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Humour and sarcasm: expressions of global warming on Twitter

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The increasing popularity of Twitter as a medium for sharing and debating scientific information brings forth questions about the type of narratives emerging around environmental/ climate change and global warming. This article maps the landscape of narratives of how Twitter is used to communicate about environmental issues in Turkey. It displays how these actors can play a crucial role in constructing and/or de-constructing such crisis. I show how Twitter users in Turkey, use such medium to strengthen their own and the public's awareness on global warming or to deny all together create a counter narrative and how certain frames that promote scepticism about environmental change are broadly disseminated by using certain emotional context. The analyses of the 1295 tweets collected using a random week sample displayed users who are sceptical about the Turkish government taking a more active stance toward climate change whereas the users supporting the government in general where more preoccupied with hoax arguments that in return may compromise trust in scientific authorities. The analysis combines thematic analysis of tweets and coding. I conclude the paper by conversing the significance of studying Twitter as a communicative platform that provides rich information displaying the existing dynamics.

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Introduction

Anti-climate populism and alternative knowledge production. Though, environmental change—climate change and global warming—are significant challenges facing the world, it is also a complex issue to communicate. In fact, it has so far been a low priority for most of the global citizens (Jang and Hart, 2015). In their article Johnson and Levin (2009: p. 1593) study the effect of psychological biases on “preferences, perceptions and reactions to environmental change”. They concluded by stating that all these biases have a role in causing people to “downplay the probability and danger of environmental change, and their role in it, while increasing their perceived incentives to maintain the status quo, and to blame problems on others” (Johnson and Levin, 2009: p. 1593). These non-rational influences are the long-term results of downplaying science and scientific perceptions by political parties and politicians (Hart and Nisbet, 2012; Nisbet, 2009), as well as the media framing, manipulation, and fake news.

In the recent years trust, credibility and respect to science has been challenged and especially topics like climate change has become increasingly polarised and politicised. Right-wing populist politics and their attacks on academics, scientists caused an increasing emergence of struggles between “an allegedly virtuous people and political elites, which are portrayed negatively” (Mede and Schäfer, 2020: p. 473). Climate change has been one of the issues where populists openly object to and criticise universities and academics working on these topics and create, what Boler and Davis (2018: p. 75) refer as, their truthiness’. The construction of such “truthiness” enables the reproduction of alternative knowledge (Mudde and Kaltwasser, 2017), also referred as “pseudo-science” (Dawes, 2018), “troll-science” (Eslen-Ziya, 2020), or “counter-science” (Ylä-Anttila, 2018). Construction of such alternative knowledge (not anti-science) displays what Giorgi and Eslen-Ziya (2022: p. 5) the “ambivalent relationships between populism, scientific knowledge and, more generally, expertise”. By disputing and devaluing established scientific knowledge populists advocate such counter-knowledge (author in press). The use of alternative scientific knowledge and statistical science to create what Eslen-Ziya (2020) calls troll-science, loaded with populist ideology and emotions makes it non disputable by some communities. This is for instance evident in the anti-climate opposition.

The right-wing anti-climate opposition feeds from the competing claims on climate change, the uncertainties involved in the research and challenges the trust and credibility of climate research. As the public has a limited first-hand knowledge about the issue, according to Sarathchandra and Haltinner (2020), the attitudes about climate change relies on epistemic knowledge of the experts. Once the credibility of scientists is questioned the climate change knowledge results in othering of scientists, where they are seen as harming willpower of the so-called pure people (Forchtner et al., 2018). Research shows that media and especially digital media consumption patterns shape public trust and confidence in science.

Although there is vast scientific research focusing on the role of media in framing environmental change perceptions, little has been done to study the expressions of such discourses in everyday discussions. This article then is an attempt to fill this gap by studying the public understandings of environmental change through the analyses of tweets shared on global warming during a random week. Here the goal is not to analyse reactions regarding a specific event—such as an environmental catastrophe—but to study how private citizens use digital media to communicate about environmental change. Twitter as an “unregulated platform where anonymity and ubiquity facilitate a wider dissemination” (Ozduzen et al., 2020) help spread information fast and to a wider audience. For this understanding the pro and anti-environment change narratives shared on Twitter will help us understand the

motivation behind supporting and/or sharing such tweets. I will first discuss the affective dynamics of networked discourse, the role of echo-chambers in social media in shaping climate change discussions, and later introduce the climate change debate in Turkey, which will be followed by methodology section where I review the choice of hashtag and the analyses of captured Tweets. Later, I will introduce the emerging categories by situating into the highly polarised political environment in Turkey that shapes the arguments and justifications people use to understand the environmental change phenomena and forming polarised digital identities through.

Affective dynamics of networked discourse. Studying networked publics or networked society is closely linked to investigating the impact of globalisation and the role of digital technologies in society. According to Castells (2004: p. 3) it is “a society whose social structure is made up of networks powered by micro-electronics-based information and communications technologies.” What differentiates network society from other forms of societies is the key role digital technologies play in creating new forms of social structures and relationships. The society is networked as its social structure “results from the interaction between social organisation, social change, and a technological paradigm constituted around digital information and communication technologies” (Castells, 2004: p. 3). Such communication technologies according to Castells lead to the advent of new social structure accommodating an open market approach, facilitating freedom-oriented social movements, and revolutionising the information and communication technologies. The social movements that were accelerated by the digitalisation, enabled the emergence of a new form of communication:

The culture of freedom was decisive in inducing network technologies which, in turn, were the essential infrastructure for business to operate its restructuring in terms of globalisation (Castells, 2004 p. 22).

This new form of communication in return is facilitated via what Papacharissi (2016: p. 310) refers as “the feelings of engagement”. In this paper when discussing such “feelings of engagement” within the online sphere I will follow Boler and Davis’s (2018: p. 75) take on affect and emotions, an emphasise on: “the relational nature of affect and emotion”.

Based on her research Papacharissi (2016) argues that digital media technologies help trigger certain ties that may be important for the utilisation of the networked publics. For her, both online and offline spaces are not to be separated but both part of everyday political and social activities. In this research too, I argue that network publics created online and function via the use of texts and hashtags shape the everyday life (Meraz and Papacharissi, 2013) no different than the offline interactions. Therefore, I argue, studying random online utterances are valuable as it enables us to inquest into the casual discussions. Moreover, the network publics—like offline ones—are activated and sustained by feelings of belonging and solidarity (Papacharissi and Oliveira, 2012), however, evanescent those feelings may be (Papacharissi, 2016). She argues:

Driven by an ambient, self-sustaining mode of reflexivity, generated and re-generated by accumulating and imbricated digital layers of expression, affective traces persist and bind networked publics long after the initial events that called them into being.

Producing “feelings of community” (Dean, 2010: p. 22). Kim and Bianco (2007: p. 3) in their book, *The affective turn* theorises

how the recent critical media theorists now consider the affective dimension of networks:

an intensification of self-reflexivity (processes turning back on themselves to act on themselves) in information/communications systems, including the human body; in archiving machines, including all forms of media technologies and human memory; in capital flows, including the circulation of value through human labour and technology; and in biopolitical networks of disciplining, surveillance, and control.

In other words, as in everyday interaction affect is produced and reproduced in these online spaces. Here collective action frames are facilitated where “collective cognitive understandings are formed to justify their activities and encourage wider participation” (Hara and Huang, 2011: p. 490).

It is within these spaces that online mobilisations take place where emotions like hope, solidarity as well as anger and frustration enable one to communicate and make sense about the world around them (McGarry et al., 2019). Such emotions in return guides and constructs the beliefs and meanings that inspire and legitimate the activities within such platforms. Tweeting for a cause, is an example of this. While Twitter allows for a performative arena for public discourses to be shaped, sustained, and challenged (Ural, 2021), hashtags and keywords create a networked public connected with a common story or a cause (Siapera et al., 2018). Twitter then serves as a mean to distribute beliefs and views; they work to engage others and even organise social movements (Eslen-Ziya, 2022b). In other words, Twitter serves as a social platform bringing and connecting people with similar interests, worldviews allowing for networked protests (Tufekci, 2017). In the following section I will focus on the role of echo-chambers in these online platforms that help find further evidence (both factual and emotional) for people to strengthen their existing views.

Echo-chambers in social media. The inclination of individuals to gather and infer and later spread information in accordance with their ideologies and opinions is explained through the echo-chambers on social media. As echo-chambers help intensify the existing perspectives and views and because the algorithms “take advantage of these tendencies in order to drive more traffic to their platforms” (Anderson and Becker, 2018: p. 525) social media platforms intensify existing divides on polarised topics such as the climate change. In other words, as individuals become more and more politically polarised, they stop catching opposite side of the arguments, but are surrounded by alike views to their own.

Garimella et al. (2018) approaches the study of echo-chambers and their role in intensifying polarisation in terms of two components: First it is the opinion shared by the user and second the so-called chamber. The latter refers to the social media network created around the user, also referred as the echo-chambers, where it allows these opinions to be echoed back to the user once it is shared. Such echoing allows people to hear back their voices causing them to reaffirm their already standing views. The existing research shows that echo-chambers exist in many different social media platforms like blogs, forums and social media sites like Facebook and Twitter. Using real instances of political news sharing in Twitter, An et al. (2014) studied the predictive power of four key aspects of social psychology: *gratification*, *selective exposure*, *socialisation*, and *trust & intimacy* and concluded that people tend to tweet on issues similar to their own political leaning.

In the context of climate change, research has shown that individuals participate in discussions with people who have

similar views to their own. Williams et al.’s (2015: p. 126) research depicts how social networks are characterised by “strong homophily and segregation into polarised “sceptic” and “activist” groups”. This was because many interacted with only like-minded people and belonged to communities subjected to a single perspective. They also found that when groups of opposing views came together in these social media platforms their posts and messages carried negative sentiments. For instance, the users who express negative views were subject to criticism and negative sentiments from the members of the opposing communities. Hence, climate change discussions on social media may occur both in echo-chambers with single dominant views or in open forums with mixed-attitude groups. Once such discussions in the latter group occurs, the interaction between the mixed-attitude communities were found to use humour and sarcasm to express their views and even mock the ones in the opposite groups, which will be discussed in the following section.

Use of humour and sarcasm on social media. Scholarship on echo-chambers on social media and public opinion towards climate change both talk about the role of emotions involved in such discussions. Especially when opinions clash, the views become connotated with negative sentiments (Williams et al., 2015). The use of language where the meaning is different than its literal one—sarcasm—is widely used in climate change discussions as an attack discourse (Anderson and Huntington, 2017). As climate change is a topic prone to polarisation and incivility the users employ figurative speech—such as sarcasm, irony, and cynicism, which serve as a discursive strategy to provoke the others with a different view. According to Anderson and Huntington (2017) sarcasm was used when the discussions were sceptical of climate change. It is used as a strategy to either put forward one’s attitude by either tuning down its critical nature or aggravating the criticism in a humorous way (Whalen et al., 2009). These sarcastic messages usually lead to incivility attacks via the use of demeaning words and insults causing another person emotional distress (Phillips, 2011).

Tearing someone down for the purpose of self-entertainment or tearing someone down for being humorous and funny around the like-minded people may be listed as some of the motivations for the use of sarcasm. On Twitter sarcasm is used through the expression of a “negative sentiment in positive terms, or occasionally vice versa” (Anderson and Huntington, 2017: p. 602). According to Anderson and Huntington (ibid) the use of sarcasm on social media might in fact undermine the democratic prospect of digital technologies. For the topic of the climate change, for the purpose of this study—it is noteworthy to observe how the use of humour or sarcasm becomes a marker for the climate change debate on social media. Hence the study of the discourses on climate change in Turkey in Twitter will help us understand the discussions around which echo-chambers in social media are formed and cross-cutting viewpoints are expressed. Moreover, I will explore how sarcasm and humour is engaged in climate change discussions on Twitter to either deal with fear and raise awareness or deny climate change. Before going into details about the methodology used, I will first introduce the climate change context in Turkey.

Background: climate change in Turkey

According to the Millennium Ecosystem Assessment (2005) many of the world’s ecosystems as well as the ecosystem services (i.e., food, recreation, fresh water, and biodiversity) provided by aquatic ecosystems are in a serious decline. Turkey with its complex climate structure is already one of the countries that is affected by such environmental changes. In fact, in the near future according to the environmentalist scientists, climate change is anticipated to

generate water shortages resulting in drought, and declined grain production (Ozturk et al., 2010; Lionello et al., 2017). Despite such pessimistic scenario, Turkey is still reluctant to address climate change and prioritise policies to prevent it from happening. As Turkey fails to set goals to address climate change, public perception on environment change is under researched.

Among the few empirical studies that focuses on the public narratives on climate change and global warming is the Pew and EDAM surveys conducted both in 2015. The Pew survey revealed that public viewed climate change as the top threat. The other threats included global economic instability, Islamic State, Iran's nuclear programme, cyberattacks, tensions with Russia, and territorial disputes with China (Günay et al., 2018: p. 11). On the other hand, one out of every five people surveyed by EDAM revealed that climate change was not Turkey's problem and there was no need to reduce greenhouse gas emissions by the country (EDAM, 2015: p. 2). Furthermore, the findings revealed a relatively low public awareness in Turkey on the climate change agenda. In this context, in order to understand why the public is disinterested in climate agenda or has low awareness on environmental issues, it is important to understand the dynamics of networked discourse in Turkey.

According to Bulut and Yörük (2017) Twitter plays a key role in everyday politics and civil resistance in Turkey. As both the financial and political outlets are controlled and censored by the ruling party, and the flow of information is closely monitored digital media became an alternative source of information (Eslenz-Ziya, 2022a and Jenzen et al., 2020). For instance, when the Turkish authorities started to control the content of mainstream media, the opponents of the government used more and more digital media sources (such as Twitter, blogs, and YouTube) as sources for news and information, (Eslenz-Ziya, 2022a). The Gezi Park¹ protests in 2013 is a good example of this where the AKP government sought loyalty from the mainstream media (Burul and Eslenz-Ziya, 2018: 183) and digital media become the only venue to get the news. This was enough for Erdogan to blacklist digital media platforms:

Do you understand why we are against social media like YouTube, Twitter, Netflix? To eliminate these immoralities. For this reason, we want to bring them to our parliament and be completely removed and controlled².

Since then, not only digital media has been the primary target of the AKP's (the Justice and Development Party—the political party in power for the past 20 years) governance, but they also utilised these platforms for their own agenda. According to Ural (2021: p. 1087) a new set of discourses gained a space within Twitter, “openly advocating pro-AKP policies” and dominating networked conversations. This pro-government online networking in return helped deepen the existing polarisation within the Turkish society. This was evident for instance in Ozduzen and McGarry's (2020) analyses of the memorialization of Gezi protests, where echo-chambers created in these platforms supported establishing collective identities. Such echo-chambers in return, I argue, also intensified the already existing us vs them divide. This divide is, according to Ozduzen and Korkut (2020) between Islamist and secular groups and on issues like gender and sexualities in Turkey. I will add that this polarisation between AKP supporters and the others (non-AKP supporters/opponents) is extended to the debates over climate change and climate activism in Turkey.

Methods

Tweet body. Taking Kim et al.'s (2018) methodological approach of simple random sampling, I collected Tweets mentioning global warming (*küresel ısınma*) from Twitter (<https://twitter.com/>) via

a Google Chrome-based version of NCapture, which only brings together a random week sample. In their research Kim et al. (2018) tested the efficiency of simple random sampling with constructed week sampling by varying the sample size of Twitter content. They found that simple random sampling is more efficient than a constructed week sampling in terms of obtaining a more efficient and representative sample of Twitter data. As the aim of the paper is to map the landscape of narratives of how Twitter is used to communicate about environmental issues in Turkey—by borrowing Kim et al.'s (2018) methodological approach—the simple random sampling was ample to produce a sufficient sample size.

The Turkish hashtag *küresel ısınma* (global warming) was used in order to bring together the discussions around global warming specifically in Turkey. The plugin, belonging to the Nvivo software allowed me to capture and export conversations on Twitter using the *küresel ısınma* hashtag. Once the tweets were captured NCapture created a file and imported it to NVivo. After eliminating the duplicate tweets, a total of 1295 tweets remained.

Following data collection, to protect the anonymity of the authors of each tweet, I removed all potentially identifying information—including usernames, locations, and Twitter user bios. This de-identification of data was completed before coding occurred. Once the coding was done, the coded tweets were translated to English. In the paper only the paraphrases of these quotes were used, making sure that no direct quote will take the readers/onlookers to the original post shared on Twitter.

Content analysis. For the content analysis of the tweets the qualitative data analysis software, Nvivo12—was used. The coding was done in line with Clark's (2016: p. 235) “expressions of a movement's goals” perspective where tweets act as a political expression. Examining the pro and anti-climate expressions collected under the global warming (*#küresel ısınma*) hashtag grouped the dominant discourses appearing by the twitter users from Turkey. In these tweets I trace references to both pro and anti-environment discourses, as well as their construction of enemy in a political sense.

The thematic analysis of the tweets revealed two main categories: (i) the emergence of two oppositional groups—pro-environmental change supporters and the climate-change deniers and (ii) the clash between these groups and their polarisation (see Fig. 1 for all categories emerging from the captured tweets). The themes that emerged from the analysis allowed me to formulate anti and pro-environment discourses emerging around environmental change—global warming and climate change (also presented in Fig. 1). Some of them were how they see the situation, how they define themselves and others, what they propose to protect and achieve and what they fight against.

Results

The analyses of tweets on environmental change—global warming and climate change—in Turkey revealed two main landscapes of discourses communicated. These were first from the environmental change supporters who discussed the issues about climate change and global warming and aimed at disseminating awareness and second were from the climate change deniers who rejected global warming and climate change all together. In this section I will talk about both groups by discussing their arguments, their choices of words and the ways they express themselves. I will also talk about how they depict the other, which I will refer as *the clash*. Though this may be the only interaction the environmental change supporters and deniers have with one another, I will show how it will lead to further polarisation between these two groups.

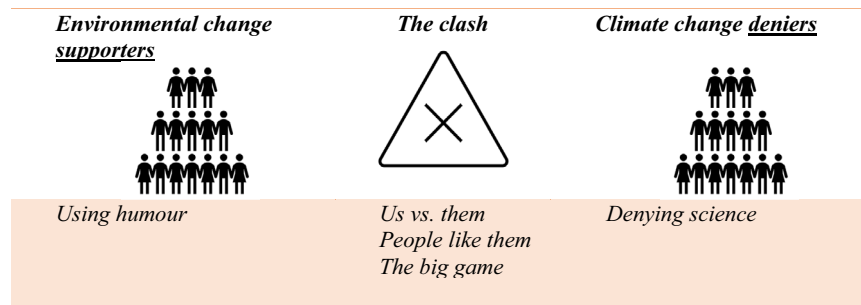


Fig. 1 Illustrating both the process of anti and pro-environment mobilisation online and the formation of digital identities through tweets.

Climate change supporters. The analyses of the tweets revealed that the environmental change supporters used scientific arguments to point out the climate change developments in Turkey and across the globe. They talked about and cited the academic research conducted on global warming. For instance, the following tweets talk about the changing water temperatures by referring to the scientific research:

Ocean temperatures are rising faster than previously thought. The researchers said that the severity of global warming and climate change in the oceans has increased in the last 10 years, and therefore, floods, tornadoes and storms are expected in many parts of the world.

US scientists have found that even at the bottom of the ocean, the temperature rises significantly. They expected that the severity of global warming and climate change in the oceans has increased and that events such as flooding, tornadoes and storms will be seen in many parts of the world.

Ocean temperatures have increased dramatically! #BREAKING Researchers said that the severity of global warming and climate change in the oceans has increased in the last 10 years, and therefore they expect events such as flooding, tornadoes, and storms in many parts of the world...

According to the research conducted at the Swiss Federal Institute of Technology in Lausanne, viruses that live longer as a result of global warming will threaten the human population more.

Previous research refers to this method, the use of social media platforms such as Twitter and Facebook to be employed to share climate change information by the public as soft political mechanism (Uysal et al., 2012). Though the use of soft powers has been mostly via propaganda, strategic communication, bots, artificial intelligence, cyborgs (Tsvetkova, 2020) here we observe the use of scientific arguments as an important tool affecting the current discussion on global warming on social media. Whilst the digital media technologies serve as a medium for information sharing and receiving, the use of Twitter in this case becomes a powerful tool—a “second face of power” (Nye, 2004). Likewise, on environmental issues social media contributes as an instrument strengthening climate change perceptions via the spreading of scientific information:

In the studies on global warming and climate change, scientists think that many problems can be solved with the help of AI.

The use of such scientific information with positive emotion inducing triggers like hope—instead of fear inducing ones—were found to be another strategy used by the climate change supporters.

This is in line with the research suggesting that positive emotions are more likely to generate prosocial behaviours than negative emotions (Haltinner et al., 2021; Ring, 2015; O’Neill and Nicholson-Cole, 2009). Research further showed that “fear is generally an ineffective tool for motivating genuine personal engagement. Nonthreatening imagery and icons that link to individuals’ everyday emotions and concerns in the context of this macro-environmental issue tend to be the most engaging” (O’Neill and Nicholson-Cole, 2009: p. 355). Similarly, Ryan (2016: p. 5) argues that “creative public participation methods” may trigger positive emotions like hope, care, and solidarity. This in return may have an impact on creating collective emotions like hope, responsibility, and solidarity (Author et al., 2020). The use of humour and even sarcasm in our data—which will be discussed further in the following section—supports this argument.

Climate change deniers. The climate change deniers were found to be deep-rooted within a larger distrust of science. They believed in conspiracy theories were the climate change or global warming was presented as part of a so-called bigger plan that aims to destroy the Turkish nation. The deniers believed that the scientific views on climate change was influenced by the West and their funding resources:

Kabbalist, Jesuitist, Masonic, Zionist globalist gangs who try to dominate the world on issues such as fake global warming are managing people through science they have invented.

They viewed science as being biased and dominated by foreign powers:

Intellectual of our country!! They make money by translating everything aliens write into Turkish, assuming it is science, and they attribute every arson to “global warming”, Intellectual pygmy!!

While they regarded scientists as being corrupt and in alliance with the West, they provided alternative counter scientific knowledge:

Global warming is a big concern, but the place in this image is not about it. As the ice in the front falls, it forms again in the rear. It’s kind of a loop. Thank you @RotasizSeyyah. He said it in his video. I would suggest a look at the Patagonia video.

According to Sarathchandra and Haltinner (2020) in addition to the argument that scientists are only adapting to a common scientific narrative without questioning their methodology, there is a belief that scientists are “producing unreliable findings because they are not following the scientific method” (ibid: p. 56), and that they are letting opinions outweigh the facts. According to Forchtner et al. (2018) the climate change communication has resulted in othering of scientists, where they are seen as harming

willpower of the so-called pure people. Such rhetoric not only other's scientists but also endorses anti-science positions leading scientists and scientific knowledge to be criticised for misleading people. The climate change deniers, while identifying the former as a group of elites deceiving people (Poberezhskaya and Ashe, 2018) announce the latter as mob research that hides the truth (Sarathchandra and Haltinner, 2020). Therefore, these tweets illustrate not only the existing discourses around trust in scientific knowledge but at the same time show how counter-knowledge discourses are disseminated as public sentiments on social media. Moreover, as the above tweet demonstrates, while the tweets established scepticism towards scientific knowledge, they at the same time weighed lay person views above the scientific ones. The introduction of photographer Rotasuz Seyyah's videos as evidence to argue against global warming is a very good example for this.

The clash through sarcasm

#Küresel ısınma is cominggg...

Since environmental change is one of the most heated and conflictual debates that takes place on Twitter, it tends to polarise individuals and their views. Previous research has shown that people are inclined to use attack discourses like incivility or sarcasm when posting in social media (Angouri and Tseliga, 2010; Rowe, 2015). Anderson and Huntington (2017: p. 601) argues that while incivility includes expressions that causes another person emotional stress, sarcasm is a form of provocation that relies in irony and humour. Incivility involves anger and loathing leading to insults towards the different "other", and sarcasm is more subtle and requires an object off critique (Attardo 2000). According to Korkut et al. (2020: p. 1) the way humour is used in social media during protests for instance serves as a channel for to "assert humanity and sincerity against dehumanising political manipulation frameworks. Humorous content, to this extent, enables and is indicative of independent thinking and creativity." Humour then is used as a tool to not only challenge the hegemony (Pearce and Hajizada, 2014: p. 73) but also to create alliances.

It is still very warm, looks like winter will bypass my beautiful country. we humans are the biggest factor in global warming and climate change it brings. Luckily I love beautiful sunny days.

Even though it's mid-October, I'm still walking around in shorts and sandals! Long live global warming...

The earth is flat my nephew, there is no global warming my nephew, the sun is smaller than it looks my nephew

Similarly, our data revealed that the pro-environmentalists on twitter tended to create their messages with a satiric humorous way. They talked about how the global warming meant summer like weather throughout the year! They expressed a negative sentiment (fear of global warming) in positive terms (lifelong summer):

Shorts by day, sweat by night... f*ck global warming!

By using such opposing framing, sarcasm serve as what Anderson and Huntinton (2017: p. 602) refers as "language intensifier". It is used to "both express the attitude of the speaker toward the object and to influence the receiver in some way regarding the object" (ibid: p. 602). It then serves as a rhetorical tool to capture attention to the event in discussion and persuade—in this case to climate change.

The analyses of the tweets revealed a disperse group of environmental change deniers. For instance, some of the environmental change deniers saw global warming as part of a conspiracy

theory. They pointed out to the fact that global warming was a lie. They pointed out to the conflictual news presented in the past years and criticised science in the process.

Well, where is that global warming?! How many times have I said here; I said global warming is a lie, there is global cooling. But there must be an academic title in front of my name! Yo! brother, an [states his name] does not become easily, but up to you. When you are cold, there is nothing I can do!

Those who said "ice age is coming, we will freeze" yesterday say "global warming is coming, we will burn" today. Content prepared with powerful visuals and high-quality effects replaces "real science". The global media is lying.

Other on the other hand believed that the current government has ended such threat altogether:

When AKP came, dry streams started to flow, the hole in the ozone layer was closed...

There were also some twitter users believed that these were all God's will and there is nothing we humans can do about it:

It is Allah who creates and manages, global deception, global warming, global lies, all are fictional stories!!!

Hence while the environment change deniers who believed in conspiracy theory took an active stance to prove the climate change supporters wrong, the other deniers took a more passive stance in talking about their role in this discussion and referred to the will of God. However, the overall opposition between these groups, or what I call the clash, occurred in relation to their stance towards science. Regardless of their approach, the environment change deniers rejected science whereas the supporters promoted scientific evidence in their discussions. Though the latter group's use of humour alongside scientific evidence in their tweets can be viewed as an approach to lessen the clash between them and the environment change deniers, the deniers' use of conspiracy theory and anti-science claims reflects the challenge in finding a common ground for discussion.

Discussion

Studying the expressions and public understandings of global warming on Twitter provided an understanding of these discourses in online everyday discussions in Turkey. The pro and anti-environment change narratives shared on Twitter displayed how networked publics are shaped parallel to the everyday political and social actions. In other words, the network publics created online was no different than the offline interactions where polarisation between AKP supporters and the others (non-AKP supporters/opponents) was extended to the debates over climate change and climate activism in Turkey. Furthermore, the discussions of global warming as crisis demonstrated how the Twitter users in Turkey, tweeted to support their views. They did this by either promoting public awareness on global warming or creating counter scientific arguments in line with the right-wing populist rhetoric of the political party in power. The latter group did this by creating a counter narrative ideologically and emotionally loaded. In the case of global warming as the network publics—like offline ones—got loaded with emotions, feelings of belonging and solidarity were activated among the twitter users, and their views and perceptions got more intense (for example, the anti-climate change groups' rejection of scientific knowledge all together).

According to the emotional echo-chamber theory (Eslen-Ziya et al., 2018) then the existing divides between groups or ideologies

gets more strengthened. social media platforms intensify existing divides on polarised topics such as the climate change. In other words, as individuals become more and more politically polarised, they stop catching opposite side of the arguments, but are surrounded by alike views to their own. What is important here is that both the views and emotions associated with those views are shared in these online platforms (chambers) and later both the emotions and the views come back to its owner via echos. Once they are back, they get more intense and stronger, in the case of global warming for instance, once the issues were associated with certain political ideology it became very difficult to change or question it. The use of sarcasm, or humour in this case for instance served to provide emphasis on the issue.

Conclusions

Increasing popularity of Twitter as a medium for sharing and debating scientific information brings forth questions about the type of narratives emerging around environmental/climate change and global warming. This article was an attempt to map the landscape of narratives of how Twitter is used to communicate about environmental issues—global warming in Turkey. It showed these actors crucial role in constructing and/or de-constructing such crisis. I showed how Twitter users in Turkey, used such medium to strengthen their own and the public's awareness on global warming or to deny all together create a counter narrative and how certain frames that promote scepticism about environmental change are broadly disseminated by using certain emotional context. For example, analyses of the 1295 tweets collected using a random week sample displayed users who are sceptical about government's taking a more active stance toward climate change whereas the users supporting the government in general were more preoccupied with hoax arguments that in return may compromise trust in scientific authorities. I conclude the paper by conversing the significance of studying Twitter as a communicative platform that provides rich information displaying the existing dynamics. It further adds to the existing literature exploring the relationship between emotion and climate change by discussing how the environmental change supporters were using humour in order to communicate scientific knowledge on Twitter. Furthermore, by depicting emotion as a relational force where it is used to promote climate change awareness, this paper offers a nuanced understanding of how people engage with climate change.³

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Notes

- 1 Gezi Park Protests (2013), that that began as a peaceful sit-in against the urban development plan to construct a shopping mall over Istanbul's Gezi Park later heightened when the police burned protestors' tents and started attacking the protestors with water cannon, plastic bullets, and tear gas. In the event of the protests 11 died, and thousands were injured.
- 2 <https://www.duvarenglish.com/politics/2020/07/01/erdogan.seeks.to.shut.control.social.media.platforms.in.turkey>. Accessed on 15. 05. 2022.
- 3 NSD <https://www.nsd.no/en> was consulted during this process.

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