U.S AID to Ukraine: Discussions on Twitter

A Comparative Content Analysis of Issue Categories

Media Platforms and Communication Practices(U60312)

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Abstract

With the aim of examining the discussion related to US Aid to Ukraine on Twitter, this paper attempted to discover the main issues by collecting 137 tweets from 5 actor groups, taking inspiration from previous research. The tweets were then examined and analyzed to discover 5 major issue categories: Misappropriation of funds, Budget allocation, Political partisanship, Proxy warfare, and Morality. Afterwards, the tweets were indexed based on their issues and a series of word clouds were generated to illustrate the findings. The paper allowed for an examination of the specific issues that different actor groups emphasize. The paper also suggests conducting further research to provide a more detailed examination of these phenomena.

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Introduction

On February 24, 2022, Russia invaded Ukraine, sparking conflict throughout the country. On August 24, 2022, the U.S. announced $2.98 Billion in Aid to Ukraine which "will allow Ukraine to acquire air defense systems, artillery systems and munitions, counter-unmanned aerial systems, and radars to ensure it can continue to defend itself over the long term," said President Biden. In the digital age, war is not just limited to a physical battlefield as the emergence of social platforms and online media outlets has enabled various ways in which the politicians, government and citizens can partake in discussions surrounding the war. Though most social platforms afford users similar opportunities to partake in discussions, Twitter enables users to relay information with both precise and open context. Retweets spread the visibility of a user's tweet making it possible to connect and have discussions with new users that either support or oppose specific opinions or information. Hashtags also enable users to find relevant topics or create new topics where their influence can be higher. However, polarization can still be found among twitter users since they can be segregated both knowingly and unknowingly which eventually lead to the creation of filter bubbles where discussions eventually decrease or cease.

This project aims to investigate the perspectives of five selected actor groups on Twitter in the United States on the topic of Ukrainian aid. By analyzing the arguments of these actor groups, we intend to gain a comprehensive understanding of the varied viewpoints on this issue and the strategies used by these actor groups to influence their audience. To accomplish this, we will conduct a mixed research study that utilizes digital methods to gather tweets pertaining to discussions surrounding Ukrainian aid. Through comparative content analysis, we will differentiate and classify tweets based on the perspectives of the actor groups.

Literature Review

Twitter and its affordances

Twitter is a social media and micro-blogging platform that allows users to send and read short text-based messages known as tweets. It was founded in 2006 by Jack Dorsey and associates in San Francisco. The platform was created to work with SMS messaging, and as such, tweets were limited to 140 characters, and to 280 characters since 2017. As of December 2022, Twitter's audience accounted for over 368 million monthly active users worldwide (Published by S. Dixon, Dec 14, 2022). The platform has become a popular tool for communication, news dissemination, and social interaction, and has been instrumental in shaping the way we consume and share information today (Rogers, 2013).

According to Rogers (2013), initially considered a platform for "pointless babble" and a backchannel for interacting at events, Twitter has undergone a shift in how it is perceived and studied by researchers. In November 2009, Twitter changed its tagline from "What are you doing?" to "What's happening?", reflecting a shift in the platform's focus towards real-time information and news dissemination (p.16). Jan Hinrik Schmidt (2014) states that unlike social network sites such as Facebook, the follower/followee relationship on Twitter can be unilateral, which allows for the calculation of similarities between users and the creation of echo chambers and filter bubbles. Twitter's software has specific affordances such as the "@-sign" for addressing or replying to a user. Twitter has since integrated features such as an "in reply to" link, a separate tab for replies and a "reply" link to make it easier for users to reply to tweets. The "retweet" affords to forward a message while preserving the

reference to the original sender. Twitter allows for the formation of relations between users and texts by using hashtags. These hashtags are searchable, connecting tweets from users who have no pre-existing follower/followee relationship, and are unmoderated, allowing any user to introduce and use them. Twitter is particularly attractive for research due to the ease of gathering tweets and collections, as well as the built-in means of analysis such as retweets for significant tweets, likes, replies and hashtags for subject matter categorization, @replies, followers-followees for network analysis, text for content analysis and shortened URLs for reference analysis (Weller et al., 2014; Bruns,2019).

Twitter's structure and features, such as its affordances, have led to the creation of complex follower networks with unidirectional and bidirectional connections between individuals, media outlets, NGOs, political actors, and other organizations (Weller et al., 2014). The platform has become a powerful tool for political communication, with many world leaders and politicians using it to share their thoughts and opinions on a variety of issues. Additionally, it has been used as a source of real-time information and a place for debate in news, politics, business, and entertainment. Twitter's utility for individuals and organizations alike, and its success as a platform for global news media and public communication, is due to the highly personalized use of the tool by each user for outreach, spreading information, or connecting with friends. Due to its potential for research, functionality as a communicative medium, as well as its inherent capabilities and affordances, Twitter was chosen as the platform for this project.

Echo chambers, Filter bubbles and Polarization

Bruns (2017; 2019) defines an echo chamber as a group of participants who choose to connect with each other to the exclusion of outsiders. This leads to the group becoming isolated from outside views and the views of its members circulating widely within the group. A filter bubble emerges when a group of participants choose to communicate with each other, to the exclusion of outsiders. This results in the group's own views and information circulating among group members rather than information introduced from the outside. The concept of filter bubbles was first introduced by Eli Pariser in his 2011 book, "The Filter Bubble: What the Internet Is Hiding from You" and refers to the algorithmic selection of information based on the individual user's interest profile (Parizer,2012; Bruns, 2019). As Pariser puts it, such algorithms would 'narrow what we know, surrounding us in information that tends to support what we already believe' (Pariser, 2011). These patterns can lead to filter bubbles that lock users into highly idiosyncratic filter bubbles based on their personal interests or lead to collective filter bubbles that enclose groups with similar interests and ideologies in a unique information universe. Sunstein et al. (2018) studied the phenomenon of group polarization, in which individuals in a group tend to move towards a more extreme point in the direction to which the group's members were originally inclined. This concept has significant implications for the internet and social media, particularly in regard to groups of like-minded individuals engaging in within-group discussion. Social media algorithms that curate content for users based on their past behavior can contribute to group polarization by creating filter bubbles where individuals are only exposed to information that confirms their pre-existing views, leading to a lack of diversity in the information they consume and more extremism in their beliefs. It is important to note that algorithms are not created without human bias and preferences

built into them. These biases reflect the assumptions and understandings of their developers. Platform algorithms may amplify or counteract human choices such as personalization options, search terms, or social network engagement, but it is primarily human agency that determines the formation of echo chambers and filter bubbles, not the algorithms themselves. (Bruns, 2019).

Twitter's structure may contribute to the formation of echo chambers by suggesting users to follow other users that are already in the same network community or with similar interests or opinions. Additionally, the algorithm may suggest content that confirms the user's pre-existing views. Yardi and Boyd (2010) and Gruzd and Roy (2014) have observed that even though Twitter users may be exposed to multiple points of view by using hashtags or trending topics, the platform's 280-character limit is insufficient for deep, meaningful debates, and prioritizes emotions over factual arguments. Thus, Twitter's structure and features may limit the diversity of information consumed and the ability of users to engage in informed and reasoned discourse leading to polarization and contributing to the spread of 'fake news', which we found evident in our research on discussions on Twitter surrounding the United States aid to Ukraine. Studies have shown that misinformation spreads faster and farther on social media platforms such as Twitter compared to traditional media, due to the ease of sharing, the lack of gatekeepers, and the tendency for people to trust information that is in line with their existing beliefs (Vosoughi et al. 2018).

Polarization refers to the increasing ideological distance between individuals or groups, as observed by Nelimarkka et al. (2018). Online polarization can be driven by echo chambers and filter bubbles. In the United States, political polarization between the Republican and Democratic parties and in the media has grown, although research on ordinary citizens has yielded mixed results on whether citizens are becoming more

polarized or if polarization is only taking place among extremists (Layman et al., 2006). Social media platforms, such as Twitter, have been found to amplify the voices of extremists and facilitate coordination (Meineck, 2018; Bruns, 2019), but are not the main cause of this trend. Studies have shown that political polarization on Twitter is intensified by the platform's algorithms and the tendency of users to self-select into groups of like-minded individuals, resulting in a reinforcement of existing beliefs and an increase in extremism (Bakshy et al. 2015). A study conducted by Conover et al. (2021) found that while the retweet network on Twitter is highly polarized, the mention network is not, and attributed this to the use of hashtags that expose users to different perspectives and content. However, political segregation remains prevalent in the retweet network. The concept of echo chambers and filter bubbles on social media is a subject of debate among academics, with some arguing that they are not prevalent in mainstream society and that the constant focus on these ideas exaggerates the role of technology and algorithms in current political issues (Bruns et al., 2017). They suggest that the more pressing concern is the resurgence of hyperpartisan populism and demagoguery, highly prevalent in the United States in recent years. A recent example of polarization can be observed in the ongoing debate surrounding the provision of aid to Ukraine, specifically in terms of military and economic assistance to combat Russian aggression in the ongoing war. The position held by certain political parties, news outlets, groups and individuals in relation to this aid package serves as an illustration of polarization. Some actors advocate for the package, arguing that it is a crucial measure to support a key ally in the region and to counter Russian aggression. Conversely, other actors reject the package, seeing it as a potential waste of resources, a misallocation of tax-payer money and/or money laundering. The disagreement between these actors reflects an ideological divide, with each side

becoming increasingly entrenched in their respective perspectives and at times spreading misinformation on the conflict.

Public Spheres to Network Publics

Jürgen Habermas defines "Publics Spheres" as a space that is framed and structured by the operations of the mass media (primarily print and broad-cast), and where "mediated political communication" is thus "carried on by an elite" (Habermas, as cited in Bruns 2016, p. 56). Over the years, various arguments emerged to question the unified nature of the public sphere due to its inability to fully represent the complexities of modern day media ecology (Bruns, 2016).

The evolution of communication technologies has changed the way in which individuals interact and acquire information. Though mass media remains to be present, the potential for simultaneous communication has since increased with the rise of technological advancements. The term, "Media Convergence" connotes several phenomena in which advancements of telecommunication may influence or change aspects of the communication process (Papacharissi, 2010). Social network sites encapsulate how individuals gather to seek, expand, and produce new information and their overall salience in transforming the public sphere.

By further examining social network sites, Danah Boyd uncovered the genre of "Network Publics":

> "Networked publics are publics that are restructured by networked technologies. As such, they are simultaneously (1) the space constructed through networked technologies and (2) the imagined collective that emerges as a result of the intersection of people, technology, and practice." (Boyd, as cited in Papacharissi, 2010, p. 39).

The emergence of social network sites introduced these individuals to distinct environments where specific affordances shape their engagement. The influence of Twitter on networked publics is specifically apparent in its structural affordances where users' messages are restricted to 280 characters known as "Tweets". The persistence of tweets encompasses the countless ideas and conversations that flow within the feed. Retweets allow for both replicability and scalability where one tweet can be vastly distributed, heightening its visibility and amplification. Lastly, the traces left by users interacting on twitter makes for effective access to specific information.

Dynamics of networked publics expands on the role of users on Twitter and how these dynamics shape the social environment. The ease of access allows for an invisible audience where lurking becomes prevalent, and performativity is more challenging due to lack of information and social cues. Additionally, the collapse of context increases in competitive environments where the unwanted participation from others is not only supported but also used to limit information among users. Lastly, technology further complicates the boundaries around public and private due to individuals' social curiosity and an interest to peek into personal or private situations. Through the dynamics of networked publics, the structural elements can showcase a valuable framework within mediated environments (Papacharissi, 2010).

Politics,Power and Issue Publics

According to Karine Nahon, the politics of social media may have the power to affect value systems of individuals and groups as well as their behaviors. Even though social media has empowered various users with tools that enable them to share information and collaborate on producing knowledge, it does not warrant that its basic elements and architecture are built on neutrality or egalitarianism. Nahon also addresses three main power modes: influencing decisions, setting the agenda, and shaping stakeholder preferences and norms which are critical to understanding power in social media (Bruns, 2016). It is often a misconception that the ubiquity of information online can enable citizen competency or encourage contributions to more democratic discussions. However, differences of proficiency in media literacy and information dissemination can lead to fragmentation among users who are not particularly aware of utilizing social networks or information.

Stephen Barnard indicates that symbolic power is an elite tool for institutions (government, media, corporations) as well as elite actors to shape ideologies and values of particular groups (Barnard, 2018). The presence of such actors can also be found on Twitter which can both foster an information seeking environment or limit user's ability to counter such information or presence.

Converse 1964 explains the concept of "issue publics" as small groups of people who are concerned about specific issues. In a changing political and information environment, selectivity and specificity play a role in how issue publics operate in a social network (Kim, 2009). Not only does Twitter's hashtag feature allow users to track specific issues, events, or topics but also keywords. Bruns & Burgess suggest that groups of users who engage under hashtags can be seen as "ad hoc" publics. The life

cycle of hashtags or issues surely makes for both short lived and long-term communities where formation of several public sphericules are possible (Bruns, 2016).

Communication and Linguistics

According to Luhmann, in the book of (Jesper Tække; 2011), communication is the synthesis of three choices: knowledge, expression, and comprehension. The ability of the third choice to differentiate itself from the first two is what makes it important. Every time there is an understanding, we have a component in the communication process, which turns communication into a series of interconnected processes that involve the sender, receiver, and feedback. In the recent Ukraine-Russian conflict, there have been different forms of communication. The victims of this warfare make use of social media platforms like Twitter as a tool for conversation. In order to foster the fight and spread it all over the world, videos, text, pictures, and links are used as means of verbal and non-verbal reporting.The contribution of posts, shares, and likes can be considered a component of societal struggle, one must connect it to what has come before, and language plays a crucial role in this process.Thus, to gain aid from foreign bodies like the United States of America (USA), the Ukrainians had to make use of the English language rather than their native dialect of Slavic. Communication had developed into an autopoietic process that generated linguistic components (Jesper Tække). Through the network of linguistic components, it has created a mutual understanding between the victim and their helper. Billions of dollars, troops, bombs, trucks, and many more aids have been and still are being sent to Ukraine by the American government as the crisis continues. Thanks to communication and language, the Russians and Ukrainians have explored the medium of Twitter as a space for the necessary updates about combat.

Actor-Network Theory (ANT)

The actor-network concept is an important idea to consider when writing about conflict. For Latour, as in the write-up of (Jesper Tække; 2011), the term's initial component, the actor, is based on Greimas' actant model, which does not require actors to be human. This implies that in addition to counting humans, actors also include non-humans. The actor's idea encompasses anything to which an action can be assigned, whether it be a person, an object, a group of people, a government, or even a deity. The actor's role in the Russian-Ukrainian conflict has been significant, both in terms of human and non-human agents. From a human perspective, both Russian and Ukrainian actors have chosen to engage in physical combat in order to defeat or coerce their opponents. However, non-human actors such as weapons, technology, and even language have also played a crucial role in shaping the dynamics of the conflict.The mediators on social media such as influencers, politicians, organizations, media outlets, and other micro-bloggers cause changes in the ongoing battle by putting up stories of the day-to-day happenings. It is crucial for (Jesper Tække) to assert that the network is a notion and not a physical object, but rather a tool used to describe something other than the subject of the description. Social Network Sites (SNS) like Twitter are being used to express the magnitude of the struggle. The assemblage of people, guns, missile bombs, telegram, organizations, and Twitter together entails the ways in which the crisis is handled. Therefore, we can refer to something in the world as an actor-network if it consists of actors who function as mediators between each other or are otherwise connected in some way. Using the actor-network theory paradigm, Russia and Ukraine can draw attention to the role that humans and non-human actors play in armed conflict.

Research Question

One of the key contributors to narrowing down our topic was our curiosity on how users on twitter engage on topics of war, specifically the Ukrainian Russian conflict. Understanding the key concerns or issues would allow us to further comprehend the dynamics of networked publics in relation to how these users formulate their tweets and their degree of influencing the stream of information.

Therefore, our research questions are the following:

 RQ1: What are the key issues surrounding US Ukraine aid on Twitter?

RQ2: How do different actor groups position themselves towards these issues?

By answering these questions, we hope to uncover the type of recurring issues being circulated on Twitter as well as the position of key actor groups. Identifying key actor groups allows for an interesting analysis where we investigate their overall influence within specific issues. Moreover, we relate our findings to concepts such as polarization, publics and politics.

Methodology

Due to the formulation of our research question, our overall approach to the paper will be a mixed methods case study. Other similar studies related to politics on Twitter did not employ case studies and instead focused on a broader study of Twitter users. These studies, however, had an interest in how politics were discussed in general, whereas our research question is interested in a specific area of interest. Therefore, we are approaching the study as a case, which allows us to focus on a specific event, namely the discussion of US aid to Ukraine on Twitter.

The reason for choosing a mixed methods approach is that we are following the research presented in Twitter and Society (Weller et al, 2014), in which some of the underlying issues of conducting either purely quantitative or qualitative research on Twitter are discussed. They argue that a quantitative approach would be shallow and without context, while a deep qualitative approach would be severely limited in scale. In addition, Alan Bryman discusses 16 different ways that various researchers of content analysis have found value in mixed-method research. For this study, we have taken inspiration from Explanation, Context, and Illustration (Bryman et al., 2021).

Explanation refers to the value of being able to use methods from one research method to explain the other. This notion will be further explored in the analysis, wherein we use quantitative methods to provide us with points of interest for further qualitative analysis.

Context refers to researchers being able to use qualitative analysis to provide a contextual understanding of their collected data, which can be used in conjunction with generalizable, externally valid findings or broad relationships among variables they have uncovered. This will be used in our analysis to discover the relationships between the variables, which allows for a stronger comparison.

Illustration refers to the value of using qualitative data to illustrate "dry" quantitative findings, to provide further information, and make them more vibrant to the reader. For this paper, we will create a series of word clouds that illustrate our data.

Following these ideas, we will first conduct a quantitative analysis of our data, which provides us with points of interest where a qualitative analysis can then be employed.

Sampling & Data Collection

As the purpose of our research is to examine arguments made in the debate surrounding US foreign aid to Ukraine, it became prevalent to utilize Criteria Sampling, to ensure the data was relevant. This is in line with similar studies that based their data collection on hashtags or mentions that have a certain value to them.

Given our research question, the study has an interest in examining tweets that have a certain amount of influence or engagement from other users. To this end, we have taken inspiration from Ausserhofer & Maireder (Ausserhofer & Maireder, 2012), who collected their data using three criteria. 1. The user behind the tweet must have more than 100 followers. 2. The tweet must have at least two political keywords or hashtags. 3. The tweet was mentioned at least once by other users.

As a result, our study has the following criteria for the collection of data:

1. The tweet must have at least 500 "Likes" or retweets.
2. The tweet must include the keywords "US, Aid, Ukraine."
3. The tweet must have an argument or position itself toward an issue.

Due to our interest in discussing argumentation and key issues, we found it necessary to exclude tweets that simply report on events, or do not position themselves toward an issue. This was done by careful examination of the contents of each tweet. An example of a tweet that would be excluded would be a tweet that said, "President Biden sends 30 billion dollars in aid to Ukraine", as there is no inherent stance nor argument being made.

We have decided to not make use of hashtags in our data collection strategy, following the arguments made by Ausserhofer & Maireder, as well as the study of "The Million Follower Fallacy" (Cha et al, 2010), in which the argument is made that followers on

Twitter do not correlate with influence. This is due to how followers can in some cases be bought or increased with special scripts (Ausserhofer & Maireder, 2012). While the studies do not mention "Likes" as a factor in influence, we argue that it holds a similar value to retweets, in that it shows an interest from users to express their approval of the tweet in question.

In addition to these criteria, we have also decided to collect our data from specific actor groups like what previous studies have done. By uncovering how different actor groups position themselves in relation to the Ukraine Aid provided by the U.S., a comparison can be drawn on the type of argumentation and key issues that those actor groups focus on. The groups are as follows: US Politicians, US Media, Professional Users, Organization and Business Users, and Personal Users.

With these criteria in mind, we collected 30 tweets from each actor group, using Twitter's own advanced search tool, which allows us to conduct a search using specific parameters.

The actor group Organization & Business users, however, proved difficult to find tweets that held an argument or opinion on the issues, which resulted in 18 tweets and will be taken into consideration during the analysis.

Data Analysis & Comparison

Once the data has been collected, the tweets will be individually examined to identify the underlying themes of the different categories. The data allowed us to identify 5 key themes, from which we have devised a coding scheme, to index them. The 5 categories are Misappropriation of funds, Budget Allocation, Political Partisanship, Proxy Warfare, and Morality. The tweets that we found to be the most influential, based

on the criteria mentioned in the sampling strategy, will then be further examined in preparation for the discussion.

Once the data has been categorized, the content of the tweets will be quantified in relation to the actor groups to which they belong. This will be done by examining how often certain words appear in each tweet of an actor group, as well as how many of the tweets belong to one of the 5 issue categories. To better illustrate this dataset, we have constructed word clouds in which the most frequent words occurring in the tweets are displayed alongside a table that shows how frequent they are. This has been done for each of the 5 categories.

From here, the data will then be used to draw a comparison between the actor groups, to discover whether there are any significant differences between the main issues or themes of the actor groups.

Coding Scheme

After collection, we analyzed the tweets more systematically to insert them into issue categories. We identified the five categories of issues based on the observed pattern of tweets.

Table 1: Coding Scheme with Description and Example of Issue Categories

Issue Categories	Description	Example
Misappropriation of funds	refers to the illegal use of individuals' or the country's money. The tweets/ argument revolve around accusations of fraudulence, money laundering and theft.	"I'm calling for an audit of all US aid and funding to Ukraine. The American people deserve to know how their money is being spent in defense of another nation's border while the Biden regime ignores the threat to our national security everyday at our own border."
Budget Allocation	refers to how the country's expenditure ought to be spent or withheld. Tweets or arguments that either question the amount of aid or suggest other areas where expenditure is needed.	"It's important to analyze the $33B to Ukraine in context for what the Biden Administration won't do here on our own Southern Border. With just a small percentage of that, we could finish the Trump Wall and have a physical barrier against the invasion that we're currently facing."
Political Partisanship	relate to how individuals or entities involve partisanship because they represent and support particular views or political groups. Tweets or arguments that support or oppose the two major parties in the US	"Democrats have acted to halt inflation, lower oil prices, end gas gouging, stop big business tax cheats, and impeach Trump for withholding military aid from Ukraine. Every single House republican voted no on all of them."
Proxy Warfare	refers to how individuals or entities view the situation in Ukraine as a potential proxy war between the US and Russia. Tweets that encourage or discourage US participation in the Russian Ukrainian war.	"Amazing candor from Iran-Contra felon Ollie North: Ukraine is just like Reagan's dirty wars in Central America, Africa and Afghanistan Most of the aid is a kickback to US weapons makers and Beltway contractors The proxy war is preparation for a larger war w/ China over Taiwan"
Morality	refers to behavior or beliefs that a group deems acceptable. Tweets or arguments that use moral intuitions of "right" and "wrong," to justify specific actions or beliefs.	"It's disappointing that some of my colleagues obstructed critical humanitarian and military aid to Ukraine last week. We need to get them every tool possible as they fend off this attack. I am ready to get aid passed as soon as we can."

Ethical Considerations

In terms of ethical considerations, the research will be collecting data from users on Twitter, which is a public platform. While there is the concern that Twitter users are not fully aware of the nature of the platform, Twitter's terms of service states that data from users is publicly available and therefore free to use in research. While efforts could be made to anonymize the users to avoid identification, this would ultimately prove fruitless unless the tweets themselves were altered to avoid being easily found via Twitter's own search function. While the option of utilizing bricolage [i] in the analysis has been used before (Bryman et al, 2014), we believe there is a risk of some of the meaning and context of the tweets being lost as a result.

Results

Our database included 137 tweets, of which five actor groups and issue categories were identified and analyzed in our study. We showcase recurring keywords within each actor group with word cloud visualizations to represent our findings.

Word Cloud Visualizations of Each Actor Group

Business & Organizations

These users represent entities or collectives that include but are not limited to NGOS, political entities, movements or groups that involve arguments or stances to support their viewpoint. In the first word cloud, it is apparent that business and organization users used the following keywords: Biden (7), government(6), Military(5), Billion(5)

Illustration (1): Business and Organizations Word Cloud
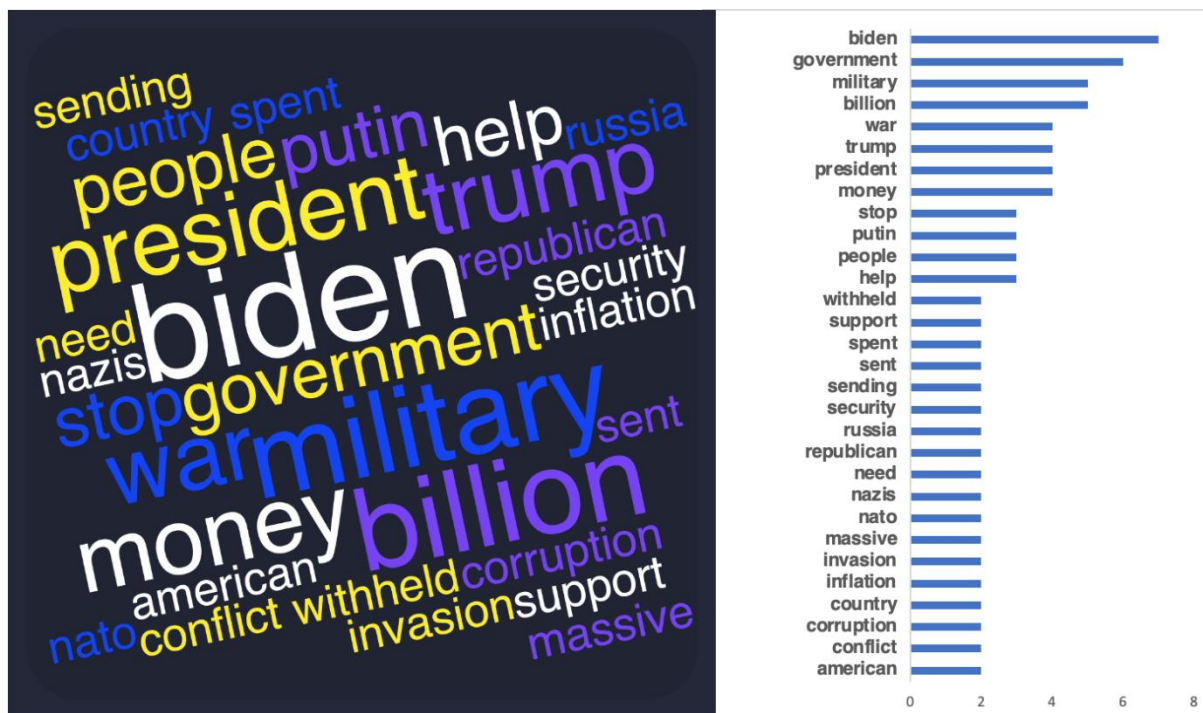
Professionals Users

The professional users were selected based on relevant professions such as journalists, former politicians, political science professors and other relevant occupations that can relate to war, politics or media. Professionals frequently used the following words in their tweets: war(14), Russia(6), Military(6)

Illustration (2): Professional Users Word Cloud

Us Politicians

For US Politicians, we selected politicians ranging from representatives, senators and congressmen who indicate their arguments regarding the aid. The most recurring words within their tweets were billion (10),military(8),congress(6)

Illustration (3): US Politicians Word Cloud

Personal Users

Personal users are individuals or home users who participate in the discussion or advocate for specific ideas.The most frequent words in their tweets were: billion(12) money(11), enough(10)
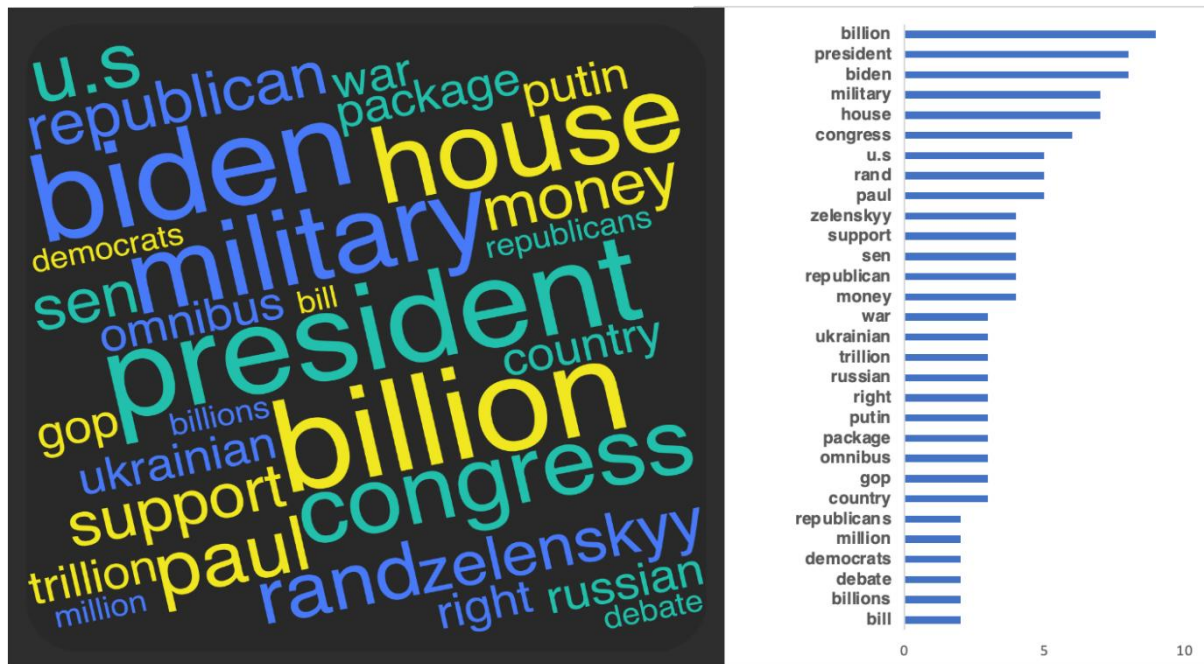
Illustration (4): Personal Users Word Cloud

Us Media

US media was selected based on whether they added their own stance or bias to which diverts from reporting or objective journalism. US Media used the following words the most: billion(9),biden(8),president(8)

Illustration (5): US Media Word Cloud

To further understand the focus of each actor group, the illustrated table below showcases the varying issues that mainly concern each actor group. The highlighted numbers indicate the highest issue category frequency for each actor group.

Table 2: Frequency Distribution of Actor Groups Tweets Under Issue Categories

Issues / Actors Groups	Morality	Budget Allocation	Political Partisanship	Proxy Warfare	Misappropriation of Funds	Total Tweets
US Politicians	8	13	5	2	2	30
US Media	7	6	9	3	5	29
Professional Users	10	2	9	6	3	30
Personal Users	5	10	4	0	11	30
Organizations & Business Users	3	4	6	2	3	18
Total	33	36	32	13	23	137

Subcategories within Issue Categories

To further findings and investigate actor groups' tweets, we highlight the top three recurring subcategories within the issue by analyzing the words and context used. Additionally, we provide examples for each subcategory to showcase users' reasonings and stances.

Budget Allocation Issue

Budget Allocation had the highest amount of data, accounting for 26,2% of the total number of tweets. Within these tweets, we discovered three subcategories that accounted for the majority of the data. These categories were 1. America, First 2. Overspending, and 3. Taxes.

1.America First

Those who advocated for the term American first accounted for 41.6%. They basically were not interested in the support given to Ukraine. As they prioritize themselves over anything.

> *"Gas just hit $4.37 & people can't get baby formula in the country Biden claims to be running. He'd rather focus on a bill that members have 4 hours to read & includes $40 billion more for aid to Ukraine & possibly $8.8 billion to fight "global disinformation". AMERICA FIRST! @laurenboebert"*

2.Overspending

From the different categories of tweets collected, it was found that 25% of the persons who tweeted on budget allocation, said the US was spending too much on the conflict, meanwhile the homeless vets are still struggling for living in the States.

> "Biden requested $37 billion for Ukraine. The bill allocates $47 billion - bringing total aid to >$100 billion. Zelenskyy will address Congress tonight, & will likely ask for EVEN MORE $$$. Meanwhile, Pelosi is comparing him to Churchill & says that democracy on the line."

3.Taxes

Besides America first and Overspending,11.1% of the 36 tweets with respect to the budget allocation demonstrated that the billions of dollars Aid sent to Ukraine has a greater effect on the taxpayers. That is to say, the burden of the billions of dollars that comes out of the State's coffers in order to grant support, falls back to the independent Citizens.

> "US taxpayers pay $1.5 billion to Ukraine every month to prop up the Ukrainian government while approx $6.4 billion a day is added to our $31 trillion dollar debt. US total debt is $93.6 trillion, which includes interest & other obligations.No one cares about US taxpayers. @RepMTG"

Proxy Warfare issue

Another issue that we found within the collected tweets was proxy warfare which accounted for 9.49%. These tweets would either encourage or discourage US participation in the Russian Ukrainian war. Further observations led us to find the three main subcategory issues which are: 1.Ensuring Victory, 2.US Self Interest and 3.US Saviour.

1.Ensuring Victory

38.46% of users justify American support or aid in the war by emphasizing the importance of victory and stopping the war.

> "This war is likely to spill over, whether we like it or not." " As Ukraine continues to request a no-fly zone, @AVindman talks to @KatyTurNBC about the potential impact of US expanding aid. "The more we help Ukraine now, the less chance there is a spillover that drags us in."

2.US Self Interest

Moreover, 23.9% of users refuted the conflict as a means of American Intervention that it is only within the United State's interest to keep funding the war.

> "Amazing candor from Iran-Contra felon Ollie North: Ukraine is just like Reagan's dirty wars in Central America, Africa and Afghanistan. Most of the aid is a kickback to US weapons makers and Beltway contractors The proxy war is preparation for a larger war w/ China over Taiwan"

3.US Savior

The third subcategory indicates that 15.38% of users position the US as a significant ally to help Ukraine against Russia.

> "It is in America's interests to be the arsenal of democracy and a source of hope for the oppressed. It is in America's interests to help Ukraine defeat one of our most powerful foes. Our commitment to aid Ukraine must exceed Putin's commitment to defeat Ukraine."

Misappropriation of funds Issue

Another key issue found in the collected tweets, is that of misappropriation of funds, of which 16,7% of the total amount of tweets accounted for this issue. These tweets can often be further broken down into subcategories of 1. Money Laundering, 2. Missing Money, and 3. Audit.

1.Money Laundering

Tweets that discussed Money Laundering accounted for 47,8% of the tweets in which Misappropriation of funds was identified as the key issue. Many of the tweets discussed money laundering in connection with Ponzi Schemes and Cryptocurrency scams.

> "The US is not struggling to track Ukraine aid. The US is pretending to struggle.Don't forget that the Ukraine war is just another money laundering scheme—A transfer of wealth from taxpaying Americans and Europeans to the MIC and 1%ers."

2.Missing Money

Tweets that discussed Missing Money accounted for 21,7% of the tweets, where many of the tweets discussed how the aid sent to Ukraine had not arrived.

> ""The weapons are stolen, the humanitarian aid is stolen, we have no idea where the billions sent to this country have gone"Ukrainian army vets and US volunteers tell @LindseySnell& @CoryPopp how Kiev plundered aid, endangered civilians and lost the war"

3.Audits

Tweets that discussed Audits accounted for 17,3% of the tweets, where many of the tweets discussed a need for oversight of the government in their aid to Ukraine.

> "Americans deserve to know where exactly their money is going, and Congress has an obligation to guarantee oversight of taxpayer funded aid to Ukraine. My legislation would've done just that by establishing an inspector general."

Political Partisanship Issue

The issue of Political Partisanship amounts to 23.36%, with a total of 32 tweets. From the 5 main categories, Political Partisanship was the biggest issue for two groups: US Media and Organizations & Business Users. These tweets can often be further broken down into subcategories of: 1. Trump withholding aid to Ukraine, 2. GOP midterm win is a threat to Ukraine aid, and 3. Rand Paul blocks aid.

1.Trump Witheld Aid

Tweets that claimed Donald Trump's interference with withholding military aid to Ukraine back in 2016 as a primary reason for the current situation, amounted to 25%. Tweets also mentioned Republicans' support of Trump, his spread of propaganda about Ukraine, and Hunter Biden.

> "This is your timely reminder that when donald trump withheld military aid to Ukraine to extort President Zelenskyy, 99% of republicans in Congress refused to remove trump from office and turned their backs on Ukraine."

2. GOP Cutting Aid

Tweets that discussed the possibility of aid being cut off if the Republicans won the midterm elections, amounted to 25% as well. Some tweets suggest Republicans aiding Russia in the spread of propaganda.

> "If the GOP wins the House, Ukraine funding may be done. Why? The right wing of the party is already openly hostile to Ukraine aid, plus the general legislative dystopia that will accompany a GOP majority will gum up everything."

3. Rand Paul Blocking Aid

Tweets stating or criticizing Republican Senator Rand Paul for delaying sending aid package to Ukraine amounted to 9,35%, where many of the tweets discussed the attempt of Republicans and Democrats to join forces and aid Ukraine, and then have one Senator block it.

> "Senator Rand Paul of Kentucky on Thursday single-handedly delayed a bipartisan effort to quickly send $40 billion in aid to Ukraine, which Congress had tried to fast-track amid the escalating brutality of Russia's war."

These findings align with the theory of political polarization, as stated by Layman et al. (2006), which suggests that the contemporary political landscape is characterized by a growing polarization of the two major parties in the United States, with the Republican Party increasingly adopting conservative positions and the Democratic Party consistently adopting liberal stances. This has led to the two parties becoming ideologically cohesive and highly polarized.

Morality Issue

In many instances, there are various methods in which users can incorporate information, beliefs or behaviour to justify or invalidate specific instances or beliefs. These types of tweets fall under the morality issue, which makes for about 24.9%, and showcases arguments that use moral intuitions of "right" and "wrong," to justify specific actions or beliefs. Morality was the highest issue for professional users out of the five actor groups.

By observing the various themes or subcategories within the morality issue, we were able to identify three key subcategories which are: 1.exposing hypocrisy,2.supporting aid and 3.resisting Russia.

1.Exposing Hypocrisy

Around 27,27% of users focused on exposing hypocrisy regarding specific individuals, entities or events. Several users were interested in exposing how specific actor groups switched sides or how specific instances discredit individuals or entities.

> "Russia invades a sovereign nation to fully annex/subjugate 40+ million breaking the fundamental principle of the UN Charter. Russia commits massive war crimes & genocide in Ukraine while the world watches. But @nytimes calls Ukraine's fight for freedom ""hard-line."" Disgusting!"

2.Support of Aid

Whereas 21.21% of users justified supporting the aid and being steadfast with Ukraine in the face of adversaries.

> "Congress needs to be ALL IN when it comes to helping provide military and humanitarian aid to Ukraine as they stand up to the war criminal Putin. We cannot accept handwringing by Congress."

3.Resist Russia

Lastly, 18.18% of users encouraged the escalation of aid or military assistance in opposition of Russia's regime or forces.

> "As Russian attacks escalate, we must also think about escalating our military aid to Ukraine. I support extending more resources in concert with our NATO allies."

Discussion

These results show us some of the key issues that surround the discussion of US aid to Ukraine, while positioning the actor groups towards the issues they discussed the most.

The largest number of tweets found in the data (26,2%), consisted of tweets discussing the allocation of budget in relation US aid to Ukraine. 25% of tweets expressed concern that the US was spending too much money on aid to Ukraine, citing issues such as homelessness among veterans in the US as examples of areas where that money could be better spent. Furthermore, 11.1% of tweets expressed concern about the impact of aid on taxpayers, stating that the cost of aid was a burden on citizens and that the billions of dollars spent on aid to Ukraine was coming out of the state's coffers and ultimately falling back on the individual taxpayer..Many of the tweets are opposed to the US sending aid to Ukraine, while expressing their belief that the US should prioritize its own needs over a foreign country.

Which follows into the issue of misappropriation of funds, which accounted for (16.7%) of the total amount of tweets. The most vocal group about this issue were the Personal Users, with 36.6% of their tweets being attributed to this issue. This could mean that people are concerned about the fact that money funded by American taxpayers that is allocated for a specific purpose, such as aid to Ukraine, may not be used in the way it was intended. Many users also brought up the notion of Ukraine being involved in the FTX crypto scandal in 2022, which has been reported as a false claim that has no evidence tied to it (Spencer, 2022). The continuous spreading of this false claim, by certain users, showcases how users can become increasingly entrenched in their

perspective, which can lead to them spreading misinformation, similar to how Layman and Bruns discuss polarization (Layman et al., 2006; Bruns et al., 2017).

As for political partisanship, we found that a significant portion of tweets (23.36%) were leaning towards partisanship polarization, with US media and organizations & business users being particularly vocal about this issue. These tweets suggest that the political positions of some US media outlets or political groups are influencing the allocation of aid to Ukraine. Interestingly, this issue is only the third biggest issue for US politicians, which we initially expected to be their number 1 concern. This can show that while political polarization is prevalent in US politics, the issue of US aid to Ukraine shows less polarization on Twitter. There is no consensus on whether social media has a strong impact on polarization, however Conover argues that the retweet network is highly polarized, contrary to mentions, with hashtags being the middle ground, that allows for different perspectives (Conover et al., 2021). Given our focus on retweets, the fact that there seemed to be a low number of tweets related to polarization and political partisanship, especially amongst US politicians, is an interesting find.

Proxy warfare was the issue that appeared the least in our data collection, with it accounting for 9,49% of the total tweets found. This shows us that, among the categories, it is the least important issue to the users included in this study. None of the actor groups had this issue as their most important issue either. It appears that there are a variety of opinions, with some individuals encouraging or discouraging US participation in the Russian-Ukrainian war. Some users justify American support or aid in the war by emphasizing the importance of victory and stopping the war, while others argue that the conflict is only in the United States' interest to keep funding the war.

Tweets on morality account for 24.9% of the total tweets, with the professional users using it the most. This suggests that professional users tend to use moral arguments to justify or invalidate specific actions or beliefs. There was a preconceived notion that professional users would primarily validate supporting the aid due to humanitarian reasons. However, the prevalence of the subcategory "Exposing Hypocrisy" showcases the users' chosen argumentation to raise the issue within Twitter. Criticism of events or individuals based on moral principle emphasized the flaws of the opposers. This could be viewed as users perceiving antagonization as morally right so long as the opposers are considered in the wrong by professional users.

Limitations

Despite our efforts to answer the research questions surrounding the discussion of aid, the insufficient amount of data collected to have a proper overview of opinions was one of the major limitations. It also proved to be difficult to fully comprehend all the dynamics of numerous actor groups and issues at once especially when data collection was done manually. Using API to collect and mine tweets with relevant keywords or hashtags, could have helped us categorize issues and actor groups more precisely. Additionally, the use of network analysis would have enabled us to showcase clusters of networks where the identity and influence of specific actor groups would have been apparent and useful for our paper. Topic modelling could have also been a useful way to compare engagement of different issues and display the various issues that are relevant to each actor group.

Conclusion

Our study of issues on Twitter allowed us to identify 5 major issue categories, each containing a series of subcategories. These categories show us what some of the key actor groups find to be the most important issues related to US aid to Ukraine. Analyzing these tweets can reveal patterns in the arguments used by different actor groups, such as the reasons given for supporting or opposing aid and the strategies used to influence others. The study of tweets about US aid to Ukraine can contribute to our understanding of how public opinion is formed and how individuals and groups engage in political discourse. Additionally, it can also provide insights into the impact of the aid on the relations between the US and Ukraine, how the aid is perceived and how it is affecting the ongoing political situation in Ukraine. Furthermore, it could be of interest to policymakers, as they may be able to better understand the public's opinion on aid and use that information to inform decision-making and improve the effectiveness of aid programs.One potential avenue for further research is to investigate the role of social media in shaping public opinion on US aid to Ukraine. Specifically, looking at how the low number of tweets related to political polarization and political partisanship found in this study, compared to the preconceived notion that retweets should have a higher amount of polarization, can be further explored. This could involve conducting a focused study specifically examining the relationship between retweets and polarization on the topic of US aid to Ukraine. Additionally, researchers could also explore how misinformation on the topic of US aid to Ukraine is spread through social media platforms such as Twitter, and the impact that this has on public opinion. This could include analyzing the types of misinformation that are prevalent on the platform, the sources of the misinformation, and the ways in which users engage with and disseminate misinformation.

References

Bakshy, E., Messing, S., & Adamic, L. A. (2015). Exposure to ideologically diverse news and opinion on Facebook. Science, 348(6239), 1130–1132. https://doi.org/10.1126/science.aaa1160

Barnard. (2018). Citizens at the Gates Twitter, Networked Publics, and the Transformation of American Journalism (1st ed. 2018.). Springer International Publishing. https://doi.org/10.1007/978-3-319-90446-7

Bruns, A., Moon, B., Münch, F., & Sadkowsky, T. (2017). The Australian twittersphere in 2016: Mapping the follower/followee network. Social Media + Society, 3(4), 205630511774816. https://doi.org/10.1177/2056305117748162

Bruns, A. (2019). 2. In Are filter bubbles real? essay, Polity Press.

Bruns. (2016). The Routledge companion to social media and politics. Routledge. https://doi.org/10.4324/9781315716299

Clark, T., Foster, L., Sloan, L., & Bryman, A. (2021). Bryman's Social Research Methods. Oxford University Press.

Conover, M., Ratkiewicz, J., Francisco, M., Goncalves, B., Menczer, F., & Flammini, A. (2021). Political polarization on Twitter. Proceedings of the International AAAI Conference on Web and Social Media, 5(1), 89–96. https://doi.org/10.1609/icwsm.v5i1.14126

Greaves, F., Laverty, A. A., Cano, D. R., Moilanen, K., Pulman, S., Darzi, A., & Millett, C. (2014). Tweets about hospital quality: A mixed methods study. BMJ Quality & Safety, 23(10), 838–846. https://doi.org/10.1136/bmjqs-2014-002875

Gruzd, A., & Roy, J. (2014). Investigating political polarization on Twitter: A Canadian

perspective. Policy & Internet, 6(1), 28–45. https://doi.org/10.1002/1944-

2866.poi354

Jesper Tække. (2011). Structural Coupling and Translation : Twitter observed as

Communication Medium and Non-human

Actor.https://www.academia.edu/download/76483416/Taekke_Oslo_2011.pdf

Kim. (2009). Issue Publics in the New Information Environment: Selectivity, Domain

Specificity, and Extremity. Communication Research, 36(2), 254–284.

https://doi.org/10.1177/0093650208330253

Layman, G. C., Carsey, T. M., & Horowitz, J. M. (2006). Party polarization in

American politics: Characteristics, causes, and consequences. Annual Review

of Political Science, 9(1), 83–110.

https://doi.org/10.1146/annurev.polisci.9.070204.105138

Meineck, Sebastian. 2018. "Deshalb ist 'Filterblase' die blödeste Metapher des

Internets." Motherboard, 9 Mar. 2018.

https://motherboard.vice.com/de/article/pam5nz/deshalb-ist-filterblase-die-

blodestemetapher-des-internets.

Nelimarkka, M., Laaksonen, S.-M., & Semaan, B. (2018). Social media is polarized,

social media is polarized. Proceedings of the 2018 Designing Interactive Systems

Conference. https://doi.org/10.1145/3196709.3196764

Pariser, E. (2012). The filter bubble: What the internet is hiding from you. Penguin

Books.

Papacharissi, Z. (Ed.). (2010). A networked self: Identity, community, and culture on

social network sites. Taylor & Francis Group.

Rogers, R. (2013). Debanalizing Twitter. Proceedings of the 5th Annual ACM Web

Science Conference. https://doi.org/10.1145/2464464.2464511

Sunstein, C. R. (2018). 3. In #Republic: Divided democracy in the age of Social

Media (pp. 60–62). essay, Princeton University Press.

Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online.

Science, 359(6380), 1146–1151. https://doi.org/10.1126/science.aap9559

Weller, K., Bruns, A., Burgess, J., Mahrt, M., & Puschmann, C. (2013). Twitter and

Society (Digital Formations) (New). Peter Lang Inc., International Academic

Publishers.

Yardi, S., & Boyd, D. (2010). Dynamic debates: An analysis of group polarization

over time on Twitter. Bulletin of Science, Technology & Society, 30(5), 316–

327. https://doi.org/10.1177/0270467610380011

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[1] Bricolage in this context refers to altering the content of the tweets, while attempting to maintain their meaning.