are currently being used by the pro-Ukrainian Cyber Army to streamline tactics for resistance on social media (Maikovska and Canevez, 2023). In fact, national identity and nationalism have become significant aspects of conflict communication on Twitter (Gabel et al., 2020). One of the reasons for this development is that sharing a language on Twitter can be used strategically to demonstrate one’s affiliation to a nation that speaks that main language, particularly for non-English tweeters (Takhteyev et al., 2012). Therefore, language choice can display one’s allegiance during an armed conflict and help to connect with people who share the same national identity, culture, and values (Sheafer et al., 2014). To avoid naive universalism in our analysis of the framing of NATO’s role in the full-scale Russian invasion of Ukraine, we opt for cross-language comparisons that allow us to detect possible biases that might result from strategic language use and ethnocentrism.

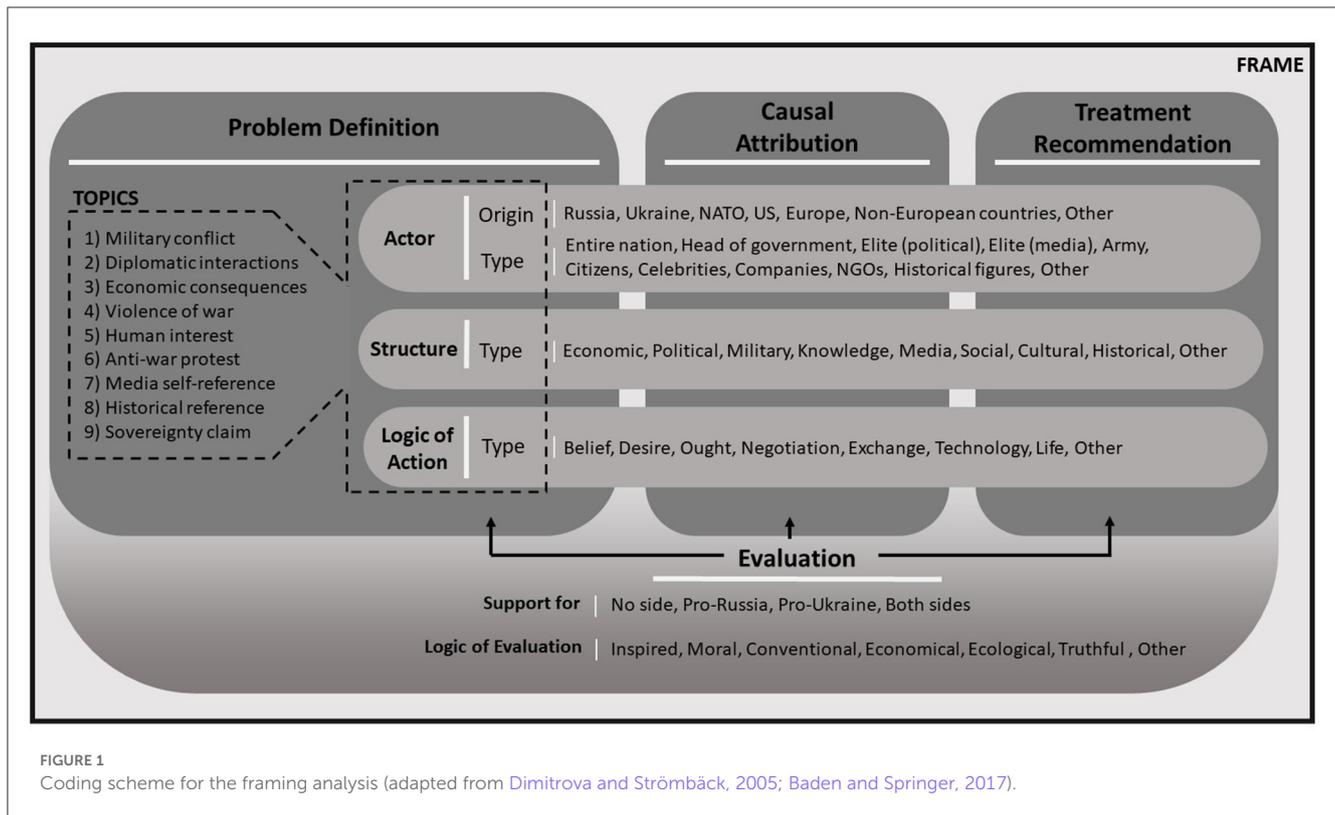
2.4. Operationalizing frames to analyze NATO’s role in the context of the full-scale Russian invasion of Ukraine on Twitter

To provide a framework that allows us to analyze how NATO’s role in the full-scale Russian invasion of Ukraine is framed across different language communities on Twitter, we combine framing theory with the interpretive repertoire framework proposed by Baden and Springer (2014, 2017). Although originally developed to measure *frame diversity*, we argue that Baden and Springer’s framework can be adapted to capture the framing of armed conflicts. To that end, Figure 1 illustrates our theoretical argument on how to combine frames and interpretive repertoires to analyze armed conflicts such as the Russian invasion of Ukraine. It also visually depicts the coding scheme used in this framing analysis and guides the following sections.

In communication studies, framing analysis of news coverage of armed conflicts has a long history. As a result, the use of framing theory to analyze the portrayal of NATO in the context of the Russian invasion of Ukraine on Twitter appears to be the rational choice. Traditionally, frames are composed of four elements that combine to form a specific meaning or viewpoint (Entman, 1993): They define problems (*problem definition*), diagnose causes (*causal attribution*), make moral judgments (*evaluation*), and suggest remedies (*treatment recommendations*, p. 52). Breaking down the meaning of war-related tweets into these four elements has several advantages for analyzing communication during armed conflicts. Most importantly, it increases the ease of identifying patterns within these messages (e.g., how different language communities attribute blame resulting from divergent evaluative standards or situational problem definitions) and therefore contributes to a more nuanced understanding of how the context and consequences of the conflict are perceived on Twitter. For example, by looking at the problem definition element, one can recognize the different issues that are being argued over and perceived as being at stake in the conflict. Next, the causal attribution element gives away the public perception of the underlying causes of the conflict, which can help to identify potential areas of misunderstanding or false narratives and to develop more effective information campaigns. Similarly, treatment recommendations can provide an understanding of what possible solutions to the conflict are being suggested on Twitter, as well as how these solutions are being assessed. Finally, the evaluation element offers insight into how personal and situational values inform judgments about the conflict. We will explain and discuss these four elements in greater detail in the following sections.

2.4.1. Problem definition

The problem definition of a frame “expresses what an issue is mainly about” (Jungblut and Zakareviciute, 2019, p. 211). More precisely, the problem definition outlines “the topic at hand . . . and the most important actors, places, and actions” (Jungblut and Zakareviciute, 2019, p. 211) that jointly constitute the topic. In line with the distinction between actors and structures proposed in the interpretive repertoire framework (Baden and Springer, 2014, 2017), we suggest that structures can also be



part of the problem definition. While actors are individuals (e.g., politicians, journalists, civilians), groups of individuals (e.g., protesters, the oil lobby), countries (e.g., Russia), or political/military alliances (e.g., NATO), structures are habitualized practices (e.g., toxic masculinity), societal norms (e.g., discipline and obedience), and their institutional manifestation (e.g., the education system, militarization). Therefore, structures are more ubiquitous, infiltrating, and vague than actors.

For example, suppose the analyzed material talks about how a country's [actor] entry into the war has impacted interactions of exchange such as production, buying, borrowing, and consumption [logic of action] and mentions economic structures like the stock market [structure] being affected. In that case, the analyzed material is probably exploring the economic consequences of war [topic]. This topic and its related actors, structures, and their interactions jointly form the problem definition of the respective frame.

To assign topics to the (inter-)actions of the actors and structures, we had to develop a list of pre-defined, war-related topics. For this purpose, we followed Jungblut (2021)'s proposal for the application of deductive conflict frames. These frames have been adapted from Dimitrova and Strömbäck (2005) analysis of the Iraq War and cover five distinct frames: (1) "military conflict" (military action that, for instance, focuses on troop movements, stalemates, equipment, and supplies), (2) "human interest" (a more soft-news-focused human interest emphasizing the plight of involved parties), (3) "violence of war" (emphasis on violence and destruction like war crimes, the aftermath of bombing or drone attacks, and overall injuries/casualty totals), (4) "anti-war protest" (focus on war protesters or demonstrations in the conflict parties' territory or abroad), and (5) "media self-reference" (emphasis is

on the media, the journalists, and their involvement in the armed conflict).²

Since these five deductive frames cover a more general concept (i.e., topic), rather than presenting a specific way of looking at or thinking about this concept (i.e., a frame), we propose repurposing the deductive frames as war-related topics. Moreover, we believe that the problem definition can incorporate an even greater variety of topics than these five. For example, in their influential study of deductive frame analysis, Semetko and Valkenburg (2000) found that "economic consequences" are a generic frame that accompanies conflict and human interest frames. Conflict frames, as understood by Semetko and Valkenburg (2000), are generic, meaning that they can place emphasis on military conflict but also diplomatic interactions and negotiations. Therefore, we decided to add "diplomatic interactions" and "economic consequences" to the list of the problem definition's topics.

Finally, we inductively added two case-specific topics that came up when testing our codebook. First, we added "historical reference," which places emphasis on past real-world or mediatized events and individuals, such as the Warsaw Pact, Minsk II, Hitler, Stalin, or references to the history and culture of Ukraine and

² The original list also includes the (6) "responsibility frame" (emphasis is on the party/person responsible for the event), (7) "diagnostic frame" (discussion of what caused the event), and (8) "prognostic frame" (discussion of the possible consequences of the event). However, these three deductive frames provide a specific way of looking at or thinking about a concept, which is why we chose to not include them in the list of war-related topics. They are not lost in translation, however, but have been integrated into the other two frame elements: causal attribution and treatment recommendation.

TABLE 1 Topics: Nine topics in armed conflicts.

Topic	Definition
Military conflict	Emphasis on military action such as troop movements, stalemates, equipment, and supplies (see Dimitrova and Strömbäck, 2005)
Diplomatic interactions	Emphasis on past, ongoing, and future diplomatic actions such as negotiations, dialogue, diplomat's speeches, or diplomatic sanctions like recall of diplomatic representatives (derived from Semetko and Valkenburg, 2000)
Economic consequences	Emphasis on events, problems, or issues that have an economic impact on an individual, group, region, institution, or entire county (see Semetko and Valkenburg, 2000)
Violence of war	Emphasis on violence and destruction like war crimes, the aftermath of bombing or drone attacks, and overall injuries/casualty totals (see Dimitrova and Strömbäck, 2005)
Human interest	Emphasis on the plight of involved parties and individuals with a more soft-news focused tone (see Dimitrova and Strömbäck, 2005)
Anti-war protest	Emphasis on war protesters or demonstrations in the conflict parties' territory or abroad (see Dimitrova and Strömbäck, 2005)
Media self-reference	Emphasis on the media, the journalists, and their involvement in the armed conflict (see Dimitrova and Strömbäck, 2005)
Historical reference	Emphasis on past real-world or mediatized events and people (inductively built)
Sovereignty claim	Emphasis on sovereignty, independence (of certain regions), restoring borders, and free choice of alliances (inductively built)

Russia. This topic also covered claims that the ethnic Russian population in Ukraine or the ethnic Ukrainian population in Russian-occupied territories of Ukraine have fallen victim to genocide in recent months and years. Second, we added the “sovereignty claim” topic, which refers to the discussion about whether or not Ukraine is a sovereign country that can choose its alliances and restore its borders, e.g., in regions of Donetsk, Luhansk, and Crimea. For an overview of all topics of a conflict frame's problem definition (see Table 1).

2.4.2. Causal attribution

The causal attribution clarifies who or what is held accountable for the problem's cause (Iyengar, 1994). In the case of war-related problem definitions and their constituting topics, the causal attribution usually pertains to assigning responsibility for initiating or escalating the war. While the actors and structures mentioned in the problem definition and causal attribution might overlap, they might also diverge. Let us consider this tweet as an example:

“Toxic masculinity is not just off-putting, it is dangerous. It causes domestic violence, distrust in society, aggression and discrimination toward minorities and even wars [*problem definition: structures—violence, distrust, wars, etc.*]. Russia has

embraced toxic masculinity for centuries [*causal attribution: actor—Russia, structure—toxic masculinity*], and it never brought anything good. It's a curse.”

As our annotations to the original tweet demonstrate, the causes of the problem are distinct from the problem that they produce.

2.4.3. Treatment recommendation

The treatment recommendation considers potential solutions to the problem and the actors in charge of coming up with them (Entman, 1993; Jungblut and Zakareviciute, 2019). In the case of war-related problem definitions, these remedies can be found in establishing/changing the actions of some specific actors or by establishing/changing structures to end the war. Of course, the set of actors and structures specified in the frame's treatment recommendation may overlap with those listed in the frame's causal attribution.

2.4.4. Evaluations

Finally, frames offer evaluations of the defined problems, causes, and treatments “but do not normally explain the grounds for this evaluation” (Baden and Springer, 2017, p. 183). This is where interpretive repertoires can complement framing theory.

2.4.5. Interpretative repertoires

Interpretative repertoires, which originated in discourse theory, identify macroscopic semantic structures, i.e. “large, generalized cultural belief structures ... enabl[ing] a concise operationalization and analysis in actual discourse” (Baden and Springer, 2017, p. 182). Interpretive repertoires include a (limited) set of actors, structures, interactions, and evaluative standards that portray the complexity of the world in a coherent, generalized manner. Whereas frames do not predefine what actors or structures might be involved in causing or treating the problem, “repertoires emphasize a set of relevant—individual and collective—actors as well as given and mutable structures” (p. 182). This set is created by decomposing each individual actor or structure in their most defining characteristics, such as their type (e.g., economic, political, military, etc.), and their origin (e.g., Russian, Ukrainian, NATO member, etc.).

Moreover, interpretive repertoires allow the systematic classification of the manner in which these actors and structures interact by assigning a coherent set of logics of actions to their interactions. In their original paper, Baden and Springer (2017) introduce seven *logics of actions*: “belief” (interactions between the mind and the world), “desire” (interactions between the mind and objects), “ought” (interactions between the mind and people), “negotiation” (interactions between people and the social world), “exchange” (interactions between people and objects), “technology” (interactions between objects and the world), “life” (interactions between people and the natural world). More detailed definitions and examples of these interactions can be found in Table 2.

Another characteristic of frame analysis is that “frames provide an evaluative tendency, but do not normally explain the grounds

TABLE 2 Logic of action: Seven actions in armed conflicts.

Action	Definition (as adapted from Baden and Springer, 2014, 2017)
Belief	This logic of action is present when actors know, expect, imagine, believe in, or trust in other actors or structures. Example 1: "How can you expect <i>Russia</i> to trust Ukraine? Me sleeping with a knife next to my husband is like Ukraine joining the NATO." Example 2: " <i>Putin</i> knows NATO can flatten him if he uses nukes."
Desire	This logic of action is present when actors desire, resent, fear, hate, or pursue other actors or structures. Example: "Why is it that the <i>NATO</i> is afraid of #VladimirPutin fuck him & his #russianinvasion."
Ought	This logic of action is present when actors evaluate, judge, or admonish another actor's behavior or order/require them to do something. Example 1: " <i>NATO & the EU</i> must send strong signals to deter Russia's further aggression." Example 2: " <i>We ask NATO</i> to establish a NO fly zone over Ukraine."
Negotiation	This logic of action is present when actors advocate for, support, regulate, concede, agree with, or fight other actors or structures. Example: "NATO & the EU must send strong signals to deter <i>Russia's</i> further aggression."
Exchange	This logic of action is present when actors produce, purchase, borrow, or consume (from) other actors or structures. Example 1: " <i>Australia</i> will provide lethal military equipment to Ukraine to help the Ukrainians resist the Russian invasion." Example 2: "Please forward this message to raise donations for #Ukraine, it's important."
Technology	This logic of action is present when actors invent, disrupt, conduct, execute, cause, or accelerate structures. Example 1: "Sad to see so many <i>Western democracies</i> destroyed by US #Nazism." Example 2: "These #Nazi animals are reason why #Russia conducted special operation in #Ukraine yet #NATO brainwashed idiots cheer for more heavy weapons." Example 3: "We ask <i>NATO</i> to establish a NO fly zone over Ukraine."
Life	This logic of action is present when actors regenerate, harvest, or pollute structures. Example 1: "The better the soils natural quality, the <i>more food</i> that can be produced. #SaveSoil #NoWar #NATOINUKRAINE NOW" Example 2: "#Putin won't use nukes in #Ukraine as it will <i>poison the whole area</i> , including parts of his country."

for this evaluation" ([Baden and Springer, 2017](#), p. 183). Again, interpretive repertoires can complement frames by providing a limited set of *logics of evaluation* that help to describe the provided grounds for evaluation. Based on [Boltanski and Thévenot \(2006\)](#)'s considerations about inspired, domestic, civic, and industrial worlds, [Baden and Springer \(2017\)](#) propose seven evaluative standards, which they refer to as the *logic of evaluation*: (1) "inspired" (what is true, divine, and amazing), (2) "popular" (what the people want, i.e., what is preferred), "moral" (what is social, fair, and moral), "conventional" (what is accepted, decided, common), "profitable" (what is affordable and creates value), "functional" (what works), and "ecological" (what is sustainable and in balance with nature).

Originally borrowed from [Boltanski and Thévenot \(2006\)](#), these evaluative standards were adjusted by [Baden and Springer \(2017\)](#) and applied to quantify frame diversity in the context of financial reporting. Thus, we had to make some modifications to apply this framework to discussions on Twitter about armed conflicts. First, we decided to disregard the differentiation between "profitable" and "functional" evaluative standards, which are useful for analyzing

TABLE 3 Logic of evaluation: Six evaluative standards in armed conflicts.

Evaluative Standard	Definition
Inspired	What is beautiful, creative, and amazing or, in contrast, is dull and unattractive
Moral	What is social, fair, and moral or, in contrast, is unjust, inhumane, and egoistic
Conventional	What is accepted, decided, common, and conventional or, in contrast, is inappropriate, weird, feared, and isolated
Economical	What works, i.e., what is functional, profitable, efficient, and creates value, or, in contrast, is useless and costly
Ecological	What is in balance with nature, i.e., sustainable, natural or, in contrast, is irreversible and disruptive
Truthful	What is in accordance with fact or reality, i.e., what is correct, accurate, and sincere or, in contrast, is bogus, misleading, or betrays other's trust

financial reporting but less relevant when examining war-related discussions on social media. Instead, we combined them into an "economical" evaluative standard (what works, i.e., what is functional, profitable, efficient, and creates value, or, in contrast, is useless and costly). Second, we blended the "popular" logic into the "conventional" (what is accepted, decided, common, and popular or, in contrast, is inappropriate, weird, feared, and isolated) since we believe both evaluative standards are insufficiently distinct in the context of armed conflicts: In times of conflict, culture and customs, as well as the (assumed) will of the people, are frequently argued over together. Finally, the conception of an "inspired" evaluative standard dates back to St. Augustine ([Boltanski and Thévenot, 2006](#), p. 72–73) and has been used for artistic and religious moments of genius, i.e., evaluating epiphanies gifted from the supernatural (p. 80). This has led [Baden and Springer \(2017\)](#) to define the "inspired" evaluative standard as "absolutes that derive from some external truth, divinity, or greatness standard" (p. 184). However, truthfulness as an evaluative standard becomes especially relevant in the context of war because propaganda and mis/disinformation can be weaponized. Therefore, we decided to separate the genius aspect of the "inspired" logic of evaluation (what is beautiful, creative, and amazing or, in contrast, is dull and unattractive) from the truthfulness aspect (what is in accordance with fact or reality, i.e., what is correct, accurate, and sincere or, in contrast, bogus, misleading, or betrays other's trust). This left us with six evaluative standards in armed conflicts, the definitions of which are described in [Table 3](#).

2.5. Research questions

The aim of this study is to investigate how NATO's role is being framed in the context of the 2022 full-scale Russian invasion of Ukraine in Russian-, English-, and German-speaking Twitter communities during the initial four months of the invasion. Given the research gaps in the comparative analysis of social media conversations about armed conflicts, we pose three research questions. These questions explore how blame and responsibility attributions toward NATO result from divergent

problem definitions and evaluations between different language communities:

RQ1: In Twitter discussions about NATO in the context of the 2022 full-scale Russian invasion of Ukraine, which of the three language communities (English, Russian, or German) is most likely to explicitly attribute blame and responsibility to NATO for the invasion?

RQ2: How is the attribution of blame toward NATO associated with different problem definitions and evaluations of conflict parties?

RQ3: How is the assignment of responsibility to NATO associated with different problem definitions, evaluations, and causal attributions?

3. Method

3.1. Case background

Social media conversations about the role of NATO can vary widely, influenced by various factors such as the discussant's home country's historical background and political affiliations. Even within a single language community, there may be significant variation in opinions expressed, as citizens from diverse national and cultural backgrounds contribute to the conversation. For example, English-speaking Twitter users may represent many voices from within NATO, particularly from the US and the UK, who generally support the alliance. Since the US is a major global power and its leaders have historically been strong advocates for NATO, it is not surprising that the majority of US citizens also support the alliance, as evidenced by the NATO Annual Tracking survey (nato.int, 2022). Similarly, most NATO member states also show support for the alliance (nato.int, 2022), which likely influences the English-language discussions on Twitter about NATO. However, the invasion of Ukraine may lead to a greater representation of Ukrainian voices in the English-language Twitter sample as Ukrainians strive to draw the attention of the international community to the invasion. Nevertheless, in the broader context, it is expected that these voices will be a minority within the English-language community.

As for the German-language Twittersphere, despite Germany's NATO membership, its relationship with the alliance is more complex, largely due to its history with World War II. The legacy of the Soviet-backed DDR and its eventual union with the West still influences public debates in Germany, which is why discussions about NATO may be more nuanced and reflect varying levels of criticism and support in the German-speaking Twittersphere. Political parties such as *Die Linke* and *AfD*, known for their pro-Moscow stance, may further shape the discourse on social media and lead to heated debates between users with differing views. The same is true for Austria, another German-speaking country with an ambivalent relationship with NATO. Austria maintains its neutrality while cooperating with NATO on various levels. However, its citizens generally do not support joining the alliance, and the far-right party FPÖ often aligns with Russian narratives on global issues. Similar to Austria, Switzerland adheres to a policy of

strict neutrality in international conflicts, avoiding alignment with any political or military blocs.

In the Russian-speaking community, opinions on NATO may be largely negative, as the majority of Russian citizens view the alliance as a threat to the country's sovereignty and security, with Ukraine joining NATO posing the greatest threat ([Levada Center, 2022](#)). The perception of NATO as a tool of Western imperialism, and the memory of Cold War tensions, could also contribute to the public opinion of NATO in Russia and parts of the Russian-speaking world. However, determining the degree to which Russian-speaking communities align with the viewpoints of the Russian government is a challenging task, given the significant variations in their cultural, political, and social affiliations. Additionally, some Ukrainians may use Russian on Twitter to amplify their tweets by tapping into preexisting Russian-language conversations about the invasion. For some, using the Russian language on Twitter could be a means of expressing their frustration or anger with the Russian government and its actions. In fact, after the 24th of February 2022, access to Twitter has been restricted for some Russian users ([Culliford, 2022](#)), likely as an attempt to shield them from pro-Ukrainian messages. All of these factors contribute to the complexity of interpreting the Russian-speaking Twittersphere, making it the most challenging community to analyze.

3.2. Original data

To address our research questions, we used an open-access dataset of tweets in English, Russian, and German that included the hashtag or keyword "Ukraine." We posit that the language differences in the subsamples correspond to distinctions between language communities, yet we acknowledge that these subsamples may not provide a clear-cut representation of the perspectives of various nationalities or affiliations. The data was gathered by Münch and Kessler via the Twitter Academic API and published on 1 March 2022 to support open science ([Münch and Kessler, 2022](#)). We accessed the repository and rehydrated³ its content for the time range from 1 February to 31 May 2022, which allowed us to analyze the portrayal of NATO during the onset of the full-scale Russian invasion of Ukraine. The initial datasets contained several million tweets per language (English $N = 23,384,107$; German $N = 7,395,587$; Russian $N = 1,808,828$), making sample preparation and quality control a significant undertaking. Following the methodological advice of [Grundmann \(2022\)](#) that the exclusion of duplicate texts is needed to reduce noise, we decided to remove all duplicates and exclude all retweets (see also [Silge and Robinson, 2017](#), for this approach on Twitter data). We decided to keep all tweets with unique text content, regardless of whether they were copy-pasted messages or had slight alterations, as long as they tagged different politicians or NGOs with @-mentions. This decision ensured that our results were not biased by deleting tweets that could have been part of a coordinated action by activists, which

³ Since Twitter restricts the redistribution of full tweets, rehydration refers to the process of using a stored tweet's ID to access the API and reconstruct the full tweet with its associated metadata.

has been shown to be a strategy to bring attention to the invasion. For instance, [Maikovska and Canevez \(2023\)](#) investigated how pro-Ukrainian activists coordinated in Telegram channels to implement this strategy to circulate content on social media such as Twitter.

3.3. Keyword-based sample for manual content analysis

We used a keyword-based selection process to identify relevant documents for the manual framing analysis of the full-scale Russian invasion. Using the keywords “NATO,” “Nato,” and “nato” in Latin and Cyrillic, we collected a corpus that contained all tweets that are *explicitly* related to NATO (English: $n = 1.264.362$, Russian: $n = 16,028$, German: $n = 253,401$). Because this was still too big a corpus for manual content analysis, we took a random sample of 650 tweets per language. In the end, we coded $n = 1.900$ random tweets, of which $n = 650$ are in English, $n = 650$ in German, and $n = 600$ in Russian⁴.

3.4. Manual coding and intercoder reliability

Adhering strictly to the theoretical framework outlined in [Figure 1](#), we created a category system to analyze the framing of NATO in the full-scale Russian invasion of Ukraine on Twitter. The resulting codebook was reviewed by the four authors on English, Russian, and German-language tweets. Whenever uncertainties arose, especially due to language or country-specific context, solutions were discussed, agreed on, and recorded in the codebook. Following multiple rounds of inspection and discussion, we conducted a first intercoder reliability test. The outcomes of the initial intercoder reliability test were satisfactory for only a small number of variables, causing us to heavily revise the codebook. When revising, we paid particular attention to the variables which coded the interpretive repertoires because they performed worst. Specifically, we reviewed the literature once again to refine the definitions and examples of “logic of action” and “logic of evaluation” used in our theoretical framework (these definitions are now used in the section about interpretive repertoires of this paper). However, even with the revised definitions, our pairwise interrater agreement was very low in the second intercoder reliability test (Holsti’s CR < 0.50)⁵, while the other categories performed well (Holsti’s CR > 0.70). In order to improve the measure once again, we binarized all variables which encoded the interpretive repertoires (i.e., the logic of action and the logic of evaluation) and recoded all tweets while only focusing on these variables. This improved our results significantly. Then, using the final version of our codebook, we performed the third intercoder reliability test on 150 tweets per language with satisfactory results,

⁴ We had to exclude tweets from the Russian-language dataset that were in Ukrainian language.

⁵ Which is in line with the measurement of the original paper in which it has been introduced ([Baden and Springer, 2014](#)), where the measure for *logic of action* reached Holsti’s CR = 0.56).

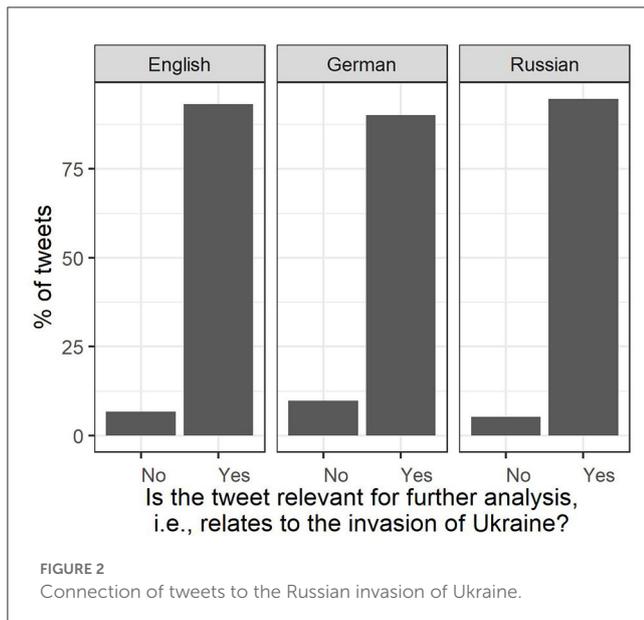
TABLE 4 Results of the third intercoder reliability test (Holsti’s CR).

Variable	English	German	Russian
Relevance (yes/no)	0.96	0.91	0.93
Supported side (stance, nominal)	0.75	0.67	0.71
Military conflict (yes/no)	0.73	0.82	0.78
Diplomatic interactions (yes/no)	0.64	0.65	0.89
Economic consequences (yes/no)	0.92	0.93	0.95
Violence of war (yes/no)	0.85	0.90	0.90
Human interest (yes/no)	0.94	0.99	0.79
Anti-war protest (yes/no)	0.97	0.98	0.98
Media self-reference (yes/no)	0.97	0.93	0.94
Historical reference (yes/no)	0.92	0.92	0.96
Sovereignty claim (yes/no)	0.94	0.76	0.96
Causal attribution (yes/no)	0.79	0.66	0.81
Causal attribution (type, nominal)	0.94	0.95	0.98
Treatment recommendation (yes/no)	0.72	0.75	0.87
Treatment recommendation (type, nominal)	0.90	0.77	0.88
Belief (yes/no)	0.89	0.78	0.77
Desire (yes/no)	0.89	0.81	0.77
Ought (yes/no)	0.82	0.78	0.77
Negotiation (yes/no)	0.77	0.84	0.71
Exchange (yes/no)	0.87	0.90	0.93
Technology (yes/no)	0.82	0.88	0.87
Life (yes/no)	0.82	0.98	0.99
Inspired (yes/no)	0.97	0.91	0.93
Moral (yes/no)	0.80	0.83	0.79
Conventional (yes/no)	0.82	0.79	0.63
Economical (yes/no)	0.90	0.78	0.89
Ecological (yes/no)	0.99	0.97	0.97
Truthful (yes/no)	0.86	0.70	0.83

as shown in [Table 4](#). It is worth noting that three variables, which have been rarely observed in the tweets, namely the “life” logic of action, the “ecological” logic of evaluation, and the topic of sovereignty claims, did not yield a positive value on a chance-corrected indicator (Cohen’s κ), despite Holsti’s CR suggesting a good fit. Therefore, we caution against interpreting these three measurements without careful consideration.

4. Results

The nature of the Russian war against Ukraine has prompted extensive coverage by a wide range of international media outlets and sparked discussions on social media about NATO’s role in the full-scale Russian invasion of Ukraine. For example, Twitter



users talking about the full-scale invasion might mention NATO in order to provide context for the invasion or discuss the potential implications of the invasion for NATO. However, not all of the tweets that reference both Ukraine and NATO are about the invasion of Ukraine. In fact, some tweets used the invasion to discuss political, ethnic, and military conflicts in other regions, for instance, to draw attention to the mistreatment of other people. Often, these tweets pointed out that the West only shows empathy when those affected by war and violence are Europeans like Ukrainians while ignoring the suffering of ethnic groups like the Uyghurs or Tigrayans. That is why in the first step of our analysis, we checked whether the sampled tweets were actually about the Russian invasion of Ukraine (see Figure 2) and then excluded all unrelated tweets (below 10% for all three language communities).

4.1. How much blame and responsibility is attributed to NATO?

Our first research question aimed to determine which language-community is most likely to explicitly attribute blame and responsibility to NATO for the full-scale Russian invasion at its onset (RQ1). Regarding the blame attribution, we found that from all tweets that discuss NATO's role in the full-scale invasion explicitly, tweets in German were most likely to blame NATO for the (escalation of) the full-scale invasion (17%), while English-speaking users were least likely to perceive NATO as the instigator (12%). The results of a χ^2 -test indicated that this group difference was significant, $\chi^2(2) = 8.843$, $p < 0.05$, $V_C = 0.070$.

In addition to these discussions about NATO being responsible for (escalating) the full-scale invasion of Ukraine, there was also a debate about whether NATO could and should propose a solution to end it. When it comes to assigning responsibility, English speakers who talked about NATO's role in the conflict were a

lot more likely to express that NATO is responsible for finding a solution (42%) to the full-scale invasion than German (11%) and Russian (7%) speakers. The differences were significant once again, $\chi^2(2) = 277.46$, $p < 0.001$, $V_C = 0.397$.

Please note, however, that these percentages are based solely on tweets that mention NATO explicitly and, as conditional probabilities, cannot be considered representative of the overall prevalence of NATO blaming on Twitter. It is important to approach these results with caution since they may not capture underlying patterns if, for instance, users of a particular language tend to blame NATO more often but mention it less frequently than other users in the first place.

4.2. The correlates of attributing blame to NATO in the three language communities

Our second research question asked how different problem definitions and evaluations are associated with attributing blame to NATO in the three language communities (RQ2). We fitted logistic regression models to gain an understanding of how different types of blame attributions derive from different problem definitions and from supporting one conflicting party over the other. We proceeded hierarchically by successively introducing two models, beginning with Model 1, which focused on the problem definition (composed of topics and the logic of action) and moving on to Model 2, which incorporated the evaluation, i.e., the expressed support for the conflict parties and the logic of evaluation for that support.

Our findings show that in the Russian-language Twittersphere (Table 5) discussing the military conflict (e.g., troop movements, equipment, and stalemates) was positively associated with attributing blame to NATO ($b = 1.33$, $p < 0.001$). Similarly, mentioning interactions between the actors that are based on desires and emotions (e.g., resentment, fear, hatred, or pursuit) was also positively related to blaming NATO ($b = 0.82$, $p < 0.01$). However, discussing the topic of violence of war (e.g., war crimes, the aftermath of bombings, or casualty totals) was negatively related to blaming NATO ($b = -1.22$, $p < 0.01$). The same was true ($b = -1.60$, $p < 0.001$) for the discussions about interactions that involved material exchanges (e.g., production, purchase, borrowing, or consumption). All these relationships remained statistically significant in Model 2 as well, where we added the evaluation variables. Among those, only supporting Ukraine was negatively correlated with blaming NATO, although this relationship did not achieve the conventional level of statistical significance ($p = 0.065$).

In the German Twittersphere, attributing blame to NATO was negatively linked to both taking a neutral stance ($b = -1.81$, $p < 0.001$) and supporting Ukraine ($b = -2.56$, $p < 0.001$). Interestingly, those who talked about history were more likely to blame NATO, but only as long as stances were not being considered, i.e., in Model 1 ($b = 0.94$, $p < 0.001$). Finally, in the English Twittersphere, being pro-Russian

TABLE 5 NATO as an instigator: Logistic regression models for blaming NATO.

	Russian-speaking Twittersphere				German-speaking Twittersphere				English-speaking Twittersphere			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Problem definition 1: topics (1 = mentioned)												
Military conflict	1.33***	0.33	1.34***	0.36	-0.14	0.23	0.00	0.26	-0.13	0.27	0.11	0.31
Diplomatic interactions	-0.42	0.40	-0.38	0.44	0.22	0.25	0.15	0.28	0.07	0.30	0.09	0.33
Economic consequences	-0.70	0.68	-0.95	0.73	-0.74	0.53	-0.65	0.61	0.84*	0.39	0.93*	0.47
Violence of war	-1.22**	0.42	-1.14*	0.46	0.20	0.37	0.44	0.44	-0.33	0.35	-0.13	0.41
Human interest	-1.61	1.47	-0.88	1.61	-0.53	0.94	-0.53	0.99	-0.13	0.94	-0.37	1.04
Anti-war protest	0.73	0.83	0.77	0.99	0.01	0.99	0.85	1.09	0.06	0.97	0.31	1.00
Media self-reference	-1.40†	0.84	-1.25	0.87	-0.20	0.51	-1.04†	0.55	0.39	0.50	-0.27	0.60
Historical reference	0.09	0.30	0.17	0.33	0.94***	0.25	0.42	0.30	0.92*	0.36	0.38	0.43
Sovereignty claim	0.45	0.44	-0.07	0.48	-0.23	0.33	-0.38	0.38	0.09	0.44	-0.19	0.53
Problem definition 2: logic of action (1 = mentioned)												
Belief	0.13	0.27	-0.03	0.30	-0.07	0.27	-0.06	0.32	0.61†	0.32	0.36	0.37
Desire	0.82**	0.31	1.01*	0.39	0.23	0.28	0.14	0.32	-0.18	0.36	-0.33	0.43
Ought	0.09	0.27	0.20	0.31	-0.71*	0.30	-0.40	0.33	-1.09**	0.34	-0.72†	0.38
Negotiation	0.25	0.26	0.17	0.30	-0.28	0.26	-0.21	0.29	0.23	0.28	0.27	0.33
Exchange	-1.60***	0.45	-1.39**	0.47	-0.05	0.33	0.02	0.38	0.05	0.34	-0.19	0.42
Technology	0.03	0.36	-0.11	0.39	-0.06	0.36	-0.05	0.41	-0.54	0.39	-0.38	0.43
Life	0.28	0.99	0.80	1.17	-1.34	1.52	-1.17	1.61	0.53	0.72	0.35	0.91
Evaluation 1: support for (both sides = reference)												
No side			-1.01	0.98			-1.81***	0.55			-0.04	0.82
Pro-Russia			0.66	0.96			0.35	0.53			2.19**	0.83
Pro-Ukraine			-1.82†	0.99			-2.56***	0.57			-0.74	0.81
Evaluation 2: logic of evaluation (1 = mentioned)												
Inspired			-0.96	0.69			-0.02	0.50			0.53	0.73
Moral			0.18	0.40			-0.09	0.34			0.68†	0.36
Conventional			0.00	0.30			-0.44	0.37			0.14	0.43
Economical			0.34	0.54			-0.46	0.51			0.29	0.47
Ecological			-0.89	1.04			0.40	1.16			-1.02	1.63
Truthful			0.06	0.33			-0.32	0.31			0.56	0.43
Intercept	-2.57***	0.39	-1.34	1.35	-1.24***	0.29	0.19	0.62	-1.85***	0.33	-2.34**	0.88

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, † $p < 0.10$. The bold values indicate the coefficients that have reached a significance threshold.

($b = 2.19$, $p < 0.01$) and talking about the economic consequences of the war ($b = 0.93$, $p < 0.05$) was positively associated with blaming NATO. Furthermore, two interesting associations emerged, although they were not statistically significant. First, using moral arguments to evaluate the conflict parties, such as arguments about justice and humanity ($p = 0.055$), was positively related to blaming NATO. Second, tweeting about interactions that make some kind of demands was negatively associated with blaming NATO ($p = 0.056$).

4.3. The correlates of assigning responsibility to NATO in the three language communities

In our third research question we wanted to determine if NATO was held accountable for finding a solution, taking into account causal attributions, such as blaming NATO, Russia, or Ukraine for the invasion (incorporated in Model 3). To do this, we used logistic regression models again (Table 6).

TABLE 6 NATO as a peacemaker: Logistic regression models for making NATO responsible for finding a solution.

	Russian-speaking Twittersphere						German-speaking Twittersphere						English-speaking Twittersphere					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Problem definition 1: topics (1 = mentioned)																		
Military conflict	0.59	0.48	0.75	0.75	0.93[†]	0.53	0.47	0.30	0.29	0.32	0.29	0.32	0.62*	0.24	0.61*	0.27	0.61*	0.27
Diplomatic interactions	0.14	0.64	0.22	0.67	0.25	0.68	0.86**	0.30	0.72*	0.32	0.71*	0.32	0.20	0.23	0.09	0.26	0.04	0.26
Economic consequences	-1.23	0.91	-1.01	1.06	-0.79	1.04	0.40	0.53	0.16	0.58	0.16	0.58	0.34	0.37	0.28	0.42	0.35	0.43
Violence of war	-1.43	0.87	-1.52[†]	0.91	-1.39	0.92	1.22**	0.38	1.01*	0.43	1.10*	0.44	0.89***	0.26	0.34	0.29	0.34	0.29
Human interest	-1.41	1.54	-1.99	1.58	-1.74	1.57	-1.73	1.53	-1.76	1.51	-1.93	1.51	-1.89[†]	0.98	-2.15*	0.95	-2.01*	0.94
Anti-war protest	-0.83	1.65	-0.97	1.64	-0.84	1.66	-0.84	1.65	-1.20	1.61	-1.04	1.64	-0.40	0.87	-0.74	0.87	-0.99	0.87
Media self-reference	-1.34	1.49	-1.21	1.54	-1.15	1.55	-0.44	0.72	-0.22	0.78	-0.33	0.78	-1.67*	0.69	-0.80	0.75	-0.79	0.75
Historical reference	0.68[†]	0.41	0.79[†]	0.47	0.86[†]	0.49	-1.84**	0.65	-1.63*	0.67	-1.61*	0.67	-0.90*	0.39	-0.58	0.44	-0.59	0.45
Sovereignty claim	-2.55[†]	1.50	-2.35	1.61	-2.50	1.64	-0.00	0.46	-0.22	0.49	-0.22	0.50	-0.48	0.45	-0.11	0.52	-0.19	0.53
Problem definition 2: logic of action (1 = mentioned)																		
Belief	0.28	0.47	0.65	0.52	0.56	0.52	0.10	0.36	0.11	0.38	0.14	0.39	-0.44	0.33	-0.38	0.37	-0.47	0.37
Desire	1.66***	0.43	1.63**	0.53	1.45*	0.57	-0.12	0.38	-0.12	0.40	-0.06	0.40	0.35	0.31	0.40	0.35	0.38	0.36
Ought	1.01*	0.41	0.84[†]	0.48	0.96*	1.46	1.18***	0.28	0.93**	0.31	0.91**	0.31	1.64***	0.22	1.25***	0.25	1.12***	0.25
Negotiation	0.27	0.42	0.76	0.48	0.94[†]	0.96	-0.18	0.33	-0.21	0.35	-0.19	0.35	0.91***	0.25	0.96***	0.28	0.94***	0.28
Exchange	1.78***	0.42	1.82***	0.51	1.73**	0.94	-0.15	0.37	-0.33	0.39	-0.38	0.40	0.19	0.29	0.29	0.35	0.30	0.35
Technology	0.25	0.63	0.37	0.69	0.49	1.73	0.81*	0.36	0.89*	0.38	0.93*	0.39	0.92***	0.25	0.68*	0.29	0.62*	0.29
Life	-0.41	1.89	-0.42	1.90	-0.57	0.69	-0.01	0.99	0.30	1.12	0.26	1.11	-0.54	0.69	-0.51	0.84	-0.49	0.85
Evaluation 1: support for (both sides = reference)																		
No side			0.16	1.30	0.16	1.28			-0.59	0.77	-0.84	0.79			0.64	1.06	0.54	1.03
Pro-Russia			-1.63	1.38	-1.21	1.35			-1.63[†]	0.94	-1.71[†]	0.96			-0.61	1.21	-0.27	1.20
Pro-Ukraine			1.61	1.28	1.12	1.26			0.36	0.76	0.26	0.77			2.86**	1.05	2.44*	1.02
Evaluation 2: logic of evaluation (1 = mentioned)																		
Inspired			0.04	0.72	-0.12	0.73			0.61	0.46	0.59	0.45			0.32	0.62	0.45	0.62
Moral			-0.66	0.58	-0.94	0.62			-0.39	0.42	-0.40	0.42			0.05	0.28	0.13	0.29
Conventional			-0.68	0.52	-0.77	0.53			0.35	0.38	0.35	0.37			-0.53	0.37	-0.55	0.38

(Continued)

TABLE 6 (Continued)

	Russian-speaking Twittersphere						German-speaking Twittersphere						English-speaking Twittersphere									
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3					
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE				
Economical			-0.70	0.78			-0.57	0.76			0.61	0.44	0.51	0.45			0.19	0.42	0.44			
Ecological			-0.52	1.82			-0.71	1.74			0.52	1.13	0.49	1.12			0.11	0.97	0.99			
Truthful			-1.76*	0.87			-2.08*	0.91			-2.00**	0.67	-2.05**	0.67			-0.68	0.52	0.53			
Causal attribution: actor-specific (1 = mentioned)																						
NATO							-0.67	0.77					-0.56	0.52					-0.90*	0.45		
Russia							0.89†	0.53					-0.36	0.33					0.56*	0.25		
Ukraine							-1.94	1.48					0.05	0.81					-0.12	1.01		
Intercept			-1.85***	0.34			-5.17***	1.40			-2.82***	0.39	-2.23**	0.84			-2.43***	0.31	-4.35***	1.10	-4.17***	1.06

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, † $p < 0.10$. The bold values indicate the coefficients that have reached a significance threshold.

First, we were able to find that in the Russian Twittersphere, there was a positive relationship between holding NATO responsible for finding a solution and talking about interactions between actors that are based on desires ($b = 1.45, p < 0.05$), demands ($b = 0.96, p < 0.05$), and material exchanges ($b = 1.73, p < 0.01$). In addition, evaluating conflict parties based on their truthfulness was negatively linked to holding NATO responsible ($b = -2.08, p < 0.05$). Finally, tweets that blamed Russia to have started the full-scale invasion against Ukraine were more likely to state that NATO could provide a solution to the conflict, but this relationship was not significant ($p = 0.095$).

Moving to the German Twittersphere, we saw that discussions about diplomatic negotiations ($b = 0.71, p < 0.05$) and the violence of war ($b = 1.10, p < 0.05$) often went hand in hand with expecting NATO to find a solution. In a similar vain, responsibility attributions toward NATO were associated with actors being asked or demanded to act (logic of action: *ought*, $b = 0.91, p < 0.01$) or to interact with a structure (logic of action: *technology*, $b = 0.93, p < 0.05$). At the same time, mentioning historical events ($b = -1.61, p < 0.05$) and evaluating the conflict parties based on truthfulness ($b = -2.05, p < 0.01$) were negatively linked to perceiving NATO as a possible peacemaker. Additionally, tweets that were supportive of Russia were less likely to believe that NATO could provide a solution to the conflict, but this relationship was not significant ($p = 0.076$).

Finally, the English-language Twittersphere was making NATO responsible when talking about military action ($b = 0.61, p < 0.05$) and in the context of asking or demanding actors to act ($b = 1.12, p < 0.001$) or to interact with a structure ($b = 0.62, p < 0.05$), but also during negotiations ($b = 0.94, p < 0.001$). In addition, tweets that voiced their support for Ukraine were also more likely to hold NATO accountable for finding a solution ($b = 2.44, p < 0.05$), as were tweets that blamed Russia for the invasion ($b = 0.56, p < 0.05$). Talking about human interest topics ($b = -2.01, p < 0.05$), on the other hand, and blaming NATO for the invasion ($b = -0.90, p < 0.05$) were both negatively linked to believing that NATO could provide a solution.

5. Discussion

This study aimed to investigate how NATO's role in the 2022 full-scale Russian invasion of Ukraine has been framed in Russian-, English-, and German-language Twitter communities over the first four months of the invasion. We draw on a comprehensive manual analysis of tweets mentioning NATO conducted by the four multilingual authors to determine which language communities are most likely to explicitly attribute blame or responsibility to NATO and how these attributions result from divergent problem definitions and evaluations between the language communities.

Our findings suggest that German-language Twitter users who mention NATO explicitly in their tweets are more likely to blame NATO for the escalation of the war than Russian- or English-speaking users who mention NATO. Moreover, English-speaking users are more likely to believe NATO is responsible for finding a solution than German- and Russian-speaking tweeters. The NATO public opinion report of 2022 indicates that 72% of allied citizens support their country's membership in the alliance, meaning NATO

is less likely to be blamed for instigating the war among in the predominantly Western English-language Twittersphere (nato.int, 2022). It is possible that the tendency of the German-language community to blame NATO when mentioning it is due to two factors. First, East Germany was a Soviet-backed state, and many (East) Germans still have a strong connection to Russia, hence more sympathy for the country and distrust toward NATO. Second, the Russian government has attempted to divide Germany and the EU through media narratives, including dependency on Russian gas imports and historical memory ([Lange-Ionatamishvili, 2015](#)). Our results may indicate that these strategic efforts have been fruitful.

Our second finding indicates that tweets written in English that mention NATO are more likely to call on NATO to take action in finding a solution to the Russian invasion of Ukraine. This is due to English being the language spoken by international organizations, decision-makers, and stakeholders when discussing global security and cooperation. Furthermore, tweets in English are more likely to be seen by a larger audience than tweets written in other languages, giving English-language tweeters a bigger platform to hold NATO accountable and push for a solution. Consequently, tweets appealing to NATO to act are more often written in English in order to make a bigger impact and bring about greater accountability for NATO.

Next, we discover that in the Russian-language Twittersphere, talking about military action (e.g., troop movements) positively correlates with blaming NATO. This connection is likely due to the Russian government's and media's vocal criticism of NATO's relations with Ukraine (e.g., the NATO-Ukraine Commission, NUC, or the Comprehensive Assistance Package, CAP, for Ukraine), which makes some Russian speakers view NATO as the main source of tension and military conflict in the region. This is in line with the findings of the Levada Center, stating that the perceived threat from NATO has risen to the highest level since 2014 among Russian citizens ([Levada Center, 2022](#)). However, talking about the violence of war is inversely related to blaming NATO among Russian-language tweeters. This finding indicates that NATO is *not* discussed as a responsible party when the tweets focus on specific war crimes or the consequences of bombings. Instead, the focus is more on the actors directly accountable for the violence (such as militants, rebels, or government forces) and not on the greater geopolitical context in which the violence is occurring. Additionally, when tweets in Russian discuss actors who demonstrate a particular ambition or express emotions such as resentment or hate, these tweets are likely to blame NATO for the full-scale invasion. This finding might simply be a result of the link between blaming NATO for the Russian war and feeling negatively toward NATO. More surprisingly, the logic of action revolving around exchanges, such as providing weapons to Ukraine, is negatively associated with blaming NATO. We explain this finding with the observation that tweets about these exchanges, usually weapon deliveries to Ukraine, are typically reported in a factual manner, i.e., listing all the equipment that is meant to be delivered.

Our findings regarding the German-language tweets indicate that messages supporting Ukraine and those showing no support for either side are positively linked to blaming NATO. As

mentioned in the prior case description, German-speaking countries share a complex relationship with NATO and Russia. A significant amount of Germans distrust NATO (about 36% according to a 2023 survey of the [Statista Research Department, 2023](#)) due to its historical ties to the United States and its involvement in military interventions in the Middle East. At the same time, there is also a sense of sympathy for Russia partly due to the close cultural and historical ties between the two countries and the fact that many Germans view Russia as a potential partner in balancing the power of the United States ([Decker, 2021](#)). In fact, we find that German-language tweets that talk about history are more likely to blame NATO as long as the overall stance is not being controlled for. When examining the historical references mentioned in these tweets using univariate analysis, we observed that there are references to NATO's expansion toward the East, as well as Germany's history with Soviet backing. Tweets that support Ukraine yet blame NATO often suggest that either NATO or the U.S. have employed Ukraine as a tool to destabilize Russia and/or the European Union.

When looking at the English-language tweets, it is clear that expressing a pro-Russian attitude is the main factor in attributing blame to NATO. It is so strong that no other factors (e.g., making historical references) have any significant association with blaming NATO once support for Russia is taken into account. Tweets in English, even more so than German-language tweets, blame NATO based on a predetermined stance rather than an interpretation of the situation. This finding is in strong contrast to the Russian-language Twittersphere, where situational problem definitions play a more significant role in determining blame attributions than predetermined stances. Interestingly, Russian-language pro-Russian tweets were not linked to blaming NATO. This could be due to pro-Russian tweeters placing greater emphasis on blaming NATO in English, with the intention of reaching a wider international audience. Indeed, as the polls show, the Russian public already holds a strong negative attitude toward NATO ([Levada Center, 2022](#)), which maybe does not need reinforcement. On the other hand, it is natural to expect this attitude to be expressed in blaming NATO anyway. Here it is worth noting that almost half of the tweets in our Russian sample were pro-Ukraine, while many tweets in Russian referred to current news coverage without clear blame attribution to NATO. It is also important to note that the tweets were collected at the onset of the Russian invasion of Ukraine, and people need time to process contextual information, rationalize their initial desire to blame, and update their moral judgment ([Monroe and Malle, 2019](#)).

Regarding attributing responsibility for finding a solution to the war to NATO, we found that in Russian, tweets that view NATO as a possible peacemaker often mention desires and demands from various actors, indicating a push for NATO to take a more active role. Accordingly, these tweets also often reference material exchanges, such as weapon deliveries. Apparently, the expectation is rather that NATO should provide (at least indirect) military support instead of actively mediating in peace negotiations. Tweets that do not view NATO as a viable peacemaker tend to focus more on claiming to present objective facts, suggesting a motive to challenge the Western portrayal of NATO as a benevolent and constructive force.

German-speaking countries are diverse when it comes to public opinion about NATO as a peacemaker. In the German-language Twittersphere, tweets expressing NATO's responsibility for resolving the invasion tend to emphasize the importance of diplomacy and the devastating impact of war more than other related topics. It suggests that German speakers advocate for NATO to take an active role in peace negotiations, particularly when discussing war crimes and overall losses. Moreover, they not only urge for peace negotiations but also demand greater military support from NATO, such as the provision of more military equipment and the establishment of a No Fly Zone, as evidenced by the use of the logics of action "ought" and "technology." In contrast, tweets that do not see NATO as a responsible actor for finding a solution tend to focus more on arguments based on historical events and make more claims based on facts: When users express that other actors than NATO are responsible for a solution, they base their arguments on a specific understanding of the past that they perceive as objectively true.

In the English Twittersphere, we observe an overlap in arguments in tweets assigning responsibility for NATO. As in the German case, tweets that perceive NATO as a possible peacemaker tend to focus on the logics of action "ought" and "technology," i.e., calling for a more active involvement of NATO. These tweets discuss a possible military intervention of NATO and weapon deliveries to Ukraine. With English being the language used by the decision-makers of NATO member states when discussing global security and cooperation, it makes sense that we observe a more straightforward and less nuanced discussion in favor of active military involvement of NATO in this language community. On the other hand, our findings also reveal that tweets in English that center around stories related to human interest tend to attribute less responsibility to NATO. It could potentially be due to the fact that these tweets steer away from the brutality of war and instead highlight more uplifting stories.

Our study has implications for the current political debate as it highlights the importance of cultural and linguistic sensitivity when addressing responsibility in armed conflicts, as well as the need to consider the diverse perspectives derived from divergent problem definitions and evaluative standards. Our findings emphasize the significance of adopting a nuanced and multidimensional approach to conflict communication for de-escalating armed conflicts. It is crucial to be aware that certain topics and evaluative standards may have (unintended) persuasive effects in some communities. For example, when discussions of war crimes and overall losses are presented, German speakers are more likely to endorse NATO's active role, such as mediating negotiations or providing weapons. The German press may consider reporting on the harsh realities of war, as it could potentially increase German support for de-escalation. However, this approach may not be equally effective for other language communities, and further research is needed to explore conflict communication strategies using media effect research methods.

In addition, our study has implications beyond the current political debate, as it provides a novel integration of conceptual and methodological perspectives on the framing and stance-taking of social media users during wartime. This contributes to the existing literature on armed conflicts and fills gaps in the

comparative analysis of such discussions, including the addition of comparative, non-English perspectives. Since frames reflect ideas resonating with the language, culture, and values of the communicator (Sheafer et al., 2014), our findings show that language-specific Twitter communities converse about the full-scale Russian invasion of Ukraine from different viewpoints and context-specific considerations. In a recent study, Blasi et al. (2022) argue that over-reliance on English-language samples (English-speaking researchers studying English speakers) has hindered cognitive sciences and has led to an underestimation of the crucial role language plays in cognition. Cognitive sciences are not an exception. Our findings illustrate the importance of conducting comparative research in general and in the framing of wars and conflicts in online environments in particular.

5.1. Limitations and future outlook

Our study comes with limitations that have to be addressed. To begin with, we investigated tweets spanning from 1 February to 31 May 2022. As the invasion continued and more information about the Russian military attack and the atrocities with which the Russian army operates is released, the public opinion reflected in the Twittersphere might have changed. Future research could include data covering a greater time span to enrich the findings and provide a broader picture of the discourse.

Furthermore, it is crucial to take into account the origin of the tweets before making any conclusions. Most of the tweets included in the open-access dataset used in this study lack geographic tags, meaning that while we can determine the language used in the tweet, we cannot ascertain its origin. It is worth noting that individuals from various countries, including Ukraine, may have written tweets in Russian intending to influence the opinions of Russian citizens. Similarly, some tweets written in German may have come from German-speaking countries such as Austria or Switzerland. English tweets likely have the most diverse origins. As a result, we have opted to refer to *language communities* instead of countries. It is conceivable that factors beyond language use, such as political culture and history, are responsible for the group differences in perceiving NATO as an instigator or peacemaker. This uncertainty about the origin of the tweets makes our results more difficult to interpret because they cannot be clearly and exclusively attributed to cultural and historical idiosyncrasies. However, it is important to remember that the tweets we examined represent actual content that Twitter users who speak Russian, German, and English encounter when participating in discussions in their native language, irrespective of their country of origin. Therefore, analyzing the discourse that transcends country barriers is intrinsically valuable because it indicates the frames that citizens are exposed to when engaging in these language-specific conversations.

Speaking about the origin of the tweets, we also need to discuss their creators. It is possible that at least some tweets that mention NATO are coming from bots or trolls and are not reflective of public opinion. They can show us what content Twitter users are exposed to but might also bias the findings about how often NATO is blamed

for escalating the war or appealed to for finding a solution. Finally, it is difficult to generalize public opinion based solely on tweets since the manually-coded sample size is quite small, and the tweets may not be representative of the population as a whole.

More critically, our observational framework does not enable us to determine the direction of the association between frame elements and blame or responsibility attribution. While we can identify which frame elements correspond to these stances, we do not know which comes first when composing the tweet. Do users first consider a problem thoroughly and then interpret the situation before deciding whether NATO is responsible or to blame for finding a solution? Or do they already have a strong preconceived stance on these matters, leading them to concentrate on topics and evaluative standards that align with their viewpoint? Future experimental research should seek to untangle these relationships.

Finally, while the interpretative repertoire framework as proposed by Baden and Springer (2014, 2017) empirically poses challenges, especially when analyzing short text forms such as tweets, we firmly believe that the interpretative repertoire framework makes a strong contribution to the theoretical development of framing theory. We encourage future research to explore whether a combination of framing theory and the interpretative repertoire framework can be applied to analyzing the media portrayal of armed conflicts in longer text forms, such as Facebook postings or traditional media coverage.

Data availability statement

The datasets and codebook presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found at: <https://osf.io/d475w/>.

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Author contributions

LK contributed to the conception and design of the study, codebook development, the acquisition, analysis and interpretation of data, coding of English and German data, and the writing of the manuscript. AK and AB contributed to the design of the study, codebook development, the interpretation of data, coding of English and Russian data, and the writing of the manuscript. CP contributed to the design of the study, codebook development, and coding of English and German data. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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