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Frack-Off: Social Media Fights Against Fracking in Argentina

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ABSTRACT

This article explores how the anti-fracking movements in the province of Mendoza, Argentina, have used Twitter to shape narratives around anti-fracking. Adopting a dynamic view of collective action frames, the article shows that the anti-fracking movements have developed multiple frames to articulate their struggle and justify their grievances, and how procedural injustice and environmental values have been motivational factors for local citizens. The article also demonstrates that Twitter is principally being used as a broadcast platform rather than being used to create online collective action, but that the strong framing means that disparate groups have been united behind the common cause.

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Introduction

The extraction of shale gas through hydraulic fracturing, known colloquially as "fracking", has found itself at the center of energy debates, as governments navigate environmental issues, carbon budgets, and energy security concerns. Considered to be the most significant and controversial innovation in the energy of the twenty-first century thus far, shale gas production has polarized political debate and has been met by high levels of local resistance. Proponents argue that it reduces gas prices, creates employment, and provides "energy security," while conversely growing evidence shows significant impacts on the environment and human health (Bamberger & Oswald, 2016; Sovacool, 2014). Much previous research has focused on fracking in the United States and Australia (Bubna-Litic, 2015; Inman, 2014) with little attention given to Latin America. Studies have explored place-specific social and ecological impacts of fracking highlighting increasing environmental and public health concerns (Bamberger & Oswald, 2016; Sovacool, 2014; Vengosh et al., 2014), and more recently, the social and political dimensions of fracking in domestic contexts, including social conflicts in Australian communities (De Rijke, 2013), perceptions of risk and opportunity in US communities (Ladd, 2013) as well as fracking as an environmental justice issue (Clough & Bell, 2016; Fry et al., 2015; Short et al., 2015). However, few studies have examined the use of social media by anti-fracking movements despite the increasing use of such platforms within global activism (Hopke, 2016). This article aims to contribute to the literature by exploring the local dynamics of anti-fracking activism in the Global South and their use of social-media as a communication strategy to articulate their narratives and alternative imaginaries.

In the last decades, social movements have increasingly used social media to raise awareness, gain visibility, disseminate information, and recruit members (Carty & Reynoso Barron, 2019).

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Debates over the effectiveness of social media to enact change continue, but platforms such as Twitter remain important for environmental movements. Born of concerns that mainstream media are complicit in the construction and concealment of green harms and crimes (Di Ronco et al., 2019), environmental groups have turned to these platforms to share their message. There was much criticism of academics for the overemphasis of Twitter's role in the Arab Spring (Carley et al., 2016), but the largely successful use of Twitter and other social media in protests around Standing Rock (Di Ronco et al., 2019), and the persistent use of the platform by movements such as #BlackLivesMatter (Taylor, 2016) suggests that the platform may still play a significant role to play in protests. Researchers have long noted the potential of the internet to strengthen democratic governance (Grossman, 1995), through its ability to promote and shape collective action (Merry, 2014), while collective action has long been the mainstay of environmental movements, where environmental issues are not fought for alone but are defined through collective processes (Taylor, 2000). Twitter lends itself to the loose but connected nature of environmental movements, allowing them to frame arguments (Doğu, 2019), build online connections (Merry, 2014), provide a base for knowledge sharing (Costie et al., 2018), and give a sense that one can change and shape the world around them (Drury & Reicher, 2009). Although many environmental struggles remain local, retaining their own identity and narratives, the digital age has allowed some to tackle large-scale political-economic processes on a global scale (Serafini, 2018). This article analyses how anti-fracking movements in the province of Mendoza, Argentina, use Twitter to shape narratives and amplify key issues related to environmental justice by linking them to broader social, political and economic processes. It also examines the way networks are built and driven through Twitter, noting that while there is not one homogenous collective, the use of collective framing through Twitter makes it an invaluable tool for social movements opposing fracking in developing collective frames.

Fracking and resistance in Argentina

The 2010 discovery of shale gas deposits in the Neuquén basin in Northern Patagonia, stretching over the provinces of Neuquén, Río Negro, Mendoza, and La Pampa, and subsequent discoveries of shale oil in Filo Morado Well in Mendoza in 2014, have transformed vast areas of Argentina into one of the largest unconventional oil and gas reserves in the world. Known as Vaca Muerta (Dead Cow), the region is the second-largest reserve of recoverable shale gas resources after China and the fourth-largest reserve of shale oil resources globally (EIA, 2013). Long dependent on fossil fuels, Argentina has relied on imports since the exhaustion of conventional fossil fuels in 2000 and rising domestic consumption (Di Risio, 2017). Seeking to end such dependencies, Argentina's domestic natural gas production has been rising steadily since 2016 largely because of production from the Vaca Muerta formation, which now accounts for around 23% of Argentina's total gross natural gas production (EIA, 2019). Despite this growth, it is estimated that only 4% of Vaca Muerta's acreage has been developed so far (Ibid).

Reliance on the water for both sustaining life and economics makes Mendoza particularly vulnerable to the impacts of fracking. The region is home to three oases which have been transformed into agricultural and urban spaces and are fed by snowmelt from the surrounding mountains and the Andean rivers (Escolar & Saldi, 2017). The region also has the largest irrigated areas in Argentina, with its agriculture-based economy highly dependent on the network irrigation system, composed of a complex network of watercourses, which covers around 8100 km and takes water from rivers and alluvial aquifers that comes from snowmelt or glacier melting (Massone et al., 2016, p. 519).

Resistance to fracking has grown in Mendoza since 2013, with local assemblies and organizations engaging in mobilizations against fracking throughout the province. Despite several municipalities declaring a fracking ban, including Tupungato, Tunuyán, San Carlos, and General Alvear, opposition reignited in 2017 when the then governor of Mendoza, Alfredo Cornejo, signed Decree 248 authorizing fracking in the province. Since the end of 2018, the citizens of Mendoza, – supported

by local branches of Extinction Rebellion and Fridays for Future – mobilized in defense of water as well as democracy. Denouncing the government for illegally and illegitimately approving fracking, anti-fracking movements noted failures to comply with the United Nations principle of Free Prior and Informed Consent (FPIC) and questioned the legitimacy of fracking in the province.

Twitter as a tool of resistance

Since 2010 Twitter has transformed both how social movements operate and the public they engage with (Burgess et al., 2015). Scholars such as Penney and Dadas (2014) note that Twitter can aid the rapid creation of geographically dispersed networked counter publics. Other scholars have explored how the platform can be used to interact and coordinate political action (Iskander, 2011), and create self-organized networks that can scale-up rapidly (Bennett & Segerberg, 2012). Twitter itself is a multitude of communication styles and conventions. Originally envisaged as a platform for chatter, with retweeting, favoriting and @replies forming the core of the conversation (Konnelly, 2015), the hashtag quickly emerged as a powerful mode of communication, allowing for the creation of spontaneous or long-lasting networks (Bruns & Burgess, 2011; Konnelly, 2015). Hashtags are not just symbolic; they also shape the development of ad-hoc groups, which activate around issues (Burgess et al., 2015). Hashtags perform this function by marking out a tweet as being connected to a broader conversation. However, hashtags can also form part of the syntax of the message (ibid.) and create links and directives which sustain rich organizational structures across far-flung movements (Segerberg & Bennett, 2011). Further, they fulfill an interpersonal function, allowing users to affiliate with the values imbued in a particular hashtag (Konnelly, 2015), potentially allowing for the bypassing of traditional gatekeepers.

Individuals too can have a significant level of power and leverage on Twitter; acting as a seed of messages and providing essential points of influence and contact. Whether via individuals or hashtags, Twitter may be used to channel alternative representations of environmental causes that are traditionally underreported or which are in opposition to dominant media frames (Di Ronco et al., 2019; Merry, 2013). Twitter networks can operate differently in terms of coherence, sustainability, and effectiveness, drawing attention to specific events and causes, making it a powerful tool in creating protest spaces, framing issues, and engaging with the public (Merry, 2013; Segerberg & Bennett, 2011).

Twitter allows for mass dissemination of the aims of a movement (Drury & Reicher, 2009) as well as for the continued negotiation of aims and objectives, allowing for a more continuous overarching consensus (Doğu, 2019) and the creation of collective identity (Klandermans et al., 2002). This could shape the thinking of Argentina's 5.7 million users[1] (Degenhard, 2021). However, it does not create activism, mobilise activity, or spur social change. And thus, this research is primarily concerned with how it is used to frame arguments and reduce environmental uncertainty through shared ideas and values (Doğu, 2019; Specht & Ros-Tonen, 2017), rather than how it is used to mobilize people.

Methodology

This research examines the frames used on Twitter by movements opposing fracking in Argentina. It considers how "Topical" hashtags (Bruns & Stieglitz, 2012) are employed to control or shape a narrative. In the first phase of this research keywords relevant to the fracking protests were queried using Twitter's advanced search page. This query provided preliminary facts about the protest such as the hashtags and prominent accounts related to anti-fracking which enabled the tracking of these hashtags and accounts for the duration of the research period.

Tracked hashtags: #NoFrackingArgentina OR #nofrackingargentina OR #NoFrackingVacaMuerta OR #MendozaSinFracking OR #NoAlFracking OR #MendozaLibreDelFracking

Tracked Accounts: @ConSol_ONG OR @argsolidarityca OR @argesinfracking OR @MaipuAsamblea OR @tunuyanxelagua OR @TupungaAsamblea

The period of 06/01/2020–07/05/2020 was chosen for this research as this followed renewed announcements from the government that fracking was to form the backbone of energy and the economy in the country. The endpoint was given by the COVID-19 pandemic drowning out discussions around fracking. Data was collected using the TAGs[2] system developed by Martin Hawksey, gathering in parallel, (a) all tweets that included one or more of the chosen hashtags (b) collecting all tweets, mentions, and retweets by the selected accounts. It yielded 5709 and 3436 tweets, respectively.[3] This was imported into Gephi and graphed by Modularity using the OpenOrb algorithm (Blondel et al., 2008) to visualize the extent and closeness of the networks in Argentina.

The second phase was frame analysis where qualitative analysis was used to explore the discussions within the networks and draw out the key frames of the movements. Framing, understood as a schemata of interpretation, is regarded as central to understanding the character and processes of social movements, particularly, the "generation, diffusion, and functionality of mobilizing and counter-mobilizing ideas and meanings" (Benford & Snow, 2000, p. 612). In this phase, thematic coding was applied in accordance with Braun and Clarke's (2006) framework [(1) familiarize data, (2) generate initial codes, (3) search for themes, (4) review themes, (5) define themes (6) write up] and the software Nivo was used to ensure the reliability and validity of the frame analysis. The first step involved the repeated readings of the tweets available in the data sheet in order to become familiar with the data and develop an initial broad coding strategy. Secondly, using these initial codes a mind map was produced, allowing for any other codes to emerge. Thirdly, the data was coded for topic areas and themes and fourthly, a word cloud produced, allowing for the reviewing of the coding and to show the finer codes. Lastly, the codes were catalogued whereby there was one code per theme. The themes which emerged most strongly were *procedural injustice* and *environmental values*. Within these, two scalar frames were seen: The *global frame* focusing on the contribution of fracking to climate change; and the *local frame* which emphasizes the defenze and democratization of water and democracy and the challenges of undemocratic practices. *Prognostic frames* were also identified, centering around a ban on fracking and revoking of decree 248, as well as the creation of the Uspallata-Polvaredas Protected Natural Area (see Table 1). After the coding process, components were explored for each frame via qualitative analysis to provide further evidence on their attributes (Doğu, 2019).

Results

The results section is presented in two halves; firstly, the quantitative data and graphs of networks are presented, providing an overview of the movements and their interactions. In the second half, recognizing that it is a fallacy to extract Twitter data from its broader political context, a more qualitative analysis of the discussions is provided (Segerberg & Bennett, 2011).

Figure 1 shows a network of the hashtags used in the anti-fracking movement in Argentina. With a modularity of $m = 0.784$ (Blondel et al., 2008), the nature of this graph suggests several factions have formed. Eighty-four distinct groupings were identified, although five of these are significantly larger. There is a reasonable number of linkages (2535 strong connections and 68 weak connections

Table 1. Themes and frames emerging from reading and coding of Tweets.

Themes	Scalar framing	Frame
Procedural Injustice	Global	Undemocratic practices
	Local	Defense and democratization of water and democracy and the challenges of undemocratic practices
		revoking of decree 248
Environmental Concerns	Global	Climate change
	Local	Creation of the Uspallata-Polvaredas Protected Natural Area

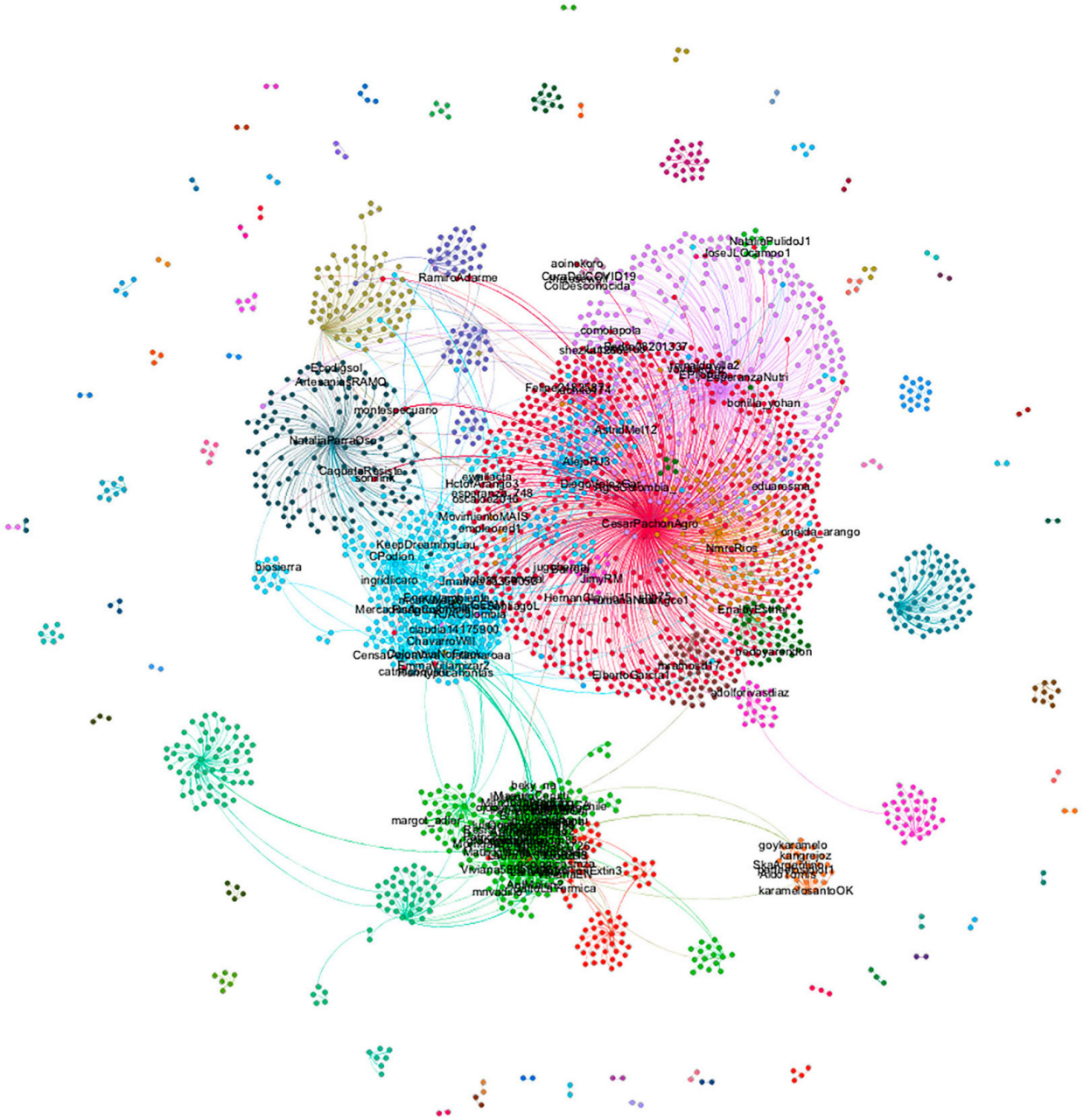

Figure 1. Network based on retweets of chosen hashtags. Presented using OpenOrb in Gephi and graphed by modularity (Blondel et al., 2008).

we found from 5709 tweets, with an average note clustering coefficient of 0.018) between these groups but not to the extent that would suggest a homogenous anti-fracking movement in Argentina.

Although hashtags are open and available for use by anyone, they can become more centralized by streams in which only a few accounts are pushing for their service to rally people around a particular event (Segerberg & Bennett, 2011). It appears to be the case here, with key nodes (accounts) sitting at the center of the hashtag dissemination graph. To explore this further, an analysis of the interactions between accounts was undertaken. Figure 2 shows that just a few reports dominate the landscape, although 85 groups persist when examining retweets of individual accounts. This suggests that these anti-fracking movements are highly coordinated by several individuals online. It also correlates with Bastos and Mercea's (2016) findings, who note that retweets usually cascade from accounts with modest followings but profusely post hashtags related to the movement. Rather than relying on user hubs as gatekeepers, the spreading of messages is more closely associated with

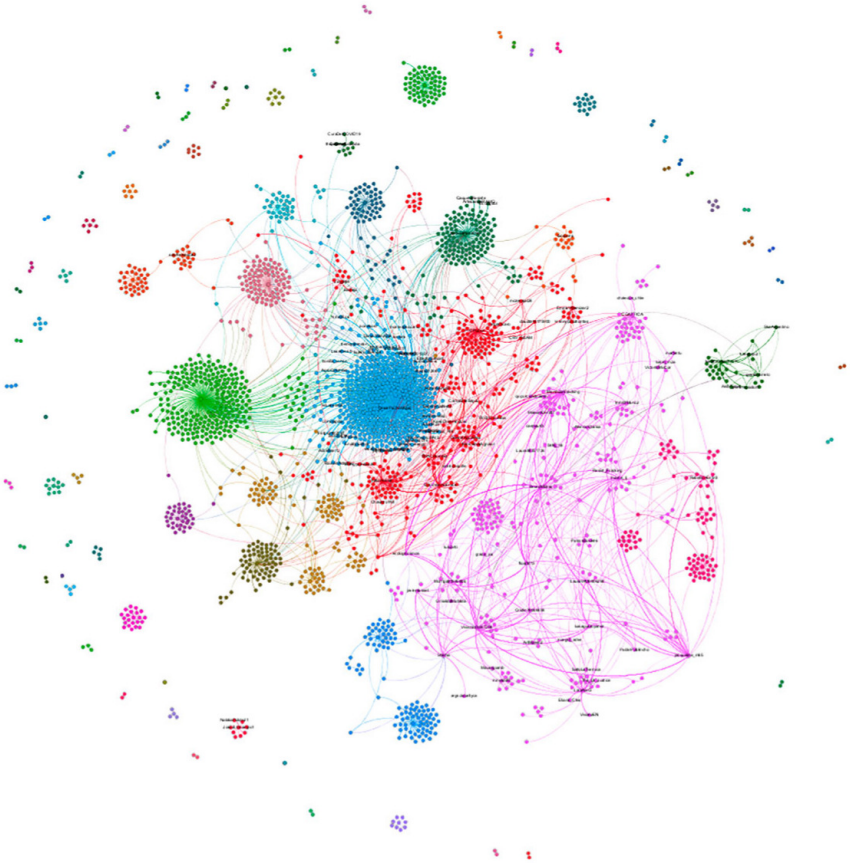

Figure 2. Retweeting of user accounts. Modeled in Gephi using Force Atlas 2.

the intensive actions of a few individual accounts who play a crucial role in the discussion of the hashtag.

It is also possible to see that it is very little interaction between these individuals or between the networks surrounding them (Average Degree = 1.582). It would appear on the surface that Twitter is being used as a broadcast platform by these groups, projecting information to followers rather than developing online networks. To understand how this translates to mobilization, the content of these tweets was examined along with their wider context (Konnelly, 2015).

Climate change

The leading global diagnostic frame centers on climate change and is evident through slogans such as "to support Vaca Muerta is to support the extermination of humanity". As Steger and Milicevic have shown, anti-fracking movements tend to argue that "fracking exacerbates climate change by taking us away from developing the renewable energy sector" (2014, p. 16). The climate change frame centers on concerns over expanding extractivist activities instead of decarbonizing the Argentine economy. The Center for International Environmental Law and the Global Initiative for Economic, Social, and Cultural Rights noted that fracking in Vaca Muerta would contribute significantly to a rise in global emissions, reducing the likelihood that carbon budgets would be met (CIEL, 2018). The anti-fracking movements question the neoliberal capitalist system and "the socio-political alignments and relations […] which allow for the practice of fracking, and further exacerbate social, economic, and environmental inequalities" (Steger & Millicevic, 2014, p. 26; Raftopoulos, 2017). Thus, anti-fracking movements also call for economic alternatives to fracking that are in line with protecting the province's natural resources – the local meeting the global.

The climate change frame reflects ongoing changes to the local climate and environment. Using the hashtags #Don'tTouchTheGlaciers, #GlobalWarming, #ClimateEmergency, and #EnoughAlready,

the antifracking movements marry their concerns to the changes the province is already experiencing to its hydrological cycle – principally the decrease in snow precipitation and the retreat of the glaciers in the surrounding Andean mountains. The province of Mendoza is now suffering a historical drought (Mannino, 2020). Despite these environmental changes, the executive and legislative authorities have insisted that developing extractivist activity is necessary for the economy. Emilio Guiñazú, the Undersecretary of Energy and Mining in Mendoza, has openly criticized the negative perceptions around fracking, citing Australia as a model for Argentina and a success story of mega-mining (Radiomiter, 2019). Contesting the idea that fracking is low risk has become an essential aspect of the anti-fracking framing. Tweets drew on the climate change frame to show the local impact of fracking on the environment in Australia and directly question the competence of Emilio Guiñazú, Humberto Mignorance (Secretary of the Environment and Territorial Planning of Mendoza), and Miriam Skalany (Director of Environmental Protection of Mendoza). The anti-fracking movements sustained reference to climate change as a crucial rationale for opposing fracking demonstrates how the negative climate and environmental impacts of fracking are not bound by particular localities but are globally distributed. The global diagnostic narrative demonstrates how the anti-fracking movements reflect the intense transnational interdependence of the world, linked in this case through the global neoliberal extractivist agenda, and the increasing concern over transnational climate risk. It is this sense of shared risk that allows the anti-fracking movement to communicate its narrative beyond its national borders while confronting and challenging national frameworks.

The defence and democratization of water

The first local diagnostic frame is centered around water governance and the defence and democratization of water. Using this frame and the hashtags #NoFrackingContiminating and #YesToFreshWater, fracking is constructed as a significant risk to groundwater quality and water resources (Vengosh et al., 2014), while water management is framed as being undemocratic. Articulating these genuine concerns (a leaked report by the Argentine government revealed that fracking operations had contaminated local aquifers [Ketcham, 2020]), and tapping into scientific studies, the anti-fracking movements tweets question the environmental sustainability of fracking, in particular its impact on local water resources and how the water used in the fracking process can no longer be used by society due to the levels of contamination, unlike irrigation water. Unsurprisingly, water protection has become one of the mainframes of the anti-fracking movements, given the province's long history of unequal access to water resources and water scarcity because of the arid climate. Within the province of Mendoza, rivers are a critical element of the natural physical environment and essential to the survival of communities and the local economy which is well-known for its large-scale wine industry, vegetable cultivation and livestock production (Massone et al., 2016). The anti-fracking movements through hashtags such as #EnoughOfPoisonInOurFood and #WithoutWaterThereIsNoHarvest were quick to underline how fracking, due to its extensive water usage, endangers the province's productive matrix. This frame was particularly evident in the tweets around the grape harvest national festival (*Vendimia*) held in the Mendoza on an annual basis between January and March to celebrate the wine and the wine-making industry.

Through the hashtags #TheGreatWaterDefense #WaterIsWorthMoreThanGold, #ForTheDemocratisationOfWater #WaterForTheNeighborhoods, the anti-fracking movements have reignited the debate over unequal water distribution and water security. The issue of fracking is symptomatic of structural problems, particularly unequal access to resources, that have faced the province of Mendoza and the rest of Argentina since the colonial period (Escolar & Saldi, 2017). Water has historically played an essential role in Mendoza's socio-economic growth, identity, and cultural heritage. Moreover, it is part of the province's historical memory which has been shaped by dispossession and policies that have traditionally favored local elites and European immigrants over autochthonous populations (Ibid.). Since the consolidation of the modern Argentine state at the end of the nineteenth century and beginning of the twentieth century, the control of and the large-scale redistribution of

local water resources, particularly for the growing wine industry and urban areas, has been at the center of social struggles and conflicts (ibid.). The categorization of the province of Mendoza into binary categories of "oasis" and "desert," where the former is viewed as productive space and considered to be the product of "modern technology and universalist rationality" and the latter is considered "as unproductive space and disposable in the name of progress," has neutralized "the political process of appropriation and unequal distribution of water" for centuries (Ibid., 272). Furthermore, because of this discursive construction, regional space was ethicized, with irrigated spaces classified and recognized as oases and associated with the European population and culture and those without regarded as "desert" and associated with indigenous inhabitants (ibid.).

This categorization greatly influenced the legal framework around rights to surface water and groundwater and the administration of water. Although the Water Law (1884) established water as public property and designated provinces with the right to legislate on matters related to the management, use, and conservation of water, it was the Constitution of Mendoza Province (1916) that established the inherence principle whereby irrigation rights were assigned to properties rather than individual, meaning that water cannot be sold separately from the land, or the land without water and reinforcing the notion that that land without irrigation is unproductive. Such laws have meant that certain groups and activities have been denied access to water while others, such as mining, have been favored (Diaz Araujo & Bertranou, 2004). Drawing on these historical inequalities, the anti-fracking movements used slogans like "irrigation for the people not for companies," "water is for the neighborhoods not for fracking" and "water is life and protects life" to demand the democratization of water and the protection of water rights for citizens against corporate interests and extractive industries.

In February 2020, as part of their campaign for #TheDemocratisationofWater, the anti-fracking movements, led by Mendoza Assemblies for Fresh Water (*la Asamblea Popular por el Agua Pura*, AMPAP) – a platform created to coordinate action to protect water resources throughout the province – demanded that the General Irrigation Department (DGI) provide information on the balance of water usage in the area. Demanding transparency, the AMPAP simultaneously submitted requests for information to the DGI's sub-delegations throughout the province in February 2020 (Explicito, 2020a). AMPAP's concerns were centered on the river flow forecasts published by the DGI in October 2019. The estimates showed that the water levels of the province's rivers were well below the historical averages and were expected to be significantly lower in the period 2019–2020, with the Mendoza River flows reaching 50% of its historical average flow, the Tunuyán in the Valle de Uco 37%, the Carrizal 51%, the Diamante River 35%, the Atuel 44%, the Malargüe 25% and the Rio Grande only 21% (Ibid.). In addition to using Twitter to gather support for their campaign, the tweets of the anti-fracking actions also capture their concern over dishonest public officials and the lack of accountability. The anti-fracking movements were quick to denounce the General Irrigation Department over claims:

> that of all the water that Mendoza has available for this year, 91% is used for agriculture, 6% for population use, 3% is taken by industry and the mining and oil activity 0.2%. The activity of fracking this year has used 0% fresh water. (DGI, 2019)

Furthermore, following the discovery that unauthorized channels had been built to steal water from the basin of the river Atuel de General Alvear and Bowen (unoalvear, 2020), the anti-fracking movements used Twitter to challenge the DGI's control over water resources in the province, arguing that if they are unable to detect clandestine diversions, they would not be able to control the water used for fracking. Calling the DGI out on its management of the province's water resources, the anti-fracking movements demanded the resignation of the entire leadership. The local diagnostic frame highlights how the anti-fracking movements concerns center on water governance, in particular water justice and defense of the commons. Anti-fracking movements have been able to connect and align their concerns over the environmental impact of fracking on water resources to broader issues linked to water allocation and management by drawing on historical grievances and amplifying deeply rooted dispossession, exclusion and inequity.

Democracy and the challenging of undemocratic practices

The second local diagnostic frame, pro-democracy, was centered on concerns regarding legislative modifications proposed by the provincial government of Mendoza to loosen environmental protections. In 2007, Mendoza had passed restrictive legislation on metal mining. Outlining comprehensive protection of water resources, Law 7722 prohibited using chemical substances such as cyanide, mercury, sulfuric acid, and other toxic substances in mining. Despite efforts from the mining sector to overturn the legislation, Law 7722 was ratified by the Supreme Court of Justice of Mendoza in 2015 (Explicito, 2019a). On the 20 December 2019, Governor Rodolfo Súarez of the centrist party Radical Civic Union (UCR) sanctioned the modification of Law 7722, eliminating the prohibition of chemical substances, except for mercury, in all metal mining processes – prospecting, exploration, exploitation – as well as removing the need for the Declaration of Environmental Impact to be ratified by the local legislative body (Explicito, 2019b). The changes to Law 7722 sparked eight days of street protests across the province demanding the reversal of the law. In the days that followed, Twitter was used as a platform to foster solidarity, disseminate knowledge about fracking and the ongoing protest marches. Reflecting on the success of overturning the amendments, tweets documented these protests and articulated celebration of the power of social activism and citizen empowerment in overcoming undemocratic practices, and firmly incorporated the protection of Law 7722 into the collective memory of the province of Mendoza through sharing muralism, poetry, film, and photography.

Using the hashtags #DontTouch7722, #Law7722, #TheWaterOfMendozaIsNotNegotiable, #MendozaIsAwake and #NoToTheCriminalisationOfProtesters, the anti-fracking movements frame their concerns around the undemocratic processes relating to the modification of Law 7222. The protesters argued that the legislation was passed undemocratically and without the knowledge and prior public consultation of the citizens of the province of Mendoza. As Arujo (2020) explains,

> the legislature used a legal fallacy to argue that the law established greater than allowed controls over a permitted activity and that the entry of resources to the provincial and national coffers would enable public investment and infrastructure improvements which would benefit the population.

Doing so, violated Article 41 of the National Constitution, which includes the right to the environment, and the General Law of the Environment, which established principles centered on prevention and precaution, and environmental non-regression (Arujo, 2020). The pro-democracy frame captures the distrust of government and the sense of betrayal by politicians who backed the changes to the law. By framing the situation as a crisis of democracy, the anti-fracking movements were also well placed to criticize the state's response to the large protests held throughout the province. The government was seen as an impediment to democracy as it fought to demobilize popular resistance through the criminalization of protesters and the restriction of rights. These concerns over the democratic processes surrounding fracking policy decisions and the government's willingness to ignore local democratic processes mirror questions raised by anti-fracking movements around the world regarding fundamental processes of democracy, capitalist economies and social and environment (in)justice (De Rijke, 2013; Short et al., 2015).

No to fracking, yes to protecting the environment

The prognostic frames are centered around a ban on fracking and revoking decree 248, and creating a Protected Natural Area between Uspallata and Polvaredas in the province of Mendoza. The solutions proposed by the anti-fracking movements correspond to their diagnostic frames, focusing on the impact of fracking on the environment and democracy. As Steger and Milicevic have previously argued,

> fracking is not just about energy, economic development, and the environment (health), but that at the root of the problem is a fundamental crisis of democracy in which people experience a lack of self-governing power and constrained opportunity or choice, especially through a policy framework that benefits elite, upper-class interests (namely, the 1–10 percent). (2014, p. 26)

Since 2017, when the exploration and exploitation of hydrocarbons began in Mendoza, the anti-fracking movements have been engaged with legal mechanisms to ban fracking. In 2017 they took the provincial government to court over its illegal authorization of fracking activities. However, while the court recognized the irregularities, the charges were not annulled, and fracking was allowed to continue. Following the court's decision, the OIKOS Environmental Network filed a lawsuit with the Mendoza Supreme Court of Justice in 2018 to challenge the legality of Decree 248, which regulates how exploration and exploitation of unconventional oil are carried out in the province and establishes that fracking has a very low or little environmental impact (Explicito, 2020b).

Using the hashtags #MendozaFreeOfFracking, #MendozaWithoutFracking, #NoFrackingArgentina, #NoFrackingVacaMuerta, and #NoToFracking, the anti-fracking movements have focused on getting Decree 248 revoked, and fracking in the province banned. The OIKOS lawsuit argues that the fracking regulations set out in Decree 248 violate both national and provincial constitutional provisions on environmental protection, as well as federal environmental law. In February 2020, while the first hearing was held to debate the decree's constitutionality, the anti-fracking movements, including members of AMPAMP, organized a demonstration outside and inside the courthouse. The case was adjourned until 31 October 2020 to allow OIKOS to gather evidence and is not expected to be ruled until 2021. The anti-fracking movements continue with their campaign to ban fracking in the province and protect its water resources.

Using the hashtag #UspallataPolvaredasProtectedArea, the anti-fracking movements have also thrown their support behind the project to create a biological corridor and the first national park province of Mendoza to protect the Uspallata Valley from extractivist activities and the water sources that supply the Uspallata Valley and Greater Mendoza (Parqueuspallatapolvaredas, 2021). The movements argue that the initiative is a viable alternative to the current extractivist model, which has turned this area into a "sacrificial zone." In addition to its conservation value, the project has the potential to generate a variety of jobs and productive micro-enterprises, and attracting both national and international tourists. Presented to the Legislature of Mendoza by the inhabitants of Uspallata in 2015, the proposed Uspallata-Polvaredas Protected Natural Area covers approximately 400,000 hectares and includes a national park within its boundaries which would be jointly managed by the national and provincial governments (Ibid.). The anti-fracking movements have used Twitter to openly support the project, spreading information and raising awareness of the Uspallata-Polvaredas Protected Natural Area alongside their campaign to ban fracking in the province and have been collecting signatures for the initiative, which has been stuck in the legislature since 2015. The prognostic frames are both localized, as in the case of the creation of a protected area, and also globalized. The narrative to ban fracking has become a shared global initiative, allowing anti-fracking movements to connect with one another through initiatives such as Global Frackdown (Steger & Milicevic, 2014). Following successful campaigns by the anti-fracking movements in countries such as Ireland, France, and Bulgaria, a total ban on fracking activities has increasingly become a viable narrative for movements throughout the world.

Discussion

Since the discovery shale gas deposits, Argentina's energy matrix has been reimagined through the extraction of unconventional hydrocarbons. Driven by changing patterns of consumption and production and linking hydrocarbon sovereignty to energy sovereignty, Argentina's commitment to fracking has grown over the last decade (Acacio & Svampa, 2017). This article has shown that in the Mendoza province, a hybrid network made up of water assemblies, neighbors, environmental organizations and political actors has formed in opposition to fracking. In particular, citizen assemblies like AMPAMP, who have historically been involved in mining conflicts (Acacio & Wyczykier, 2020; Svampa, 2006), have played a critical role in disseminating information to raise awareness of the negative social and environmental impacts of fracking and shaping collective action frames on Twitter.

Although opposition to fracking in the province of Mendoza has been growing since 2013, the anti-fracking movement was most recently reenergized by the modification of Law 7722 which acted as a key political moment and led to the reframing of the anti-fracking narrative. The diagnostic frames of the anti-fracking movements reflect the territorial tensions – changing social and power relations as well as territorial reconfigurations – that accompany Argentina's energy transformation and bring together localized concerns over environmental risk. Conflicts around natural resources are not new in Argentina (Svampa & Viale, 2014) and the province of Mendoza has a history of organizing around environmental issues, particularly the defence of water (Saldi et al., 2014). The local diagnostic frames draw on collective memory and Mendoza's relationship with the local environment, creating anti-fracking identity through narratives which connect the past and the present. The diagnostic frames around water governance draw upon the province's long history of unequal access to political influence over water resources and reflects how historical grievances have become part of the fracking debate. These deeply rooted issues around water governance and democratic practices have become integrated with newly emerging local and global environmental concerns, allowing the movements to reach a wider and diverse audience and gain more support (Costie et al., 2018). Furthermore, the local diagnostic frames are embedded in a sense of (in)justice from the historical configuration of state society relations around natural resources and the struggle for (environmental) democracy and social equity. The global frame challenges the official narrative that fracking offers an opportunity for energy security and sovereignty by contesting Argentina's neoliberal energy production model and highlighting its impact on the climate. The climate change frame demonstrates how the anti-fracking movements ground their narratives in a sense of place, linking the global environmental context to the local by highlighting climatic changes and their impacts within their territorial spaces. In doing so, the global frame also becomes about the defence of place and its protection from the neoliberal extractive model, raising questions about dominant notions of environment which lie at the center of debates about development (Silva Ontiverosa et al., 2018). The prognostic frames propose alternative imaginaries that look to reorient and reshape current responses to the energy crisis and development discourses by engaging in legal remedies to force policy makers to look beyond the practice of fracking and towards greener alternatives as well as articulating local initiatives that take into consideration socio-political, environmental, economic and territorial relations.

Conclusion

On a regional level, the emergence of the anti-fracking movements in Argentina is representative of the wider increase in environmental mobilization throughout Latin American over the two decades in response to the growth of extractive activities (Christel & Gutiérrez, 2021). However, it is also reflective of the rise of anti-fracking movements on a global level, particularly in Europe and the US, as communities mobilize to bring about a change in public policy in relation to harmful economic activities. As this article has demonstrated, although environmental issues are no longer bound by particular localities, environmental protests are largely driven by local dynamics. Anti-fracking movements use Twitter as a platform to bring together localized concerns over environmental risk and to confront these issues and challenge national frameworks, which often override local democracy and opposition, through their own narratives. It also allows both groups and individuals to engage in the fracking debate and has become a vital part of their communication strategy. The frames show a clear shared narrative related to the local-global dynamics of the anti-fracking movements, allowing individuals and groups to construct narratives that travel beyond national boundaries and relate to the global community. It is these local-global dynamics within collective action frames that allow environmental movements from across the globe to connect, join and support other communities in their fight against fracking and to communicate their message clearly to a wide audience (Bomberg, 2017; Hopke, 2016; Steger & Milicevic, 2014). While individual movements and actors might appear disconnected, the strength of shared narratives and

common goals ensures the anti-fracking movement can push forward a single campaign without the need for formal organization and expose different instances of substantive environmental and ecological (in)justice.

Notes

1. Approximately 13% of Argentina's population used Twitter at the time of this study, making them the second largest user of Twitter in Latin America (Brazil = 17%), and in the top 10 worldwide.
2. https://tags.hawksey.info/
3. Tweets collected were primarily in Spanish, with a few English and Portuguese Tweets being shared by international solidarity movements.

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