

# Issues, Interactions, and Group Images as Mechanisms of Affective Polarization in Two Environmental Conflicts in Argentina\*

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## Abstract

Affective polarization happens when groups develop mutual negative perceptions and feelings. This phenomenon has raised concern among journalists, opinion leaders, and academics, many of whom have related polarization to partisan politics. Previous research has relied mainly on quantitative data focused on the national-level political polarization of Western societies. In this article, we show that polarization and its negative consequences—the damage to relationships and the rise of violence—may arise after divergence with relevant issues unrelated to political positions or identities. We process trace two communities in Argentina with local environmental

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conflicts to show the interaction mechanisms that start with an issue difference, continue with affective polarization, and may end with escalation or depolarization. By showing the mechanisms of interaction that lead to polarization, we offer a precise and clear explanation of the process that can be tested in further research.

## **Keywords**

Affective polarization; local environmental conflicts; process tracing; unintended consequences; Argentina; Monsanto; CEAMSE.

# Cuestiones, interacciones e imágenes grupales como mecanismos de polarización afectiva en dos conflictos ambientales en Argentina\*

## Resumen

La polarización afectiva se presenta cuando ciertos grupos desarrollan percepciones y sentimientos negativos mutuos. Este fenómeno ha generado preocupación entre periodistas, líderes de opinión y académicos, muchos de los cuales han relacionado la polarización con la política partidista. Las investigaciones previas se han basado principalmente en datos cuantitativos centrados en la polarización política nacional de las sociedades occidentales. En este artículo, se evidencia que la polarización y sus consecuencias negativas —el daño de las relaciones y el aumento de la violencia— pueden surgir tras una divergencia en temas relevantes no relacionados con posiciones o identidades políticas. Para esto, se lleva a cabo un rastreo de proceso en dos comunidades en Argentina con conflictos ambientales locales a fin de mostrar los mecanismos de interacción que comienzan con una diferencia temática, continúan con una polarización afectiva y pueden terminar con una escalada o despolarización. Al mostrar los mecanismos de interacción que conducen a la polarización, se ofrece una explicación precisa y clara del proceso que se puede comprobar en futuras investigaciones.

## Palabras clave

Polarización afectiva; conflictos ambientales locales; rastreo de proceso; consecuencias no deseadas; Argentina; Monsanto; CEAMSE.

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\* Derivado de la tesis de doctorado llamada “Conflictos ambientalistas populares. Las actividades industriales como asuntos públicos en seis comunidades argentinas” entregada a la Universidad Austral, Argentina. Disponible en: <https://rii.austral.edu.ar/bitstream/handle/123456789/878/Tesis%20de%20doctorado%20Fitz%20Herbert%20.pdf?sequence=1>

# Questões, interações e imagens de grupo como mecanismos de polarização afetiva em dois conflitos ambientais na Argentina\*

## Resumo

A polarização afetiva ocorre quando determinados grupos desenvolvem percepções e sentimentos negativos mútuos. Esse fenômeno gerou preocupação entre jornalistas, formadores de opinião e acadêmicos, muitos dos quais associaram a polarização à política partidária. Pesquisas anteriores se basearam principalmente em dados quantitativos concentrados na polarização política interna nas sociedades ocidentais. Neste artigo, é demonstrado que a polarização e suas consequências negativas — danos aos relacionamentos e aumento da violência — podem surgir após divergências sobre questões relevantes não relacionadas a posições ou identidades políticas. Para isso, é realizado um rastreamento de processo em duas comunidades na Argentina com conflitos ambientais locais a fim de mostrar os mecanismos de interação que começam com uma diferença de questão, continuam com uma polarização afetiva e podem terminar com uma escalada ou despolarização. Ao mostrar os mecanismos de interação que levam à polarização, é oferecida uma explicação precisa e clara do processo a qual pode ser comprovada em pesquisas futuras.

## Palavras-chave

Polarização afetiva; conflitos ambientais locais; rastreamento de processos; consequências não intencionais; Argentina; Monsanto; Coordinación Ecológica Área Metropolitana Sociedad del Estado; CEAMSE.

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Polarization has become a fashionable concept between media and political analysts, who use it to explain almost every kind of social turmoil, from an unexpected result in a referendum to a coup d'état. Academics have shown a similar but more rigorous interest in the phenomena, which has provided a diverse set of theories that allow a better understanding of polarization, although sometimes using the same concept to describe very different processes (Bramson et al., 2016). However, research has been biased towards national political polarization in Western democracies and quantitative and experimental methods. Also, causal explanations have focused mainly on psychological and political mechanisms, focusing less on interactions.

This article aims to address some of these shortcomings by examining the interaction mechanisms that result in affective polarization between advocates and opponents of an industry in two Argentinean communities. We will use process tracing to show how divergent perspectives concerning the industry's effects have led both groups to drift apart, forming mutual negative perceptions. Building upon Baldassarri and Bearman's (2007) model of polarization, our cases reveal that polarization starts when a contentious issue arises, causing community members to align in opposing positions.

We will delve further than Baldassarri and Bearman and, drawing on communication and perception theories, show how this process can escalate or moderate. Escalation happens when both groups construct enemy images of their adversaries (Herrmann, 2003), while moderation is activated when participants agree on the relationship (Watzlawick et al., 1981) that overcomes the conflict about content.

## Polarization research: Progress and bias

Despite the conceptual stretching of polarization (Bramson et al., 2016), it is fundamentally characterized by the progressive divergence of opinions or emotions among individuals or groups. Two definitions prevail: first, polarization as a growing disagreement around issues resulting in more individuals identifying with extreme positions; second, polarization as a process through which two groups form opposing images and have negative attitudes towards one another. Partisanship plays a pivotal role in both definitions,

linking the growing distance with political positions or identities. Research on polarization usually underscores a fundamental concern: the gradual decline in inter-group interaction and mutual recognition, with the potential shift from dialogic towards aggressive societies (Lozada, 2004).

Previous research shows that issue polarization can manifest within political parties, in society, or both. Some argue that differences between political parties in the US have intensified without replicating the same trend in society (Fiorina et al., 2008). Others contend that party polarization leads to societal polarization (DiMaggio et al., 1996; McCright et al., 2014). Information-processing mechanisms may explain this causal link: In conditions of limited knowledge, people evaluate information through the filter of their values, ideologies, and experiences and use elite opinions to guide their positions around issues (Singer, 2016).

Other research suggests that structural causes, such as income inequality, may push voters towards extreme options (McCarty et al., 2016), while electoral rule disproportionality is associated with lower partisan polarization (Matakos et al., 2016).

Much of the research on affective polarization has also related it to politics: In this case, polarization occurs when party affiliation is an important aspect of the individual's self-representation, thus generating positive perceptions of one's own party's supporters and negative ones of adversaries (Iyengar et al., 2012). This phenomenon implies something more than an ideological divide since each party's supporters tend to think that the others are "hypocritical, selfish, close-minded" and "unwilling to socialize across party lines" (Iyengar et al., 2019). Affective polarization has been related to higher aggressiveness in the public sphere due to the communication styles of populist leaders (Waisbord, 2020), violent rhetoric (Kalmoe et al., 2018), campaign strategies focused on attacking out-groups (Iyengar et al., 2012), or the support "troll armies" in social media campaigns (Bulut & Yörük, 2017).

Affective polarization can also produce issue polarization. For example, conservatives in the US might be rejecting environmental policies

because they believe they represent the interests of liberals (Birch, 2020). Affective and issue polarization could also be connected to more ideological or partisan media systems. Since the Internet has expanded media options, the audience can engage in partisan selective exposure (Davis & Dunaway, 2016), which may also reinforce and radicalize their previous attitudes (Levendusky, 2013). Nevertheless, the effect can be attenuated by other factors, like the relevance of the topic (Mummolo, 2016) or the strength of the individual's attitude (Leeper, 2014).

Polarization has also been linked to social media, with an ongoing debate between those who see social media as “echo chambers” that reinforce previous attitudes (Colleoni et al., 2014) and others who argue that social media increases citizen's participation and diversity in the public debate, thus moderating positions (Jones-Jang & Chung, 2022).

Research on polarization has contributed to conceptual refinement and knowledge about the phenomenon at national levels and has proposed some causal psychological mechanisms. Most research has been quantitative and has taken nations as the unit of analysis, with a clear bias toward studying polarization in the United States, even though the phenomenon occurs in several regions (Casal Bértoa & Rama, 2021; Lozada, 2004; Scherman et al., 2022; Zheng & Bhatt, 2022). The other primary trend of research has relayed on experimental methods, most of them focused on the effects of the new media system and, above all, social media.

Very little research has focused on sub-national levels, where polarization dynamics might work differently. One exception is the study by Harris et al. (2014), which showed that in Utah, discussions of the most contentious national issue of the moment, immigration, had moderated. Further sub-national studies could help to observe new levels of complexity in polarization.

Similarly, little attention has been paid to the social mechanisms that may affect polarization. Research tends to promote a view of individuals as physically isolated but interacting with each other through the media;

individuals are rarely seen as participants in institutions or communities. For example, social media studies tend to overlook the fact that the same people who use the networks also interact face-to-face with people in their communities and that their interpretations about the world are the sum of these interactions plus their thoughts and contact with the material world. Indeed, evidence shows that interaction may intensify or reverse the polarization process; for example, interparty interactions may moderate polarization (Wojcieszak & Warner, 2020).

In this article, we will address these shortcomings through the qualitative study of two communities where grassroots environmental movements (GEMS) emerged, focusing on the social mechanisms that can lead to an initial opposition around issues of affective polarization and then to its escalation or moderation.

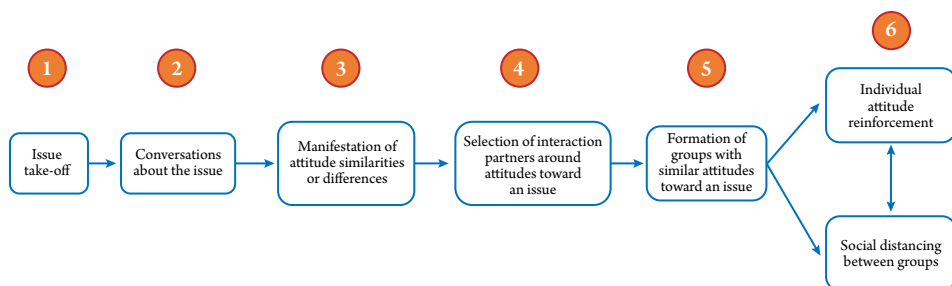
## The process of affective polarization in a community

Baldassarri and Bearman's (2007) model of polarization is based upon social-psychological mechanisms that consider the interaction between individuals across time and stands on three assumptions, none of them related to partisan politics: (a) people talk about issues that interest them; (b) during interactions, they get to know their mutual position regarding those issues; and (c) they later tend to interact with those who hold a similar point of view.

Usually, people have several issues to discuss, and can change the subject if they perceive disagreements. However, when an issue “takes off”—when it becomes of great relevance within a community—it seems so important that it is difficult to change the subject. During interactions, individuals know each other's position and interact more with those who share their views. This process has a feedback loop since recurring interactions with people with similar views amplify or reinforce the initial positions. The construction of homogeneous and distanced groups produces polarization, as shown in Figure 1.



**Figure 1. The emergence of community polarization**



Source: Own elaboration.

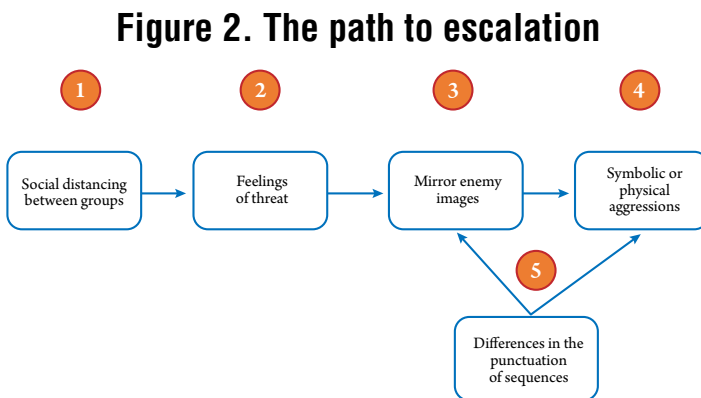
The model includes two necessary conditions: a) the emergence of a prominent issue and b) the alignment of individuals in opposite positions. If these conditions are met, the model's assumptions guarantee the unfolding of a polarization process. Both conditions appear when environmental movements oppose an industry with local supporters (Fitz Herbert, 2017). In these conflicts relevant local issues are discussed, like the environmental and health risks the community faces. Nevertheless, as environmental movements usually demand the industry's closure, they also raise concerns in those who perceive that their individual or collective well-being depends upon the economic spillover of the industry. Community members may support or oppose the industry and, as a result, activate the necessary mechanisms for a polarization process.

Baldassarri and Bearman's model does not necessarily involve affective polarization, for the distance between groups may not imply mutual negative feelings. We will show that the polarization process can follow two paths: escalation, which results in affective polarization, and moderation. We explain escalation with the theory of images in international conflicts (Herrmann, 2003), which begins when some government's act is interpreted as a threat by another nation. As people seek to balance their feelings towards others with the cognitive representation of their attributes (Cottam, 1977), when someone makes the perceiver feel threatened, he builds an image that allows him to reduce moral inhibitions to attack and eliminate the threat.

A frequent image is the stereotype of the enemy, where the adversary is seen as driven by evil intentions and pushed by a monolithic leadership capable of building intricate conspiracies. Paradoxically, this power is susceptible to the perceiver's actions; therefore, a response would inhibit future aggressions. These elements constitute the nucleus of a self-fulfilling prophecy since, if the enemy attacks, it is explained by the belief in its evil nature. If not, it is considered a confusion maneuver or a response to the determination of the perceiver.

The enemy stereotype is complemented by complacent images of one's own group, which is seen as benign and altruistic. Aggressions are justified as defensive behaviors imposed by the adversary. Images usually present mirror mechanisms, as each adversary constructs similar enemy stereotypes. These images give rise to escalation since each party tries to discourage the other and persuade them of their will and determination while the other interprets this as an aggression from which they must defend themselves. Therefore, all participants see themselves as victims and have a low predisposition to approach the other party.

These ideas apply to community polarization, where, as the distance between groups increases, members feel threatened by the opposing positions and begin to adjust their images of their own and the other group, creating mirror enemy images that make symbolic or physical aggressions more probable (Figure 2).

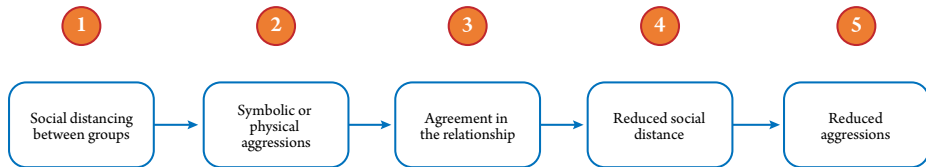


Source: Own elaboration.

Escalation is not inevitable: Interaction mechanisms may lead to moderation. Relationships are constructed in an interaction process where participants share two levels of communication: the content level, where information is transmitted, and the relationship level, which proposes how the information should be interpreted (Watzlawick et al., 1981). Differences can occur at one or both levels, but if the participants reach an agreement in the relationship, content disagreements are easier to overcome.

Communication levels are not independent: content differences may cause relational conflicts. Nevertheless, the reconstruction of the relation can reduce aggressions and distance between groups, moderating the polarization process despite remaining content differences. Figure 3 shows this causal path.

**Figure 3. The path to moderation**



Source: Own elaboration.

Moderation is challenging to pursue once escalation has started. As mistrust, and perhaps hatred, grows between parties and all participants define themselves as victims, it becomes more difficult to reestablish relations. However, a relational change may happen when one party takes the initiative and the other perceives it as sincere.

## Cases and method

Our argument was built upon the study of two communities in Argentina that became polarized after the emergence of environmental movements demanding local industries' closure. Both communities had environmentalists and industry supporters who were involved in acts of verbal or physical violence.

We selected the cases with the most-similar method. We chose two communities from democratic provinces<sup>3</sup> in Argentina, which showed affective polarization after a conflict between an industry and an environmental movement. Given the characteristics shared by the cases—the same culture and political system, the relevance of the environmental issue, and polarization—we considered them the most similar cases. This similarity allowed us to focus on the mechanisms that triggered polarization while relevant factors remained constant. However, we should note that after studying the cases in depth, we also detected mechanisms that led both communities down different paths: In one (Malvinas Argentinas) polarization was intensified, while in the other, there was depolarization.

Our research strategy was qualitative, as we sought an in-depth understanding of the cases. We visited both communities more than two times, conducted 36 interviews, and analyzed 493 news articles, 354 Facebook posts, and documents provided by the interviewees. We interviewed observers and leaders from GEMs, the industry, the state, or the community to consider the polarization processes from different points of view.

We process traced the cases using an iterative research strategy that combined deduction from theorized mechanisms and induction from the data (Beach & Pedersen, 2013, p. 19). First, we wrote a general context of the cases that considered relevant structural variables for polarization, like party polarization of social inequality. Second, we used the news, the social media posts, and the interviews to generate a chronology. Third, we used *Atlas.ti* for coding: First, we coded the interviewees' perceptions about the industry, their own group, and the groups they perceived as adversaries; then, we coded the evolution of those perceptions and their relationship with different events. Fourth, we wrote a draft of the cases that included the events and the perception of those events between different groups. Fifth, we compared the drafts with the polarization mechanisms identified in the literature. Finally, we used our knowledge of other social theories to search for new mechanisms that could account for the processes observed

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3 According to Carlos Gervasoni (2011), some Argentine provinces display authoritarian traits that make them hybrid regimes.

in the cases. Along with all the analysis, we followed Bennet and Checkel's (2015) recommendations for process tracing.

## Case analysis

### **Radical polarization in Malvinas Argentinas**

Malvinas Argentinas, a city in the Córdoba Province, is located approximately 14 kilometers from Córdoba City, Argentina's second-largest urban center. The city had a population of 12,187 in 2010, marking a 41 % increase since 2001. This growth was fueled by the availability of affordable land and its proximity to Córdoba.

Before the environmental conflict in 2012, Malvinas was a tranquil town with limited economic resources and social activity. The municipality was the primary employer, and with few alternative job prospects, most adults commuted to work in Córdoba, returning home in the evenings. This led to Malvinas being characterized as a “dormitory town” where residents had minimal interaction. The lack of employment opportunities and low social capital made the municipality a vital resource for various needs, including assistance with necessities, tax payment tolerance, help in emergencies, and access to employment.

The mayor, Daniel Arzani, a member of one of the traditional families of Malvinas, had been elected by 86 % of the citizens. His primary opponent was Victor Mazzalay, another longstanding city resident. Arzani was a Unión Cívica Radical party member, opposing the provincial governor, José Manuel de la Sota, from Partido Justicialista. However, both supported the plan of the biotech company Monsanto to establish a seed plant in Malvinas in 2012. Arzani claimed to be unaware of Monsanto's reputation but saw the investment as beneficial for the city. Therefore, he asked his allies to support the project.

Initially, the announcement of Monsanto's project received positive reception, even from prospective environmentalists who perceived it as a sign of progress. However, concerns about environmental risks emerged,

influenced by some residents' perceptions of potential hazards and warnings from Rodolfo Montenegro, a well-known biologist in Córdoba. One citizen, Silvia Torrejón, was very active in convincing their neighbors of the risks. Fernando Ustáriz, who initially favored the project, said that he learned through Torrejón and his internet research that the company "was going to bring death." These changing attitudes became common among future environmentalists, who researched Monsanto's reputation on the Internet and discussed it with neighbors, ultimately raising awareness about the potential risks of the plant.

These interactions triggered the initial mechanism—the take-off of the environmental issue. Environmentalists started conducting door-to-door campaigns to inform their neighbors about the potential risks. They also organized meetings and assemblies with biologists and used social media, including the creation of a Facebook page, *Malvinas Lucha por la Vida*, to disseminate information about their movement.

Subsequently, the second and third mechanisms came into play as neighbors began discussing Monsanto during casual encounters and at meetings organized by environmentalists. These interactions allowed each participant to learn about their neighbors' positions, sometimes resulting in confrontations. Torrejón recalls some neighbors' rejections: "They said 'No, these are jobs for our people' or just get away."

Some of the concerned neighbors spoke to Arzani. Micaela Maidana, who, as many environmentalists had supported Arzani until that moment, recalled: "I went to talk to Arzani. I asked him for answers: What I saw on the Internet had horrified me. 'Don't believe that bunch of crazies' (...) They are trying to overturn me."

O'Donnell, a psychologist who had a close relationship with Arzani's daughter, recalls:

First, I thought Arzani was naïve; I told him, "Call Montenegro. You're putting us at risk." "I'll see." Later, I realized he didn't care (...) I felt mistreated (by the municipality's employees). They laughed at us, they

called us crazy (...) (Arzani said) we were five loonies, that we were playing politics and wanted to destabilize him. It made us very angry.

These interactions led to the activation of the fourth, fifth, and sixth mechanisms, creating two distinct and increasingly distant groups: the environmentalists, who mobilized to demand the cancellation of Monsanto's project, and the supporters of the investment, who were mainly people close to or sympathetic to the mayor. According to Romina Ustáriz, many neighbors became angry with them for their stance against Monsanto: "They excluded us. They would hold a meeting of merchants asking for security, and we were never invited. We were wiped off the map."

O'Donnell explains how she was distanced from Arzani's daughter: "When the Monsanto issue started, she (Arzani's daughter) became upset. I started posting on Facebook, and she blocked me and sent me huge private messages saying we were only interested in politics."

The environmentalists also refused to talk to Monsanto supporters. Juana Scocco, a Monsanto employee who worked with the Malvinas community, explains: "I approached them, but they didn't want to (talk). O'Donnell was very friendly and even told the assembly that we wanted to talk, but there was no way." Another environmental leader, Marcela Rosas, said: "We never spoke again to those who still support Monsanto."

The same happened with Monsanto's supporters. Gutiérrez remembered a conversation with a colleague who opposed the project:

There is a woman in the municipality who was with Mazzalay. Once, she wanted to talk. "Where do you work?" I asked. "I'm a colleague of yours, don't you know?" she said. "You're not my colleague because I've seen you insult the mayor. If you're with Mazzalay, you don't exist to me.

Two groups were thus formed: the environmentalists, who perceived Monsanto as an environmental risk, and those who supported the project, primarily people close to or sympathetic to the mayor.

Afterward, the community became divided. According to Ustáriz, “a River or Boca<sup>4</sup>” was established, and friendly relationships between neighbors broke down. Some families even drifted apart; e.g., O’Donnell stopped talking to her father.

The conflict escalated as the groups constructed mutual negative stereotypes. Environmentalists saw Monsanto supporters as selfish, motivated solely by economic interests, and indifferent to suffering. As was written in *Malvinas Lucha por la Vida*, “they (Monsanto) are only motivated by economic interests, and they only come to our country to plunder its resources.”

The environmentalists thought that economic resources gave Monsanto enormous power to buy wills. Ustáriz said: “Monsanto put money in all the media (...) The journalists were well instructed.” For O’Donnell, the newspaper *La Voz del Interior* was the “official spokesman for Monsanto,” and Arzani controlled “a retinue of municipal employees who defended the mayor’s position with all their might.”

As Herrman proposed, the enemy stereotype included the paradox of positing that Monsanto’s power was vulnerable to social protest, as was stated in *Malvinas Lucha por la Vida*: “The people show the judges that they fight on all fronts. We mobilized and were able to speed up proceedings that had been dragging on since August of last year.”

Monsanto’s allies constructed a similar image, assigning their adversaries the hidden intention of removing Arzani. Lanzini, an Arzani supporter, said: “What do they want? The mayor’s chair.” For Gutiérrez, this intention implied an evil nature: “I think these people do not want to do good. Because if they no longer want to promote jobs, much less are they going to love our town. They want the power to destroy us.”

Also, some Monsanto allies believed the environmentalists were part of a powerful international network that gave them economic support. Guti-

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4 River and Boca are two football teams known for their intense rivalry.



érrez even thought the environmentalists mobilized people from other cities to vote for Mazzalay in the 2015 elections.

These negative perception images were complemented by a positive view of the own group. In the case of the environmentalists, they were the ones who were concerned about life and health, while Monsanto's supporters thought they were the promoters of work and progress for the city.

The images were the frames with which each group interpreted their own and their adversaries' behaviors. On one occasion, Gutiérrez and others threw stones at the environmentalists. From Gutiérrez's perspective, this was a defensive reaction to the environmentalists' "attacks": They were blocking the possibility of work, and she, unlike other pro-Monsanto neighbors, was "committed to going out in the streets to defend my own." She said: "Who are these environmentalists to take jobs away from us?"

For the environmentalists, this behavior confirmed the aggressive nature of their adversaries. Romina Ustáriz said, "(The Municipality) even hired hooligans to stone us when we protested." These statements also fit the monolithic and hierarchical vision of the stereotype of the enemy, as Ustáriz assigned the mayor the will and ability to control the groups that attacked the environmentalists. However, as Gutiérrez explained, she was acting on her own, contrary to the intentions of her group's leaders. Silvana González, who succeeded Arzani as mayor, explains that the city council tried to stop the reactions of their supporters: "People would say, 'we're going to fight' and we'd say, 'no, stop' (...). In fact, many blame me for the company's retirement because we didn't let them fight for their jobs. But that would have been chaos."

Gutiérrez confirmed these versions: "We wanted to get the environmentalists out. The mayor wanted me to help him but backed out. He was afraid and wouldn't let us fight. And we listened to him, unfortunately."

Other evidence shows that both groups saw themselves as victims and labeled their conduct defensively. O'Donnell reflected on the environmental mobilizations: "It is crazy when you have to go out and defend your

rights because the one who is supposed to do it (the mayor) doesn't do it." Meanwhile, González explained the attitude of Arzani's children:

You were outside your house with 50 people you didn't know (...) Daniel's children went through things they didn't have to (...) They told you: "Daniel's children want to go out and kill them." Because they were defending their father and defending their mother.

As proposed in the theoretical framework, this logic leads to escalation. The image of the adversary as evil generated anger and fear, causing many individuals to perceive their aggressive behaviors as defensive responses. Furthermore, the adversaries made the same interpretation but reversed the blame. Therefore, each side felt justified in its aggressions and tended to perpetuate the conflict in a chain of mutual aggressions and accusations. As Rosas explains, individuals felt they had lost control of the situation: "Many times our neighbors threatened us to death. And one also loses control—this impulse of returning the threats."

These chains of aggression also occurred on social media. On February 24, 2014, the movement called for a rally at the provincial government headquarters, and the following exchanges were published:

**Zulma López:** They brought in additional infantry and police guards from the capital. Even for the looting in December, there were few officers in Malvinas. Arzani is afraid??? But about what ???? If he is the genocide... (...)

**Cristina Álvarez:** It's perfect that they brought many policemen. You have many flaws; YOU ARE NOT PACIFIC. You are violent, and you play the victim. In the last protest, you provoked shame.

For environmentalists like Zulma López, Arzani could not be defending himself if he was the aggressor. Meanwhile, those who supported the mayor, such as Cristina Álvarez, indicated that the police presence was a response to the violent actions of the environmentalists.

In the absence of institutional responses, the environmentalists submitted a list of candidates for the Malvinas elections of 2015. According to the movement's leaders, this was a way to increase the chances that Mon-

santo would not settle in Malvinas. Therefore, contrary to what is often postulated in the literature on polarization, this is a case in which differences over an issue led to affective polarization and then to partisan identification.

The escalation cycle had significant consequences for Malvinas. A local journalist, Julián Salvatierra, summarized it:

All this generated hatred and division among the inhabitants of Malvinas (...) When you generate division in a town, it's like breaking the place's relationships and community life. Because how can you live with someone who is supposed to be the enemy?

Despite Monsanto's decision to cancel its project in 2016, relationships between the polarized groups could not be reestablished, and mistrust between groups remained.

### **Villa Domínico, a case of reversed polarization**

In 1977, Argentina's military government created a state-owned company, CEAMSE, to manage the waste disposal system in Buenos Aires, the country's most populated area. In 1978, CEAMSE built a landfill in Villa Domínico, a scarcely populated city near the Federal Capital. During the 1980s, the surroundings of the landfill were populated with working- and middle-class neighborhoods, including Las Torres, a gated neighborhood of 10,000 inhabitants.

Domínico had an unequal population, but social capital was high. Many civil organizations collaborated with the most vulnerable sectors. There were even fluid interactions with neighbors from Las Torres, which, as a gated community, tended to be less integrated with the rest of the city.

Towards the end of the 1990s, few residents were aware of the landfill despite suffering its consequences, such as the intense bad smell on days of low atmospheric pressure. On those occasions, neighbors believed the smell came from a nearby contaminated river.

Before the environmental mobilization began, the mayor of Avellaneda, the party to which Domínico belongs, was Baldomero Álvarez de Olive-

ra, a member of Partido Justicialista, as was the governor of the Province of Buenos Aires, Eduardo Duhalde. Neither of them had questioned or promoted reforms in CEAMSE, nor was there political polarization at the national level, which in Argentina began after 2008.

The environmental issue took off after a process that began in 1999 when there was an outbreak of cases of leukemia and other types of cancer in Las Torres. Cecilia Vázquez, a neighbor whose son became ill and later died of leukemia, recalls: “In February, the children started to get sick. Every 20 days, one after another. Here we all know each other, so you’d go out and ‘another kid got sick.’ It was a shock to hear about 22 cases.”

Information about each new case that mainly affected children was quickly disseminated through face-to-face interactions in the most concurred social spaces: the first aid room, the school, and the church. Neighbors expressed their concerns and requested blood donors and other forms of solidarity.

The mothers of sick children found their neighbors during their visits to the hospital and began to meet in Las Torres’ health center to share the information they gathered in their medical consultations. They reached the same conclusion: The outbreak was produced by environmental pollution. They began researching the potential causes the experts pointed out, such as zinc factories or transformers with PCBs.

One of the mothers, the schoolteacher Larsen, learned from a school employee that the president of a civic group, Pedro Rollheiser, had environmental studies that blamed CEAMSE for pollution. Larsen contacted Rollheiser, and she recalled:

A colleague told me, “There is an engineer in Don Bosco who is making some claims to CEAMSE because we have a landfill behind us, almost 200 meters away.” “What? What is a landfill? What do you mean we have it nearby?” (...) (Rollheiser) showed me his work and took me there, and I could see those mountains of rubbish of almost 24 meters.

In the following months, these neighbors researched the relationship between the landfill and the diseases until they obtained a report in

which an engineer, Arnaldo Ramos, warned about the environmental risks of CEAMSE's emissions. They began to link the landfill to the diseases and eventually discovered that a few months earlier, there had been a fire at CEAMSE, which, according to the experts, could have caused the illnesses.

Consequently, the neighbors defined CEAMSE as an environmental risk and tried to communicate with its authorities. According to Vázquez, "(We) wrote 500,000 notes to the governor, to the authorities of the provincial environmental secretariat, to CEAMSE, and to the president of the nation: no response." They also met with the mayor, who told them that CEAMSE was a necessary evil. Meanwhile, the company's authorities were telling the media that the neighbors were crazy and had hallucinations.

Neighbors spread the word about the environmental risk through meetings, face-to-face conversations, and leaflets. They did not use the Internet, which had not yet been fully developed. They obtained coverage on a national journalism TV show, which, although the environmental issue was already present in Las Torres, gave the environmental debate a broader scope. Vázquez said: "When we saw the show, we said, 'Thank goodness, it's out.' The next day, all the radio stations came. Journalists and other people were ringing the doorbell. I spent the whole morning giving interviews. That's when the issue spread."

The movement gained adherents and visibility with the definitive take-off of the environmental issue. The second and third mechanisms were activated as leaders began facing opposition and hearing disagreements. According to Larsen, the mobilized neighbors put up posters in the buildings, which were soon torn down, and some people asked them to drop the issue because it would devalue their properties.

However, the greatest opposition came from the 153 employees of the landfill, led by Diego Ibarra. He explained that they shared some environmental demands, but not of the same relevance as the mobilized neighbors:

We lived near the landfill, with a thousand trucks, dirt, and smell. There were days when you had to keep your windows closed because of the

smell. And that had to do with the lack of investment (...) There was pollution, but it wasn't pollution as they said; they were dying of cancer.

The workers reasoned that pollution could not be so serious, for they had worked at the landfill for more than 20 years without getting sick. Moreover, in the face of the mobilizations, their main concern was to keep the landfill in operation: As Ibarra said, "We would lose our jobs."

By 2002, the fourth and fifth mechanisms were activated. Neighbors were divided into two groups with different positions about CEAMSE: those who perceived environmental risk and those who defended landfill operation. Throughout 2002, both groups mobilized, their distance grew, and the community became affectively polarized.

In retrospect, leaders of both groups reflected on their isolation and lack of understanding of the other's point of view. According to Larsen,

We were mobilizing, and CEAMSE's workers, who were our neighbors, did what they called a counter-mobilization. I remember seeing people who were part of the club where my children played. And I thought, "Why are they in front of us? Why aren't they walking with me here? (...) Now, I understand Larsen's situation better, but in those days, we were angry.

Ibarra later reflected that each group was closed on its own perspective:

At that time, we were at odds. We were also closed, defending our jobs without going deeper into their proposal. And they didn't go into the things we were saying. It was as if each of us stood in our own truth, and we fought.

In this process, the groups drifted apart, and the aggression increased. At one protest, Ibarra punched Rollheiser in the face. Larsen recalls that in the neighborhood, people asked if individuals were "for or against CEAMSE," and "the sense of rivalry was terrible, like a Boca-River."

On a visit to a school to promote the environmentalists' claims, Rollheiser learned from the headmaster that the conflict was affecting the chil-

dren. She told him workers' children put up a poster supporting the landfill, and other students took it down and ended up fighting. This situation also affected the children of the leaders of each group: Ibarra's son had fought with the children of Miguel Solanas, president of a civil organization in Wilde that supported the environmentalists.

Rollheiser's children were also schoolmates of Ibarra's son, and this prompted Rollheiser to call the workers' leader:

Ibarra gave me a punch that still hurts (...) But then I called him and said, "Look, here's the situation: I have children, you have children, yours are going to defend you, mine are going to defend me, and what do we do? Are we going to beat each other up and get our children to fight as well? And he says, "You're right. It doesn't make sense."

This conversation produced a relationship agreement that led to a moderation of the conflict. The escalation was not immediately reversed, but the agreement reduced aggression. When the landfill's closure became a concrete possibility, workers staged a protest, and one identified Rollheiser. As they were about to beat him, Ibarra stopped them and said: "This guy is defending his own and has nothing to do with our problem."

The polarization ended for good when the workers managed to keep their jobs. The government offered them the opportunity to continue working on the rehabilitation of the landfill. Since then, the workers and the environmentalists have been working together and reestablished personal relations.

## Conclusions

In this article, we have shown that polarization is a process not always driven by political identities; sometimes, it can arise from divergences around relevant issues that are not connected with previous political positions. Like all polarization processes, the phenomenon in our cases led to a distancing between groups and individuals, with the consequent erosion of social ties, decreased communication between groups, and increased physical and symbolic violence. However, we have also shown something rare in polarization research: that the process can be reversed. In Domínico, a relational agreement between leaders stopped the escalation process.

Deep comprehension of the cases is not frequent in polarization research polarization. However, we have shown that case studies can advance our understanding of the polarization process by focusing on the mechanisms that lead to different causal paths. In particular, the mechanisms of image formation and relationship agreement can collaborate not only with comprehension, but also with the design of potential solutions for a phenomenon that causes considerable adverse outcomes. As stated by one observer of the polarization in his community, agreements are almost impossible to reach when individuals see their neighbors as enemies.

Moreover, the method allowed access to the participants' perspectives in real-life situations. By showing the different positions around the polarizing issue, this study has exhibited the emergent nature of the phenomena and an ample range of non-intended consequences. As examined, although most of the individuals in Villa Domínico and Malvinas Argentinas dreaded the consequences of the social division that polarization generated, they kept sustaining the process with actions that sometimes even felt out of their control.

At the theoretical level, we have tested Baldasarri and Bearman's model and contributed to an extension of their theory by amplifying the model with the escalation and moderation paths. While our argument combines a wide variety of theories—from sociology, psychology, and international relations—to explain polarization processes, the common ground between them is their interest in explaining social phenomena through communication/interaction mechanisms and perception. Unlike most polarization studies, we consider time and interaction between individuals and groups critical to explaining social phenomena. These factors are better captured by in-depth research and mechanism analysis than the prevailing experimental and quantitative methods in the polarization literature.

The research also has limitations related to the methodology. First, the explanation may be suitable for the specific cases we analyzed, but there are no warranties that they can be generalized to other contexts. Fortunately, the mechanisms approach offers greater precision about the theories present-



ed, so further testing will be easier to conduct. Research on local environmental conflicts in other countries may test if the argument is generalizable.

Second, all the data was gathered after the environmental conflicts had ended. Therefore, the primary information source in the three cases were protagonists who reflected on past experiences. Although this permitted an understanding of the actors' perspectives, which unknowingly produced the polarization, their testimonies were filtered by memory and the awareness of non-anticipated events. Moreover, the size of the polarized groups and their effects on non-polarized individuals of the community, or even on less compromised members of each group, was impossible to measure. Knowing that local environmental conflicts can lead to polarization, other researchers may be able to gather data during the conflict to gain a real-time understanding of the processes.

Our analysis should not be interpreted as evidence against alternative polarization theories, like the structural or political polarization perspectives. In fact, there may be many different paths that lead to the formation of distinct groups with mutual negative feelings. However, a more precise emphasis on how the stated causes produce the outcomes should be welcomed. Precise theories may help to understand when and how to take part to reverse a polarization process.

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