Reflections on Climate Change and New Media in Russia: Challenges and Opportunities

MARIANNA POBEREZHSKAYA
University of East Anglia

Abstract: This essay examines how social media (Twitter and LiveJournal blogging platforms) cover climate change issues in Russia. Russia is one of the largest greenhouse gas (GHG) emitters in the world and has become a key player in global climate change politics. At the national level the problem has largely been ignored until a few years ago when the Russian government announced a more defined climate change policy. Traditional mass media coverage of climate change, even though it follows changes in state policy, has substantially increased, yet still falls far behind discussions taking place in other states. This essay investigates whether, due to the reserved approach of traditional media to this environmental topic, social media can become an alternative information channel for climate change debates.

Keywords: climate change, environmental communication, Russia, Twitter, Live Journal, social media

The problems related to communicating environmental risks and, in particular, climate change have been studied by various scholars throughout the past decade (Boykoff 2011; Carvalho 2007; Ereaut and Segnit 2006; Hansen 2010; Smith 2005). Being such a complex phenomenon, climate change has to be 'translated' for the general public and policy makers so that educated decisions can be made. It is only logical that mass media play a crucial role in this process of 'translation' of climate change information.

In various countries, these processes of climate change mass communication are shaped by a mixture of macro-factors (for example, state policy, economic conditions, media relations with other actors or international relations (see Gavin and Marshal 2011b; Carvalho and Burgess 2005; Lewis and Boyce 2009; Trumbo and Shanahan 2000) and micro-factors (think of journalistic norms of balance or novelty (see Boykoff and Boykoff 2004; Boykoff and Boykoff 2007; Carvalho 2007)). Russia represents a useful case for studying both types of

factors. Firstly, Russia is one of the largest GHG emitters in the world (UNFCCC 2014), thus, it often becomes a key player during international negotiations on climate change (Afionis and Chatzopoulos 2010; Andonova 2008). Secondly, for several years Russia has occupied a rather questionable position in the climate discussion – seeking to gain political and/or economic benefits at the international level and at the same time ignoring the problem at the domestic level (Henry and Douhovnikoff 2008; Korppoo and Vatansever 2012). Thirdly, due to the way the Russian media system operates (Azhgikhina 2007; Mickiewicz 2008), it has been argued that Russian traditional mass media tend to either re-create the existing political discourse on the problem – by questioning or supporting climate change mitigation or adaption policy depending on where the Russian official position lies – or to simply underrepresent the topic by not writing about it (Poberezhskaya 2014).

With the development and popularisation of internet and new media, we can witness the emergence of a new platform which is available to civil society and independent media to raise the discussion to the next level by openly debating all aspects of the climate change problem (Boykoff 2013; Freelon 2013). Hestres (2014) argues that in the United States 'internet-mediated advocacy organisations' already influence climate change related policies. Also, as Koteyko et al. (2013) observe, online comments allows us to understand readers' own interpretations of climate change issues rather than just the elites' views of the problem. In other words, it can be argued that the internet has been more widely used for climate change debates. As will be discussed in more detail below, this optimistic vision of new media has to be taken with a pinch of scepticism. As Morozov (2012) notices in his critic of 'cyber-utopianism' the internet cannot only promote positive (democratic) processes, it can also promote processes which prevent democratic developments. In the case of climate change, this statement could be interpreted in a sense that new media and the internet do not only provide opportunities for environmental activists to promote their agenda, but also for climate sceptics or deniers to openly communicate their positions.

This essay provides an overview of how climate change is addressed within Russian-language social media.[1] My aim is to establish whether new media can claim amore powerful and decisive role in framing climate change in Russia than their offline pendants have. In particular, this essay investigates how climate change is presented in two types of social media – online blogs and Twitter. It concludes with a discussion on how new media, though providing a new platform for the promotion of climate change mitigation, still lacks the power to promote climate change coverage to the next level.

The Internet in Russia: new form or new content?

In the last decade, Russia has witnessed an extremely rapid growth of internet penetration (up to 1,826 percent in ten years (Oates 2013: 6)). According to the Public Opinion Foundation [*Fond 'Obshchestvennoe mnenie'*], in 2007 only nine percent of their respondents were using the internet as their primary source of information, however, in five years this figure in-

---

[1] Due to obvious reasons with regard to some social media and networks, it is difficult to identify the exact location of the user. In this case all Russian language sources were considered.

creased to 22 percent (FOM 2013). Interestingly enough, at the time when the internet was still relatively unpopular in Russia, it was accompanied by high hopes with regards to its role in developing and sustaining freedom of speech in Russia (Vinogradov 2006; Yushchenko 2007). This 'cyber-optimism' (Oates 2013) was based on the internet's capabilities for open discussions and the absence of state control. However, over time it has become more apparent that the internet's role, and its degree of freedom, has been exaggerated and it is 'not yet breaking down well-established patterns of power' (Fossato et al. 2008: 53). Furthermore, from the early 2010s onwards experts have begun to observe how the Russian government has started to treat the internet and new media more seriously. The Russian government has, to some extent, transferred the ways it works with traditional media to the new media realm. As a result, on the one hand, Russian officials have followed the global trend of using the internet to promote a more democratic society (Misnikov2012; Renz and Sullivan 2013a, 2013b). But on the other hand, Strukov (2012: 111) introduces the term 'networked Putinism' to describe the use of new media by Putin's regime in order to manage the democratic process in Russia. It is argued that because RuNet[2] becomes a successful tool of political manipulation, it loses public trust as a potential platform for public discussion (Schmidt and Teubener 2009 in Panchenko 2011: 113). As Oates and McCormack (2010: 133) note, 'Russia is shaping the internet, rather than Russian society being shaped by the internet'.

Twitter

Twitter, founded in 2006, now hosts '241 million monthly active users' who send 500 million messages or 'tweets' daily (Twitter official website 2014). Due to its structural nature (only 140 characters can be posted by a user at one time), Twitter does not allow for the extensive analysis of public discussion, but it does allow us to see user stances on certain issues. For this research project, 595 tweets were collected, which include all Russian language posts that mentioned 'climate change' [*izmenenie klimata*] and which were published by users from 21 December 2013 to 21 February 2014.[3] Pearce et al. (2013) in their study on Twitter and the way its users reacted to the latest Intergovernmental Panel on Climate Change (IPCC) report identified three Twitter communities – 'climate critics, climate convinced and climate neutral tweeters'. Following this same logic, the tweets collected for this project were also analysed based on whether the authors question or accept the existence of climate change or just share neutral information about it.

The results showed that out of 592 tweets – 532 could be referred to as being in the 'climate convinced' category whilst 59 posts did not express any position and only one post was clearly climate sceptical (in addition, three posts were irrelevant and only mentioned climate change in a different context). The one 'sceptical' post, which blamed climatologists for deception, stated: 'untruthful ecologists change the term 'global warming' to 'climate change' when it was found that there is no such thing as global warming' (iwmaster 30.12.2013).

---

[2] Russian language internet (see more on RuNet in Schmidt and Teubener 2006)
[3] The timeframe was selected randomly without attachment to any climate change event at either the national or international level (which could influence the results).

'Neutral tweets' mostly provided information on climate change without any negative or positive characterisation of the phenomenon. It was noticed that 45 tweets contained links to various reports, presentations or student papers on the topic which could lead us to conclude that the topic is relatively popular among Russian students (or their teachers and/or curricula). However, this is a highly speculative conclusion which needs much greater investigation.

The largest category of 'climate convinced' tweets provided a large range of topics. Firstly, 197 tweets (almost one third of all posts) were devoted to the negative consequences of climate change. It should be noted that due to the nature of Twitter, various users often publish (re-tweet) identical messages. This allows us to identify the popularity of certain topics (often users re-tweet articles that have appeared in traditional media). For instance, information on how climate change negatively affects people's health, causes melting of Greenland's ice sheet, and threatens deer and snail populations, appeared 6-8 times within the studied period, whilst 11, 15 and 18 users re-published information (respectively) on how climate change causes outbreaks of ticks in Russian forests, leads to significant economic losses and increases in food prices. Interestingly, 31 users re-tweeted information and links to articles on how climate change (though not anthropogenic) was a reason for the disappearance of the Indus Valley Civilisation. The most popular post in this sub-category of climate change's negative consequences stated that 'annually, climate change kills thousands of penguin chicks' (Riascience 29.01.2014). This concern with the catastrophic outcome of climate change is understandable: as has been argued, people are more likely to react to climate change if it is perceived as something directly affecting their lives (Howard-Williams 2009; McManus 2000). Similarly, it could explain users' high interest in the negative effects of climate change on various life-forms, especially if they relate to popular animals such as deer, penguins, polar bears, panda bears and so on. Arguably, in this way people 'objectify' the abstract concept of climate change by making it more visual and once again more relatable (Hoijer 2010).

A second interesting observation in the 'climate convinced' category is that 102 tweets (the second most popular topic within the studied data) stated that the 'sun has almost no effect on climate change' (e.g. indecentia 22.12.2013). This finding, published in an article authored by American scientists in *Nature Geoscience* and re-published by a number of Russian media outlets, states that whilst the sun is claimed to be a negligible factor in climate change, volcano eruptions were the main reason for modifications in Earth's climate until the nineteenth century, and from the twentieth century this 'championship' was passed to GHG emissions (Gazeta.ru 2013). It is important to consider that the article confirms the anthropogenic character of climate change in the twentieth century (and beyond) (The Royal Society 2010). It thus dismisses a popular belief in the 'normality' of global warming – a conviction which plays down human responsibility for the environmental crisis and helps postpone agreements on climate change mitigation policy (Bell 1994; Carvalho 2007). This case can serve as an example of traditional media discourse's relocation to the social media.[4]

Lastly, one of the most surprising findings in this snapshot concerns the popularity of American officials. For instance, 37 users re-tweeted Barak Obama's statement that 'climate

---

[4] This example has to be taken with caution since such media outlets as Gazeta.ru or Lenta.ru are not 'clear cut', in a sense into which category they fall – traditional or new media.

change is an indisputable fact' and 104 tweets (the most popular post within the studied sample) quoted US Secretary of State John Kerry's statement that climate change is comparable to weapons of mass destruction. Does this suggest that American authorities are seen as more trustworthy on this subject matter? Does it mean that the 'users' were shocked that even the USA which has a relatively sceptical population admits the seriousness of climate change? Once again due to the limited length of Twitter posts, this remains unclear. It is worth noting that Russian officials were only mentioned twice and in both cases in a negative way. In the first case, references were made to 'Putin's supporters' who will soon be 'living on palm trees' (Sergey_Sergey_G 25.12.2013); in the second case, the user raised the question 'it is already thundering [meaning that we are already suffering from climate change consequences – MP] but why does the state ignore climate change'? (David_Webb 18.01.2014). As has been mentioned beforehand, Russian climate change politics are indeed quite ambiguous, passive and sometimes even contradictory. But this kind of open criticism (or at least an attempt at criticising) is quite unique for climate change discourse in Russia (Poberezhskaya 2014).

Overall, this analysis of Twitter has demonstrated that a majority of posts belong to the 'climate convinced' category. These observations can be explained by the types of users that Twitter attracts. For example, this social network on average attracts younger, more well-educated and, relatively speaking, more politically engaged audiences (than those of traditional media) (Oates 2013). In this case Twitter is used in order to create awareness of climate change as well as to highlight its negative outcomes. The influence of Twitter should not be overestimated. The cumulative audience of these posts is most likely to be far smaller than the audience of the majority of traditional media (based on the number of users' followers and the circulation of Russian newspapers).

Blogging on climate change

Blogs present useful data for the analysis of climate change communication. Koteyko (2010: 657) – who is one of the first researchers exploring this type of social media with regards to climate change – argues that:

> blogs are arguably one of the best media to study the 'dramatic dimensions' (Cobb and Elder 1983) of the climate change issue like ethics, morality and uncertainty, as online debates can show how different actors attempt to redefine existing solutions to the problem or point out that the solutions do not work.

It has been observed that Russia possesses one of the 'world's most engaged social networking audiences?' (Alexanyan 2009: 6). In this observation of Russian language blogging on climate change, I have looked only at the most popular blogging platform – LiveJournal (Fossato et al. 2008; Web Index report 2013). As in the case of Twitter, the same timeframe and keywords were used.

Overall, 62 blog entries were identified. Following the same methodological steps as in the previous section, all entries were again divided into 'climate convinced', 'climate neutral'

and 'climate sceptic' categories. Unlike in the case of Twitter, only 30 entries (just under 50 percent) belonged to the 'climate convinced' category. Out of them only 15 were fully devoted to climate change, whilst another 15 only mentioned climate change among other topics. Similar to Twitter content, the majority of entries (18) were devoted to the negative consequences of climate change, including the disappearance of certain types of fish and birds, changes in the Great Barrier Reef, depletion of freshwater resources and ice melting. Several blog entries were dedicated to security issues including three bloggers re-posting John Kerry's statement on climate change as being similar to 'weapons of mass destruction' (the same event which was so popular in Twitter coverage), an entry devoted to the US army and how it has 'started' a war against its own climatologists who support the theory of anthropogenic climate change (zbaza 8.02.2014), and finally, an entry on a potential 'climate war' which may emerge as a logical consequence of resource scarcities (gornomari 17.02.2014).One blog entry which redirects readers to an article by a British scholar on climate politics in which the Russian position and behaviour are carefully scrutinised (russiancouncil 3.02.2014).

Lastly, I would like to note that there were also three blog entries which contained slightly positive messages with regards to climate change mitigation steps. One of them provided a description of a technology which allows people to improve insulation in their houses – a device which, as the author states, will contribute to the fight against climate change (mimohod 8.01.2014). Two other entries were dedicated to the Sochi Olympic Games. Both entries underlined the statement that the Sochi Olympics were announced as one of the 'greenest' and carbon neutral games in the history of the Olympic movement. One entry confirms the desire of the Russian government to offset the Games' emissions) (clicr 24.12.2013). The second entry discusses the Russian NGO 'Russia Carbon Fund' [*Fond "Russkii Uglerod"*], which has organised an exhibition of art objects made out of recycled waste (clicr 12.02.2014). The same exhibition provided visitors to the Games with a chance to calculate their 'carbon footprint': in order to 'cover' it the visitor could have donated money for recovering Russian forests.

A majority of the blog entries in the 'neutral' category (16 out of 23) just mention climate change within the description of movie or film plots, as a natural reason for the disappearance of mammoths or some ancient civilisations in the past. Interestingly, several blog entries in this category (which can be considered very close to the climate sceptic position) outlined potential positive consequences of climate change for Russia (economic benefits from Arctic development and increased agricultural production).

The 'sceptic' category included posts which either denied climate change's existence or openly questioned its anthropogenic character. Two tendencies were noticed within this group of blogs. From one side, the posts tried to debunk the 'myth' of anthropogenic climate change which is most likely not happening at all (even Pushkin noticed in his poems very warm winters, hence anomalous weather is quite natural (klausnick 4.01.2014)) and from another side, they uncover the conspiracies behind this 'plot'. One author explains in a very lengthy piece how climate change is a result of the changes in the Gulf Stream and how the US – whilst stimulating the myth of GHG emissions' influence on climate change – is hiding the real ('catastrophic') state of the climate and is urgently trying to prepare its country for environmental collapse (beriozka_rus 16.01.2014). Another entry (whose tone is quite close

to that of racist propaganda) states that anthropogenic climate change is one of the many lies 'poured upon us' by 'the Jewish rulers of the world' (ponchik_k 9.02.2014).

Image 1. Installation at the 'Russian Carbon Fund' eco art objects exhibition, Sochi Olympic Park 2014.

Source: http://clicr.livejournal.com/149278.html (accessed 22 February 2014).

Overall, these observations demonstrated that blogs provide a lot of material for climate change communication studies. As Athique (2013: 203) rightfully notes, 'blogs tend to favour a more extreme polarization of viewpoints, since they lack the formal centralizing mechanism established by traditional media controls (the "professional tones of objectivity")'. Hence the content of the blogs is much more diverse than those in traditional media. Also, in comparison to Twitter the studied blogs were much more sceptical towards climate change problems – more often questioning its anthropogenic nature or discussing only the positive sides of the issue. For future studies, it would be beneficial to not only look at the range of various blogging platforms and extend the timeframe, but to also add a quantitative and qualitative analysis of blog comments[5] – an online text type that was omitted in this snapshot of climate change representation in social media. Perhaps blog entries are by nature more controversial and produce greater and more heated discussion. At the same time it can

---

[5] One of the approaches which could be used here is the scholarly technique of issue mapping (http://www. issuemapping.net).

also be beneficial to look at the restrictions that the bloggers and Twitter users experience or impose upon themselves through self-censorship (Marwick and boyd 2011) – a common online practice which calls into question the idea of the new media as a censorship-free zone.

Concluding remarks

In their study on the political economy of mass media, Herman and Chomsky (2002) acknowledge that the internet can provide a better representation for civil society by breaking through the elite-dominated traditional media realm. At the same time the authors conclude that it is very unlikely that the internet will bring significant changes in the way media operate within market driven (or, in the Russian case, state-centralised) economies. Neil Gavin (2009: 130) states that, 'for British citizens to make effective use of the web, they need to be a good deal more connected, interested, persistent, and "web-savvy" than they actually are. Consequently, its influence on climate change politics may still only be marginal'. Having said this, Gavin (2010) admits that the internet provides an open space for a diverse range of opinions and unlimited space for information on the topic. Indeed, the above analysis of LiveJournal blog content demonstrates that the published posts proposed a great range of opinions and messages – starting with practical advice on how to make your own contribution to the fight against climate change, and ending with anti-America discussions. On the other hand, as Gavin and Marshall (2011a) have argued, the internet often duplicates conventional media messages without bringing anything authentic to climate change discourse. The observations of this study compel us to conclude that (especially in the case of Twitter) the lion's share of the material studied consisted either of copied messages produced by the traditional media or of plain links to traditional media websites.

Another issue which has to be considered when studying climate change communication through social media is the type of media outlet approached. Freelon (2013: 5) argues that, in social media, the 'discourse architecture influences' the content of these communicative tools. Whether 'users can pre-select desired content, the amount of text they are allowed to enter per post, the presence of "reply" features, and the ability to filter or report offensive behaviour' can stir the quality and quantity of comments produced. Indeed, as the analysis of Twitter discourse illustrates, the nature of this social media outlet restricts the possibility for interpretation. Even the proposed classification of 'climate sceptic', 'climate neutral' or 'climate convinced' groups based on the limited information of 140 characters can be contested.

At the same time the role that social media play in climate discourse should not be dismissed or underestimated. As Athique (2013: 201) states, 'a significant number of bloggers are using the platform to offer political comments and to share their own views on news and current events'. Athique's claim holds true for Russia no less than for other countries: we cannot disregard that Russian bloggers' political views and interests are tangibly more independent and critical than those of offline consumers of traditional media (Etling et al. 2010). In the case of climate change, the internet and various social platforms allow environmental NGOs to express disagreements with 'traditional media' products and propose their own vision of events. Exemplary for this trend is the reception of the documentary 'The History of a

Certain Lie, or Global Warming' [*Istoriia Odnogo Obmana, ili Global'noe Poteplenie*], which was broadcasted by Channel One in 2009 and which debunked the 'myth' of climate change. Greenpeace Russia and the WWF-Russia immediately reacted and published online video responses and articles in which they explained how the documentary was misleading (Greenpeace 2009; Ecoloungetv 2009).

Admittedly, the opinions of internet users cannot simply be equated to public opinion, but social media do allow us to understand the 'trending' topics.[6] They provide some possible answers to the question how people process the information on climate change – whether this is the concern about dying penguin chicks or disbelief in the anthropogenic character of climate change and belief in its conspiratorial nature. As has been argued, 'contemporary social network sites [have] the capacity to integrate online social networks with those formed in the physical context of everyday life' (Athique 2013: 103). In this sense it is important to understand that people who write in social media about climate change and those who read this information are often already committed to the issues. According to Hestres (2014: 237), for instance, US internet-mediated advocacy organisations often reach groups through their online campaign that are already alarmed. In this sense this online activity could be called 'preaching to the choir'; however, as Hestres' study demonstrates, it nevertheless manages to become an important component in 'a full-blown social movement to tackle climate change'. In this case the internet has helped 'turn members of the climate issue public into committed, long-term activists' (ibid). The same logic could be applied to the climate-sceptic community, however: by questioning climate change, these users will continue to search for and read information which subsequently cements their view.

Overall, we can conclude that the role that the social media examined in this essay play in climate change communication is quite questionable. Whilst providing a platform for a vast range of topics, they often duplicate the climate discourse that already exists in traditional media.[7] However, social media do offer both climate activists and climate sceptics a chance to raise their concerns. They also allow scholars, policy makers and environmental activists to see which aspects of this problem become less or more popular, how to attract the attention of the online (and perhaps the offline) community. In short, it is apparent that this topic requires further substantial studies.

References

Afionis, Stavros, and Ioannis Chatzopoulos (2010). 'Russia's Role in UNFCCC Negotiations Since the Exit of the United States in 2001'. *International Environmental Agreements-Politics Law and Economics*, 10: 45-63.
Alexanyan, Karina (2009). 'Social Networking on Runet: The View from a Moving Train'. *Digital Icons: Studies in Russian, Eurasian and Central European New Media*, 1 (2): 1-

---

[6] However, given the relatively small penetration of Twitter and LJ and the social profile of their users, these topics could only be trending in specific social groups.
[7] In this case the references were made to Russian mass media.

12.   http://www.digitalicons.org/wp-content/uploads/2009/11/Karina-Alexanyan-DI-2.1.
pdf (accessed 5 February 2014).

Andonova, Liliana (2008). 'The Climate Regime and Domestic Politics: the Case of Russia'.
Cambridge Review of International Affairs, 21: 483-504.

Athique, Adrian (2013). *Digital Media and Society: an Introduction*. Cambridge: Polity.

Azhgikhina, Nadezhda (2007). 'The Struggle for Press Freedom in Russia: Reflections of a
Russian Journalist'. *Europe-Asia Studies*, 59 (8): 1245-1262.

Bell, Allan (1994). 'Climates of Opinion: Public and Media Discourse on the Global Envi-
ronment'. *Discourse and Society*, 5 (1): 33–64.

beriozka_rus (2014, 16 January). 'Klimat i geopolitika (chast' 2)' / 'Climate and Geopolitics
(part 2)', *LiveJournal*. http://beriozka-rus.livejournal.com/294268.html (accessed 21 Feb-
ruary 2014).

Boykoff, Maxwell (2011). *Who Speaks for the Climate? Making Sense of Media Reporting
on Climate Change*. Cambridge: Cambridge University Press.

Boykoff, Maxwell (2013). 'Public Enemy No. 1?: Understanding Media Representations of
Outlier Views on Climate Change'. *American Behavioral Scientist*, 57 (6): 796–817.

Boykoff, Maxwell and Jules Boykoff (2004). 'Balance as Bias: Global Warming and the US
Prestige Press'. *Global Environmental Change*, 14: 125–136.

Boykoff, Maxwell and Jules Boykoff (2007). 'Climate Change and Journalistic Norms: A
Case-study of US Mass Media Coverage'. *Geoforum*: 1190-1204.

Carvalho, Anabela (2007). 'Ideological Cultures and Media Discourses on Scientific
Knowledge: Re-Reading News on Climate Change'. *Public Understanding of Science*,
16: 223–243.

Carvalho, Anabela and JacquelinBurgess (2005). 'Cultural Circuits of Climate Change in UK
Broadsheet Newspapers, 1985-2003'. *Risk Analysis*, 25 (6): 1457-1469.

clicr (2013, 24 December). 'Rossiiskie uchenye k fevralyu otsenyat "uglerodnyi sled"
Olimpiiskikh igr' / Russian Scientists will estimate "carbon footprint" of the Olympics
Games by February", *LiveJournal*. http://clicr.livejournal.com/142122.html (accessed 22
February 2014).

clicr (2014, 12 February). 'Fond "Russkii Uglerod" predstavliaet na olimpiade vystavku eko
iskusstva' / 'Fund "Russian carbon" Presents Eco Exhibition at the Olympics', *LiveJour-
nal*. http://clicr.livejournal.com/149278.html (accessed 22 February 2014).

David_Webb [David Oreshok] (2014, 18 January). Twitter. https://twitter.com/David_Webb/
statuses/424730751985147904 (accessed 21 February 2014).

Ecoloungetv (2009). 'O fil'me 'Istoriia odnogo obmana' spetsial'no dlia proekta
Ecolounge/About the Film 'The History of a Certain Lie' Especially for the Ecolounge
Project'. [video online], *Youtube*. http://www.youtube.com/watch?v=vyFZVhwiCs0 (ac-
cessed 3 March 2014).

Ereaut, Gill and Nat Segnit (2006). 'Warm Words: How Are We Telling the Climate Story
and Can We Tell It Better?' *Institute for Public Research*. www.ippr.org (accessed 11
November 2009).

Etling, Bruce, Karina Alexanyan, John Kelly, Rob Faris, John Palfrey and Urs Gasser (2010). 'Public Discourse in the Russian Blogosphere: Mapping RuNet Politics and Mobilization'. *BerkmanCenter Research Publication,* No. 2010-11, October 19: 1-46.

FOM (2007). 'SMI: Predpochitaemye kanaly informatsii/Mass Media: Preferable Channels of Information'. http://bd.fom.ru/report/cat/smi/smi_rei/d073121 (accessed 15 June 2010).

FOM (2013). 'Istochniki informatsii i telepredpochteniia rossiian/Sources of Information and TV Preferences of Russians'. http://soc.fom.ru/obshchestvo/10938 (accessed 2 October 2013).

Fossato, Floriana, John Lloyd and Alexander Verkhovsky (2008). *The Web That Failed: How Opposition Politics and Independent Initiatives Are Failing on the Internet in Russia.* Oxford: Reuters Institute for the Study of Journalism.

Freelon, Deen (2013). 'Discourse Architecture, Ideology, and Democratic Norms in online political discussion'. *New Media &Society: 1-20,* doi: 10.1177/1461444813513259 (accessed 10 March 2014).

Gavin, Neil (2009). 'The Web and Climate Change Politics', in *Climate Change and the Media,* edited by Tammy Boyce and Justin Lewis. New York: Peter Lang Publishing, 129-142.

Gavin, Neil (2010). 'Pressure Group Direct Action on Climate Change: The Role of the Media and the Web in Britain – A Case Study'. *The British Journal of Politics and International Relations*, 12: 459-475.

Gavin, Neil and Tom Marshall (2011a). 'Climate Change and International Protest at Copenhagen.Reflections on British Television and the Web', in *Transnational Protests and the Media*, edited by Simon Cottle and Libby Lester. New York: Peter Lang, 197-209.

Gavin, Neil and Tom Marshall (2011b). 'Mediated Climate Change in Britain: Scepticism on the Web and on Television around Copenhagen'. *Global Environmental Change*, 21 (1): 1035–1044.

Gazeta.ru (2013, 23 December). 'Solntsepochti ne vliiaet na izmenenie klimata/Sun Practically does not Influence Climate Change]'. http://www.gazeta.ru/science/news/2013/12/22/n_5835877.shtml?utm_source=dlvr.it&utm_medium=twitter (accessed 26 February 2014).

gornomari (2014, 17 February). 'V ozhidanii shoka. Bor'ba za prirodnye resursy' / 'Expecting a miracle. Fight for Natural Resources', *LiveJournal*. http://gornomari.livejournal.com/686542.html (accessed 21 February 2014).

Greenpeace (2009). *'Global'noe naduvatel'stvo na pervom/Global Swindle on the First Channel'.* http://www.greenpeace.org/russia/ru/news/3972797 (accessed 4 November 2009).

Hansen, Anders (2010). *Environment, Media and Communication.* London: Routledge.

Henry, Laura and Vladimir Douhovnikoff (2008). 'Environmental Issues in Russia'. *Annual Review of Environment and Resources*, 33: 437-460.

Herman, Edward and Noam Chomsky (2002). *Manufacturing Consent. The Political Economy of the Mass Media.With a New Introduction by the Authors*. New York: Pantheon Books.

Hestres, Luis (2014). 'Preaching to the Choir: Internet-mediated Advocacy, Issue Public Mobilization, and Climate Change'. *New Media &Society*, 16 (2): 323-339.

Hoijer, Berglez (2010). 'Emotional Anchoring and Objectification in Media Reporting on Climate Change'. *Public Understanding of Science*, 19 (6): 717–731.

Howard-Williams, Rowan (2009). 'Ideological Construction of Climate Change in Australian and New Zealand Newspapers', in *Climate Change and the Media,* edited by Tammy Boyce and Justin Lewis. New York: Peter Lang Publishing, 28–40.

indecentia [John Smith] (2013, 22 December). Twitter. https://twitter.com/indecentia/stat uses/414913720834215936 (accessed 21 February 2014).

Iwmaster [SDbrvS] (2013, 30 December). Twitter. https://twitter.com/iwmaster/statuses/ 417911867647229952 (accessed 21 February 2014).

klausnick (2014, 4 January). 'Na banal'nosti potianulo' / 'Banal themes', *LiveJournal*. http://klausnick.livejournal.com/1407718.html (accessed 21 February 2014).

Korppoo, Anna and Adnan Vatansever (2012). *A Climate Vision for Russia: From Rhetoric to Action.* Moscow: Carnegie Endowment for International Peace.

Koteyko, Nelya (2010). 'Mining the Internet for Linguistic and Social Data: An Analysis of "Carbon Compounds" in Web Feeds'. *Discourse and Society*, 21: 655-674.

Koteyko, Nelya, Rusi Jaspal and Brigitte Nerlich (2013). 'Climate Change and "Climategate" in Online Reader Comments: a Mixed Methods Study'. *The Geographical Journal*, 179 (1): 74-86.

Lewis, Justin and Tammy Boyce; eds (2009). *Climate Change and the Media*. New York: Peter Lang Publishing.

Marwick, Alice and danah boyd (2011). 'I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, and the Imagined Audience'. *New Media & Society*, 13 (1): 1-20.

McManus, Phil (2000). 'Beyond Kyoto? Media Representation of an Environmental Issue'. *Australian Geographical Studies*, 38 (3): 306-319.

Mickiewicz, Ellen (2008). *Television, Power, and the Public in Russia*. Cambridge: Cambridge University Press.

mimohod [Denis] (2014, 8 January). 'Rekuperator dlia ventiliatsii chastnogo doma' / 'Heat Recovery Ventilation for the House', *LiveJournal*. http://mimohod.livejournal.com/ 123189.html (accessed 21 February 2014).

Misnikov, Yuri (2012). 'How to Read and Treat Online Public Discussions among Ordinary Citizens Beyond Political Mobilisation'. *Digital Icons: Studies in Russian, Eurasian and Central European New Media*, 7: 1-37. http://www.digitalicons.org/issue07/files/ 2012/06/7.1_Misnikov.pdf (accessed 1 February 2014).

Morozov, Evgeny (2012). *The Net Delusion: The Dark Side of Internet Freedom.* London: Penguin Books.

Oates, Sarah (2013). *Revolution Stalled: the Political Limits of the Internet in the Post-Soviet Sphere*. Oxford: Oxford University Press.

Panchenko, Egor (2011). 'Integratsiia Internet-SMI I sotsial'nykh setei v Runete: novaya publichnaia sfera ili prostranstvo kontrolia? / Convergence of Internet News Media and Social Networks on Runet: A New Public Sphere or a Space of Control?' *Digital Icons:*

Studies in Russian, Eurasian and Central European New Media, 5: 87-118. http://www.digitalicons.org/issue05/files/2011/05/Panchenko-5.6.pdf (accessed 3 February 2014).

Pearce, Warren, Kim Holmberg, Iina Hellsten and Brigitte Nerlich (2013, December). 'Climate Change on Twitter: Topics, Communities and Conversations about the 2013 IPCC Report'. *Making Science Public*: working paper 1.

Poberezhskaya, Marianna (2014). 'Media Coverage of Climate Change in Russia: Governmental Bias and Climate Silence'. *Public Understanding of Scienc: 1-16,* doi: 10.1177/0963662513517848 (accessed 15 March 2014).

ponchik_k (2014, 9 February). 'I eto samoe strashnoe' / 'And This is the Scariest Thing', *LiveJournal*. http://ponchik-k.livejournal.com/1121547.html (accessed 21 February 2014).

Renz, Bettina and Jonathan Sullivan (2013a). 'Electronic Resources and the Study of Political Elites in Russia'. *Europe-Asia Studies*, 65 (10): 1898-1911.

Renz, Bettina and Jonathan Sullivan (2013b). 'Making a Connection in the Provinces? Russia's Tweeting Governors'. *East European Politics*, 29 (2): 135-151.

Riascience (2014, 29 January). Twitter. https://twitter.com/riascience/statuses/428697811203657728 (accessed 21 February 2014).

russiancouncil (2014, 3 February). 'Izmenenie klimata v global'noi politike: est' li perspektivy u novogo dogovora?' / 'Climate Change in Global Politics: is there any future for a new agreement?' *LiveJournal*. http://russiancouncil.livejournal.com/144985.html (accessed 21 February 2014).

Schmidt, Henrike and Katy Teubener (2006). '"Our RuNet"?: Cultural Identity and Media Usage' in *Control + Shift: Public and Private Uses of the Russian Internet*, edited by Henrike Schmidt, Katy Teubener and Natalja Konradova. Norderstedt: Books on Demand, 14-21.

Sergey_Sergey_G [Sergey Gantimurov] (2013, 25 December). Twitter. https://twitter.com/Sergey_Sergey_G/status/415896529971740672 (accessed 21 February 2014).

Smith, Joe (2005). 'Dangerous News: Media Decision Making about Climate Change Risk'. *Risk Analysis*, 25 (6): 1471-1482.

Strukov, Vlad (2012). 'Networked Putinism: the Fading Days of the (Broadcast) Era'. *Digital Icons: Studies in Russian, Eurasian and Central European New Media,* 7: 11-123. http://www.digitalicons.org/issue07/files/2012/06/7.5.1_Strukov.pdf (accessed 2 February 2014).

The Royal Society (2010). *Climate Change: a Summary of the Science*. London: The Royal Society.

Trumbo, Craig and James Shanahan (2000). 'Social Research on Climate Change: Where We Have Been, Where We are, and Where We Might Go'. *Public Understanding of Science*, 9: 199-204.

Twitter Company page (2014). https://about.twitter.com/company (accessed 5 March 2014).

UNFCCC (2014) 'Greenhouse Gas Inventory Data'. https://unfccc.int/ghg_data/items/3800.php (accessed 5 March 2014).

Vinogradov, Dmitry (2006). 'Russian Internet Remains an Island of Free Speech and Civil Society'. *Russian Analytical Digest*, 9: 12-15.

Web Index Report (2013). http://www.tns-global.ru/services/media/media-audience/internet/information/ (accessed 25 April 2014).

Yushchenko, M. A. (2007). 'Sredstva massovoi kommunikatsii kak mekhanizm formirovaniia vlast'iu obshchestvennogo soznaniia grazhdan / Mass Media as a Mechanism to Form Civic Public Opinion'. http://www.lib.tsu.ru/mminfo/000063105/305/image/305-067-070.pdf (accessed 12 January 2012).

zbaza (2014, 8 February). 'Armiia SSHA gotova borot'sia s naseleniem' / 'US Army prepared to fight against people', *LiveJournal*. http://zbaza.livejournal.com/254545.html (accessed 21 February 2014).

MARIANNA POBEREZHSKAYA is a Postdoctoral Lecturing Fellow at the University of East Anglia (School of Political, Social and International Studies). She received her PhD in Politics and International Relations from the University of Nottingham, UK. Before embarking on her doctoral studies, Marianna had the opportunity to study politics and media in Russia, the United States and the UK. Marianna's research interests include: political communication, green politics, climate change, the political economy of mass media, post-Soviet geopolitics, and communication of environmental risks. [M.Poberezhskaya@uea.ac.uk]