



Russian climate scepticism: an understudied case

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Abstract

In this paper, we consider climate scepticism in the Russian context. We are interested in whether this has been discussed within the social scientific literature and ask first whether there is a discernible climate sceptical discourse in Russia. We find that there is very little literature directly on this topic in either English or Russian and we seek to synthesise related literature to fill the gap. Secondly, we consider whether Russian climate scepticism has been shaped by the same factors as in the USA, exploring how scientists, the media, public opinion, the government and business shaped climate scepticism in Russia. Climate scepticism in the USA is understood as a ‘conservative countermovement’ that seeks to react against the perceived gains of the progressive environmental movement, but we argue that this is not an appropriate framework for understanding Russian climate scepticism. Articulated within a less agonistic environment and situated within an authoritarian regime, Russian expressions of climate scepticism balance the environmental, political and economic needs of the regime under the constraints of a strong ‘carbon culture’ and closed public debate.

Keywords Climate change · Environmental communication · Climate scepticism · Russia · United States

1 Introduction

Anthropogenic climate change (ACC) became a political issue in 1988, when James Hansen told Congress, ‘with 99 percent confidence’, that a long-term warming trend was occurring (Weart 2003). Very swiftly sceptical voices acted to challenge the legitimacy of ACC as a social problem, to avoid policy to address it and, if possible, to push it off the

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policy agenda altogether. This contestation was an important element of climate change politics in the USA (McCright and Dunlap 2000, 2003), ultimately influencing the decision of the White House not to ratify the Kyoto Protocol and withdraw from the Paris Agreement.

The period of US climate policy between 1988 and 1997 was formative in shaping how climate scepticism is studied and understood more widely, particularly in the Anglophone academic literature. In their literature review of environmental denial scholarship between 1990 and 2015, Bjørnberg et al. (2017: 234) found that despite efforts at a cross-national or general level approach,¹ ‘a majority of the articles have an Anglo-American perspective and focus on environmental and climate science denial in the US, UK, or Australia’. The authors note that ‘it remains to be investigated to what extent the findings of this literature can be extended to non-Anglo-American countries’ (Bjørnberg et al. 2017: 230).

In this paper, we extend consideration to Russian climate scepticism. We were interested in whether this has been discussed within the social scientific literature on climate scepticism and asked first whether there is a discernible climate sceptical discourse in Russia and second whether it has been shaped by the same factors as in the USA. We began with a literature review of climate scepticism in the USA and of wider scholarship on environmental denial and then sought out literature that tackled climate scepticism in Russia. However, we found a relative lack of literature directly studying Russian climate scepticism.

Our main finding was thus that Russian climate scepticism is an understudied case; there is little literature directly on this topic in either Russian or English. However, from the related literature, we were able to recognise the presence of a discernible climate sceptical narrative in Russia with many similarities to climate scepticism in the USA, but also much specificity and distinctness. Russian scepticism is not, as in many other nations, a reaction to a mature, developed environmental movement, with a vocal presence in public and media discourse: it is a manifestation of competing pressures on (and internal debates within) a closed elite. This means that approaches adopted to study climate scepticism in the USA, Australia and the UK, which draw heavily on social movement approaches, are often inappropriate in the Russian context. Many of the expectations about how climate scepticism will manifest and how it can be studied are therefore confounded when looking at Russia.

2 Conceptual and methodological considerations

Climate scepticism is understood within the scholarly literature as a concerted attempt to ‘reject, dispute, or question the mainstream/orthodox thesis’ of climate change (Van Rensburg 2015: 1). ‘Epistemic scepticism’, contrasted by Rahmstorf (2004) with response scepticism, queries whether ACC is happening (trend scepticism) whether it is human activity causing it (attribution scepticism), and whether ACC would really have the negative effects claimed (impact scepticism). These categorisations of epistemic scepticism have been used to identify claims and arguments being made by Russian climate sceptics and scepticism about policy mentioned when rooted in these epistemic arguments.

¹ Garrard et al. (2019) would be a notable example of cross-national effort.

Our research began with a short survey of the literature on US climate scepticism in the period 1988–1997 to understand the actors and forms of climate sceptical argument identified. This review recognised five factors that shaped the particular structure of the climate denial movement in the USA, which has been understood in the literature as part of a wider environmental denial movement (McCright and Dunlap 2000; 2003; Bjørnberg et al. 2017; Jacques 2006; 2009). The denial movement in the US relied on:

1. Sceptical scientists willing to challenge global orthodoxy on climate science and organised through a knowledge-production network of conservative think tanks (CTTs);
2. The publication of climate sceptics' views in the print and broadcast media (often due to journalistic commitment to balanced reporting, which overrepresents minority views of climate science);
3. The weakening of public concern (through undermining environmental NGOs and grassroots arguments);
4. A conservative anti-interventionist Republican party reluctant to create environmental policy and
5. The interests and funding of fossil fuel businesses and other industry actors supporting these efforts.

This suggested five factors were key to the success of climate scepticism in the USA and largely agreed with Bjørnberg et al. (2017)'s answer to the question 'Who denies?' in their literature review of Anglophone environmental denial scholarship, 1990–2015. This paper identified six key actors important within environmental denial: scientists, the media, the public, governments, business and political/religious organisations. Finding little scholarship on religious responses to climate change in Russia, we combined the categories of government and political organisations into one category in this paper and used the five categories identified to provide a structure for approaching Russian climate scepticism.

We identified work engaging with Russian climate change in each category and compared Russian climate scepticism with that of the USA and the wider literature on climate scepticism to identify similarities and differences. It was intended that this paper would provide a systematic review (Klöck and Nunn 2019; Schäfer and Schlichting 2014) of the literature on Russian climate scepticism in both Russian and English languages. We conducted a comprehensive search via databases IS Web of Science, JSTOR and Scopus, using keywords 'climat* chang*' or 'global warming' and 'Russia' (including both English and Russian variations) and identified 127 sources that dealt in some way with climate scepticism. However, we found that only four were addressing climate change directly as the main topic of the paper (Poberezhskaya 2018a; Tynkkynen and Tynkkynen 2018; Yagodin 2021; Kokorin 2017). We therefore extended our search more widely, snowballing from papers already identified to find as much comment and context as possible. We also drew on Russian language grey literature to augment areas of meagre coverage and to deepen our understanding. This methodological approach is not without its limitations (Agin and Karlsson 2021) as there is a possibility that some literature has been missed; however, the relative lack of direct research on this topic makes it even more important to synthesise and develop what is currently understood about Russian climate scepticism.

3 Science in Russian climate change policy debates

As in the USA, scientists in Russia have been an important factor in giving credibility to political and economic arguments against ratification of the Kyoto Protocol by rejecting the science of climate change. In the USA, diverse actors came together to create ‘a powerful countermovement [that] effectively challenged the environmental community’s definition of global warming as a social problem and blocked the passage of any significant climate policy’ (McCright and Dunlap 2003: 348). By the 1990s, ‘the scientific debate became enmeshed in political struggles’ (Lichter and Lichter 1992: 2) and sceptical scientists like Fred Singer, Frederick Seitz and William Nierenberg played important roles in legitimating political narratives of inaction. Each scientist was a trained physicist, had a history of working closely with the state on military projects and had worked with businesses and CTTs to legitimate industry positions on a range of policy issues in the past. They had been instrumental in resisting industry regulation on public health and environmental issues like Tobacco smoking, DDT and Ozone Depletion (Oreskes and Conway 2010). Along with other sceptical scientists they mobilised to ‘define—or, more accurately, *re-define*—global warming as non-problematic’ (McCright and Dunlap 2003: 349) and provided legitimation for the rejection of the FCCC and Kyoto Protocol.

In Russia, the collapse of the USSR had already reduced greenhouse gas (GHG) emissions to target levels, so there was little to lose through ratification of the Kyoto Protocol and plenty to gain, both politically and financially. However, there were also hopes that ACC would bring agricultural benefits to Russia and make the Arctic regions and Northern Sea Routes more hospitable and navigable. Hopes of positive impacts, though falling into the category of impact scepticism, were not *prima facie* unreasonable or politically motivated, but would prove scientifically unsustainable (Wilson Rowe 2013).² Nevertheless, the Russian context in the early 1990s was characterised by less urgency than in other nations because the costs of cutting emissions, but also the estimations of harm from ACC were both relatively low.

Those opposing ratification argued that the Kyoto Protocol would threaten Russian economic growth and that its ecological credentials would be questionable without US participation (Korppoo et al. 2015). As in the USA, some scientists backed up the policy sceptical argument with epistemic scepticism, embracing trend and attribution to supplement widespread impact scepticism. One such scientist was Khabibullo Abdusamatov, an astrophysicist and head of the Space research laboratory at Pulkovo Observatory. He contributed both attribution scepticism (famously claiming the Earth’s climate is mostly impacted by solar radiation and is, in fact, moving into a new ice-age) and trend scepticism (arguing that the Kyoto Protocol needed ‘to be delayed by at least 150 years’) (Abdusamatov 2009). Other scientists, such as atmospheric physicist Kirill Kondratyev, criticised climate modelling as a methodology and actively attempted to debunk the ‘climate change myth’ as a plot of the ‘climate mafia’ (Gerasimov 2002). Yuri Izrael, perhaps the most important climate

² Some Northern territories would, for example, see increases in agricultural yield due to temperature rises, but losses in the more agriculturally important Southern territories would erode any gains (Shkiperova et al. 2015). Temperature rises might well have positive impacts on living conditions in some parts of Russia, but increases in extreme weather events throughout the country (e.g. heatwaves, cold snaps, floods and droughts) would outweigh any benefit overall (Kislyak et al. 2019; Leppänen et al. 2017; Zolotokrylin et al. 2018). Additionally, temperature increases are happening 2.5 times faster in Russia than globally and threatening physical infrastructure through melting permafrost (Rosgidromet 2017).

sceptical scientist in Russia, was a prominent Soviet era physicist with a distinguished multi-disciplinary career. He held prominent positions at World Climate Conferences, the IPCC and the Russian Academy of Sciences, but was a staunch critic of the IPCC's findings, advocating attribution scepticism and declaring his opposition to the Kyoto Protocol on scientific grounds. His role at the Russian Academy of Sciences led, in 2001, to a two-page memorandum claiming 'a high level of uncertainty as to whether the rise in temperature ... was in fact due to human activity' (Schiermeier and MacWilliams 2004: 13). In the early 2000s, he became a policy advisor to Putin, ensuring his views continued to have a political impact.

After the ratification of the Kyoto protocol by Russia in 2004, public debate on ACC moved away from denial, but a discernible 'causal agnosticism' about ACC persisted in public debate, making 'scientific knowledge ... part of the theatre of policy debate without being [a] decisive factor' (Wilson Rowe 2012: 26). Rather than reliance on trend, attribution or impact scepticism, doubts were voiced about the fairness of the climate change regime, which did not properly consider Russian forests' capacity to absorb carbon (Korppoo et al. 2015). After 2009 scientists' comment mostly moved away from ACC denial (e.g. Porfir'ev et al. 2011), coinciding with a period of political acceptance of climate change knowledge in Russia, but Wilson Rowe (2012) argues that this had more to do with political and economic positioning than with the science. Thus, Russian sceptical scientists were key to the early manifestations of scepticism between 1988 and 2004, but became much less important during Medvedev's pro-climate policy presidency (2008–2012) and during Putin's presidency (2012–present), when the position was more ambiguous. Yagodin (2021: 65) found that in 2017/18 when the country had signed the Paris Agreement, but not ratified it, journalists most often drew for their scientific information on established 'denialists who function in the national-level media debate mostly as science popularizers'.³

It is significant to note that an important difference between Russian climate scepticism and the US is the lack of CTTs, which 'have long been recognized as the crucial organizational base of the [US] conservative movement' (Dunlap and Jacques 2013: 701). Developed as a response to previous environmental policy debates, they have offered ideologically vetted comment on scientific issues for several decades and been 'treated by media as credible sources of objective information... achiev[ing in the US] the status of an "alternative academia"' (Dunlap and Jacques 2013: 701). In the 1990s, CTTs were peculiar to the 'culture wars' of the USA, providing an established network that could be quickly mobilised in response to the threat of climate change policy, but there was no equivalent network in Russia. Attempts at creating CTTs in the UK and western Europe have since been attempted, but such organisations are not particularly suited to the Russian context where state and business are very closely connected; with state involvement in key businesses, the importance of a mediating organisation with perceived independence in the eyes of the voter is superfluous.

³ An example of a science populariser would be geologist/oceanographer Aleksandr Gorodnitsky. Despite limited credentials as climatologists, such figures enjoy 'structural positioning within media institutions that favour and re-use certain climate denial arguments during sensitive periods of policymaking' (Yagodin 2021:74).

Despite this difference, notable Russian sceptical scientists share some general characteristics with sceptical US scientists, of whom ‘many...have been physicists, rather than climate scientists...[and] can also be found among older members of two communities of atmospheric scientists, namely theoretical and empirical meteorologists’ (Björnberg et al. 2017: 235). Porfir’ev et al. (2011), themselves Russian climatologists, writing about climate sceptics argue that they normally belong to the older generation who are not following the latest developments in climate science and often do not specialise in climate. They note that their discipline has (like many others) been negatively affected by the turbulent years after the USSR collapsed.

Another similarity between US and Russian sceptical scientists is a cynicism as to the scientific value of computing and General Circulation Models (GCMs) as a way of studying climate. In the USA, the rise of scientific approaches that drew heavily on GCMs, left behind empirical meteorological researchers not trained in the new methodologies, which according to Lahsen (2013) created patterns of prestige and marginalisation that left fault lines within the scientific community. These explain why some branches of science have embraced, and others derided, GCM-based approaches to climate and weather in the USA. However, in Russia, the fault line is less acute between empirical and GCM-based approaches, because there was no comparable GCM research in Russia until the early 2000s. This means that there is a less abrupt fracture, but also that a different evidence for climate change is privileged in Russia.

There is little direct scholarship on scientists’ attitudes to climate change in Russia, but this is potentially an important area of study. Dronin and Bychkova’s (2018: 2102) small scale qualitative study of high-profile environmental scientists’ attitudes in the USA and Russia found that doubt and scepticism regarding ‘the validity of modelling as a tool for scientific investigation’ was higher in their Russian interviewees. They also find that US scientists viewed ‘ozone depletion and global warming... to be significantly more researched and scientifically grounded than [anthropogenic desertification, deforestation and mass extinction]’, whilst Russian scientists⁴ reversed these rankings. This suggests that the attribution scepticism of the Russian discourse is not merely denial of environmental science, but a different appreciation of it, with different threats and risks given more weighting of likelihood and harm.

4 Russian media approaches to ACC

In the USA, climate scepticism was facilitated by a journalistic emphasis on ‘balance’ between those advocating climate policy and those resisting it. Boykoff and Boykoff (2004) explain that between 1988 and 2002, US journalists actively sought out sceptical scientists and other sceptical voices in order to ‘balance’ their coverage of ACC, thus giving the impression that the scientific community was split on the issue. This problem was found to self-correct over time (McAllister et al. 2021; Timm et al. 2020, etc.), but its early manifestation meant that western media norms and values skewed the climate change debate away from questions of what should be done towards questions of whether ACC is a real problem (McCright and Dunlap 2003). Though ‘balance as bias’ can be seen in Russian

⁴ Scientists were drawn from ‘different backgrounds which included biologists, hydrologists, geologists, glaciologists, and physical geographers’, but the sample size was small (Dronin and Bychkova, 2018).

coverage, it is far from the main cause of poor-quality reporting (Wilson Rowe 2013). The heavy influence of the government's attitude to climate change on the Russian media and the great variation in Russia's geography, industry and ways of life account better for temporal and geographical variations in coverage of ACC.

One difference between Russian media coverage of ACC and other nations is the relatively small volume of coverage, both in frequency and length of articles (Boussalis et al. 2016). Poberezhskaya's (2018b) detailed study of Russia's national newspaper 'Izvestiia' (1992–2012) makes clear that the limited number of articles on ACC published in the months after the USSR's collapse all confirmed its reality and urged readers to 'save the environment', but from 2009 to 2012 one-third of climate change articles carried at least some sceptical sentiments. Despite scientific consensus strengthening, media coverage became more sceptical. This likely reflects a growing awareness of the political and economic implications of ACC for an energy-exporting nation, but also the scepticism of a nation used to propaganda and mistrust of authoritative sources.

Boussalis et al. (2016) studying the period 2000 to 2014 find that shifts in coverage over time can partly be explained, as in other countries, by the economic situation in Russia. Only when the economy is more stable does the media discussion draw more on climate science and address the topic of Russia's GHG emission reduction. Yet, a more important factor influencing the Russian media is that it has, since 2000, increasingly faced barriers when performing the role of the fourth estate and criticising government decisions. It has, on occasions, pushed for change or exposed social problems, but has largely been reduced to a mouthpiece of the state (Erzikova and Lowrey 2014).

This means that the 'strong correlation between right-wing affiliation and the publication of denialist articles' noted by Björnberg et al. (2017: 236) which is particularly clear in the USA (see Feldman et al. 2012) does not apply in studying Russian media. The lack of political plurality in Russia is not an issue to be addressed here, but it is important to understand that attitudes towards environmental problems are barely affected by party or left–right affiliations (Anisimov and Orttung 2018) and newspapers' ownership structures or political orientation do not substantially impact the quality of coverage (Boussalis et al. 2016). There is no direct evidence of censorship concerning ACC, but the media closely follows the state's position on the topic (Poberezhskaya 2016).

Another important source of variation in Russian media outlets' approaches to climate change is geographical diversity, expressed in the staggering difference between ways of life in the central part of the country and its periphery. Unfortunately, to date, very little research has been done on regional media and climate change, but there are exceptions such as Yagodin (2021) and Beuerle (2018). Beuerle (2018) demonstrates that even neighbouring regions can have different approaches to the topic, depending on the state of local biodiversity, regional exposure to international events and the position of the scientific community.

One way in which Russia has been following global media trends is in internet penetration and media consumption patterns, which might be expected to open up debate, because the internet offers a free and accessible arena for people to express their environmental concerns. New media are recognised in the literature as 'distinct to legacy media in their adoption of different journalistic tones and quoting of different voices' (Painter et al. 2018: 8). However, the impact of social media is ambiguous as it also provides another platform to attack environmental NGOs and share conspiracy theories. Poberezhskaya (2018a: 951) argues conspiratorial thinking 'diminishes people's desire to cut their carbon footprint, making them content with the established way of life since the blame is allocated somewhere else' (see also Douglas and Sutton 2015). One of the key conspiratorial framings

found in Russia reintroduces Cold War rhetoric, by depicting a hostile western plan to control global energy markets. Traces of this narrative have also been detected in traditional media coverage (e.g. Tynkkynen and Tynkkynen 2018).

5 Public attitudes to ACC in Russia

ACC is a complicated, long-term, slow-moving threat, which makes it hard for public attention to remain at a level of acute concern for sustained periods of time. When ACC became a policy issue in the USA, the environmental movement played an important role in advocating ACC policy, shaping public opinion and sustaining public awareness. The existence of this movement was thus an important factor in shaping climate scepticism, which emerged as a response to environmental advocacy. During the ‘greenhouse summer’ in 1988, US opinion polls showed the public was deeply concerned about ACC and politicians ‘caught off guard by the scare ... lacked prepared interpretive packages on global warming’ (Ungar 1992: 492–3). In keeping with the public mood, they made commitments that suggested a strong policy response was likely, but as public attention moved on and the moment passed, Ungar (1992: 494) describes ‘a seemingly concerted backlash against global warming’. Global leaders shifted their calls for action to calls for a ‘no regrets strategy’ whereby emissions reduction would be undertaken only when it would pay for itself in energy efficiency gains.

In Russia, the environmental movement is less developed and the need to weaken public concern about ACC is less important: Public opinion in Russia is far less alert to the threats of ACC and public opinion is far less important in affecting political change. The Russian government has, in the last decade, been tightening control over NGO activity, undermining not only climate governance (Graybill 2015), but the vitality of Russia’s fragile civil society. To date, branches of the major international environmental organisations (e.g. ‘WWF-Russia’ or ‘Greenpeace Russia’) continue to be vocally critical of governmental policy on climate change adaptation and mitigation (Davydova 2020), but there is much less engagement at the grassroots level. Data on September 2019’s ‘Global Climate Strike’ shows that, single day of participation in the USA saw around 650,000 participants take part, the figures for a single day’s participation in Russia were 85 participants (Global Climate Strike 2019).⁵ The limitations placed on NGOs (and on the civic sphere) have a reciprocally depressing influence on coverage in the media and public engagement with environmental issues.

A Public Opinion Foundation (FOM) poll in Russia in 1999 showed that, whilst 77% of respondents noticed climate change in their region, they prioritised other environmental problems (e.g. water and air pollution) (Petrova et al. 1999). Polls in 2008 showed that 67% of respondents believed global warming was taking place, but only half attributed it exclusively to human activity (FOM 2008). Levada-Centre’s (2015) found only around 20% of respondents considered ACC the most pressing environmental issue, consistently placing it 6th (low in comparison to other nations) (World Bank 2010). The results have been

⁵ The data collection for these figures is not clear, but the low figure in Russia is likely because one needs official approval to hold a mass rally in Moscow. Activists were restricted to a single-person picketing (about 30–40 people took part in this activity); however, St. Petersburg and Novosibirsk gathered small protests of 100 and 40 participants respectively so the numbers protesting across all dates of the protest were likely higher, although still small compared to most developed countries (The Moscow Times 2019).

supported in 2020 by the IPSOS international study of public attitudes towards climate change. Whilst on average respondents across 29 surveyed countries placed ACC among three top environmental concerns, Russia had the smallest percentage of people (13%) who allocated climate change top priority and occupied the position of least agreeing with the statements that it is the government's responsibility to act on ACC. The majority of respondents acknowledged its anthropogenic nature (63%), but still this percentage was second to last among all countries⁶ (Ipsos 2020). Furthermore, Kurbanov and Prokhoda (2019) looking at European public opinion polls, note that, due to low levels of understanding of its consequences, Russia exhibited the weakest link between belief that climate change is happening and concern about its impacts. Research in this area suggests Russian people welcome moderate increases in winter temperatures and decreases in summer ones (Mkrtchyan et al. 2018).

In wider research, public perception of climate change finds that 'men, older age groups, and those with fewer years of formal education tend to be more doubtful about the reality and anthropogenic nature of climate change' (Poortinga et al. 2019: 25; Björnberg et al. 2017). Furthermore, socio-political variables 'such as political orientation, human values and worldviews' have been shown to be important in Anglophone nations, although this varies depending on region (Poortinga et al. 2019: 26, see also Drews and van den Bergh 2016). These findings do not apply as clearly in former Communist countries 'due to the low political salience of climate change and the different meaning of left-right identification in these countries' (McCright et al. 2016: 338). Russia stands out even within the former Communist block as having the highest percentage of trend scepticism and one of the highest percentages of attribution scepticism (Poortinga et al. 2019). Another area of divergence is that in Russia, a respondent's level of wealth is not positively correlated with levels of climate awareness. Kurbanov and Prokhoda (2019) suggest that richer Russians are less concerned with environmental related issues, because of particularities of Russia's recent history: wealth accumulation took place rapidly in 1990s–2000s among people who took advantage of new economic and political freedom and, therefore, are less receptive to arguments for restrictions of any kind.

Resources are not equally distributed within Russia and impacts of climate change differ drastically from region to region, meaning that approaches to, consequences of and effects on peoples' everyday lives will differ widely (Crate 2017). The lack of public engagement with climate change is therefore problematic, in terms of finding policy responses that take account of diverse communities' risks. Studying Northern Russia, Anisimov and Orttung (2018) found that 'the majority of the population considers climate and environmental changes locally, does not associate them with global drivers, and is not prepared to act on them'. Graybill (2015: 313) makes clear that policy will be ineffective if it does not engage with indigenous knowledge in Northern communities, because ACC 'is conceptualized differently than Western science might anticipate'. These dissonant global understandings of ACC, 'when applied locally, present a temporal and spatial mismatch', as people in remote Northern locations are often excluded from 'Russia's industrial production' and additionally can 'barely afford its consumer products' (Graybill 2013).

Aside from the mutually minimising effects of low public concern, low media coverage and low NGO engagement with climate change, various other factors contribute to the lack of public engagement. These include the 'Soviet-era notion' that the power of progress

⁶ Ipsos (2020) disclaimer warns that Russian respondents belonged to 'Upper Deck Consumer Citizens' category—being more urban, educated, with higher incomes than average citizens.

can solve any environmental problems—a notion which may explain the current fatalistic approach to climate change in Russia (Graybill 2015); the suspicion of information coming from authorities and scientific elites in a country with a totalitarian history (Kokorin 2017) and the impact of the ‘material-spatial context’ rooted in socio-cultural notions of geographical vastness and abundance of natural resources (Tynkkynen and Tynkkynen 2018). Another explanation suggests a coordinated state led effort to downplay climate change concern and avoid giving any traction to public discontent, which might prove a threat to the regime (ibid). There is thus no one single explanation for Russia’s detached public attitude to climate change: weak public engagement results from a range of socio-economic, political, geographical and historical factors.

6 Government attitudes to ACC in Russia

McCright and Dunlap (2000) argue that in the US environmental claims about ACC were challenged by a specifically *conservative* countermovement, which attempted to resist the successes of the wider environmental movement in the USA since the 1960s. From 1988, Republicans were immediately motivated to oppose not only proposed policies to address ACC, but also the science underpinning it. The Republican takeover of Congress in 1994 facilitated these efforts through exposure at congressional hearings and the national news. Ultimately climate scepticism became linked to core conservative values, becoming ‘a virtual litmus test for Republican political candidates ... adding it to the ‘culture wars’ (joining God, gays, guns, and abortion) in the eyes of conservative laypeople’ (Dunlap and Jacques 2013: 705). This acutely partisan response to environmental politics is clearly not to be expected in a country with a long history of centralised power, where it is not easy to say whether government controls or merely leads business, media and public understandings of climate change. It is also unclear whether governmental seeding of climate sceptical discourse can really constitute a fully fledged effort to manage the framing of the issue, in the way it has been attempted by CTTs elsewhere. There is a core strand of government discourse that is clear that climate change does exist and should be addressed (e.g. Paramonova 2019), even as the same actors draw on climate sceptical narratives at other times or in other contexts. This makes the Russian policy elite’s handling of climate change ambiguous in a way that contrasts strongly with the partisan political divisions in more studied countries.

The purpose of this paper is not to provide a comprehensive analysis of Russia’s climate change policy, which has been achieved elsewhere (e.g. Korppoo 2016; Henry and McIntosh-Sundstrom 2012), but to show that the Russian state has had to tread an ambiguous line between engagement with international discourse on ACC and the pressures of its own commercial and environmental risks. Despite the economic downturn in the early 1990s, Russia is still one of the most carbon intensive economies in the world. At least within official rhetoric, it emphasises its own importance to the international climate regime and its global leadership in cutting emissions (e.g. Medvedev 2012; President of Russia 2009a). Yet, it is also in a vulnerable position: it has a fossil fuel driven economy, with low energy efficiency and slow engagement with renewable energy sources. A key task of Russia’s engagement with the international community is balancing these different pressures (Rusakova 2015; Makarov and Sokolova 2017).

In 2009, President Medvedev signed a ‘Climate Doctrine’, which urged the implementation of timely adaptation strategies to avoid substantial economic losses and more

importantly reduce loss of life risk (President of Russia 2009b). Whilst it had no legal power, it was an important step in advancing Russian endorsement of ACC. Russia's climatologists (Kattsov et al. 2017) praise the document for 'foreseeing global trends and emphasising the importance of adaptation'. In 2010, the government adopted the Climate Doctrine implementation plan which was meant to act as a bridge from 'words to deeds', but instead 'contained just a summary of various Russian federal programs only indirectly connected to climate, and no additional funding was provided for its implementation' (Makarov et al. 2017: 324). In 2013, a more serious step was taken when President Putin signed a decree on GHG emissions reduction by 25% to the baseline year of 1990, to be achieved by 2020, albeit that this would still allow for a substantial increase in GHGs.

Yet, Russia continues to be reluctant in its international commitments (Gladun and Ahsan 2016). It consistently engages with the UNFCCC (Graybill 2015), but like other emerging economies (Rinaldi and Martuscelli 2016), its modest GHG emission reduction pledge has cast doubt on its dedication to keeping GMT below 2°C (Sharmina 2017). Additionally, Russia's local governance engagement with climate change is almost entirely absent, creating a disconnect between local needs and understandings of the ACC threat (Graybill 2015). These features are exacerbated by climate change legislation that exhibits a markedly anthropocentric approach to the problem, with no consideration given to the vulnerability of wildlife and ecosystems (Ivanova 2018).

However, some scholars are more optimistic about Russia's climate policy: Bashmakov (2014) argues that Russia's ability to stay within committed levels of GHG emissions is not due purely to economic crises, but also reflects advances in decarbonisation (see also Shkiperova et al. 2015). The introduction of a national 'Climate Week' in 2017 aimed to raise public awareness and attract attention to the problem (Kremlin.ru 2017). The event included a range of actors (e.g. the Ministry of Defence, the Ministry of Agriculture, Gazprom, Rusal) and activities, which took place throughout Russia. Ambiguous governmental discourse on climate change and policy can facilitate both acceleration and slowing of climate change policy as judged necessary by the state (Poberezhskaya 2019).

On the other hand, whilst President Putin has maintained participation in the UNFCCC, he also continues to espouse scepticism when he judges it expedient. For example, during the Russian Energy Week in 2018 he made a statement that endorsed climate change, whilst also emphasising attribution scepticism:

We are witnessing global warming, but we do not understand the reasons for this warming, because there are still no answers. And the so-called anthropogenic emissions, most likely, are not the main cause of this warming, it may be changes of a global nature (RIA Novosti 2018).

Honouring Russia's commitment to limiting GMT at a 2 °C increase, 'would require rapid technological change and, more challengingly, the dismantling of institutional and social structures that come with the current energy system' (Sharmina 2017: 312). Tynkkynen and Tynkkynen (2018) argue that, due to a recent move towards a more authoritarian governance style and a nationalist 'Great Power' narrative emphasising sovereignty and fossil fuels as the source of Russian power, this change becomes less tenable. There is no struggle between different views of the issue offered by different political parties, because key political actors and their inner circle dominate (Korppoo 2016). Climate change is removed from the realm of democratic contestation and discussed behind closed doors. Climate scepticism is therefore not a discourse that is used to combat environmental efforts and win public support, but a tempering element that can be blended into state narratives at times when the government wishes to decelerate its climate change policy or undermine

public anxiety about ACC. Economic and business considerations strongly shape why and when this happens, but climate scepticism is not merely an expression of these interests and reducible to them.

7 Business attitudes

The industry has been an important factor in shaping climate sceptical messages in the USA, with ‘private companies, industry associations, business groups and coalitions ... identified as important funders of activities inimical to environmental science’ (Björnberg et al. 2017: 236). The Global Climate Coalition (GCC), for example was set up in the 1990s to provide industry friendly commentary on ACC policy, cultivating the message that the cost of cutting emissions would be economically prohibitive (Gelbspan 1995). CTTs and business coalitions foster epistemic scepticism to complement the ideological rejection of environmental policy on market fundamentalist grounds. In Russia too, there are domestic industrial lobbies, such as the Russian Union of Industrialists and Entrepreneurs, which helped slow down the process of ratifying the Paris Agreement (Yagodin 2021: 67), but these organisations and ideologies are much less established. The close connections between extractive industry and the Russian state (Gustafson 2012) remove the need for intermediating advocates of business needs.

Russia does have pro-market advocates, such as Andrei Illarionov one of Putin’s key advisors on climate change in the 2000s, whose anti-regulatory ideological stance has similarities to the US discourse. Illarionov vehemently argued that the Kyoto Protocol was harmful to Russia’s economic growth: ‘Unfortunately, it is a war. War against the whole world and, in this case, against Russia’ (Schiermeier and MacWilliams 2004: 13). Yet, Russia does not have a long history of capitalism and free market ideology is not as strong a national or personal identity as it is for many US climate sceptics. Climate scepticism in the Russian business community is therefore more subtle than in the USA, with some industrial stakeholders supporting climate mitigation policies as bringing economic benefits and reinforcing the idea of Russia as a world leader (e.g. Henry and McIntosh-Sundstrom 2012). The difference between a communist and capitalist history of industrialisation is thus important in understanding the Russian business response to ACC.

Throughout the Soviet period, Russia was notorious for sacrificing the environment to economic growth (Poberezhskaya 2016), but then this could equally be said of early industrial capitalism in the west. The most notable difference on this score is that in the west social and environmental movements in the twentieth century challenged the most visible forms of environmental damage and enjoyed marked legislative success. Soviet Russia did not have the same experience⁷ and post-Soviet Russia has continued its heavy reliance on fossil fuel extraction, such that the ‘benefits of oil and gas development are prioritised over risks’ (Sidortsov 2019: 137). This is especially evident in Russia’s north, where the interests of nature and of communities living near extraction sites are rarely considered in the pursuit of national wealth. Uneven relations between extractive industries and indigenous population are further complicated by the adverse effects of climate change (Sulyandziga 2019), echoing the problems of the American North (e.g., the Dakota access pipeline). The

⁷ This is not to say that there was no environmental awareness or action taken in the USSR, but that manifestations of environmental pressure, apart for a short period before the USSR collapse, differed in kind and in success from those of the west.

important difference is the historic culture of protest and social movement that is present in the USA and absent in Russia.

Russian big business must now co-exist with global approaches to climate mitigation and adaptation strategies (Makarov et al. 2017; Martus 2018a). It has shown a nuanced engagement with climate change, echoing the careful balancing that is being done at the state level. Industry commentary has had periods of explicitly ecological energy policy and periods of emphasising sovereignty and fossil fuel power. Importantly, the Russian business community is not monolithic with some major players (e.g., RUSAL, Sberbank, RusHydro etc.) being more vocal on climate change commitments than others. Whilst Martus (2018b; see also Molchanova et al. 2020) shows that climate change has been effectively absent from the public communication of major Russian oil and gas companies, recently this has been changing with more companies taking part in public events dedicated to climate change and the policy of decarbonisation (e.g. Skolkovo Low Carbon Dialogue 2021).

The opening statement on the website of the 'Climate Partnership of Russia', which has united 29 major Russian organisations,⁸ declares that collaboration between science and business 'can bring enormous benefits to both the global economy and the Russian economy' (Climatepartners.ru 2018). The partnership serves as a platform for knowledge exchange as well as a representation of Russian businesses at international climate change negotiations. It articulates a discourse of economic gains from energy market efficiency, but business is still struggling to make practical progress in the development of energy efficiency and renewables. This is due to the 'low awareness among population and organisations' along with 'limited investments', 'market imperfections, poor records of energy use statistics, and patchy regulations' (Sharmina 2017: 311; Proskuryakova and Ermolenko 2019). In both government and business, there is a very strong pull towards fossil fuel reliance and fossil fuel supremacy, which is unsurprising given the economic disposition of the country. Tynkkynen and Tynkkynen (2018) talk about a 'hydrocarbon culture' which operates within Russia and strongly links fossil fuels to nationalist narratives about power, abundance, and the industrial importance of Russia. Whilst US discourse has a similar element of reverence for fossil fuel power in its national culture, it has been less prominent in state-led narratives than in Russia. Both countries are strongly constituted by their historical relationships to fossil fuel production and heavy industry, but Russia, as an energy exporter, is more acutely aware of its dependency.

Of course, the negative impacts of climate change will not only fall on actors outside the energy sector, but on the sector itself. Its acknowledgements of climate risks are, therefore, not merely to placate Western trading partners, but reflect awareness of physical infrastructure vulnerability. For instance, alteration of regional weather patterns may negatively affect power transmission lines (due to an increase in the sleet load) and riverbed erosion may affect pipelines (Sharmina 2017). Negative impacts that are already happening, such as changes in the permafrost thawing cycle, could also damage Russia's pipeline network and hydrocarbon production sites. The Russian energy sector is therefore under various pressures from different directions, which, in combination with the lack of public interest in ACC, means it is easier to address it through proxy concerns, such as resilient and efficient energy markets.

⁸ Including a diamond mining giant ALROSA, Russian Corporation of Nanotechnologies RUSNANO, Russia's largest hydroelectric company RusHydro, world's second largest aluminium company RUSAL, Russia's largest bank Sberbank (state-owned), one of the largest insurance companies in Russia Ingosstrakh and more.

Overall, whilst there is a limited climate change discussion within the business community and a prioritisation of the fossil fuel industry by the state, it would be an oversimplification to ignore some plurality of opinion. Fossil fuel companies would, of course, be substantially affected by deviation from Russia's carbon addicted path, but there would also be those who benefit from economic diversification, strong energy efficiency policies and advancements in the renewable energy sector. This means that there will be commercial winners and losers of a move to more sustainable economic models and this plurality of voices creates complexity, but also a window of opportunity to advance more sophisticated mitigation policy. Deliberation, however limited, could create more effective policy than a one-sided pro or anti-fossil fuel narrative autocratically imposed.

8 Discussion

In this paper, we considered Russian climate scepticism as discussed within the social scientific literature to assess whether there was a discernible climate sceptical discourse in Russia and whether it has similar characteristics to those predicted by the western literature on climate scepticism. Epistemic scepticism was noticeable in each of the five categories studied and there were some similarities between Russia and the USA, with only business and industry proving a less important factor than in the USA. In some ways, the comparison is more apposite than between the USA and more commonly studied cases, such as the UK or Australia since Russia and the USA both share the legacy of Superpower narratives in their self-identity and pride in their geographical vastness and resource richness. There are vested interests in both countries that perceive climate change as a fundamental threat to national self-identity based on carbon-intensive economies and the fossil fuel extraction industry.

As in wider research on climate scepticism, 'the main impetus for climate denial is ... the threat it poses for those wishing to maintain the (economic or political) *status quo*' (Tynkkynen and Tynkkynen 2018: 1104). Narratives of modernity, progress and the special global leadership role in Russian self-imagery have strong similarities to those in the USA. Jacques (2006; 2009) argues that environmental scepticism in the USA is rooted in a devotion to the modernist vision of an enlightened, democratic, capitalist society, progressing through scientific knowledge, technological innovation and growth in wealth towards a positive future. From this perspective, scepticism is a defence of what Norgaard (2006) calls 'ontological security': a situation in which people exhibit a fear of the future and of having to examine their national role in addressing the problem. There is a need to avoid knowing how one contributes to climate change, because of the threat this knowledge poses to one's identity. Such notions of 'self-protection' have also been supported by Graybill's (2013:830) study in Kamchatka: 'local conceptualizations of social resilience—"we are resilient, we have survived all of the changes thrown at us by the twentieth century"—does not have room for the emotional baggage created by thinking about climate change'.

However, there were many important points of difference between Russian climate scepticism and that studied in the literature hitherto. Most importantly, it is not ideologically 'conservative' nor is it positioned as a 'countermovement' with a successful environmental movement to challenge. In the USA, a history of publicly contesting market intervention on a range of issues had already led to the creation of networks of politically conservative think tanks ready to bring together industry, money and sceptical scientists to make environmentally sceptical arguments in the media (Oreskes

and Conway 2010; Jacques 2009). In Russia, this network does not exist in the same way. Furthermore, the importance of political identity as a predictor of environmental attitudes does not apply in Russia or more widely in the post-Communist nations (McCright et al. 2016; Smith and Mayer 2019). Chaisty and Whitefield (2015) argue that in the post-Communist societies environmental issues are impacted by negative experiences of transition, weak democracy, high corruption and a dependent variety of capitalism. Similarly, the political regime has not experienced the left–right tension of other nations, because the continuity of centralised power regimes stifle contestation. Unlike its US counterpart, heavy industry in Russia has not had to fund scientists or free market policy-makers to influence public opinion, because the state’s influence, both within business and over civic life, makes it unnecessary for businesses to appeal to citizens to protect their interests.

There is also a difference in the patterning of climate scepticism within other environmental denial movements. Whilst western climate denial is strongly linked to a long history of environmental and science denial based on anti-regulatory ideology, in Russia, climate scepticism does not necessarily imply scepticism about other environmental issues or rejection of scientific knowledge (Dronin and Bychkova 2018). Yagodin (2021:73) shows that a range of environmental change trends are recognised by regional academic experts and declared problematic despite experts having strong ties to the fossil fuel industry. It is the failure to attribute such trends to ACC that is notable, not scepticism about environmental problems in general. More acute lifestyle implications make ACC harder for Russian society to accept than other instances of environmental deterioration (Graybill 2013).

However, our research was also shaped by a relative lack of literature directly studying Russian climate scepticism. We argue that these differences create challenges for the application of western understandings of climate scepticism to the Russian context. Van Rensburg (2015: 2) notes, climate scepticism is ‘often constructed as rooted in and motivated by extraepistemic concerns’, which means that it is ‘primarily an artefact of material, political, and ideological forces and that the evidence dispute is a mere smoke screen for these forces to play out’. Yet, this approach may be questioned in contexts with limited open discussion and public contestation, where the closing down of debate can be achieved by more direct autocratic means than the creation of a smokescreen.

Scholars of liberal democracies are less equipped to analyse Russia, because of its non-democratic policy debates, in which public comments are manifestations of contestation that takes place within closed elites and not themselves examples of contestation. This means that climate sceptical discourses are not merely symptoms of extraepistemic concerns and individual self-interest: they foster the ambiguity that allows Russian elites to navigate a range of pressures, risks and concerns related to ACC. The literature has tended to conceptualise and study climate scepticism as emanating from a right-wing perspective on environmental issues, which seeks to sway public and elite opinion. Russian climate scepticism, in contrast, is deployed by the state to temper the direction and rapidity of policy making on climate change domestically and internationally. This may explain why Russia is understudied in the literature on climate scepticism, the approaches and findings of which are best suited to address climate change debates within a western nation with popular scientists, a free press, strong civic culture, democratic government and free markets. When these conditions are not met, studying climate scepticism is a different task that cannot rely on the common approaches of the existing literature.

9 Conclusion

Climate scepticism is clearly significant in Russia: epistemic scepticism is present within scientific discussions; the media goes back and forth on the anthropogenic nature of climate change; public attitudes show far less conviction and concern than in other countries; elite political discourse makes use of epistemic scepticism when it serves political interests and business narrative works around epistemic issues in order to negotiate the international and domestic economic realities. There is also fear of the economic dangers of climate policy and concerns that Russia would benefit from a warmer climate and that the international community is imposing economic policy on Russia as a form of economic warfare.

However, ‘climate scepticism’ in Russia does not mean quite the same thing that it has meant in the USA and does not entirely follow the patterns suggested by the majority of the literature. It is not a reactive discourse, competing in various social arenas for the power to frame climate change, but an expression of a more ambiguous positioning of a state with its own unique history, character and culture. In all areas studied, the Russian experience cannot be equated with the paradigmatic case of anti-environmentalism in a democratic, capitalist, modernistic society, because the experience and meaning of ‘democracy’, ‘capitalism’ and ‘modernity’ differ.

This is important for the social science scholarship of ACC in recognising the need for further research. Our findings should also be important to all scientists, journalists, environmental communicators, policy-makers or businesses that want to work with or influence semi-authoritarian and authoritarian regimes. Recognising that assumptions and narratives that are established in the west may not be applicable in this context can foster sensitivity in communicating about ACC.

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