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Exploring the informational elements of opinion answers: the case of the Russo-Ukrainian war

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Abstract

Introduction. The present investigation contributes to information behaviour research by elaborating the nature of opinion as a type of information. To achieve this, the informational elements of opinion answers available on Quora - a major question and answers (Q&A) forum were analysed.

Method. The empirical findings draw on the qualitative content analysis of 483 opinion answers dealing with the Russo-Ukrainian war. It was examined how the answerers articulated four main elements of opinion answers: (i) the stance taken on an issue or event, (ii) emotional reaction to it, (iii) suggestion for future action, and (iv) grounds used to bolster an opinion.

Results. The answerers most frequently took a neutral or negative stance on the topics articulated in the opinion questions. The emotions expressed in opinion answers were negative, indicative of anger, hate and contempt. The answerers offered a number of suggestions mainly dealing with the ways in which the war could be ended. To bolster their answers, the answerers primarily drew on the views presented by political decision makers such as presidents and ministers. The answerers also supported their views by making references to external information

sources and drawing on factual evidence, Moreover, negative evaluation of the qualities of an entity or event was fairly common. The answerers also drew on explanation to make understandable the war-related events.

Conclusion. Opinion is an important informational category whose significance is probably growing, due to the developments in today's information and communication environments. In the media, more strongly than before, attention is devoted to people's opinions, instead of merely emphasizing the role of irrefutable (objective) facts.

Introduction

Opinion is a concept whose nature has seldom received analytical attention in information research. Traditionally, opinion is approached as a counterpart of fact (Kuklinski et al., 1998). Fact refers to a piece of information about circumstances that really exist or events that have occurred. Compared to facts, opinions tend to be associated with less informational value because they represent an individual's subjective view on an issue, thus connoting a 'mere opinion' (Weddle, 1985, p. 25). However, opinion is not necessarily inferior to facts because it can offer information that can be used in problem solving and making sense of the world more generally.

Wilson (1981, p. 3; 5) is among the first information scientist to identify opinion as a form of information, in addition to facts and advice. More recently, the growing use of social media has significantly increased the research interest in opinion-related phenomena. Personal opinions expressed in social media forums are playing an important role influencing everything from the products people buy to the presidential candidate they support. With these developments, researchers have made attempts to refine the methods of information retrieval so that search engines not only retrieve facts but also opinions (Eirinaki et al., 2012). To this end, *opinion mining* - also known as *sentiment analysis* - is a particularly important approach because it develops techniques which automatically detect opinionated information (Cortis and Davis, 2021; Varathan et al., 2017). The role of opinion

as a type of information has also been examined in studies on *informational support* offered by online communities. Chuang and Yang (2014) demonstrated that opinions function as elements of informational support, in addition to facts, referrals to information sources and stories of personal experience. *Opinion leadership* - the process in which a person influences the attitudes or actions of other persons informally - is another phenomenon relevant for the analysis of opinion (Jung and Kim, 2016). However, in investigations on opinion mining, informational support and opinion leadership, the nature of opinion as an informational construct has not been examined in greater detail; opinion has been largely taken as a self-explanatory category. This suggests that the features of opinion are worth a closer study.

To this end, the present investigation makes an attempt to elaborate the informational nature of opinion by analysing *opinion answers* available on *Quora* - a major question and answers (Q&A) forum. Opinion answers are responses to opinion questions in which Quora users invite other people to express their personal views on an issue. To examine the nature of opinion answers, the study concentrates on answers dealing with a timely issue giving rise to diverging personal views, that is, the Russo-Ukrainian war. It broke out 24 February 2022 when Russia invaded Ukraine. Since its inception, the war has elicited opinionated debates in online forums, due to the controversial nature of the topic. Thus, opinion answers on this topic offer rich material for the analysis of the elements of

opinions, either supporting Russia's invasion or condemning it. To examine this issue in more detail, a sample of opinion answers offered to 400 opinion questions were analysed. The empirical findings refine the picture of opinion as an informational category and shed additional light on the nature of opinions sought and shared in Q&A platforms.

Literature review

The features of opinion have been examined in diverse fields, most notably Philosophy, Political Science and Communication Research. In general, opinion can be defined as a 'potentially testable statement, which claims that the reality is, was, or should be constituted in a certain way' (Lindström, 1997, p. 147). This characterisation suggests that fundamentally, opinion deals with one's value-based judgements, based on his or her beliefs. Stokeld (2015) clarified this issue further by defining *beliefs* as assumptions that we make about ourselves and other people, and how we expect things to be. From these things we develop an opinion that we hold to be true. Moreover, *values* are important for opinion formation because they stem from our beliefs; values are things that we deem important and are about how we think things ought to be or people ought to behave. *Attitudes* also influence opinion formation because they represent our learned ways of responding to people and situations based on the beliefs and values we hold. Taken together, beliefs, values and attitudes are significant constituents of an opinion about an issue.

Since the ancient Greek era, philosophers have reflected the nature of opinion by examining how it differs from other forms of knowledge. Plato characterised (public) opinion in terms of *doxa*, a word which originates from the Greek verb *dokein* which means 'to appear', 'to seem', 'to think' and 'to accept' (Moss, 2020, p. 199). Plato considered *doxa* as being a belief residing in the unreasoning, lower parts of the soul. According to him, *episteme* (knowledge) is characterised by clarity or distinctness, while *doxa* is more difficult to define because it is indicative of both clarity or distinctness and vagueness or obscurity. Despite its ambiguous

nature, Plato considered *doxa* to be a necessary constituent of human knowledge because knowledge is true opinion (Heffernan, 2017, p. 388). In the late 1700s, Kant articulated the traditional wisdom that there are three ways of believing something to be true: possessing factual knowledge (*wissen*), holding an opinion (*meinen*), and maintaining faith (*glauben*) (Brotherton and Son, 2021). However, as Brotherton and Son (2021) point out, Kant's approach reflects an idealized epistemology in which clear distinctions between fact, opinion and faith can be drawn. In everyday reasoning, the boundaries may be more malleable.

Weddle (1985, p. 19) clarified the relationship between factual knowledge and opinion by characterising facts as '*states of affairs - what they are regardless of what anybody may think*'. In contrast, opinions are subjective claims about such states. More recently, Corvino (2015) asserted that all statements express beliefs, either factual beliefs or opinion beliefs, and that both facts and opinions can be successful or unsuccessful in representing reality. To clarify the nature of opinions in relation to facts, Corvino (2015) proposed that a statement of fact is one that has objective content and is well-supported by the available evidence. A statement of opinion is one whose content is either subjective or else not well supported by the available evidence. On the other hand, it has been claimed that no one can be wrong in his or her opinion; people are entitled to their own opinions but not to their own ('false') facts (Heffernan, 2017, p. 393).

Similar to the concept of opinion, the construct of fact can be approached differently. Gårdén et al. (2014) identified three major meanings that the students, teachers and librarians at Swedish primary and upper secondary schools attributed to the term facts. Firstly, facts were associated with specific genres or modalities indicative of information sources of certain types, for example, encyclopaedias. Secondly, facts were seen as distinguishable, external, and tangible. Thirdly, facts came across as having strong connections to neutrality and they were viewed as evidence. Phenomena related to opinion statements are also of

interest in Linguistics and Discourse Studies (Kaiser and Wang, 2021). For the present study, the investigation conducted by Asher, Benhamara and Mathieu (2009) is particularly relevant because it offers conceptual tools for the empirical analysis of opinion answers presented on Q&A platforms. Drawing on lexical semantic analysis, Asher, Benhamara and Mathieu (2009, pp. 280-283) categorised opinion expressions using a typology of four top-level categories.

First, an opinion holder may make use of *reporting expressions* while informing other people about the states of affairs. Verbs in this group typically presuppose the truth of their complements, for example, indicating that a missile attack on a flat occurred yesterday at 14.45 in Kharkiv, Ukraine. Second, *judgement expressions* are indicative of normative evaluations of objects and actions; these expressions articulate a positive or negative assessment of something or someone. For example, an opinion holder may condemn the missile attack against a civilian target as a war crime. Third, *advice expressions* are indicative of an opinion on a preferred course of future action. These expressions manifest themselves in suggestions or recommendations; the opinion holder may urge, for example, that NATO should participate in the war in Ukraine in order to prevent missile attacks on civilian residences. Finally, there are *sentiment expressions* indicative of an attitude toward something, usually based on feeling or emotion rather than reasoning. There may be indications of positive sentiments such as pride and love; on the other hand, negative sentiments such as anger and contempt may dominate while expressing opinions about war-related events such as missile attacks toward civilian targets.

The role of opinion as a type of information has rarely been examined in studies on information behaviour occurring in online communities. Savolainen (2011) explored the ways in which people ask and share information in slimming blogs. It appeared that opinions occupied an important role; 81% of the postings, 55% of the comments written by the bloggers, and 46% of

the comments submitted by the readers reported opinions. Biyani et al. (2014) identified factual (non-subjective) and opinionative (subjective) threads in online forums. The opinionative threads discuss subjective topics that seek personal viewpoints, evaluations, and other private states of people, while non-subjective threads seek and share factual information. More recently, Carrillo-de-Albornoz et al. (2019) exploited lexical, syntactic, semantic, network-based and emotional properties of texts to automatically classify patient-generated contents into three types: experiences, facts and opinions. The study departed from the assumption that opinions express a person's judgement, viewpoint or statement that is conclusive. On the other hand, while describing his or her experience, the user may also express an opinion in the same sentence. This finding parallels with Gazan's (2010, pp. 698-699) observation that in collaborative online discussions occurring in social Q&A communities, expressions indicative of opinions may also incorporate other informational elements such as personal experiences and facts. No less than 111 out of the 122 instances of collaborative information seeking analysed by Gazan were classified as hybrids of fact and opinion.

The investigation conducted by Savolainen (2015) is particularly relevant for the present study because it offers conceptual tools for the empirical analysis of opinion answers. Savolainen (2015) examined how people request and offer informational support in an online discussion group and a Q&A site while planning a free-time trip. Three main types of informational support were identified: providing factual information, providing advice, and providing personal opinion. The last-mentioned category was defined as value-based judgement based on one's beliefs and actual experiences. The findings indicate that in the discussion group, as well as at the Q&A site, the provision of personal opinion is the most frequent method to offer informational support (Savolainen, 2015, p. 455).

For the present study, however, the findings specifying the grounds which the online participants used to bolster their opinions are most relevant. Savolainen (2015) identified nine different types of grounds. *Description* of an entity depicts, for example, the room services available in a hotel. *Positive evaluation* may praise the high quality of such services, while *negative evaluation* can blame the untidy hotel room. The grounds also included *explanation* (e.g., giving reasons why the room services were deemed of poor quality), *comparison by similarity* (e.g., depicting the common features of room services available in diverse hotels during the visit) and *comparison by differentiation* (e.g., depicting how such services varied between hotels). The opinions were also bolstered by drawing on *positive generalisation* (e.g., concluding that most hotels offer high-quality room services) or *negative generalisation* (e.g., concluding that the quality of room services in most hotels is low). Finally, *reference to an external source of information* was used as a ground, for example, by offering a hyperlink to a hotel's website. The study revealed that the most popular ground bolstering a personal opinion was positive evaluation. Moreover, description and explanation were used quite frequently as grounds bolstering personal opinions. The role of grounds of other types, that is, comparison by differentiation, reference to external source of information, positive generalisation, comparison by similarity, and negative generalisation remained marginal.

Research framework

The literature review suggests that in general, opinion can be understood as a subjective judgement about a particular matter, based on one's values, beliefs, attitudes and feelings. Thereby, opinion can be considered as a type of information because opinion represents the way in which an individual views an issue. The opinion may be kept hidden from other people or articulated publicly in online discussion, for example. In the latter case, the opinion articulated by an individual becomes information for others. Opinions can also be sought if an individual is interested to know how other people view an issue. The present

study departs from the assumption that the informational nature of opinion can be elaborated further by examining the features of opinion answers articulated in online forums, more specifically, Q&A sites. It is believed that opinion questions presented in such sites invite people to express their subjective judgements about an issue and explain why they view such issues the way they do. In the present study, the issue at hand is the Russo-Ukrainian war. It is expected that the controversial topic will elicit differing views manifesting themselves in opinion questions and opinion answers, thus rendering it easier to identify features particularly characteristic of opinions.

Drawing on the study of Asher, Benhamara and Mathieu (2009) reviewed above, it is assumed that the subjective judgements articulated in opinion answers are constituted by three main elements. First, there is a personal (subjective) view on an issue, as expressed by the opinion holder. Asher, Benhamara and Mathieu (2009) refer to this element in terms of *judgement expressions* that are indicative of normative evaluations of objects and actions. This element indicates the extent to which the opinion holder finds an issue, for example, Russia's invasion to Ukraine as acceptable or unacceptable. In the present study, the judgement-based element of opinion is referred to as a *stance* taken on an issue or event. The stance is based on an individual's values, beliefs and attitudes, and it can be positive (acceptive), negative (non-acceptive) or neutral (non-partisan) in nature. A neutral stance is indicative of *reporting expressions* identified by Asher, Benhamara and Mathieu (2008); a neutral stance just informs others about the states of affairs by depicting their features. Second, as the term *sentiment expressions* identified by Asher, Benhamara and Mathieu (2009) suggests, opinion may incorporate articulations of positive or negative emotions such as joy and anger; in the present study, this element is referred to as *emotional reaction*. Third, the term *advise expressions* identified by Asher, Benhamara and Mathieu (2009) offers suggestions about the best course of action to someone. In the present study, this element is referred to as *suggestion for future action*.

Finally, it is assumed that an opinion answer can be taken more seriously if it incorporates the element of *grounds*. This constituent refers to the ways in which an individual bolsters his or her stance on an issue and gives reasons for an accompanying emotional reaction and/or suggestion for future action. To examine the nature of grounds, the present study makes use of the list of grounds identified by Savolainen (2015). The grounds reviewed above include *explanation*, *positive evaluation*, *negative*

evaluation, *comparison by similarity*, *comparison by differentiation*, *positive generalisation*, *negative generalisation*, and *reference to external sources of information*. Moreover, based on the preliminary analysis of the empirical material, two new grounds were included, that is, *prediction* and *drawing on factual evidence*. The features of the grounds will be specified further while explaining the research framework presented in Figure 1.

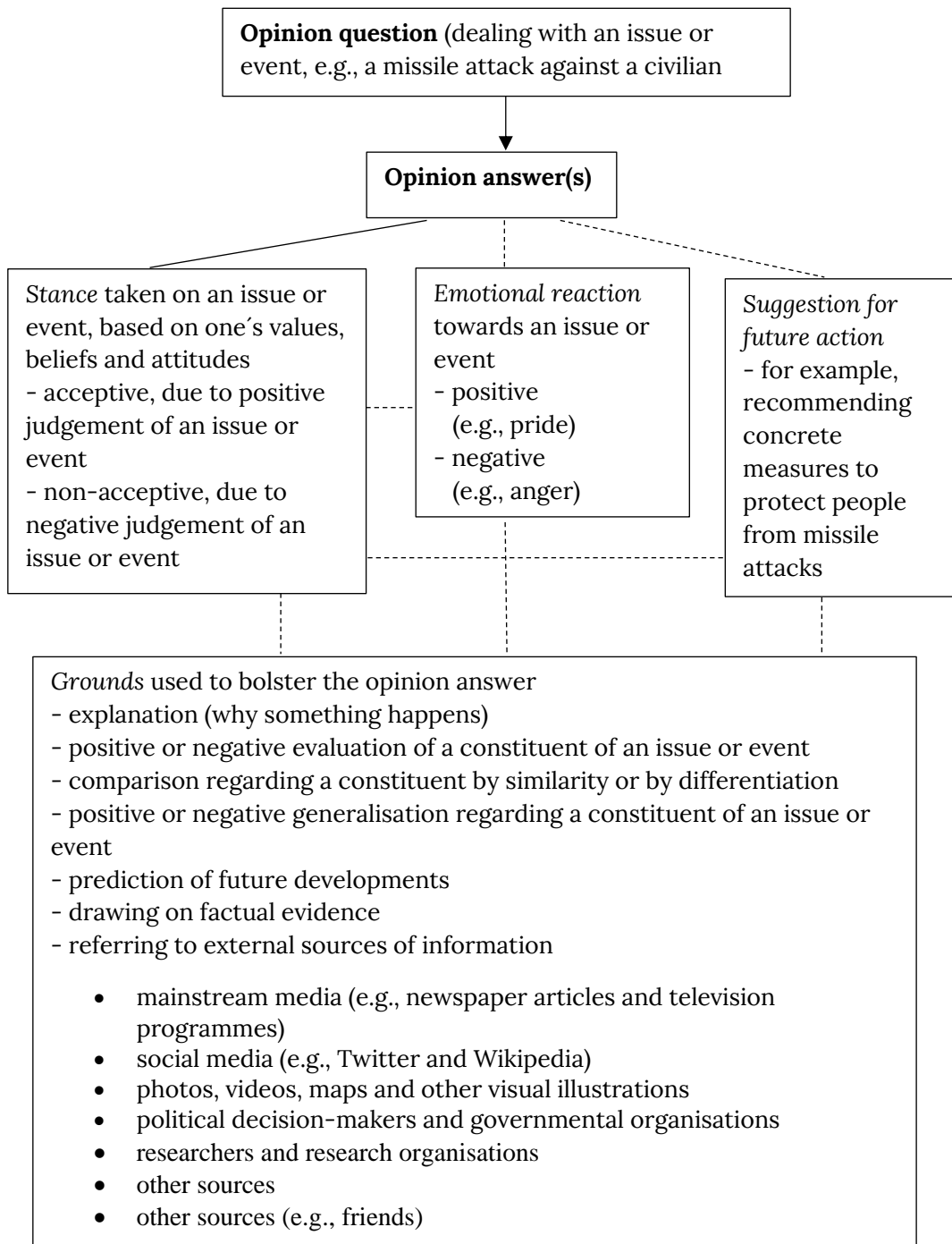


Figure 1: The research framework

Figure 1 suggests that an opinion answer (presented in a Q&A platform) is affected by the topic of an opinion question. It may ask, for example, 'what is your view on the Russian attack on a Ukrainian shopping mall during peak hours?' The question may elicit one or more opinion answers constituted by four major elements. First, there is the acceptive (positive,) non-acceptive (negative) or neutral stance that the *answerer* takes on an issue or event explicated in the opinion question. Second, an opinion answer can incorporate (but not necessarily always) an emotional reaction towards the issue at hand. The opinion answer can express positive emotions (e.g., pride) or negative emotions such as hate. Third, the answerer may propose a course of future action, for example, additional measures to be taken to protect shoppers from occasional missile attacks. Thus, at a minimum, an opinion answer contains the articulation of the stance on an issue; in addition, the answer may express an emotional reaction and make a suggestion for future action.

Finally, the fourth element: an opinion answer can incorporate one or more grounds used to bolster an opinion. The answerer may make use of explanation which makes it understandable, for example, why occasional missile attacks against civilian targets tend to occur during the war. The opinion answer can also be made meaningful by making an evaluation of a constituent of the issue or event. While drawing on a positive evaluation of the state-of-affairs, the answerer may indicate, for example, that the first-aid staff worked very effectively to help the victims of the attack. Using the same example, such assessments may be negative if the staff failed to help them effectively. Moreover, comparison is a way to bolster an opinion. The answerer may draw attention, for instance, to whether the first-aid staff tried to help the victims in similar or different ways compared to earlier attacks against supermarkets. Opinion answers can also be bolstered by drawing generalisation, for example, by assessing whether the first-aid staff tend to work more or less effectively in similar situations. In addition, the answers can be bolstered by presenting predictions, for example, speculating that it will be increasingly

difficult to protect shoppers from random missile attacks in the future. The opinion expressed in the answer can be supported by drawing on factual evidence which indicates, for example, the number of victims identified by the police. The use of factual evidence in support of an opinion answer is indicative of the opinion-fact hybrid identified by Gazan (2010). Opinions may not always appear purely as subjective judgements, but they can be related to factual evidence obtained from statistical data, for example. Finally, an opinion answer may be bolstered by referring to external sources of information. They can be of different types, ranging from a television programme to a view presented in a blog writing.

Research questions

The overall goal of the present investigation is to refine the picture of opinion as an informational category and shed additional light on the nature of opinions sought and shared in Q&A platforms. To attain this goal, drawing on the research framework presented in Figure 1, the study seeks answers to the following questions:

- RQ1. In which ways do the answerers articulate their stances on the issues and events of the Russo-Ukrainian war in a Q&A platform?
- RQ2. How do the answerers articulate their emotional reactions constitutive of opinion answers?
- RQ3. How do the answerers articulate suggestions for future action as a part of opinion answers?
- RQ4. In which ways do the contributors use grounds of diverse kind to bolster their opinion answers?

Empirical data and methodology

The empirical data were gathered from Quora (<https://www.quora.com/>)- a major Q&A website. Quora is a social question-and-answer website headquartered in Mountain View, California. It was founded in 2009 and made available to the public in June 2010. Quora users can submit questions and comment on answers

that have been submitted by other contributors. The most popular topics discussed on Quora include Technology, Movies, Health, Food, and Politics (Ruby, 2023). Quora relies on user reporting, but sometimes the content posted by users is checked by human moderators (Wikipedia, 2023). As of 2020, Quora was visited by 300 million users a month.

The empirical data were downloaded from four Politics-related subgroups:

1. Truth about Russia (we challenge Kremlin's propaganda)
<https://truthaboutrussia.quora.com/>
2. Russia and Ukraine Conflict
[\(https://russiaandukraineconflict.quora.com/\)](https://russiaandukraineconflict.quora.com/)
3. The Ukraine Crisis
[\(https://theukrainecrisis.quora.com/\)](https://theukrainecrisis.quora.com/)
4. The Russian Perspective
[\(https://therussianperspective.quora.com/\)](https://therussianperspective.quora.com/)

Opinion answers submitted to subgroup 1 (Truth about Russia) and subgroup 2 (Russia and Ukraine Conflict) tend to support Ukraine and condemn Russia's invasion while the answers available in subgroup 3 (The Ukraine Crisis) and subgroup 4 (The Russian Perspective) represent pro-Russian views and apologise the attack to Ukraine. The above groups were selected because it was expected that the constitutive elements of opinion answers are articulated most clearly when the topic invites strong views, for or against an issue at hand.

The selection of subgroups discussing a contentious topic involves the issue of a *false balance* (Nardi, 2017, p. 135). False balance occurs when both sides of a debate are presented despite one perspective being overwhelmingly agreed upon by consensus. For example, it is evident that pro-Russian views are relatively unpopular among most Western countries. Still, in the sample of the four subgroups, pro-Russian and anti-Russian

opinions on the invasion are presented as equal even though the majority of people tend to adopt a critical stance to Russia's attack. For example, a recent survey conducted by Ipsos (2023) indicated that in the United States, 57% of the respondents favoured the provision of continuing support to Ukraine until all Russian forces have withdrawn from territory claimed by Ukraine. As the present investigation does not take a pro-Russian or anti-Russian stance but aims at identifying how the informational elements are articulated in opinion answers, both pro-Russian and anti-Russian, the problem of the false balance does not endanger the validity of the empirical study.

To obtain a preliminary picture of the nature of posts discussing the Russo-Ukrainian war, the opinion questions and answers submitted to the above subgroups were read tentatively. The sampling criteria required that a subgroup contains a sufficient number of posts relevant from the perspective of the research questions presented above. On the basis of the preliminary reading, a working solution was found: 100 newest posts containing an opinion question plus one or more opinion answers per subgroup are sufficient to meet the aforementioned requirement. It appeared that the above sample is sufficient to allow a detailed analysis of the opinion answers. It became evident that the inclusion of additional posts would not have essentially changed the quantitative and qualitative picture of the opinion answers dealing with the Russo-Ukrainian war. Therefore, the sample of 400 opinion questions attracting altogether 483 opinion answers provided by 206 individual answerers were downloaded for a closer analysis. The posts included in the sample were submitted to Quora within the period of 5 March - 3 July, 2022.

The number of answers is higher than the number of opinion questions because some opinion questions attracted more than one answer; the highest number of answers offered to an opinion question was 11. However, in most cases, only one answer per question was offered. Typical to discussions occurring in online forums, there were a few highly active

contributors; of them, the most frequent participant submitted no less than 66 answers. On the other hand, the majority of the participants, that is, 143 contributors wrote only one answer. The answerers were from diverse countries, most notably France, India, Russia, Sweden, USA and the United Kingdom.

The coding of the empirical data was an iterative process in which the data were scrutinised several times by the author. First, the 400 opinion questions were classified by inductively identifying altogether 16 main

themes such as Russia's invasion to Ukraine and Ukraine's military capabilities. Thereafter, the opinion answers were coded by making use of the categories specified in the research framework presented above in Figure 1. During the preliminary coding, the coding process was kept open so that new categories emerging from the data were allowed. As noted above, two new categories were identified during the preliminary coding, that is, Prediction and Drawing on factual evidence. The coding categories of opinion answers are specified in Table 1.

Category	Illustrative example taken from the data
Stance taken on an issue or event	
• acceptable (positive)	<i>I think that Khodorkovsky is right - the West cannot leave Ukraine. (SG1)</i>
• non-acceptable (negative)	<i>Nuclear war leaves no winners, so that is unlikely. (SG2)</i>
• neutral (non-partisan, undefined)	<i>I'm from the Far East, not the West, so this is not a biased opinion. (SG1)</i>
Emotional reaction	<i>But the level of hate is what concerns me. How can people hate these beautiful people so much? This question is what fuels me with anger. (SG4)</i>
Suggested future action	<i>In my opinion, money should be spent on humanitarian aid for both West Ukraine and the Donbas. (SG3)</i>
Grounds	
• explanation	<i>It is difficult to fight against the Russian army because they are fighting a war of destruction. (SG1)</i>
• positive evaluation	<i>Russia enjoys air superiority. The operation is being carried out brilliantly from all angles. (SG3)</i>
• negative evaluation	<i>Putin is unable to understand that the world has changed. (SG1)</i>
• comparison by similarity	<i>The Ukrainian scenario is very similar to that of Afghanistan. (SG2)</i>
• comparison by differentiation	<i>On a pound-for-pound man-for-man basis, the UK is doing more for Ukraine than any other country. (SG2)</i>
• positive generalisation	<i>Zelensky and Ukraine in general are absolute heroes. (SG1)</i>
• negative generalisation	<i>Putin and his generals are pure evil. (SG1)</i>
• prediction	<i>Most likely, Ukraine will have a neutral government, be demilitarized, and not join NATO. (SG4)</i>
• drawing on factual evidence	<i>Russia is adding \$ 173 Million a day to its GDP and losing \$ 100.4 Million a day. (SG3)</i>
• referring to external sources of information	
- mainstream media	<i>According to the Washington Post, Russia is starting to devolve into a second-hand economy. (SG2)</i>
- social media	<i>Arestovich told how to surrender to the mobilized LDNR - BlogH1.com. (SG4)</i>
- photo, video, map or other visual illustration	<i>My video is about what is happening now on the battlefield between Russia and Ukraine. (SG1)</i>
- political decision-makers and governmental organisations	<i>Emmanuel Macron stated out loud that France would help Ukraine until it achieves victory. (SG3)</i>
- researchers and research organisations	<i>According to the Center for International and Strategic Studies, sanctions have probably knocked 2 to 3 million barrels per day of Russian crude oil and products offline. (SG2)</i>
- other (miscellaneous) sources	<i>Representatives of the Novoshakhtinsky Oil Refinery said that the fire at the enterprise was caused by the strike of two drones. (SG1)</i>

Table 1: The coding categories of the opinion answers. Legend: SG = Subgroup of Quora

The 483 answers were assigned with 1464 codes. Of these, 483 dealt with the answerer's positive, negative or neutral stance taken on an issue or event. Thirty-five codes were used to depict the emotional reaction expressed by the answerer, while 52 codes dealt with the future action proposed by the opinion holder. The majority of the codes (894) were assigned to grounds by which the opinion answer was bolstered. An opinion answer was coded only once for a criterion category, once it was identified for the first time in the answer. In long answers, the same criterion, for example, negative evaluation was often identified in several segments of the same answer. In these cases, once an answer was coded for a criterion category, other instances were simply ignored. On the other hand, an answer could be assigned with several coding categories. This was most common when assigning codes to grounds; for example, explanation, negative evaluation and prediction were often employed to bolster an opinion.

Overall, no significant problems were faced while coding the data. However, there were a few exceptions. It was not always possible to unambiguously define the stance taken by the answerer; in these cases, the stance was coded as *neutral (undefined)*. While coding emotional reactions, only expressions explicitly indicative of affective elements, for example, words such as anger, fear and hate or expressions like 'loser' indicative of contempt were included in the above category. In the coding of the subcategories of mainstream media and social media, a few borderline cases were faced. The answerers often referred to newspaper articles reporting the views presented by an individual author of information, for example, President Zelensky. In this case, the source was coded as *political decision maker*, not *newspaper article*. However, if a newspaper article contained no references to individual authors of information, the latter code, that is, *newspaper article* was employed. The same approach was adopted while coding television programs and material published in social media forums. Moreover, a few borderline cases were encountered in the coding of the subcategory of photos, videos, maps and other visual illustrations. It was sometimes unclear whether or not sources of

this kind originate from material published in the social media. If a visual illustration, for example a photo, contained no hyperlink to an online resource, it was coded in the above subcategory, not social media.

The internal reliability of the coding was improved in that the categories specified in Table 1 are built on prior research characterising the nature of opinions (Asher et al., 2009; Savolainen, 2015). To strengthen the reliability of the coding, the initial coding was refined by repeated reading of the data. Miles and Huberman (1994, p. 65) recommend the careful checking of the codes as a useful method for the lone researcher; in their view, the code-recode consistencies should be at least 90%. Following this advice, the coding was refined until it was found that the codes appropriately describe the data and there were no anomalies.

In order to examine the relative share of the coding categories, percentage distributions were calculated. Thereafter, the data were scrutinised by means of qualitative content analysis. More specifically, the constant comparative method was employed to capture the variety of articulations of the opinion answers (Lincoln and Guba, 1985, pp. 339-344). To achieve this, the categories specified in Table 1 above were systematically compared. In this way, it was possible identify similarities and differences in the ways in which the answerer articulated, for example, their stance on Russia's invasion to Ukraine and bolstered their views by drawing on negative evaluation or explanation.

The reporting of the qualitative findings incorporates an ethical issue because they are illustrated by excerpts taken from the contributors' posts. Since the posts submitted to Quora are freely accessible to anyone interested, they can be seen as contributions which are intended to elicit public interest in the Russo-Ukrainian war. Due to their public nature, the posts can also be utilised for research purposes, provided that the identity of an individual contributor is sufficiently protected. To this end, the posts were

equipped with technical codes. For example, in the code A146-SG2, A146 refers to the 146th answerer in the alphabetical list of the 206 contributors, while SG2 refers to subgroup 2 (Russia and Ukraine Conflict). Finally, to anonymise the data, all information about the submission dates for the posts was deleted from the illustrative excerpts.

Findings

Quantitative overview

The 400 opinion questions presented in Quora's four subgroups were classified by inductively identifying 16 main themes listed in Table 2.

Russia's invasion to Ukraine	62
President Putin's political and military objectives	50
Russia: culture, society and state	38
Russia's economy	38
The role of NATO in the Ukrainian crisis	34
Russia's military capabilities	29
Military operations in Ukraine	28
Ukraine's military capabilities	27
Russia's international relationships	25
The credibility of information sources	21
Ukraine's international relationships	15
Military equipment used in the war	12
Peace negotiations	8
Ukraine: culture, society and state	7
War crimes	4
The rebuilding of Ukraine	3
Total	400

Table 2: The main themes of opinions questions

As Table 2 indicates, opinion questions dealing with Russia's invasion to Ukraine, and President Putin's political and military objectives were most popular, followed by questions focusing on Russia's culture, society, state and economy. The Quora users were also interested in NATO's role in the Ukrainian crisis, as well as Russia's and Ukraine's military capabilities. The popularity of other themes such as peace negotiations and the rebuilding of Ukraine was fairly low, probably due to the early phase of the war. Concrete examples of individual opinion questions will be offered below while presenting the findings of the qualitative analysis.

The analysis of the 483 opinion answers revealed that the majority of them, that is, 260 answers took a neutral (non-partisan, undefined) stance on the issue or event

depicted in an opinion question. 192 answers indicated a negative (non-acceptive) stance; the rest, that is, 31 answers took a positive (acceptive) stance. The high share of negatively oriented answers is understandable, given the serious nature of the topic.

The answerers seldom expressed emotional reactions; only 35 codes out of 1346, that is, 2.6% were assigned to them. Only three codes were assigned with positive emotion, that is, pride, while 32 codes indicated negative emotional reactions such as anger and hate, thus reflecting the displeasing issues typical to crisis times and war. Similarly, the number of codes assigned to suggested future action, that is, 52 was relatively low, representing only 3.9% of the codes. The majority of the codes, that is, 894 out of 1464 (61%) dealt with the grounds. As the role of grounds appeared to be particularly

significant, the distribution of codes assigned to them is presented in Table 3.

Type of ground	%
Reference to external information sources	24.1
Negative evaluation	19.3
Explanation	17.6
Prediction	13.2
Drawing on factual evidence	11.1
Comparison by differentiation	5.0
Comparison by similarity	4.9
Positive evaluation	4.9
Negative generalisation	0.6
Positive generalisation	0.3
Total	100.0

Table 3: The percentage distribution of codes assigned to grounds used to bolster opinion answers (n = 894)

Table 3 demonstrates that reference to external sources of information, negative evaluation, and explanation were particularly important when opinion holders made attempts to support their views. Quite frequently, the answerers also drew on prediction and factual evidence, thus reflecting the view that the articulations of opinions do not always appear purely as subjective judgements but form a hybrid with facts (Gazan, 2010). The role of grounds of other types remained quite insignificant. This is reflected most clearly in that the answerers seldom made use of comparison and generalisation.

Qualitative elaboration of the opinion answers

The quantitative picture of opinion answers will be refined by reviewing the results of the qualitative content analysis. Following the logic of the research framework depicted in Figure 1 above, the qualitative findings will be presented by starting from the review of the stances taken by the answerers, followed by the analysis of emotional reactions, suggested future action and the grounds which were used to bolster an opinion answer.

Taking a stance

The answerers seldom took a positive stance on issues or events explicated in the opinion questions. This is understandable because most questions dealt with hardships characteristic of times of crisis. However, there were examples in which the answerers articulated acceptive views. An acceptive stance was particularly popular in cases in which the activity of a person was considered important from the perspective of the values held by the answerer.

Does the genuineness of Boris Johnson's intentions towards Ukraine grow more questionable by the day? (SG2)

As an American, I have always been impressed by Boris Johnson and his stalwart support of Ukraine. His recent statement about training Ukrainian recruits is impressive. (A138-SG2)

A considerable share of the answers took a negative stance on an issue or event mentioned in the opinion question. This stance is indicative of the opposite values, beliefs and attitudes of answerers supporting either Ukraine or Russia. A negative stance was

common if the answerer considered an issue or event as blameworthy or ethically untenable.

What is your view on the Russian attack on a Ukrainian shopping mall during peak hours? (SG1)

My opinion is clear. Russia is a terrorist state that is run by a criminal. (A192-SG1)

Moreover, a negative stance was taken if the answerer disagreed with the view presented by the asker or made an attempt to refute the approach implicit in the opinion question. This stance was particularly frequent among answerers supporting Russia's attack.

Did the Russian invasion of Ukraine doomed Russia forever? (SG4)

Not at all. The international community outside of the West (and the West represents less than 16% of the world's population) understands that the war in Ukraine was deliberately created by the West, to wage proxy war on Russia. (A167-SG4)

As the quantitative overview indicated, a neutral (non-partisan, undefined) stance was most frequent among the answerers. This suggests that even in the case of highly controversial issues, the answerers do not always categorically accept or condemn a phenomenon depicted in the opinion question. The answerer's point of departure may be non-partisan in nature so that he or she devotes the main attention to the objective features of the phenomenon, by describing, for example, how a military operation proceeds in Ukraine.

If Ukraine retakes Kherson, liberates Mariupol, and recaptures Izium, will the Russians be forced to negotiate for peace? (SG1)

Ukraine is working very hard on retaking Kherson right now. Russia has moved troops out of the area to concentrate on Severodonetsk. (A189-SG1)

The answerers also often took a neutral stance when they were asked to characterise Russia's

or Ukraine's military capabilities. This is mainly due to how such capabilities are primarily assessed in terms of technical (instrumental) qualities of weapon systems, not as factors that in themselves are acceptable or non-acceptable.

How can the Ukrainian command see, track, and hit the moving Moskva cruiser at 100 km distance - if not through US provided real-time SatCom (Rammstein/Germany) information? (SG1)

The Ukrainians used a Turkish Bayraktar drone to stalk and decoy the Moskva. With that drone they had constant sight and tracking of the ship. (A120-SG1)

Expressing emotions

The quantitative overview revealed that the opinion answers seldom contained explicit emotional reactions. Answerer A46 (in subgroup 1) offered a rare example of positive emotional reactions by expressing pride about Ukraine's brave defence efforts: 'Zelensky and Ukraine in general are absolute heroes'. Given the serious themes of the opinion questions, it is not surprising that the majority of emotions expressed in opinion answers were negative. However, no strong emotional reactions accompanied by emoticons or swear words were presented. This is probably due to Quora's relatively strict moderation policy. In most cases, the emotional reactions were directed to political decision makers, most notably President Putin. In these cases, expressions of anger, hate and contempt were quite usual among answerers condemning the Russian invasion.

What was Putin thinking when he hit the Ukraine mall with missiles? What did he gain from striking civilians? (SG1)

So vindictive little Vova threw a tantrum, taking it out on innocent civilians shopping at a mall. The Littlest Tsar is famously and laughably thin-skinned and insecure. Tragically, this loser has the power to make women and children pay with their lives for his own stunted psychological development. (A186-SG1)

Answers such as these not only express anger but also contempt and derision, as suggested by the words 'loser' and 'The Littlest Tsar'. Moreover, negative emotions were articulated if the opinion holder felt that a group of people such as ordinary Russians is looked down without reason.

What makes you a Russophile? (SG4)

The level of hate is what concerns me. "How can people hate these beautiful people so much?" This question is what fuels me with anger. It is the West who foments that hate. (A57-SG4)

Anger and derision were also common in answers criticising the values behind provocative opinion questions.

Are the US armed forces only capable of clubbing, devastating third world armies by saturation bombing from the air? (SG1)

Whatever you say, Komrade Ivan Dezinformatsiya. There are no U.S. military forces in Ukraine, idiot! (A106-SG1)

Suggesting future action

Suggestions for future action are based on normative views and preferences adopted by the answerers. Many of the suggestions dealt with the ways in which the military operations in Ukraine should be advanced in the future and how Ukraine's allies should offer additional help to beat the Russian army. Some of the suggestions operated on an idealistic level, without proposing any concrete measures.

How will Putin lose the war? What factors will help Ukraine overcome this trouble? (SG1)

The West must continue to be united behind Ukraine. Europe must remember that Ukraine is fighting for freedom and democracy in Europe as well. (A100-SG1)

The suggestions for future action also offered concrete recommendations, for example, the ways in which the military conflict could be solved.

The Ukrainian authorities should just end-up the carnage of its own army, along the atrocities committed by its Nazi militias, and offer terms of surrender to Russia that Russia can accept. (A150-SG3)

Russia must remove all the land mines, Russian colonists and troops in Ukraine. Russia will have to return Crimea, of course. (A55-SG2)

Grounds

An integral element of an opinion answer are the grounds by which the opinion holder bolsters his or her view. To spare space, the opinion questions are not included in the review of the grounds. The main attention is directed to how the answerers supported their stances on an issue, emotional reactions to it, as well as suggestions for future action. The nature of grounds is discussed by starting from the most frequent type specified in Table 3, that is, reference to external sources of information, followed by less frequently used grounds (drawing on factual evidence, explanations) and ending with rarely used grounds (positive and negative generalisation).

Reference to external sources of information. The quantitative overview revealed that the opinion answers were most frequently bolstered by making references to information sources of a diverse kind. In this regard, *political decision-makers and governmental organisations* were particularly important. The answerers often sought support to their views by citing presidents because they can be regarded as particularly authoritative sources of information.

Emmanuel Macron stated out loud that France would help Ukraine until it achieves victory, the goal being to recover the whole Ukrainian territory, including Crimea. (A150-SG3)

Russia will never forget that the conflict in Ukraine began with a bloody coup d'état staged by the West. This was announced on June 17 (2022) by Russian President Vladimir Putin at the plenary session of the St. Petersburg International Economic Forum. (A25-SG4)

Moreover, references were made to ministers and influential officials in order to convince the readers about the credibility of the opinion answer.

Russia, speaking through its Foreign Minister, Sergey Lavrov, insisted the onus was on Ukraine to solve the problem of resuming grain shipments by demining its ports. (A189-SG2)

Sometimes, the opinion answers were bolstered by drawing on the findings of researchers and research organisations. References to such sources were made at a general level only, without any detailed description of their credibility.

According to state pollster conducted by VTsIOM, Putin's rating jumped six percent in the week ending February 27 to reach 70%. (A25-SG4)

To support their views, the answerers also drew on news published in *mainstream media* such as leading newspapers and broadcasting companies. Similar to information sources reviewed above, it became obvious that information obtained from mainstream media was used selectively to strengthen one's view on the invasion.

The New York Times reports: "As Russian troops launch an exhaustive campaign to occupy eastern Ukraine, the state's ability to withstand Russian aggression depends more than ever on the assistance of the United States and its allies". (A157-SG3)

Social media forums. Blogs and websites were used as alternative or complementary information sources to material offered by mainstream media. A particular characteristic of the use of social media sources was that they were referred to in order to support one's partisan view.

Watch the full documentary below. You would know why Russia invaded Ukraine and you would support Putin yourself. (A81-SG3)

Closely related, the answerers also drew on visual material of diverse types to convince the reader. More specifically, the answerers made use of *videos, maps and other pictorial illustrations* to bolster their partisan views.

My video is about what is happening now on the battlefield between Russia and Ukraine. These are the MLRS systems, howitzers, and long-range artillery needed to stop Putin's advance into Ukraine. (A100-SG1)

Videos and photos can offer effective means to demonstrate that phenomena subject to controversial interpretations do exist in reality. One of the pro-Russian answerers (A102-SG3) presented a photo found from the mobile phone of an Azovite soldier who died in battle in Mariupol. In the photo, a group of five soldiers pose with the Ukrainian flag and the swastika flag; in addition, one of the soldiers does the Nazi salute. Even though it cannot be confirmed whether photos such as these are genuine or manipulated for propagandistic purposes, visual material can strongly appeal to Quora users, similar to videos showing surrendered Russian soldiers.

Drawing on factual evidence. Opinions do not necessarily appear in a pure form, as subjective views forming a direct counterpart of facts. In reality, opinions are often bolstered by drawing on factual evidence, for example, statistical data. The analysis of the opinion answers revealed that the nature of factual evidence varied considerably, ranging from numerical data to references to the content of international conventions. For example, answerer A8 (in subgroup 1) pointed out that before the Russian invasion, Turkey let many Russian warships pass through the Black Sea, as the *Montreux Convention* of 1936 allows it. On the other hand, the answerers tended to employ the factual evidence selectively, depending on whether they support Ukraine or Russia. There appeared to be two major sub contexts where factual evidence was used to bolster an opinion answer. First, the answerers drew on facts while assessing the military capabilities of Ukraine, Russia and NATO. For example, answerer A189 (in subgroup 3)

presented a picture describing the military balance. The picture indicates that NATO has 3.48 million active troops, while Russia has 771,000. Moreover, NATO has 9,469 main battle tanks, compared to Russia's 2,600 tanks.

Second, factual evidence was employed to bolster opinions about Russia's economy. This topic was fairly popular, partly due to how there are publicly available statistical data about Russia's economic development inflicted by the war.

According to the Russian Central Bank, GDP will decline by 8% this year; Russian Ministry of Economic Development says GDP will drop 7.8%. (A120-SG2)

Evaluation. Opinion answers were also bolstered by presenting an evaluation about an issue, event, person or objective of activity. Given the nature of issues elicited in the opinion questions, it is unsurprising that most of the responses offered by the answerers were negative or critical. However, there were also a few positive assessments. Many of them praised qualities of Ukrainian soldiers and civilian people.

Ukraine is fighting like mad and dying for their homes, families and Ukraine. (A16-SG1)

Another issue attracting positive evaluations was the military capabilities of the armies, as well as the resources of Russia in particular.

Russia is a country with tremendous resources. They have oil, wheat, metals, gas, enriched uranium - the list is endless. This means they can sustain themselves without any import dependence and yet the whole world depends on their exports. (A33-SG3)

However, negative evaluations were more frequent. Most critical assessments dealt with Putin's characteristics as a leader. In turn, the pro-Russian answerers presented disparaging assessments about President Zelensky.

Vladimir Putin shows no human feelings or even compassion. He is a bloodthirsty dictator who

will do anything to achieve his goals in Ukraine. (A198-SG1)

Zelensky, a mere mediocre character from some Ukrainian provincial musical. American administration has chosen that hero as one who would humbly do her will. (A33-SG3)

Moreover, negative evaluations were made while assessing the military capabilities of the Russian army in particular.

There have not been any major Russian advances in eastern Ukraine. Russian advances have been slow, clumsy, piecemeal, and at high costs to Russian soldiers and Ukrainian civilians. (A138-SG2)

Among pro-Russian answerers, negative evaluations were often directed to the ways in which Western countries have attempted to influence Ukraine. In some cases, such assessments incorporated elements of conspiracy theories.

Ukraine is a chitinous shell of what once was the prosperous Soviet Republic, sucked out by its Western benefactors with the help of Nazi battalions created by their secret services. (A25-SG4)

Explanation. Opinion answers can also be supported by explaining why a phenomenon is occurring. Such explanations could be identified most easily from the opinion answers when they incorporate expressions such as *because* and *due to*. In particular, explanation was used as a ground to make it understandable why military operations occurring in Ukraine succeed or fail.

Why is Putin currently winning his war against Ukraine? (SG3)

Because Russia has a professional army, 10 times more artillery, operating military factories, unlimited amounts of oil and ammunition. (A163-SG3)

Explanation was also used to make it understandable why the war broke out in Ukraine or how the war will end.

The US intervention in this conflict is due to the US aspiration to 'hostile takeover' this time all of Russia and ideally all territories of the former Russian Empire. This is the colonial nature of the United States. (A25-SG4)

Prediction. Explanation of why things happen as they do was sometimes closely related to prediction, that is, a statement about what is going to happen in future military operations. Predictions as a form of grounds were also employed to speculate the end result of the war.

In any case, this is a war of attrition that will probably last for years. It is hard to see a real positive outcome for Ukraine with a recovery of its stolen territory by Putin's Russia. (A198-SG1)

Predictions were also presented about Russia's and Ukraine's future in the post-war era.

I suspect Putin will install a puppet government and not annex Ukraine. But I am less certain of this. I would say 65% chance he does a puppet government. But it will be neutral, demilitarized, and not part of NATO - ever. (A57-SG4)

Comparison. As the quantitative overview indicated, comparison was seldom used as a ground supporting an opinion answer. Comparisons made by the answerers were of two main types: comparison by similarity and comparison by differentiation. In the former cases, attention was directed to similar features of an event or process. Military operations were particularly popular topics of comparative notions.

Russian army's scorch earth tactic was applied in WW2 at Königsberg, Prussia, in 1945. Same as in Mariupol and towns of Donbas, Soviet artillery annihilated everything standing in the city, regardless of collateral destruction. (A183-SG2)

In contrast, comparison by differentiation focuses on dissimilar features of a phenomenon, for example, military capability.

I don't think Russians have better military, maybe bigger but not better. Motivation - definitely Ukrainians. Organization - Ukrainians. Information - Ukrainians. Only raw size is on Russians size. (A203-SG1)

Generalisation. Finally, generalisation was employed as a ground to bolster an opinion answer. Positive generalisations were seldom made, probably due to the nature of the discussion topic.

Zelensky and Ukraine in general are absolute heroes. (A46-SG1)

To compare, negative generalisations emphasising the weakness or low quality of an entity were somewhat more frequent. Negative generalisations were often directed to political leaders, most notably Putin and his supporters. Moreover, negative generalisations sometimes dealt with a group of people or even a nation.

Putin and his generals are pure evil. (A65-SG1)

Russians in general are being alienated from public and getting worse as the days go by. (A66-SG1)

Discussion

The present study contributed to information behaviour research by elaborating the nature of opinion as a type of information. This was done by analysing the elements of opinion answers focusing on a controversial issue, that is, the Russo-Ukrainian war. Four elements of opinion answers were identified: (i) the stance taken on an issue or event, (ii) emotional reaction to an issue or event, (iii) suggestion for future action, and (iv) grounds used to bolster one's view. It was assumed that at a minimum, an opinion answer is constituted by the articulation of a stance on an issue or event, either positive (acceptive), negative (non-acceptive) or neutral (non-partisan). An opinion answer becomes more substantive if it also incorporates an emotional reaction and/or suggestion for

future action. If the above elements are supplemented with grounds, it is possible that an opinion answer becomes more credible in the eyes of other people. As a varying constellation of the above elements, opinion answer forms a type of information. More specifically, as an informational category, opinion (answer) represents the way in which an individual articulates his or her subjective view on an issue or event. As the present study demonstrated, information of this type can also be sought by other people and shared to others in Q&A platforms, for example.

The empirical analysis revealed that the answerers most frequently took a neutral or negative stance on the topics articulated in the opinion questions. Given their serious nature, it is unsurprising that the majority of emotional reactions were negative, indicative of anger, hate, contempt and derision. As to suggestions for future action, the answerers offered recommendations mainly dealing with the ways in which the war could be ended. To bolster their answers, the opinion grounds primarily drew on the views presented by political decision makers such as presidents and ministers. To further support their views, the answerers made references to a variety of external information sources. They also drew on factual evidence, most notably statistical data. Of the grounds of other types, negative evaluation of the qualities of an entity or event was fairly common. The answerers also drew on explanation to make it understandable why war-related events occur. Opinion holders also compared the features of such events, drew generalising conclusions and predicted how the war in Ukraine would end. On the other hand, comparisons and generalisations were rarely made. This may be due to the fact that they are cognitively more demanding than negative evaluation, requiring opinion holders to relate information in more detail before drawing conclusions.

The novelty value of the empirical findings can be reflected by making a few comparative notions. The findings support Gazan's (2010, pp. 698-699) observation that in posts submitted to Q&A platforms, expressions

indicative of opinions may also incorporate other informational elements such as personal experiences and facts. In opinion answers examined in the present investigation, there were numerous examples of hybrids of fact and opinion when the opinion holders drew on factual evidence in order to bolster their views. On the other hand, compared to Savolainen's (2015) findings about the employment of grounds to bolster opinions dealing with free-time trip planning, there appeared to be significant differences. In the above context, the answerers quite seldom made references to external sources of information, while the opinion answers focusing on the issues and events of the Russo-Ukrainian war actively drew on such sources. This could be due to the difference of the discussion topic. Free-time related opinion answers were primarily supported by referring to one's personal experiences about hotel services. In contrast, it is evident that the answerers commenting on war-related issues have no personal experience about battles or missile attacks occurring Ukraine; thus, they have to draw on external information sources depicting such events. While giving reasons for their opinions dealing with free-time travel planning, the Q&A contributors most frequently drew on positive evaluation and explanation. In contrast, in opinion answers focusing on the Russo-Ukrainian war, positive evaluations were seldom employed, due to the serious nature of the issue at hand. However, explanation was a popular way to bolster opinions in both contexts. This suggests that giving reasons about why the opinion holder interprets an issue in a certain way is an integral element of opinion answers. It appeared that in both contexts, opinion answers seldom drew on grounds that are cognitively demanding: comparison and generalisation.

The opinion answers submitted to Quora often indicated partisan views adopted by pro-Ukraine and pro-Russia contributors. This approach was also reflected in that the answerers tended to conform to the views of like-minded fellow participants. This observation supports the conclusions drawn by Walter and Salovich (2021, p. 520). They demonstrated that in online debates people do

not welcome information that contradicts their pre-established beliefs but show a great readiness to believe things that align with their existing worldview. This applies to fact-checking, as well as the preference for unverified information obtained from partisan sources. Given the controversial nature of the Russo-Ukrainian war, there were clear indications that the answerers unconditionally supporting Ukraine or Russia tend to draw on black and white constellations by selectively drawing on information sources that confirm their beliefs, without willingness to make use of information offering contrary evidence. Similarly, as Bi et al. (2021) observed, like-minded people often simply ignore contrary evidence in online debates.

The empirical findings can also be paralleled with the notion that in today's society, conspiracy theories - unproven claims about the existence of nefarious secret plots - necessarily blend factual claims about known events with speculation about concealed actions and the alleged conspirators' motives. Therefore, the blending of factual claims, ideological conviction, and opinionated speculation may position conspiracy theories somewhere between pure fact and pure opinion (Brotherton and Son, 2021). This phenomenon was most clearly identified while analysing the opinion answers offered by pro-Russia contributors. They explained that the primary motive of Russia's invasion to Ukraine is to fend off the imperialist project led by the United States, aiming at the conquest of Russia and the exploitation of its rich natural resources. On the other hand, explanations and evaluations characteristic of conspiracy theories were not uncommon amongst the critics of the Russian invasion. They asserted that the Ukrainian war is only a part of a long-time political-military project by which Russia tries to subjugate other European countries.

Prior studies on the nature of opinion have mainly examined it as philosophical category by characterising it as a form of human knowledge, particularly in relation to facts (Corvino, 2015; Heffernan, 2017; Weddle, 1995). It is suggested that fact is one that has objective

content and is well-supported by the available evidence, while a statement of opinion is one whose content is either subjective or else not well supported by the available evidence (Corvino, 2015). However, distinctions such as these have not thematised opinion as an informational category in particular. Similarly, communications studies characterising the features of opinion leaders have largely neglected the examination of the informational elements of opinion (Jung and Kim, 2016). In information behaviour research, the main attention has been devoted to how people seek and share opinion-based information particularly in online forums (Gazan, 2010; Savolainen, 2015). However, in studies such as these, the nature of opinion as a type has not been analysed in greater detail.

As the present investigation focusses on opinion answers offered in a social Q&A forum, the findings cannot offer a conclusive picture about opinion as a type of information. Nevertheless, the findings elucidate the features opinion as a form of subjective information, in relation to objective information such as facts. The findings suggest that opinion incorporates three major informational elements: (i) a statement indicative of an individual's value-based judgement about an issue or event, (ii) a statement depicting his or her emotional reaction towards an issue or event, and (iii) a suggestion for practical action to in order to affect things in the future. On the other hand, opinion as a type of subjective information thus constituted often becomes more meaningful if it is related to objective information, for example, facts. This is particularly evident in cases in which an individual bolsters his or her opinion by drawing on factual evidence offered by statistics. As observed by Gazan (2010), objective information (facts) and subjective information (opinion) often appear together as hybrids of facts and opinion. This suggests that it is inappropriate to contrast opinions with facts because they represent diverse types of information.

Although information available in opinion answers tend to be biased, the role of opinion

is becoming more central in today's information environments. With this development, the demarcating line between opinion and fact is becoming increasingly blurred. According to Kavanagh and Rich (2018, p. 3), this is indicative of *truth decay* in today's society. There is an increasing disagreement about facts and analytical interpretations of factual data, as well as the increasing relative volume, and resulting influence, of opinion and personal experience over fact. The growing use of social media has exacerbated these trends by inflating the amount of opinion that can be easily and quickly proliferated. The popularity of social Q&A sites such as Quora supports the above conclusion. One manifestation of the blurring of the line between opinion and fact in today's context is the increasing use - even by established newspapers - of stories that combine opinion and fact, without clearly demarcating which is which (Kavanagh and Rich, 2018, p. 27). On the positive side, as the present investigation demonstrates, the users of social media may not necessarily deem opinions inferior to facts. They intentionally seek personal opinions to find out how other people experience, feel and interpret issues of their interest. This suggests that despite its ambiguous nature, opinion is acknowledged as a relevant type of information in today's society. It is evident, however, that the further elaboration of the relationship between opinion and fact will give rise to additional questions dealing with the credibility of opinion as a type of information, trust in

information available in digital environments, as well as the challenges of media and information literacy (Haider and Sundin, 2022).

Conclusion

The present study pioneered by refining the picture of opinion as a type of information - a topic largely neglected in information behaviour research so far. The findings highlight that opinion is an important informational category whose significance is growing, due to the developments in today's information and communication environments. In the media, including forums of social media, more strongly than before, attention is devoted to people's subjective views and feelings, instead of merely emphasising the role of irrefutable (objective) facts. As the present investigation examined opinion answers offered in a Q&A platform and the discussion topic dealt with a highly controversial issue, further research is required to elaborate the features of opinion as a type of information. This may be done by choosing different topics that are less politically charged, for example, issues related to health and hobbies. It is probable that studies conducted in such contexts would yield different and complementary results concerning the stances that the opinion holders take on an issue, as well as emotional reactions evoked by the topic, suggested future action, and the grounds employed to bolster their view

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References

- Asher, N. & Benamara, F. & Mathieu, Y. (2009). Appraisal of opinion expressions in discourse. *Linguisticae Investigationes*, 32(2), 279-292. <https://doi.org/10.1075/li.32.2.10ash>

- Bi, D., Kong, J., Zhang, X. & Yang, J. (2021). Analysis on health information acquisition of social network users by opinion mining: case analysis based on the discussion on COVID-19 vaccinations. *Journal of Healthcare Engineering*, 2021, Article 2122095. <https://doi.org/10.1155/2021/2122095>
- Biyani, P., Bhatia, S., Caragea, C. & Mitra, P. (2014). Using non-lexical features for identifying factual and opinionative threads in online forums. *Knowledge-Based Systems*, 69, 170-178. <https://doi.org/10.1016/j.knosys.2014.04.048>
- Brotherton, R. & Son, L.K. (2021). Metacognitive labeling of contentious claims: facts, opinions, and conspiracy theories. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.644657>
- Carrillo-de-Albornoz, J., Aker, A., Kurtic, E. & Plaza, L. (2019). Beyond opinion classification: extracting facts, opinions and experiences from health forums. *PLoS One*, 14(1). <https://doi.org/10.1371/journal.pone.0209961>
- Chuang, K.Y. & Yang, C.C. (2014). Informational support exchanges using different computer-mediated communication formats in a social media alcoholism community. *Journal of the Association for Information Science and Technology*, 65(1), 37-52. <https://doi.org/10.1002/asi.22960>
- Cortis, K. & Davis, B. (2021). Over a decade of social opinion mining: a systematic review. *Artificial Intelligence Review*, 54(7), 4873-4965. <https://doi.org/10.1007/s10462-021-10030-2>
- Corvino, J. (2015). The fact/opinion distinction. *The Philosophers' Magazine*. <https://www.philosophersmag.com/essays/26-the-fact-opinion-distinction>
https://ia902604.us.archive.org/29/items/corvino-2015/Corvino_2015.pdf (Internet Archive)
- Eirinaki, M., Pisal, S. & Singh, J. (2012). Feature-based opinion mining and ranking. *Journal of Computer and System Sciences*, 78(4), 1175-1184. <https://doi.org/10.1016/j.jcss.2011.10.007>
- Gazan, R. (2010). Microcollaborations in a social Q&A community. *Information Processing & Management*, 46(6), 693-702. <https://doi.org/10.1016/j.ipm.2009.10.007>
- Gärdén, C., Francke, H., Lundh, A.H. & Limberg, L. (2014). A matter of facts? Linguistic tools in the context of information seeking and use in schools. In *Proceedings of ISIC, the Information Behaviour Conference, Leeds, 2-5 September, 2014: Part 1*, (paper isic07). <http://InformationR.net/ir/19-4/isic/isic07.html>
- Haider, J. & Sundin, O. (2022). *Paradoxes of media and information literacy: the crisis of information*. Taylor & Francis.
- Heffernan, G. (2017). From false opinions to "false facts" and back again: a phenomenological *Besinnung* on mindfulness and mindlessness. *The Humanistic Psychologist*, 45(4), 385-396. <https://doi.org/10.1037/hum0000076>
- Ipsos (2023). *One year in, global public opinion about the war in Ukraine has remained remarkably stable*. Ipsos. https://ia601607.us.archive.org/26/items/ipsos-global-advisor-war-in-ukraine/Ipsos_Global%20Advisor%20-%20War%20in%20Ukraine.pdf (Internet Archive)

- Jung, J-Y. & Kim, Y-C. (2016). Are you an opinion giver, seeker, or both? Re-examining political opinion leadership in the new communication environment. *International Journal of Communication*, 10, 4439-4459. <https://ijoc.org/index.php/ijoc/article/view/5303/1776> <https://archive.org/details/httpsijocorgindex.phpijocarticleview53031776> (Internet Archive)
- Kaiser, E. & Wang, C. (2021). Packaging information as fact versus opinion: consequences of the (information-) structural position of subjective adjectives. *Discourse Processes: A Multidisciplinary Journal*, 58(7), 617-641. <https://doi.org/10.1080/0163853X.2020.1838196>
- Kavanagh, J. & Rich, M.D. (2018). *Truth decay: an initial exploration of the diminishing role of facts and analysis of American public life*. Rand Corporation. https://www.rand.org/pubs/research_reports/RR2314.html <https://archive.org/details/kavanagh-rich-truth-decay-2018> (Internet Archive)
- Kuklinski, J.H., Quirk, P.J., Schwieder, D.W. & Rich, R. F. (1998). "Just the facts, ma'am": political facts and public opinion. *The Annals of the American Academy of Political and Social Science*, 560(1), 143-154. <https://doi-org/10.1177/0002716298560001>
- Lincoln, Y.S. & Guba, E. (1985). *Naturalistic inquiry*. Sage.
- Lindström, P. (1997). Persuasion via facts in political discussion. *European Journal of Social Psychology*, 27(2), 145-163. [https://doi.org/10.1002/\(SICI\)1099-0992\(199703\)27:2<145::AID-EJSP811>3.0.CO;2-C](https://doi.org/10.1002/(SICI)1099-0992(199703)27:2<145::AID-EJSP811>3.0.CO;2-C)
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis: an expanded sourcebook*. 2nd ed. Sage.
- Moss, J. (2020). Plato's doxa. *Analytic Philosophy*, 61(3), 193-217. <https://doi-org/10.1111/phib.12192>
- Nardi, P.M. (2017). *Critical thinking: tools for evaluating research*. University of California Press.
- Ruby, D. (2023). *35+ Quora statistics: all-time stats & data*. DemandSage. <https://www.demandsage.com/quora-statistics/> <https://archive.org/details/ruby-2023> (Internet Archive)
- Savolainen, R. (2011). Asking and sharing information in the blogosphere: the case of slimming blogs. *Library & Information Science Research*, 33(1), 73-79. <https://doi.org/10.1016/j.lisr.2010.04.004>
- Savolainen, R. (2015). Providing informational support in an online discussion group and a Q&A site: the case of travel planning. *Journal of the Association for Information Science and Technology*, 66(3), 450-461. <https://doi-org/10.1002/asi.23191>
- Stokeld, W. (2015). *Beliefs, values, morals, assumptions and attitudes*. Bayridge. <https://www.bayridgecounsellingcentres.ca/beliefs-values-morals-assumptions-and-attitudes/> <https://archive.org/details/stokeld-2015> (Internet Archive)

Varathan, K.D., Giachanou, A. & Crestani, F. (2017). Comparative opinion mining: a review. *Journal of the Association for Information Science and Technology*, 68(4), 811-829. <https://doi-org/10.1002/asi.23716>

Walter, N. & Salovich, N.A. (2021). Unchecked vs. uncheckable: how opinion-based claims can impede corrections of misinformation. *Mass Communication & Society*, 24(4), 500-526. <https://doi-org/10.1080/15205436.2020.1864406>

Weddle, P. (1985). Fact from opinion. *Informal Logic*, 7(1), 19-26. https://informallogic.ca/index.php/informal_logic/article/download/2698/2139 <https://archive.org/details/weddle-1985> (Internet Archive)

Wikipedia (2023). Quora. Wikipedia. <https://en.wikipedia.org/wiki/Quora> https://archive.org/details/wikipedia-quora-2023_202304

Wilson, T.D. (1981). On user studies and information needs. *Journal of Documentation*, 37(1), 3-15. <https://doi-org/10.1108/eb026702>