



Does artistic activism change anything? Strategic and transformative effects of arts in anti-coal struggles in Oakland, CA

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ABSTRACT

Mushrooming opposition to coal mining and transportation in the United States (US) connects with both environmental justice and climate justice movements. Artistic expressions are part of the strategic toolkit of these movements. Art's capacity to foster cultural, cognitive and psychological changes is amply recognized by academics as well as by public in general. Nevertheless, the theoretical question of how art is linked to activist strategies and to socio-spatial transformations in environmental conflicts remains unexplored. This paper contributes to filling this gap by examining the emblematic struggle to stop the construction of a coal-export terminal in Oakland, CA. Our data includes 32 in-depth interviews of activists, artists and legal experts linked to the conflict surrounding this coal-export terminal. Non-participant observation and secondary data collection helped to contextualize the interviews. The results offer a timeline of the movement, a map of artistic expressions, and network analyses around the effects of environmental artistic activism. We demonstrate that creative activism has critical relevance for facilitating engagement, education and outreach of the anti-coal movement. Arts and its spatial impact benefited the movement by expanding its scale and making it more inclusive regarding demographics, including particularly women and youth of color. The use of the arts raised environmental and political awareness and enhanced public participation in decision making. The paper connects the literatures of environmental justice, environmental humanities and human geography. We contribute to the yet underdeveloped dialogue discussing the capacity of art to influence socio-ecological structures and socio-spatial dynamics in cases of environmental justice conflict.

1. Introduction

Recent projects to develop export terminals for fossil fuels along the West Coast of North America face increasing opposition (Hazboun, 2019). Besides the implications for climate change, activists denounce the danger that transporting, storing, handling and shipping fossil fuels poses for neighboring communities (Boudet and Hazboun, 2019; Allen et al., 2017). The transformative discourse opposing fossil fuels connects environment and climate impacts with social justice issues (Eve & Croeser, 2017). These movements' ultimate aim is not only to avoid the construction of projects that aggravate climate change (UNFCCC, 2016), but also to trigger socio-environmental change to solve the crises impacting local communities (Warlenius, 2018).

Three out of four environmental hazards in the US are placed in poor and marginalized communities (Schlosberg and Collins, 2014). Race plays a prominent role in exposure and response to environmental risks

in the US (Bravo et al., 2016; Bullard and Wright, 2018). Aware of the power relationships behind global ecological, political and economic dynamics (Martinez-Alier, 2002), the environmental justice and climate justice movements see the need to foster imaginative routes towards alternative socio-environmental relationships (Wapner and Elver, 2016).

Environmental humanities have long pointed towards cultural change as the way to tackle environmental problems (Heise, 2016; Oppermann and Iovino, 2016). The transformative power of art relies on its capacity to spark cultural, cognitive and psychological changes (Bell and Desai, 2011; Bleiker, 2018; Danchev, 2009). Resistance movements and environmental activists use artistic expressions to educate (Blanc and Benish, 2017), engage community in participation in decision making (Bianchi, 2018; Brewington and Hall, 2018), and strengthen community identity (Văidianu et al., 2014). Moreover, artistic and creative expressions are important for younger cohorts (Della Porta,

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2013a) whose voices are currently leading climate justice protests on a global scale (Carrington, 2019; Martínez García, 2020)

Yet the academic literature comes short in bringing these theoretical perspectives to the ground level. Some studies have addressed the uses of art in social movements (Adams, 2001; Eyerman and Jamison, 1998; Mahon, 2000) and, to a lesser extent, in environmental movements (Ogaga, 2011; Sommer and Klöckner, 2019; Williams et al., 2010; Merlinsky and Serafini, 2021). Nevertheless, the theoretical question remains as to how activist art and campaigning strategies work together to achieve maximum impact and, more broadly, what role art really plays in environmental conflicts.

This paper addresses this gap by analyzing how activist art is used in an emblematic fossil fuel resistance movement in Oakland, CA, where a coalition of movements for environmental, climate and social justice has resisted a coal export terminal since 2015 (Arnold, 2015). We systematize the effects of the artworks used by different activists and artists referring to the coal terminal and trace the concrete changes and anti-coal strategies linked to the transformative power of art. The research is thus guided by two questions:

- Q1. How is the use of the arts linked to the strategies of the movement against coal exports?
- Q2. Which transformations and achievements of the anti-coal movement do activists recognize as related to the use of art?

Overall, the paper seeks to contribute to the geographical aspects of the environmental justice literature (Kim et al., 2018; Raddatz and Mennis, 2013) by systematizing situated knowledge about artistic activism against a potentially damaging project and determining the local effect of arts in anti-coal movements. In this respect, the research acknowledges environmental conflicts as a source of knowledge about socio-spatial relations (Moore et al., 2017). We use an interdisciplinary environmental humanities lens, discussing to what extent art triggers socio-ecological change, including spatial transformation, when used by mobilized communities. The opposition to coal exports in Oakland, which has not been analyzed yet by the scholarly literature, is an example of the fossil-fuel export debate in western North America. Thus the study adds to the new geographies of coal (Cardoso and Turhan, 2018; Oskarsson et al., 2021) by positioning the vision and arguments of local opponents to coal exports in northern countries.

The remainder of this paper is divided as follows. The next section offers a literature review about art in environmental and social movements and the state of the coal industry in United States. The third section details the research methods. The fourth section presents a brief history of the use of arts in the movement ‘No coal in Oakland’, and an analysis of the relation of artistic expressions with associated effects, strategies, and transformations. These results are discussed in the fifth section, centered on the contribution of anti-coal artistic activism in community-based strategies and the types of transformation art triggered. The final section concludes.

2. Background

2.1. Activist art in socio-environmental movements: contributions and gaps

Against the notion of an art divorced from morality and function, activist art engaged deeply in politics and social change (Weibel, 2014). Early in the 20th century, for instance, the Dadaist movement aligned with politics and protests of social movements, also rejecting the formalized artistic definitions of their contemporaries. In doing so, new forms of art making and protesting generated new artistic expressions (Grindon, 2011). Similarly, art has been a catalyst of inspiration for green politics since the beginning of the modern environmentalism (Blanc and Benish, 2017). The tree-planting artwork ‘7000 Oaks’ by the German Joseph Beuys, 1982, had an impact in cities around the world

and across generations (Adams, 1992). Today, the number of artists working on ecology and sustainability is such that there is an annual dedicated prize to visual arts and sustainability, the COAL Art and Environment Prize (Coal, 2020).

Our topic of interest, coal exploitation and trade, has attracted the interest of engaged artists in the past (Blanc and Benish, 2017; Thesing, 2000), and especially after the 2015 United Nations Climate Change Conference (COP21) in Paris (UNFCC, 2015). In the Appalachians, the best-known coal territory in the US (Shapiro, 1993), music helps to express emotions and opinions about ongoing social injustice, labor struggles, and claims to promote new identities after coal (Jenkins, 2010). The poster ‘The True Cost of Coal’, by the artist-activist collective Beehive Design, became an educational and organizational tool for grassroots organizations in Appalachia against coal extraction and burning (Blanc and Benish, 2017). Similarly, theatre and performing arts served to produce and exchange of evidence for public health policies in coal mining towns (Byrne et al., 2018).

Overall, researchers recognize the role of art in promoting sustainability, for instance, by communicating climate change (O’Neill and Smith, 2014), captivating the general public (Blasch and Turner, 2016), and inspiring awareness and personal action about climate change (Anderson, 2018; Sommer and Klöckner, 2019). Participatory art has sought to engage with a community’s environmental knowledge (Sacco et al., 2019; Williams et al., 2010). Additionally, some hail art as an act of resistance to ‘redress historically silenced narratives’ (Ogaga, 2011:98).

Therefore, it is not surprising that environmental humanities endorses art as having the capacity to trigger the cultural change needed to deal with the socio-environmental crisis (Iovino, 2019; Robin, 2018). Nevertheless, the environmental justice literature has done little to connect, empirically and theoretically connect the actual processes of resistance movements towards socio-environmental change with the use of the arts.

Environmental conflicts are social conflicts that manifest through social mobilizations in response to projects perceived like environmental threats like water, air, soil pollution, environmental and health risks and impacts. (Conde, 2014; Rodríguez-Labajos and Martínez-Alier, 2015). Racial and ethnic identities explain distributive injustices over the location of environmental hazards (Agyeman et al., 2016; Pulido, 2017). Movements for environmental justice made such a connection apparent, e.g., in the struggle against waste dumping in North Carolina in 1982 (Bullard, 1994). A common goal of such mobilizations is the material and political dissolution of projects perceived as socially and environmentally adverse (Martínez-Alier, 2002; Nixon, 2011; Hess & Satcher 2019)

Just as any project goes through stages, the strategies of a movement opposing a project are also diverse and evolving (Hess and Satcher, 2019; Scheidel and Schaffartzik, 2019). That is, both conflicts and community mobilization go through different phases, in which the strategies of the environmental activists differ considerably, involving, e.g. engagement, networking, or education (Hess and Satcher, 2019; Porto et al., 2018; Tormos-Aponte and García-López, 2018). The strategic ways in which art is used by environmental justice activists in their campaigns throughout these different phases is not fully understood. In particular, the overall strategies of anti-coal movements have never been studied vis-à-vis their use of the arts.

The theoretical interest of this enquiry transcends the concrete aim of ending a project to prevent the material effects of environmentally destructive activities. Environmental problems cannot be solved without a transformative approach towards “restructuring of dominant social relations and institutional arrangements” (Temper et al., 2018: 753), since gender, class, and ethnic identities explain distributive injustices over the location and impacts of environmental hazards. The creation of counter-narratives (Bell and Desai, 2011), strengthening of collective identity and knowledge (Temper et al., 2018), and promoting recognition and participation (Della Porta, 2013b; Schlosberg, 2013) have a

potential for socio-cultural transformations towards sustainability in the context of environmental conflicts. Following prefiguration politics (Maackelbergh, 2011), environmental justice movements reflect in their daily life the world they want to create by embodying in their resistance practices the principles they advocate (Grosse, 2019; Rodríguez-Labajos et al., 2019).

Arts have been used to challenge the status quo and imagine new realities (Anderson, 2018; Bell and Desai, 2011; Bleiker, 2018). From this perspective, artistic practices stir togetherness and solidarity (Mahon, 2000), communicate opinions to the larger society (Eyerman and Jamison, 1998) and raise political awareness (Adams, 2001; Eyerman and Jamison, 1998). Furthermore, artistic practice has moved people to act politically and change the ways of thinking and understanding the world (Ryan, 2015).

Despite the valuable contribution of the transformative potential of arts, there is lack of clarity about what type of transformation should we expect from the use of arts in sustainability, when, where, and how the transformation occurs and who is affected by it. These points constitute building blocks of a novel understanding of the links between art use and environmental conflicts.

We will advance such an understanding building on three angles of transformations in the environmental justice: a) Material transformations associated with the end of an environmentally and socially hazardous project (Martinez-Alier, 2002); b) Political transformations encompassing regulatory changes, participation in decision making processes, and gaining support from powerful actors (Della Porta, 2013b; Hess and Satcher, 2019); c) Socio-cultural transformations emerging from interactions between individuals, identity, values and knowledge (Rodríguez-Labajos et al., 2019; Temper et al., 2018). Thus, the contribution to the geographical aspects of the environmental justice literature highlighted above lead us in identifying concrete changes across these categories linked to the transformative power of art in the analyzed case.

2.2. Opposition to coal exports within the anti-coal movements in United States

Coal was and still is the fuel of global economic growth (Böll Stiftung, 2015). The US has biggest reserves of coal and is one of the world's largest exporters, exporting 8.3% of global production in 2018 (EIA, 2019a). Falling natural gas prices, declines in the costs of wind and solar energy and, to a lesser extent, environmental regulations have reduced coal's popularity (EIA, 2018a). As a result, US coal demand has fallen by more than one-third since peak production in 2008 (EIA, 2019b).

Meanwhile, activists in the US oppose coal denouncing the danger this industry imposes on communities, and the contribution to climate change from transporting, storing, handling and shipping fossil fuels (Boudet & Hazboun, 2019). The climate justice and environmental justice movements are particularly concerned (de Place, 2018). (Grunwald, 2015).

Still, researchers in cultural politics have discussed the persistent economic and political power of the fossil fuel industry, calling it the *coal complex* (Roy and Schaffartzik, 2021; Brown and Spiegel, 2019). President Donald Trump challenged the 2015 Paris Agreements, repealing low-carbon transition policies with the slogan: '*Trump Digs Coal*' (Walters, 2018). The end of the alleged 'War on Coal' meant overturning existing regulations regarding carbon emissions and attempting to revive the coal mining (Wang et al., 2019).

In a context of declining coal extraction and coal-mining employment, the industry survives thanks to international markets (Olkuski et al., 2019). Coal exports increased since 2016 (EIA, 2018b), driven by the demand of countries like China and India whose industries rely on coal-based energy (Clemente, 2018; Geels, 2014). This is in the origin of proposals to build coal and other fossil-fuels exports terminals –especially in military bases or other federal properties – on the West Coast (Brown, 2018).

Utah mines have gained increasing attention after their recent interest in coal exportation through West Coast (Yardley, 2015). Coal producer Wolverine Fuels (formerly known as Bowie Resource Partners) saw the Port of Oakland as an option to expand mining operations (Loftus-Farren, 2015). The project evolved towards the combination of a railway and a coal shipping terminal in the Port of Oakland. In 2011 they joined forces with a local developer in charge of the company 'Oakland Bulk and Oversized Terminal LLC (OBOT)', created to redevelop the former Oakland Army Base (OBOT, 2019).

Oakland is a major West Coast port city in California, with 429,082 habitants in 2018 (Oakland City, 2019). As the industrial and trade center of the San Francisco Bay Area, Oakland has a high concentration of pollutant sources, which configures a territory of environmental injustice (Fisher et al., 2006; McClintock, 2015; Rhomberg, 2004). East Oakland and West Oakland are the most exposed neighborhoods to environmental hazards, which affect a majority of African American, Southeast Asian, and Latino populations that experience a high intensity of poverty (Garzón et al., 2013).

The US Environmental Protection Agency (US EPA) situates Oakland at the core of the country's environmental justice movement. Since 1999, community organizations pursuing environmental justice have succeeded in shutting down an incinerator (Hamburg, 1998) and a yeast plant (DeFao, 2002), and in pushing for the management of toxic soils (Counts, 1999). This background proved the community's capacity to fight effectively against polluting industries. The Port of Oakland remains at the center of anti-pollution struggles, specially from sea shipping and the carrying of diesel trucks (Hamilton and Wentworth, 2016).

Unsurprisingly, the threat of a new polluting project faced the resistance of activists and residents. An opposition movement gained support from the city council, worker unions, and diverse social movements. So far, they have stopped the exportation of coal from Oakland (Arnold, 2015; Express, 2018). Despite the interest of this movement in terms of the strategies used and how they are leading their path towards social environmental justice, the case has not yet been analyzed yet by the scientific literature.

3. Methodology

Careful consideration to positionality and ethics was part of the research design, prior to the consultation with primary data sources. In order to ensure adherence to principles of responsible research, the research protocol (including procedures for participants' consent and data management) was formally evaluated and approved by the Ethics Committee on Animal and Human Experimentation at the Universitat Autònoma de Barcelona (CEEAH-UAB).

This research follows a mixed-methods approach guided by the two research questions (Q1, Q2) presented in the introduction. Our conceptual map (Fig. 1) connects notions from environmental justice, social movements and transformations inspired by the background literature review. Annex 1 includes a definition and elaboration of each key concept, as well as a detailed description of procedures for the data gathering, organization and analysis.

The compilation of background data started by reviewing regional press, relevant social media posts, and webpages of activist groups. In this period, we contacted potential interviewees by email and a snowball sampling followed. In April and May 2019, semi-structured interviews were conducted with a total of 32-artists, activists and legal actors from different organizations (Annex 1) involved in the anti-coal movement in Oakland. As part of the primary data collection, interviewees were asked to describe the movement and associated artistic expressions, and to relate their experiences and perspectives about any socio-environmental transformation since their involvement started (see Annex 1 for the interview protocol). The research did not impose any given definition of art, and we accepted as such anything that informants perceived to be art. The artworks mentioned during the interviews were recorded with the title provided by the informants.

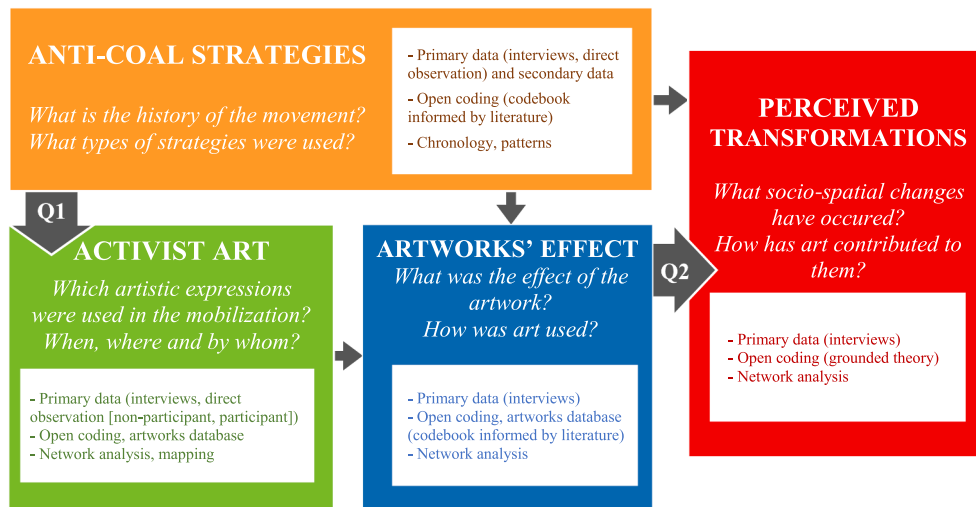


Fig. 1. Concept map of the research, connecting key concepts, research questions (Q1, Q2), and data collection and organization methods. Source: Own elaboration.

Interviews were coded using MAXQDA, a software for analysis of qualitative data. The codebook emerged from the analysis of the interviews, although the grouping categories were informed by the background literature review (see codebook as Annex 2). Among the informants, 18 were artists (who consider themselves to be also activists) and 14 non-artists; 10 informants (31% of the sample) were children, 9 (28% of the sample) were between 18 and 60 years old, and 13 (40% of the sample) were older than 60; 18 (56%) women, 12 (37%) men and 2 (6%) non-binary. The sample represents the demographics (age, gender, race) of the movement. The high percentages of women, retired people and under-age reflect their importance in organizing and leadership. The analysis had into consideration possible differences in the use of artistic expressions according to age and gender.

Direct observation also contributed to primary data collection in two ways: by inspecting and mapping the places where the conflict and artistic expressions occurred, and by complementing the interview data.

Supplementary non-participant and (occasionally) participant observation included the attendance to events and activities organized by the movement during the fieldwork period (see Annex 1 for a list of attended events). This helped refining the interview design, collecting background information of the movement, contrasted later in the interviews, and expanding the network of contacts.

Based on the compiled data, a detailed timeline, a map, and network representations of relevant concepts were developed using different analytical tools (ArcGIS, Excel, Gephi). Annex 1 presents the correspondence between sources of data, analytical tools, and results. Summarizing, the timeline was built from secondary data collection, non-participant observation and a form with a timeline completed during interviews. The timeline was the base for the chronological description of relevant events, as well as the timing of strategies, artworks and transformations mentioned by the informants (Fig. 2, Annex 3). The map was built from direct observation and interviews. It served to connect

Phases of the anti-coal movement in Oakland	4.1.1. <i>Building the movement and spreading the message</i>	4.1.2. <i>Starting to take action</i>	4.1.3. <i>Success: the second hearing and the ban to coal transportation</i>	4.1.4. <i>Silent movement and maintaining the life of the issue</i>	4.1.5. <i>Today: Block the money</i>
YEAR	2012- 2015	2015 - 2016	2016	2016 - 2018	2018 - 2019
STRATEGIES					
KNOWLEDGE	x	x	x	x	x
ORGANIZATIONAL	x	x	x	x	x
ECONOMIC		x		x	x
LEGAL		x	x		
ARTS USED BY THE MOVEMENT					
AUDIOVISUAL/SONGS		x	x	x	x
IMAGE-BASED	x	x	x	x	x
CLOTHING				x	x
MEDIA	x	x	x	x	x
ORAL/WRITTEN		x	x	x	x
PERFORMANCE		x		x	x
ORGANIZATION		x		x	x
ARTS IN GENERAL		x	x	x	x
CHANGES AND TRANSFORMATIONS					
SOCIO-CULTURAL	Creation and strenghtening of human connections				
	Creation of an artistic movement				
	Expanding demographics				
	Increased local awareness				
	Youth movement				
	Demoralize oposition				
POLITICAL	Increased political support for the movement				
MATERIAL	Stop the terminal				

Fig. 2. Timeline of the movement against coal in Oakland. Source: Own elaboration.

the artworks with the place and discuss their spatial impact (Fig. 4). The networks of concepts resulted from the codification of the data obtained in the interviews. Network analysis allowed data visualization and the representation of the frequency and co-occurrence of codes in the interviews. The codes categories used for network analysis were “anti-coal strategies”, “effects of art”, “targets” and “transformations” (Fig. 5 and Fig. 6).

4. Results

4.1. The history of the use of arts in the anti-coal movement in Oakland

This section explains the history of the movement and the most significant events, the strategies and artworks used and their location. A complete timeline of the movement is shown as Fig. 2. An extended version of the timeline is presented as Annex 3. Fig. 4 presents a map with the location of the artistic expressions.

4.1.1. Building the movement and spreading the message

The Oakland Bulk and Oversized Terminal (OBOT) project, as planned by a well-known local developer from Oakland, was not contested until 2015, when negotiations between the developer and the Utah coal industry became public (Reaper, 2015). In May 2015, a movement against this project was formed with the motto “No Coal in Oakland” (NCiO). The core group of people in this movement, came from different parts of Oakland and different social and environmental movements such as “System Change Not Climate Change”, “Idle No More”, “Occupy Oakland” and the Civil Rights Movement.

When asked about the position the movement as an environmental justice or as a climate justice movement, interviewees refer to both the local and global impact of coal, although typically emphasize elements of racial injustice and demographic segregation in Oakland: “So locally, West Oakland is largely African-American. In this country we have housing

segregation by governmental design, including that polluting industries are put into the neighborhoods where Black people were allowed to live.” (MM, independent artist, NCiO).

During the first months, the group focused on finding support from other environmental groups, unions and health workers and the faith community. House signs with the message “No Coal in Oakland” conformed the first image-based artworks of the movement. The signs were placed through all Oakland, with the purpose of calling the attention to the situation. The group also created a website with posts of news about the cause that informants see as an artistic piece due to the profusion of visual elements, such as photos and graphic design.

Interestingly, worker unions and port workers were key for the anti-coal coalition. “Oakland wouldn’t benefit economically very much. I mean the bankers always say ‘jobs, jobs, jobs’. But the number of jobs that would be needed to operate that would be like twelve or so. Meaningless.” (JR, Rose Foundation).

NCiO got information about the legal state of the project, and learned that the City Council could, under public health and safety regulation, block the project. Therefore, the strategy during the second stage was twofold. On the one hand, coalitions with different environmental and social organizations were sought so that the movement could generate its own knowledge base. On the other hand, the creation of a big coalition aimed at participating in decision making towards stopping the project.

4.1.2. Starting to take action

The first street demonstration took place in the “Bike to Work Day” (May 2015). Artists and activists dumped charcoal in front of Rotunda Building, in downtown Oakland, and called the street-performance “Dumping Coal.” Pictures from this action appeared in the local newspapers in the following days, and the name of the movement NCiO circulated widely (Tepperman, 2015). Other artistic forms were used for contestation that day. Activists prepared their first banners combining texts with images. Children recited poems directed to the public in general, decision makers, and to the developer.

While waiting for a judicial decision, the activists tried to reach as many people as possible. During this stage, NCiO organized teachings with social collectives like Black Live Matter and the housing movement. They wrote reports about health and safety and sent letters and signed petitions to politicians and developers. They also prepared press releases for local newspapers like the San Francisco Chronicle, the East Bay Express, and the Oakland Post. The message targeted decision makers like Governor Brown, urging them to act.

NCiO took advantage of the increasing global attention on climate change and participated in 2015’s Oakland Climate March together with other regional environmental justice organizations. The NCiO poster, launched that day, deserves a special mention (Fig. 3). It was silkscreened in front of the City Council in the Climate March and it was amply used in the anti-coal mobilization. The artist who created the image remembers: “We wanted to get the message out to the community, and the best way is a big bold poster. Then they took the image and made their own street signs and then gave them out too. [...] They made some T-shirts.” (JP, Artist). The NCiO T-shirt became a useful and popular artwork for the activists, who wore it often, especially in court hearings (as observed directly during fieldwork) and in social events and marches around the city (e.g., the Climate March). Some activists used it during our interviews.

Other popular expression of NCiO actions were the Occupella songs, sung in every demonstration. The performers used the music from popular songs and adapted the lyrics to the anti-coal struggle. BL from Occupella explained: “The idea was rewriting songs to get people to sing [...] it’s really hard to get people to sing to an original tune. Using tunes that people are going to know them enough, people are going to sing together”. (BL, independent artist- NCiO).

The strategies behind these actions aimed at engaging more and more people, educating the general public, generating “their own

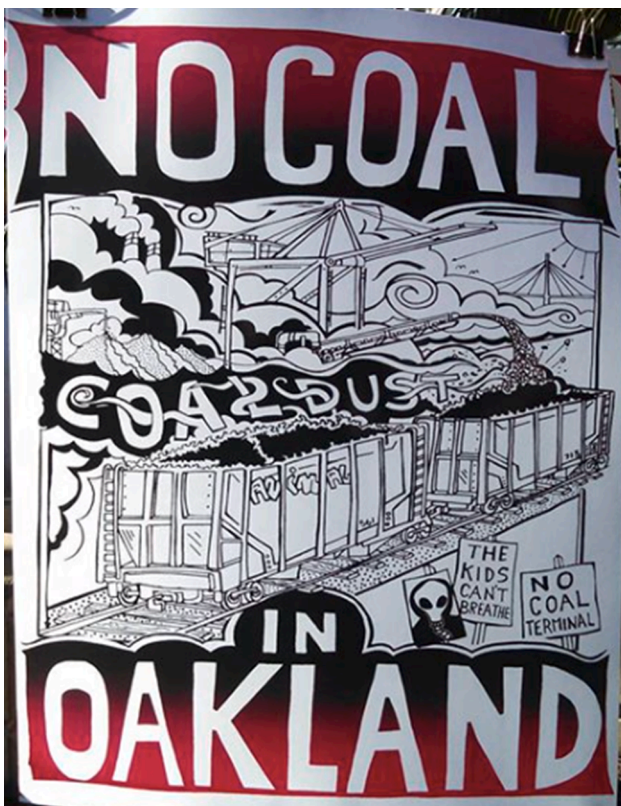


Fig. 3. “No Coal in Oakland” poster by the artist John Paul Bail. With permission.

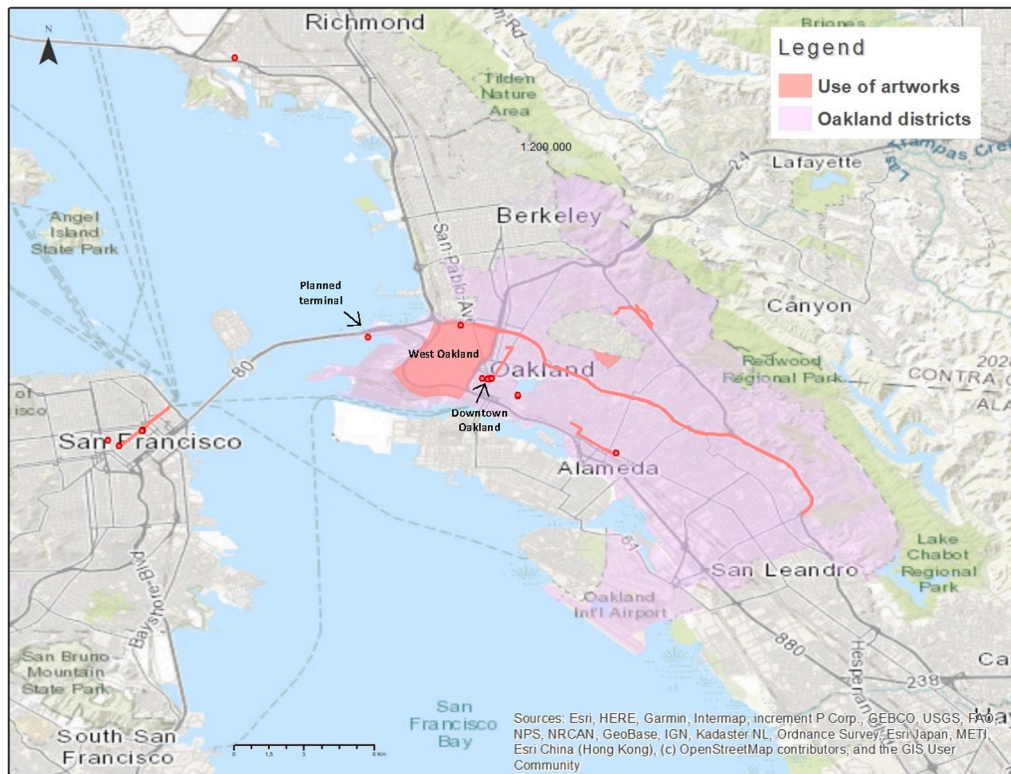


Fig. 4. Anti-coal artistic activism location.
Source: Own elaboration.

science” to expand the knowledge and information base of the movement and demanding participation in the legal decision-making process.

4.1.3. Success: The second hearing and the ban to coal transportation

The most important public hearing according to the interviewees was held in June 2016. More than 600 people testified against the project. Many dozens of Oakland’s children, elders, faith leaders, workers, politicians, business owners, pediatricians, teachers, and artists participated. “I never saw a community come together to fight like this like to the coal terminal. You never saw anything like that before.” (BB, WOEIP).

The artist DS and the photographer BA honored all these efforts with the transmedia piece called “Faces of Coal Resistance” at Oakland City Hall. The artists used “photos that were reflective of all the different parts of the community that had come out to protest the coal” (DS, Independent Artist), enlarged, printed and put them in sticks and used them as signs. Another part of the piece was a nighttime projection of these photos on the City Hall. The purpose was to make “ordinary people to be the heroes and the leaders” (DS, Independent Artist).

This hearing would be the first opportunity for children to publicly advocate formally to decision making. Informants remembered children using emotive poems to express their opinions about the project, that caused deep impact. From this day, children would be frequently photographed and quoted. In fact, informants recall: “We’ve had students recite poems [...] so many different times in front of City Hall and in front of council members (CZ, Rose Foundation)”. A young activist explained: “I think poetry it’s to make people feel things and to also for the Author to be able to authentically express what they’re trying to get out.” (IC, Youth vs Apocalypse).

In this stage, art and activism were used together for purposes such as expressing opinions, and getting attention to the issue. Yet in the judicial process, public health professionals played a key role. “There was a clause in there that said basically ‘the city can’t change the terms except for health and safety’. So, to do that, we had to show ‘this is what the science says’” (AH, NCI/O).

After this second hearing, seven Council members unanimously voted to uphold the ban on transporting coal. The whole community and the activists celebrated the Council’s decision. They expressed their joy through songs, cheered by Occupella musicians. That day was the most successful event that interviewees remember. The ‘successful strategy of the movement’ combined organizational, educational, and knowledge-generating strategies that generated a popular movement and allowed participation in decision making.

4.1.4. Silent movement and maintaining the life of the issue

The City Council’s ban to coal was not the end of the battle against coal in Oakland. Five months later, the developer filed a federal claim against City, claiming that the ban violates his constitutional and federally protected right to ship coal. A period that interviewees describe as a turn to a “silent movement” started, as the case entered a litigation process. Written artistic expressions were always present throughout all the city like the announcements in Grant Lake Theatre that claimed with glowing lights: “We praise Oakland stand against the deplorable lawsuit to inflict planet killing coal on our community”.

In this context, young people helped “maintaining the life of the issue”. Youth organizations such as “Youth vs Apocalypse” and other youth social justice movements took a central role. Led by young people of color, these organizations strongly represent the West Oakland community. Organizations like 350.org, Rose Foundation and Clean Energy Alliance were focused in organizing and supporting youth activism and they hosted summer programs and educational sessions. They educated kids about climate change and its relation to the coal project. Education initiatives included artistic activities like the creation of memes were kids merged images and text in a multimedia format, collective painting of the banner “New Year No Coal”, and craft building.

Young activists organized several anti-coal demonstrations that informants regarded as artworks themselves. Youth’s advocacy was essentially based in artistic activism. Youngsters occupied the streets

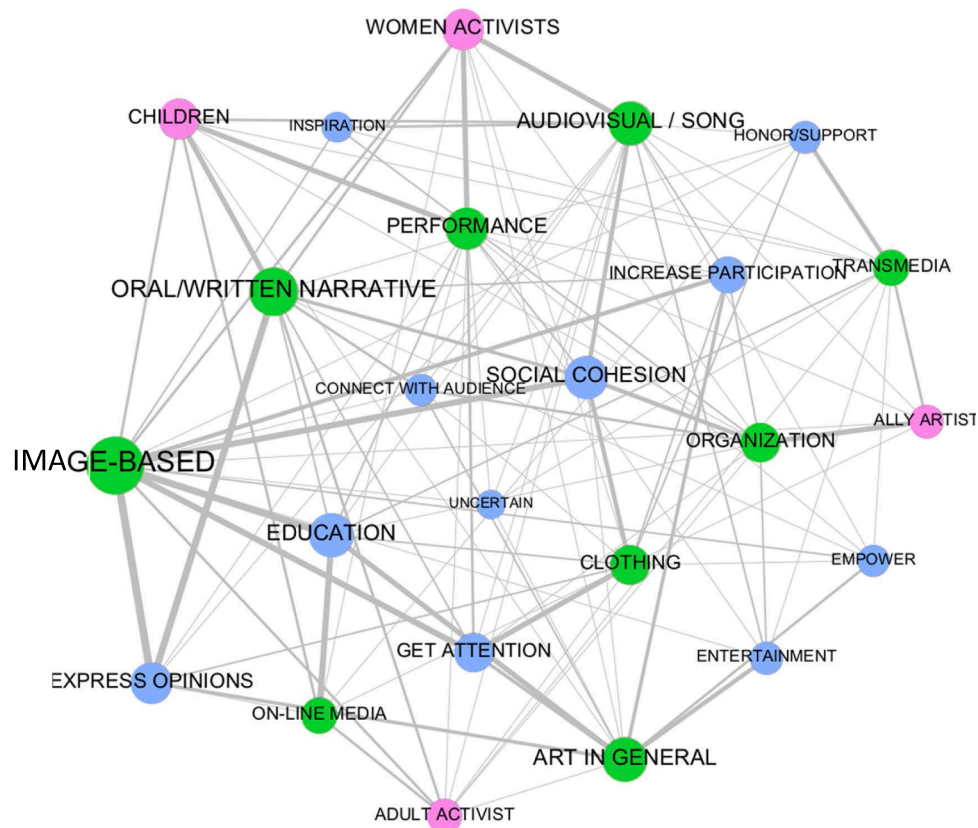


Fig. 5. Network analysis between types of art (Green nodes), art's effect (blue nodes) and user (pink nodes). Note: the size of the nodes and the edges reflects the number of times a given item (and their interaction) was mentioned by the interviewees. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

Source: Own elaboration based on force-directed Model Force Atlas 2

dressed as zombies or elves, performing, singing and carrying banners they designed. The strategy was “*direct truth telling about the project including creativity and fun, and making it something that feels good to be part of, emotionally and spiritually*”. (CO, 350.org). These artistic demonstrations were mainly in downtown Oakland around the U.S. Courthouse, the City Council, the developer's office at Rotunda Building, but also in other parts of the city, such as the kids' schools, or near the developer's residence.

Meanwhile, the core NCiO group was “*trying to figure out how does the funding of such a project work and how do we find out who might be contacted for the whole project*” (NS, NCiO). In May 2018, a federal judge overturned the ban, to the advantage of the developer in the legal battle (Veklerov, 2018). Therefore, the activists had to look for other ways to stop the project.

In sum, during this silent period the movement aimed at influencing the developer, keeping the community mobilized, and engaging more people through education. Youth artistic activism became central. The core NCiO group explored new avenues to stop the project through legal or financial means.

4.1.5. Today: Block the money

In 2018 the movement discovered that the Bank of Montreal may fund the project. Taking advantage of the Meeting for Principles of Responsible Investment at Marriott Marquis Hotel in San Francisco, a loud demonstration in front of the venue involved dances and music coordinated by different artists. The demonstrators handed out informative flyers, that included creative graphics that represented “*a pile of coal and a bunch of dollar bills coming out of it*”, with the purpose of “*getting to somebody who doesn't really care about those issues but is worried*

about what their money is being used for' and 'trying to get people to go there sign a letter” (NS, NCiO).

When asked about the current state of the conflict, interviewees believe to have won the battle. In the Federal Courts the litigation continues via several ongoing cases. The activists see themselves part of a growing global movement for climate and against fossil fuels. Their presence at the mural painting celebrated at the Climate Justice Mural project at San Francisco in 2018 serves as a visual representation. Their mural portrayed a pollutant industry using the colors of the movement: red, yellow and black.

Interviewees see their main achievement as the fact that the terminal project has been stopped thus far, even after a subsequent adverse court decision in May 2020 (Dinzeo, 2020). They celebrate the building of a solid movement that opposes the project.

Thus, artistic expressions were present throughout the timeline of the movement. The interviewees recall 28 different expressions that span all the period (Fig. 2) all around the city (Fig. 4).

Most of the pieces intended to expose the community views and the socio-environmental injustice of the project and to explain the dangers of coal. Coal is portrayed as a polluting, hazardous, and toxic element. The term or the visual representation of ‘community’ appears often. Red, black, and yellow colors dominate the visuals. The No-coal in Oakland poster (Fig. 3), described as the most representative of the movement, uses black to represent the dark coal dust, and red as the color of the movement (e.g., the NCiO t-shirts were red).

The poster shows a factory burning big piles of coal, and the coal train emitting plumes of smoke with the text “*coal dust*”. As the artist explained, the intention is to depict the coal dust “*that would blow off into us*” (JP, independent artist). The slogan “*kids can't breathe*” and a skull

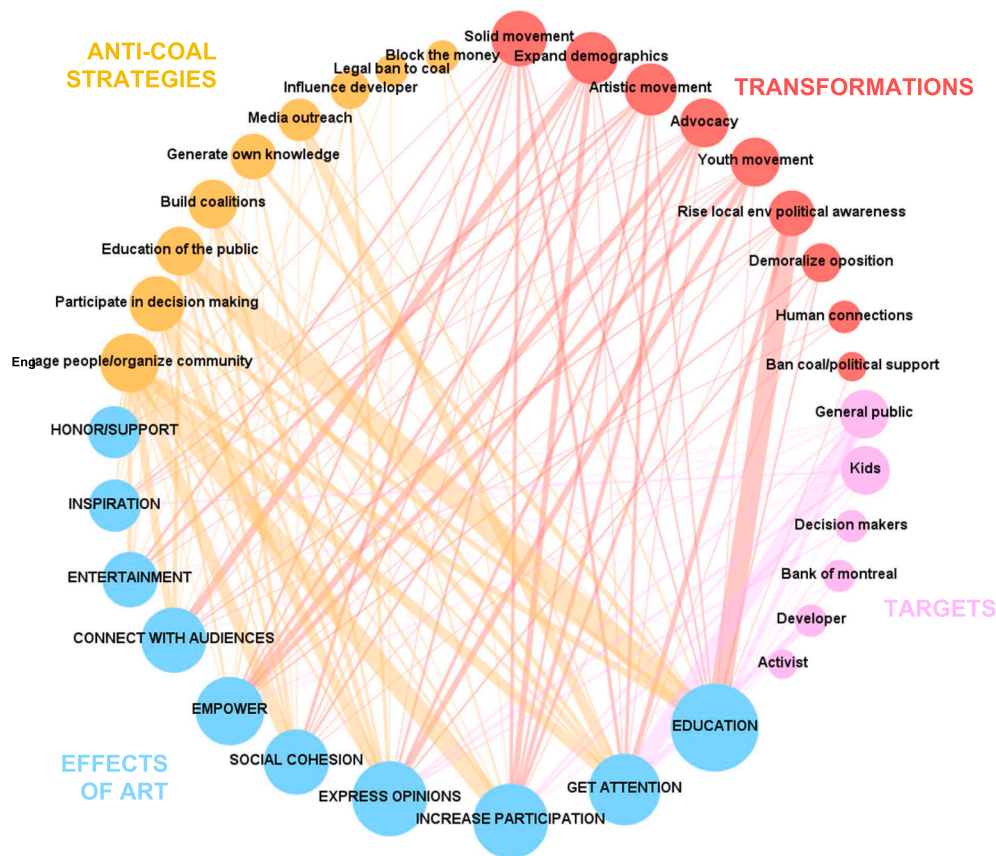


Fig. 6. Chord diagram of anti-coal strategies (orange), activist art effect (blue), art-induced transformations (red) and target of the artworks (pink). Note: the size of the nodes and connecting ties reflects the number of times a given item (and their interaction) was mentioned by the interviewees.. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)
 Source: Own elaboration

mask stress the scientific argumentation that coal harms the health of the Oakland citizens. “It invokes pollution and death” (BB, WOEIP). The New Bay Bridge in the background and a graffiti on the train convey Oakland’s local identity. The informants that mentioned this poster praised its contribution to the recognition of diverse community views in environmental decision making and to make the environmental injustice behind the project visible. “You can’t disagree with what’s on this poster. I think it brings people to the issue who might otherwise not have thought about it. It activates people who are more emotional than perhaps rhetoric based” (BB, WOEIP).

Spatially (Fig. 4), 46% the artworks occurred in Downtown Oakland, in front of the City Council, targeting decision makers and the general public and in the nearby Rotunda Building, addressing the developer. 28% were itinerant, such as practices during marches to the City Council, or to the Lake Merritt. Kids’ artworks were the most aimed to the developer (Fig. 6), thus they were performed in their office or near his residence (e.g., *Zombie Coal-pocalypse*). 28% were at relevant places in San Francisco like the Federal Building and the Civic Center Plaza. Just 7% of the artworks were located in West Oakland, near the planned building site of the coal terminal. Fifty-four percent of the pieces were created for ephemeral events, out of which 27% were performances (e.g. Coal dumping, theater plays, Elf delegation), and 40% were image-based expressions (e.g., the banner used in the youth march against coal).

4.2. Connecting art, effects and strategies of the movement

A network of concepts displays the relationships between artwork’s effect (blue), type of medium (green), and users (pink) (Fig. 5). The network shows the more frequently depicted artwork type and effects

(indicated with the size of the nodes), and the relation and co-occurrence between them and the users (width of ties and the closeness between nodes). *Education*, *social cohesion* and *expressing opinions* are the three most frequently perceived effects of anti-coal artistic activism. Among the artistic expressions, image-based pieces and audiovisuals are the most popular expression of the anti-coal movement.

Another network allows visualizing the chained connection between the strategies of the movement, the effects of artistic activism and the perceived transformations (Fig. 6). The size of the nodes indicates the frequency of mentions in the interviews, and the width of the tie indicates items’ cooccurrence. This figure reveals an interest of the anti-coal movement beyond *education*, towards engaging more people in the movement, organizing members of community, and promoting participation in decision making.

Interestingly, *education* is most frequently perceived effect of art (Fig. 5, Fig. 6). Education appears directly connected with image-based expressions like banners, posters, signs, and online media (e.g., the NCiO website, and Angelica’s animation about coal). As an example of combining art’s effect in education and in getting public attention: “it’s a catchy, it’s colorful, it directs people’s attention and it tells people what you’re about, people start asking questions and people feel a lot of folks know that this is happening and it raises awareness” (CZ, Rose Foundation). *Rising local environmental awareness* follows the combination of education and increased public attention (Fig. 6)

Image-based media is among the more mentioned artworks during interviews. Pieces such as the anti-coal poster, big banners and collective murals were the most referred to; they also were connected to all perceived effects of arts, especially *education*, *social cohesion*, *increasing participation*, *expressing opinions*, and *getting attention*. Furthermore,

image-based expressions are the preferred media for adults, women, and children, as the direct ties of the “users” nodes in Fig. 5 reveal. Image-based artworks and online media showed information about the conflict using drawings, symbols and colors that depicted the impacts and injustice of the coal terminal, providing an avenue for the activists to express their opinion to the public at large.

The NCiO t-shirts contributed notably to social cohesion and to get people’s attention (see node “clothing” in Fig. 5). “We’d have the experience of wearing them and people coming up and asking us about it and stuff like that” (SS, NCiO). “You now feel a part of something and connecting with other people” (LM, Faith Community). In fact, the T-shirt alone contributed as much to social cohesion as all the rest of audiovisuals and songs. For the NCiO supporters, the T-shirts were also a way to honor and support their own activism. Interestingly, social cohesion responds directly to the movement organizational strategy of engaging people in the movement and organizing the community (Fig. 6).

Oral and written narratives had an important role in expressing opinions. Children used them twice as much as adult and woman activists (Fig. 5) to join the anti-coal strategy of participating in decision making (Fig. 6). Interviewees remember poems in City Council hearings as a major form of advocacy for decision making of young activists, especially poems recited by young women of color. This is an example of a coincidence of preferences between women and children. Interviewees would explain: “most of them [children activists] are girls. And all the adult supporters are female” (CO, 350.org). Similarly, “the youth were both male and female, mostly female. And the same with the adults that are involved, mostly female” (JT, Clean Energy Alliance). Artistic demonstrations qualified as “performances”, were also a place of convergence for children and women activist. The main effect was to get attention of the general public, and contributed this way to the strategic purpose of organizing the community and calling media attention.

4.3. Art, strategies and transformation.

The NCiO movement triggered transformations, as perceived by the interviewees, that we have grouped in three categories (socio-cultural, political, and material), with the aim to connect with literature on environmental conflicts and social movements. Nearly half of the perceived changes are socio-cultural transformations that started since the first stages of the mobilization. Several political and material transformations occurred after the city’s ban coal. In particular, the chord diagram in Fig. 6 reveals three patterns of art-induced transformation that are described next.

4.3.1. Socio-cultural transformations highly related with relational effects of art

The creation of a solid and artistic movement, its expanding demographics and advocacy capacities, and the increased engagement of younger cohorts were socio-cultural transformations most frequently associated with artistic practice of the anti-coal movement. Several effects of the arts converge in the creation of a solid movement. Meanwhile, the expanding demographics, advocacy capacities, and youth participation rely on the connection with audiences, increased participation, the possibility of expressing opinions, and the empowering effect of the arts.

Artistic means helped to expand the demographic composition of the movement due in part to their role in communication. Different kinds of people and their respective understandings identify with the movement thanks to art’s effect in connecting with a variety of audiences. “Specifically, communities of color, environmental justice communities, immigrant communities, for example, where maybe the language is different. If you have a visual, sometimes you don’t even need to speak that language to understand the issue [...] A role that art places specifically in these campaigns is communicating with a wider audience” (JT, Clean Energy Alliance). Thus, artistic practices and enjoyment increase participation and became a space of encounter for everyone.

Similarly, the capacity to increase participation engages youth. This effect concurs with the possibility to express opinions and thus a feeling of empowerment. Furthermore, the youth movement is characterized by the activism of children of color who see their role as actors of change. “It talks a lot about challenging the dominant paradigm... these pieces of art create change for the creators” said CZ (Rose Foundation) talking about the “New Year No Coal Banner” created for a youth demonstration organized by a girl of color. As the demographics of the movement expanded, artistic activism also made it more inclusive: “I think art is just different ways of reaching out to different types of people with different kinds of experiences and types of learning” (IC, Youth vs Apocalypse). Oral/written narratives (e. g., poems) and image-based expressions (e. g., banners and murals) contribute the most to social inclusion.

Fig. 6 also shows the strong connection of perceived educative effects of art with rising local environmental and political awareness. The ability to educate in an attractive and catchy way makes people sensitive to the environmental concerns affecting their community.

4.3.1.1. Political transformations moderately related to educative effects of art. NCiO promoted political transformations that cannot be attributed directly to the effect of the arts. That is the case of gaining the political support that would eventually lead to the legal ban on coal transportation. It is worth emphasizing that this transformation is connected to education, the most impactful effect of artistic activism. This is well-known by the activists: “I feel like that education is part of agitating people to act” (JT, Clean Energy Alliance); “the important thing for the grow of this movement is education, more people have to see [...], so I really like to hold banners, in the maximum exposure” (MB, NCiO). Besides being the most frequently mentioned effect, directly connected with image-based expressions like banners, posters, signs, and online media (Fig. 5), education connects practically all the strategies, transformations and targets, especially the organizational anti-coal strategy of educating the public (Fig. 6).

4.3.1.2. Material transformations poorly connected with art. Interviewees did not directly link the arts to the most important material transformation perceived by the movement: *Stopping the terminal*. The educational effect was the only one somewhat connected to achieving the legal ban to coal. This raises the question as to what extent artistic expressions are truly necessary for the success of the movement. When interviewees were directly asked this question, two basic positions emerged.

- No movement without art. Some interviewees, and specially artists, conceived art as part of human nature, not only in this movement but historically. A young activist said: “I’ve never known a social justice movement without art” (IC, Youth vs Apocalypse). An experienced social activist agreed: “I think without it would be very different. I mean I can’t imagine not having the banners and not having that kind of visual expression”. (JL, NCiO and Thousand Grandmothers).

Under this vision, the activist art of social movements is linked to the cultural conception of mobilization. For them, it makes sense that one of the transformations triggered by the movement was “becoming an artistic movement”. “A movement has music, artists and intellectuals, intellectuals need someone to do art [...] Like Emory Douglas from the Black Panthers: they were activists in the room. And he had to become the artist of the group, he was the only artist in the room” (JP, artist). This is linked to inspirational and entertaining effects of the arts.

- Art is one effort among many others. Many activists agreed that the arts were part of the toolkit of the movement, together with legal, organizational and knowledge strategies. “Art by itself doesn’t make change but art together with smart organizing and strategy can be very powerful” (MB, NCiO). This is linked to the effect of art of giving

“honor and support” to the activists’ work: “*There is two arms to this movement [...] who wants to talk about the financial goings on in Montreal and someone who wants to figure out how to paint the street. Those are really different conversations. And I think that we’ve done a good job of respecting that both of those things need to happen*” (TF, NCiO).

Interestingly, none of the interviewees endorsed the idea of a movement devoid of the arts.

5. Discussion

Combined, the above results point to two major findings regarding the use artworks in anti-coal struggles. The first one is that creative activism is a necessary component in the strategic toolkit of anti-coal movements, with critical relevance for engagement, education and outreach. The second one is that the use of the arts triggers socio-cultural transformations desired by environmental justice movements and underpins political changes. The contribution to the material transformations that constitute the ultimate goal of the struggle is mostly indirect.

5.1. Creative activism as a necessary component in the strategic toolkit of anti-coal movements.

A striking finding regarding the arts’ influence on anti-coal strategies is its role in engaging people and organizing community, beyond being a mere resource for dissemination and awareness. In the analyzed case, art was present since the very beginning of the mobilization. Art fueled the spread of concerns about the project and energized the struggle keeping it alive during periods of apparent stagnation. This is of particular significance given that good community organization is a challenging task for environmental justice groups and communities (Larsen et al., 2015). Once achieved, community mobilization has proved to be key for blocking effectively polluting activities (Leonard, 2018; McAdam and Boudet, 2012).

Social movements scholars recognized the relevance of organizational and social networks for social movement mobilization (Snow et al., 1980). In the analyzed case, the effect of artistic activism in social cohesion and increasing participation were the most influential for organizational strategies of the movement. For instance, singing together had a significant incidence in enhancing feelings of collectivity, solidarity and social cohesion.

Indeed, social cohesion is critical in environmental resistance movements (Rodríguez-Labajos et al., 2019; Schlosberg and Collins, 2014), especially in challenging power structures over the uses of public spaces that disrupt community life (Lefebvre, 1991). This disruption can even involve violence against environmental defenders resisting coal projects around the globe (Scheidel et al., 2020; Roy and Martínez-Alier, 2019; Watts, 2018). Our results support previous analyses showing the effectiveness of artistic means to enhance community participation and social cohesion within activism (Byrne et al., 2018), and in context of environmental conflicts (Harper et al., 2018). Activists wearing the NCiO t-shirt created a joint identity and an enhanced feeling of collectivity; they were using the same signs that, as Otte (2019) puts it, represented shared values. The artistic object, a material entity, communicated ideas, opinions, and struggles. This aligns with organizational aesthetics theories (Taylor, 2002; Sorsa et al., 2018) that position clothes as communicative artistic pieces with incidence on organizational strategies.

On the other hand, environmental-justice activists emphasize the need of community participation in decision-making processes. The demand of “a place at the table” (Schlosberg, 2004) was one of the claims and strategy of “No Coal in Oakland” that, interestingly, was highly catalyzed by artistic activism. As pointed in the results section, both the house signs and the poster showed the distress of the community over the project; they were the first claim of community views

recognition in environmental decision making. This way, environmental justice movements use cultural expressions to make visible their struggles (Martínez-Alier, 2021).

Beyond entertainment and social cohesion, art was a vehicle for political mobilization, as pointed out by Ogaga (2011). Banners, performances, and poems recited in front of the City Hall were critical in the expression of discontent, and in the activists’ request to the City Council to act against the project. Our research has unveiled concrete effects and functions within this process, linking Ogaga’s understanding of art as an act of militancy to the actual strategies of the anti-coal movement. Artistic militancy led to effective interventions that fostered the participation of the community in decision making and the education of the public. Notably, artistic activism was the main form of expression youth used for advocacy, specially by reading poems.

5.2. Transformative effect of art

5.2.1. Socio-cultural transformation: inclusiveness

Inclusiveness was the other key transformation of the struggle. Artistic activism contributed to the expansion of the demographics of the anti-coal movement and the overcoming of demographic barriers. Seasoned activists raised the first voices against the project, but the social transformations were particularly influenced by the work of youth activist groups, consisting mainly of young girls of color. The turn towards a more inclusive movement is significant in environmental justice communities that were already fighting for racial justice and social justice (Reinke, 2019; Schlosberg, 2013).

Young activists introduced performances and poems in the mobilizations. Such pieces served to empower, to increase the participation of children and other affected communities of color, and to connect with different types of audiences. Artworks emerged as a fun, jazzy and friendly choice for demonstrating opposition, with the advantage of producing aesthetics that engaged different kinds of people.

In Oakland, youth of color identified their advocacy against the coal-exports project as a source of awareness about the social conflicts in their community and in their capacity to be agents of change. Through the arts, they gained a voice and wielded power to denounce an important local developer apart from being the main militant force in ‘maintaining the issue alive’ during the silent period of the movement. This way, children of color demanded a metaphoric space within the environmental and climate justice movements, as women of color did in the People’s Park Movement in the late Cold War era (Lovell, 2018).

Several scholars have pointed the use of art as a tool to empower disadvantaged communities (Brewington and Hall, 2018; Lovell, 2018). Blurred limits between political will and art shaped this process in Oakland, although considering activist art as the only source of empowerment would be naïve. Still, the co-occurrence of “empowerment” with other effects such as “increased participation” and “connection with audiences” calls for the acknowledgement of artistic activism as a mechanism to challenge power relations, and to promote inclusion within the movement. Siding Reed (2005), the NCiO movement was a transformative experiences for those who take part in it. Consistent with Serafini’s (2015) participants of activist performance in Oakland were also political agents. Indeed, kids and communities of color became involved, physically and symbolically, with the anti-coal struggle though artistic activism and in this process, they developed their political subjectivity.

Radical environmental justice and climate justice movement seek to regain power over dominant forces (Croeser, 2017). Segregation reproduces environmental injustice (Pavel, 2015). Therefore, overcoming demographic antagonisms and including everyone is a pre-requisite for promoting transformations towards justice and fairness (Kwon and Nicolaidis, 2019). Scholars studying the Regional Climate Justice movement in the Bay Area have already detected the advocacy potential of vulnerable community members such as young African-American women (Pavel, 2015). Our results complement this idea by pointing to

artistic expression potential for social inclusion in the context of environmental conflicts.

5.2.2. Socio-cultural and political transformation: awareness through education

Communities impacted by environmental hazards often create their own knowledge to confront big corporations (de Sousa Santos, 2012). In this respect, three strategies of the movement ‘No Coal in Oakland’ (education of the public, generate own knowledge and media outreach) revolve around knowledge and communication of the environmental and climate injustices that the OBOT project would reproduce. Interestingly, when art was used for anti-coal contestation, educative effects were the most visible outcome. Indeed, the literature addressing the role of art environmental justice conflicts (Fuller and McCauley, 2016), climate issues (Gabrys and Yusoff, 2012; Heras and Tàbara, 2014; Iovino, 2019; Sommer et al., 2019) and ecological change (Ballard, 2017) focusses on science communication and promotion of environmental awareness. Our results advance previous contributions by analyzing art created by the environmental movement itself rather than environmentally-motivated artists.

Artworks, and specially banners, posters, and murals against coal in Oakland, helped activists communicate the hazardous impacts of coal on the community. This resulted in social change by rising local political and environmental awareness. Theories on environmental humanities that encourage the use of arts for rising environmental awareness to meet the climate change challenge point to the same direction (ArtCOP21, 2019; Galafassi et al., 2018; Kim Sommer and Andreas Klöckner, 2019). In fact, a popular outcome of social movement actions is changing culture (Juris et al., 2014).

Yet the effect of artistic activism in a context of resistance on fostering cultural transformation towards sustainability is still understudied. Our results suggest that the transformative potential of education through the arts not only influenced local environmental and political awareness, but also induced the political transformation sought by activists through increased political support. With their artistic work, environmental movements push for a local environmentally conscious society, and with this they drive a political transformation that affects urban geographies as well.

In the Oakland anti-coal coalition, education appears directly connected with image-based expressions like banners, posters, and signs. There is an increasing literature on the effects of audiovisuals – especially documentaries and images – in generating awareness about climate change and enhance participation of affected local communities (Blasch and Turner, 2016; Nicholson-Cole, 2005; Suarez et al., 2008). The anti-coal movement in Oakland made little use of films. In contrast, they chose site-specific media with direct incidence on the urban space (like banners, posters, outdoor building projection, t-shirts, songs). The resulting on local environmental awareness, reduced segregation and fostered social cohesion are arguably similar with the benefits of films. Yet this choice of media highlights the importance of spatiality in the use of artistic activism.

5.2.3. Material transformation and the spatiality of the artworks.

None of our results demonstrated a direct connection between activist art with material transformations (i.e. stopping the terminal). Still, interviewees were respectful of the influence of every anti-coal action for paralyzing the project. They conceived art as essential or supportive tool of the mobilization. Accordingly, material transformation was only indirectly related to artistic activism.

Yet at this point it is worth noticing that the effects of arts depend on time and place. As discussed above, art had an incidence on inclusion and in Oakland this has a spatial implication. Although the project was planned to be built on the coastline and affect West Oakland, most of the artworks happened outside those areas. The claims of the West Oakland community moved to other parts of the city and even the crossed the San Francisco Bay. These areas, just some miles away, are regularly divided

by barriers of inequalities that decades of pro-social justice initiative are yet to dismantle (Reinke, 2019). Through arts, prevalent injustices were made apparent to demographics and communities outside West Oakland but still in the local and regional context. Art was the embodied way of moving an issue away from the space directly affected by the project. A similar “transporting effect” occurs when murals in urban landscapes bring to the present the memories of past social struggles with (Eyerman, 2014). At the same time, the movement reflected on the impacts of coal beyond the local contexts and became aware of the global effects of paralyzing coal exports. This is a clear example of how contemporary activism combines local with global impact of their actions (Della Porta, 2013a).

Artistic expressions create tangible experiences of coal impacts in the Oakland landscape that today only exist on paper, but that could potentially modify the urban dynamics. Indeed, “art is the place of imminence – the place where we catch sight of things that are just at the point of occurring” (Flynn, 2016 quotes (García Canclini, 2015: xiii)). As pointed by Brown et al. (2017) and Patsiaouras et al. (2018) spatiality and aesthetics are key for to attract a large number of participants in protests, and to reinforce the visibility of their message. While the general public was a main target of the anti-coal messages in Oakland, the movement aimed at making the issue visible to decision makers and even the developer by getting close to their regular spaces of operation. Mapping the artistic expressions has allowed us to understand the spatiality of this incidence, that responds to the strategies of the movement.

All in all, this research acknowledges the interdisciplinary work on the inter-relationships between art and environmental conflicts and contributes to expand the theoretical framework to address specific role of art in anti-coal movements in an urban context in the US, with implications in the global geography of coal. The findings of the study come from a specific, albeit emblematic, case study. We acknowledge limits to generalization. Socio-ecological conflicts largely depend on contextual conditions (Heras and Tàbara, 2014; Iovino, 2019), as well as the scope of action of the social movements around them. We can then presume that artistic activism only makes sense in the context where it is created. This research unveils the importance of understanding the culture, the place, and the intentions behind the use of an artistic expression in an environmental justice conflict. Therefore, context dependency and the individual experiences of participants should be properly explored in further attempts to understand environmental artistic activism.

Another precautionary note has to do with the concepts of ‘change’ and ‘transformation’ as the adopted methodology relies on subjective perceptions about the processes at hand. While the material process of preventing coal exports actually happened, activists preferred to focus on socio-cultural and political transformations in their statements. Undeniably, the study reveals the significance of activist art in the strategic toolkit of social movements and unpacks its key components.

6. Conclusions

Artistic expressions are part of environmental movements’ efforts to promote a sustainable future. Nevertheless, the literature neglected the study of the concrete strategies and outcomes in the use of artistic expressions in environmental justice movements. This study has systematized different effects of art, and identified the connection between artistic activism, anti-coal strategies and perceived socio-spatial transformations.

Our empirical evidence relies on the efforts (so far successful) to stop the construction of a coal-export terminal in Oakland. A chronological review of the actions undertaken by the movement ‘No Coal in Oakland’ reveals several phases in which the strategies of the activists and the use of artistic expressions interweave. According to the interviewees, art did not produce any direct material change in the urban landscape. Nevertheless, artistic activism was fundamental to shape socio-spatial

dynamics that enhanced social cohesion and engagement with the movement.

In particular, art was decisive in creating and maintaining the contestation movement that spread knowledge and influenced decision makers. Raising awareness among the general public was a main outcome. In this process, not only the anti-coal movement became more solid, but also made itself more inclusive. Through the arts, youth and women activist achieved new political spaces. Thus, art may have contributed to lessen the implications of socio-spatial segregation, by facilitating that people from different demographic backgrounds share spaces of contestation. Along with its capacity to disseminate environmental and political awareness, artistic activism emerged as a tool to tackle the socio-ecological crisis.

While the outcomes are highly context dependent, the resistance of Oakland's community is part of broader set of efforts to tackle several proposals to expand infrastructure for fossil fuel management on the West Coast. In this context, the theorization of art effects can underpin the toolkit for environmental justice movements. Highlighting the more significant effects of art provides tools towards the achievement of transformations to break segregation and gain cultural environmental awareness.

The paper contributes to research on human geography as we underscore the importance of the spatio-temporality of anti-coal strategies and artistic activism for transformations in the urban landscape. We underline the capacity of art to influence socio-spatial structures, and to trigger social dynamics for sustainable transformation in cases of environmental conflict.

In this vein, the outcomes of this study suggest analogous research in a different cultural context. Anti-coal struggles occur across continents, thus allowing for a compared analysis of the role played by the arts. Similarly, an examination of the effectiveness of the arts regarding other activist strategies remains as a question for further research. Another interesting point for future research on artistic activism is the feasibility to dissociate art and activism in contemporary social movements across cultural settings.

CRedit authorship contribution statement

Teresa Sanz: Conceptualization, Methodology, Formal analysis, Investigation, Writing - original draft, Visualization. **Beatriz Rodriguez-Labajos:** Resources, Writing - review & editing, Visualization, Supervision, Funding acquisition.

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Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.geoforum.2021.03.010>.

References

- Adams, D., 1992. Joseph Beuys: pioneer of a radical ecology. *Art J.* 51, 26–34. <https://doi.org/10.1080/00043249.1992.10791563>.
- Adams, J., 2001. The makings of political art. *Qual. Sociol.* 24, 311–348. <https://doi.org/10.1023/A:1010686807291>.
- Agyeman, J., Schlosberg, D., Craven, L., Matthews, C., 2016. Trends and directions in environmental justice: from inequity to everyday life, community, and just sustainabilities. *Annu. Rev. Environ. Resour.* 41, 321–340. <https://doi.org/10.1146/annurev-environ-110615-090052>.

- Allen, M., Bird, S., Breslow, S., Dolzak, N., 2017. Stronger together: Strategies to protect local sovereignty, ecosystems, and place-based communities from the global fossil fuel trade. *Mar. Policy* 80, 168–176. <https://doi.org/10.1016/j.marpol.2016.10.019>.
- Anderson, K., 2018. Ethics, Ecology, and the Future: Art and Design Face the Anthropocene 50, 547–548. <https://doi.org/10.1162/LEON>.
- Arnold, E.K., 2015. Communities unite to fight coal in Oakland. *Race, Poverty* 20, 10. ArtCOP21, 2019. ArtCOP21 – global festival of cult climate change [WWW Document]. URL <http://www.artcop21.com> (accessed 8.29.19).
- Ballard, S., 2017. New Ecological Sympathies. *Environ. Humanit.* 9, 255–279. <https://doi.org/10.1215/22011919-4215229>.
- Bell, L.A., Desai, D., 2011. Imagining otherwise: Connecting the arts and social justice to envision and act for change: Special issue introduction. *Equity Excell. Educ.* 44, 287–295. <https://doi.org/10.1080/10665684.2011.591672>.
- Beuys, Joseph, 1982. 7000 Oaks – City Forestation Instead of City Administration. documenta 7, Kassel.
- Bianchi, R., 2018. Istanbul sounding like revolution: the role of music in the Gezi Park Occupy movement. *Pop. Music* 37, 212–236. <https://doi.org/10.1017/s0261143018000016>.
- Blanc, N., Benish, B.L., 2017. Form, Art and the Environment. Engaging in sustainability., Routledge Studies in Culture and Sustainable Development. <https://doi.org/10.4324/9781315660370>.
- Blasch, J., Turner, R.W., 2016. Environmental art, prior knowledge about climate change, and carbon offsets. *J. Environ. Stud. Sci.* 6, 691–705. <https://doi.org/10.1007/s13412-015-0243-y>.
- Bleiker, R. (Ed.), 2018. Visual global politics. Routledge, London. <https://doi.org/10.4324/9781315856506>.
- Böll Stiftung, H., 2015. Coal Atlas. Facts and figures on a fossil fuel, Friends of the Earth International.
- Boudet, H., Hazboun, S.O., 2019. Trump's 'energy dominance' ambitions hit another snag on the West Coast [WWW Document]. *Conversat. Website*. URL <http://theconversation.com/trumps-energy-dominance-ambitions-hit-another-snap-on-the-west-coast-116713> (accessed 9.1.19).
- Bravo, M.A., Anthopolos, R., Bell, M.L., Miranda, M.L., 2016. Racial isolation and exposure to airborne particulate matter and ozone in understudied US populations: Environmental justice applications of downscaled numerical model output. *Environ. Int.* 92–93, 247–255. <https://doi.org/10.1016/j.envint.2016.04.008>.
- Brewington, Q.L., Hall, J.N., 2018. Givin' Stakeholders the Mic: Using Hip-Hop's Evaluative Voice as a Contemporary Evaluation Approach. *Am. J. Eval.* 39, 336–349. <https://doi.org/10.1177/1098214018769765>.
- Brown, B., Spiegel, S.J., 2019. Coal, Climate Justice, and the Cultural Politics of Energy Transition. *Glob. Environ. Polit.* 16, 1–12. <https://doi.org/10.1162/GLEP>.
- Brown, G., Feigenbaum, A., Frenzel, F., McCurdy, P., 2017. Protest camps in international context: Spaces, infrastructures and media of resistance, *Protest Camps in International Context: Spaces, Infrastructures and Media of Resistance*.
- Brown, M., 2018. US eyes West Coast bases for coal exports. *Mercur, News*.
- Bullard, R.D., 1994. Unequal protection: environmental justice and communities of color. Sierra Club Books, San Francisco, CA.
- Bullard, R.D., Wright, B., 2018. Race, place, and environmental justice after Hurricane Katrina: Struggles to reclaim, rebuild, and revitalize New Orleans and the Gulf Coast. *Race, Place, and Environmental Justice after Hurricane Katrina: Struggles to Reclaim, Rebuild, and Revitalize New Orleans and the Gulf Coast*. Taylor and Francis. <https://doi.org/10.4324/9780429497858>.
- Byrne, E., Elliott, E., Saltus, R., Angharad, J., 2018. The creative turn in evidence for public health: Community and arts-based methodologies. *J. Public Heal. (United Kingdom)* 40, i24–i30. <https://doi.org/10.1093/pubmed/idx151>.
- Cardoso, A., Turhan, E., 2018. Examining new geographies of coal: Dissenting energyscapes in Colombia and Turkey. *Appl. Energy*. <https://doi.org/10.1016/j.apenergy.2018.04.096>.
- Carrington, D., 2019. "Youth climate strikers: 'We are going to change the fate of humanity.'" *Guard*.
- Clemente, J., 2018. The U.S. Coal Export Boom To Asia. *Forbes*.
- Coal, 2020. Coal prize 2020 [WWW Document]. *Coal Prize Website*. URL <http://www.projetcoal.org/coal/en/2020/02/11/prix-coal-2020/> (accessed 11.2.20).
- Conde, M., 2014. Activism mobilising science. *Ecol. Econ.* 105, 67–77. <https://doi.org/10.1016/j.ecolecon.2014.05.012>.
- Counts, L., 1999. Toxic soil removal criticized. *Cityside, Oakl. Trib*.
- Croeser, E.M., 2017. From Climate Change to Climate Action to Climate Justice: An Ecological Neo-Gramscian Analysis of Ecosocialism's Potential. University of Tasmania.
- Danchev, A., 2009. *On art and War and Terror*. Edinburgh University Press.
- de Place, E., 2018. How Northwest communities are stopping fossil fuel projects before they start [WWW Document]. *Sightline Inst. Website*. URL <https://www.sightline.org/2018/04/23/how-northwest-communities-continue-to-stop-fossil-fuel-projects-before-they-start/> (accessed 9.1.19).
- de Sousa Santos, B., 2012. De las dualidades a las ecologías, REMTE.
- DeFao, J., 2002. *Rising Tensions. West Oakland neighbors andy over yeast plant emissions*. Bay Area California. *San Fr. Chron.* 13.
- Della Porta, D., 2013a. Repertoires of contention. *Wiley-Blackwell Encycl. Soc. Polit. Movements*. <https://doi.org/10.1002/9781405198431.wbepm178>.
- Della Porta, D., 2013b. Democracy and social movements. In: *The Wiley-Blackwell Encyclopedia of Social and Political Movements*. Blackwell Publishing Ltd., pp. 305–308. <https://doi.org/10.1017/s0272503700060365>.
- Dinzeo, M., 2020. Ninth circuit overturns Oakland coal ban. *Courth. News Serv.*
- EIA, 2019a. Quarterly Coal Report January-March 2019. Washington, DC.
- EIA, 2019b. Today in Energy More than half of the U.S. coal mines operating in 2008 have since closed.

- EIA, 2018a. U.S. coal consumption in 2018 expected to be the lowest in 39 years. EIA.
- EIA, 2018b. US coal exports.
- Express, E.B., 2018. Oakland Coal Company Dissolves, Reconstitutes | East Bay Express.
- Eyerman, R., 2014. The Art of Social Movement, in: *The Oxford Handbook of Social Movements*. Della Porta, Donatella; Diani, Mario, pp. 1–10. <https://doi.org/10.1093/oxfordhb/9780199678402.013.47>.
- Eyerman, R., Jamison, A., 1998. *Music and social movements. Mobilizing traditions in the twentieth century*. Cambridge University Press.
- Fisher, J.B., Kelly, M., Romm, J., 2006. Scales of environmental justice: Combining GIS and spatial analysis for air toxics in West Oakland, California. *Heal. Place* 12, 701–714. <https://doi.org/10.1016/j.healthplace.2005.09.005>.
- Flynn, A., 2016. Subjectivity and the obliteration of meaning: contemporary art, activism, social movement politics. *Cad. arte e Antropol.* 5, 59–77. <https://doi.org/10.4000/cadernosaa.1035>.
- Fuller, S., McCauley, D., 2016. Framing energy justice: Perspectives from activism and advocacy. *Energy Res. Soc. Sci.* 11, 1–8. <https://doi.org/10.1016/j.erss.2015.08.004>.
- Gabrys, J., Yusuf, K., 2012. Arts, sciences and climate change: practices and politics at the threshold. *Sci. Cult. (Lond)* 21, 1–24. <https://doi.org/10.1080/09505431.2010.550139>.
- Galafassi, D., Kagan, S., Milkoreit, M., Heras, M., Bilodeau, C., Bourke, S.J., Merrie, A., Guerrero, L., Pétursdóttir, G., Tàbara, J.D., 2018. 'Raising the temperature': the arts in a warming planet. *Curr. Opin. Environ. Sustain.* <https://doi.org/10.1016/j.cosust.2017.12.010>.
- García Canclini, Nestor, 2015. *El mundo entero como lugar extraño*. Gedisa, pp. 1–144.
- Garzón, C., Beveridge, B., Gordon, M., Martin, C., Matalon, E., Moore, E., 2013. Power, Privilege, and the Process of Community-Based Participatory Research: Critical Reflections on Forging an Empowered Partnership for Environmental Justice in West Oakland, California. *Environ. Justice* 6, 71–78. <https://doi.org/10.1089/env.2012.0039>.
- Geels, F.W., 2014. Regime Resistance against Low-Carbon Transitions: Introducing Politics and Power into the Multi-Level Perspective. *Theory. Cult. Soc.* 31, 21–40. <https://doi.org/10.1177/0263276414531627>.
- Grindon, G., 2011. Surrealism, Dada, and the refusal of work: Autonomy, activism, and social participation in the radical avant-garde. *Oxford Art J.* 34 <https://doi.org/10.1093/oxartj/kcr003>.
- Grosse, C., 2019. Climate justice movement building: Values and cultures of creation in Santa Barbara, California. *Soc. Sci.* 8 <https://doi.org/10.3390/socsci8030079>.
- Grunwald, M., 2015. *Inside the war on coal*. Politico 27.
- Hamburg, L., 1998. Oakland residents get incinerator shut down. *East Bay Reg.* A15.
- Hamilton, D., Wentworth, N., 2016. *City of Oakland 2013 Greenhouse Gas Emissions Inventory Report*.
- Harper, S., Salomon, A.K., Newell, D., Waterfall, P.H., Brown, K., Harris, L.M., Sumaila, U.R., 2018. Indigenous women respond to fisheries conflict and catalyze change in governance on Canada's Pacific Coast. *Marit. Stud.* <https://doi.org/10.1007/s40152-018-0101-0>.
- Hazboud, S.O., 2019. A left coast 'thin green line'? Determinants of public attitudes toward fossil fuel export in the Northwestern United States. *Extr. Ind. Soc.* 6, 1340–1349. <https://doi.org/10.1016/j.exis.2019.10.009>.
- Heise, Ursula, 2016. The environmental humanities and the futures of the human. *New German Critique* 43 (2), 21–31. <https://doi.org/10.1215/0094033X-3511847>.
- Heras, M., Tàbara, J.D., 2014. Let's play transformations! Performative methods for sustainability. *Sustain. Sci.* 9, 379–398. <https://doi.org/10.1007/s11625-014-0245-9>.
- Hess, D.J., Satcher, L.A., 2019. Conditions for successful environmental justice mobilizations: an analysis of 50 cases. *Environ. Polit.* 00, 1–22. <https://doi.org/10.1080/09644016.2019.1565679>.
- Iovino, S., 2019. *Pensar lo impensable. Las humanidades ambientales como discurso de liberación*. *Ecol. Polit.* 57, 8–15.
- Jenkins, D., 2010. Common law, mountain music, and the construction of community identity. *Soc. Leg. Stud.* 19, 351–369. <https://doi.org/10.1177/0964663909360435>.
- Juris, J.S., Bushell, E.G., Doran, M., Judge, J.M., Lubitow, A., McCormack, B., Prener, C., 2014. Movement building and the United States social forum. *Soc. Mov. Stud.* 13, 328–348. <https://doi.org/10.1080/14742837.2013.841575>.
- Kim, H., Marcouiller, D.W., Woosnam, K.M., 2018. Rescaling social dynamics in climate change: The implications of cumulative exposure, climate justice, and community resilience. *Geoforum* 96, 129–140. <https://doi.org/10.1016/j.geoforum.2018.08.006>.
- Kim Sommer, L., Andreas Klöckner, C., 2019. Does activist art have the capacity to raise awareness in audiences?—A study on climate change art at the ArtCOP21 event in Paris. *Psychol. Aesthetics, Creat. Arts.* <https://doi.org/10.1037/aca0000247>.
- Kwon, C., Nicolaidis, A., 2019. Reconceptualizing social movement learning in HRD: An evolutionary perspective, 152342231982794 *Adv. Dev. Hum. Resour.* <https://doi.org/10.1177/1523422319827948>.
- Larsen, P.B., Brockington, D., Perez, A.C., Grafton, B., Mohai, P., Hardin, R., Hintzen, K., Orvis, S., 2015. Evolution of the environmental justice movement: activism, formalization and differentiation. *Environ. Res. Lett.* 10.
- Lefebvre, H., 1991. *The Production of Space*. Blackwell, Oxford.
- Leonard, L., 2018. Examining civil society social capital relations against mining development for local sustainability: The case of Dullstroom, Mpumalanga, South Africa. *Sustain. Dev.* 1–7 <https://doi.org/10.1002/sd.1898>.
- Loftus-Farren, Z., 2015. *A Coal Terminal in Oakland?* [WWW Document]. *Earth Isl. J.* Website. URL http://www.earthisland.org/journal/index.php/articles/entry/a_coal_terminal_in_oakland/ (accessed 9.11.19).
- Lovell, K.N., 2018. "Everyone Gets a Blister": Sexism, Gender Empowerment, and Race in the People's Park Movement. *WSQ Women's Stud. Q.* 46, 103–119. <https://doi.org/10.1353/wsq.2018.0034>.
- Maeckelbergh, M., 2011. Doing is believing: Prefiguration as strategic practice in the alterglobalization movement. *Soc. Mov. Stud.* 10, 1–20. <https://doi.org/10.1080/14742837.2011.545223>.
- Mahon, M., 2000. The visible evidence of cultural producers. *Annu. Rev. Anthropol.* 29, 466–492.
- Martinez-Alier, J., 2002. *The Environmentalism of the Poor. A study of ecological conflict and valuation*. Icaria Editorial.
- Martínez García, A.B., 2020. Constructing an activist self: Greta Thunberg's climate activism as life writing. *Prose Stud.* <https://doi.org/10.1080/01440357.2020.1808923>.
- Martínez-Alier, Joan, 2021. *Mapping ecological distribution conflicts: The EJAtlas*. Extractive Industries and Society.
- McAdam, D., Boudet, H., 2012. *Putting Social Movements in their Place: Explaining Opposition to Energy Projects in the United States, 2000–2005 (Cambridge Studies in Contentious Politics)*. Cambridge University Press, Cambridge.
- McClintock, N., 2015. A critical physical geography of urban soil contamination. *Geoforum* 65, 69–85. <https://doi.org/10.1016/j.geoforum.2015.07.010>.
- Merlinsky, Gabriela, Serafini, Paula, 2021. *Arte y ecología política*. CLACSO.
- Moore, S.A., Roth, R.E., Rosenfeld, H., Nost, E., Vincent, K., Rafi Arefin, M., Buckingham, T.M.A., 2017. Undisciplining environmental justice research with visual storytelling. *Geoforum* 102, 267–277. <https://doi.org/10.1016/j.geoforum.2017.03.003>.
- Nicholson-Cole, S.A., 2005. Representing climate change futures: A critique on the use of images for visual communication. *Comput. Environ. Urban Syst.* 29, 255–273. <https://doi.org/10.1016/j.compenurbysys.2004.05.002>.
- Nixon, R., 2011. *Slow violence and the environmentalism of the poor*. Harvard University Press, Boston. <https://doi.org/10.1192/bjp.111.479.1009-a>.
- Olkuski, Sikora, Sikora, et al., 2019. Forecasts of production, consumption, and the trade balance of primary energy and fuels in the USA. *Inżynieria Mineralna*.
- O'Neill, S.J., Smith, N., 2014. Climate change and visual imagery. *Wiley Interdiscip. Rev. Clim. Chang.* 5, 73–87. <https://doi.org/10.1002/wcc.249>.
- Oakland Bulk and Oversized Terminal (OBOT) [WWW Document], 2019. URL <http://obotjv.com> (accessed 8.30.19).
- Oakland City, 2019. *Vintage 2018 Population Estimates*. Oakland city, California [WWW Document]. United States Census Bur. Website.
- Ogaga, O., 2011. Rethinking militancy and environmental justice: the politics of oil and violence in Nigerian popular music. *Afr. Today* 58, 79–101.
- Oppermann, Serpil, Iovino, Serenella, 2016. *Introduction: The Environmental Humanities and the Challenges of the Anthropocene*. *Environmental Humanities: Voices from the Anthropocene*. Rowman & Littlefield International, pp. 1–21.
- Oskarsson, Nielsen, Lahiri-Dutt, Roy, 2021. India's new coal geography: Coastal transformations, imported fuel and state-business collaboration in the transition to more fossil fuel energy. *Energy Res. Soc. Sci.* 73, 101903.
- Otte, H., 2019. Bonding or bridging? On art participation and social cohesion in a rural region of the Netherlands. *Poetics* 76, 101355. <https://doi.org/10.1016/j.poetic.2019.02.006>.
- Patsiaouras, G., Veneti, A., Green, W., 2018. Marketing, art and voices of dissent: Promotional methods of protest art by the 2014 Hong Kong's Umbrella Movement. *Mark. Theory* 18, 75–100. <https://doi.org/10.1177/1470593117724609>.
- Pavel, M.P., 2015. A Climate Justice Compass for Transforming Self and World. *World Futures* 71, 96–113. <https://doi.org/10.1080/02604027.2015.1092790>.
- Porto, M.F., Ferreira, D.R., Finamore, R., 2018. Health as dignity: political ecology, epistemology and challenges to environmental justice movements. *J. Polit. Ecol.* 24, 110. <https://doi.org/10.2458/v24i1.20786>.
- Pulido, L., 2017. Conversations in environmental justice: an interview with David Pellow. *Capital. Nat. Social.* 28, 43–53. <https://doi.org/10.1080/10455752.2016.1273963>.
- Raddatz, L., Mennis, J., 2013. Environmental Justice in Hamburg, Germany. *Prof. Geogr.* 65, 495–511. <https://doi.org/10.1080/00330124.2012.700500>.
- Reaper, T.R., 2015. Project could transform local coal market to international.
- Reed, T.V., 2005. *The art of protest: culture and activism from the civil rights movement to the streets of Seattle*. University of ed.
- Reinke, A.J., 2019. *The (Im) Possibilities of Social Justice through Alternative Justice in the San Francisco Bay Area*. *Entanglements* 2, 111–125.
- Rhomberg, C., 2004. *No There There. Race, Class, and Political Community in Oakland*. University of California Press.
- Robin, L., 2018. Environmental humanities and climate change: understanding humans geologically and other life forms ethically. *Wiley Interdiscip. Rev. Clim. Chang.* 9, 7–9. <https://doi.org/10.1002/wcc.499>.
- Rodríguez-Labajos, B., Martínez-Alier, Joan, 2015. Water: ecological economics and socio-environmental conflicts. In: Martínez-Alier, Joan, Muradian, R. (Eds.), *Handbook of Ecological Economics*. Edward Elgar Publishing, Cheltenham, UK, pp. 201–232.
- Rodríguez-Labajos, B., Yáñez, I., Bond, P., Greyl, L., Munguti, S., Uyi, G., Overbeek, W., 2019. Not So Natural an Alliance? Degrowth and environmental justice movements in the global south. *Ecol. Econ.* 157, 175–184. <https://doi.org/10.1016/j.ecolecon.2018.11.007>.
- Roy, B., Martínez-alier, J., 2019. Environmental Justice Movements in India : An analysis of the multiple manifestations of violence. *Ecol. Econ. Soc. INSEE J.* 2 (1), 77–92.
- Roy, Schaffartzik, 2021. Talk renewables, walk coal: The paradox of India's energy transition. *Ecol. Econ.* 180, 106871.

- Ryan, H.E., 2015. Affect's effects: considering art-activism and the 2001 Crisis in Argentina. *Soc. Mov. Stud.* 14, 42–57. <https://doi.org/10.1080/14742837.2014.944893>.
- Sacco, P.L., Ghirardi, S., Tartari, M., Trimarchi, M., 2019. Two versions of heterotopia: The role of art practices in participative urban renewal processes. *Cities* 89, 199–208. <https://doi.org/10.1016/j.cities.2019.02.013>.
- Scheidel, A., Del Bene, D., Liu, J., Navas, G., Mingorría, S., Demaria, F., Avila, S., Roy, B., Ertör, I., Temper, L., Martínez-Alier, J., 2020. Environmental conflicts and defenders: A global overview. *Glob. Environ. Chang.* 63 <https://doi.org/10.1016/j.gloenvcha.2020.102104>.
- Scheidel, A., Schaffartzik, A., 2019. A socio-metabolic perspective on environmental justice and degrowth movements. *Ecol. Econ.* 161, 330–333. <https://doi.org/10.1016/j.ecolecon.2019.02.023>.
- Schlosberg, D., 2013. Theorising environmental justice: the expanding sphere of a discourse. *Environ. Polit.* 22, 37–55. <https://doi.org/10.1080/09644016.2013.755387>.
- Schlosberg, D., 2004. Reconciling environmental justice: global Movements and political theories. *Environ. Polit.* 13, 517–540. <https://doi.org/10.1080/0964401042000229025>.
- Schlosberg, D., Collins, L.B., 2014. From environmental to climate justice: Climate change and the discourse of environmental justice. *Wiley Interdiscip. Rev. Clim. Chang.* 5, 359–374. <https://doi.org/10.1002/wcc.275>.
- Serafini, P., 2015. Prefiguring performance: participation and transgression in environmentalist activism. *Third Text.* <https://doi.org/10.1080/09528822.2015.1082789>.
- Shapiro, S., 1993. Coal towns: Life, work, and culture in company towns of Southern Appalachia, 1880–1960. *Hist. Rev. New Books* 21. <https://doi.org/10.1080/03612759.1993.9948537>.
- Snow, D.A., Zurcher, L.A., Ekland-Olson, S., 1980. Social networks and social movements: A microstructural approach to differential recruitment. *Am. Sociol. Assoc.* 45, 787–801.
- Sommer, L.K., Klöckner, C.A., 2019. Does activist art have the capacity to raise awareness in audiences?—A study on climate change art at the ArtCOP21 event in Paris. *Psychol. Aesthetics, Creat. Arts.* <https://doi.org/10.1037/aca0000247>.
- Sommer, L.K., Swim, J.K., Keller, A., Klöckner, C.A., 2019. “Pollution Pods”: The merging of art and psychology to engage the public in climate change. *Glob. Environ. Chang.* 59, 101992 <https://doi.org/10.1016/j.gloenvcha.2019.101992>.
- Sorsa, V., Merkkiniemi, H., Endrissat, N., Islam, G., 2018. Little less conversation, little more action: Musical intervention as aesthetic material communication. *J. Bus. Res.* 85, 365–374. <https://doi.org/10.1016/j.jbusres.2017.10.014>.
- Suarez, P., Ching, F., Ziervogel, G., Lemaire, I., Turnquest, D., de Suarez, J.M., Wisner, B., 2008. Video-mediated approaches for community-level climate adaptation. *IDS Bull.* 39, 96–104. <https://doi.org/10.1111/j.1759-5436.2008.tb00482.x>.
- Taylor, S.S., 2002. Overcoming aesthetic muteness: Researching organizational members' aesthetic experience. *Hum. Relations* 55, 821–840. <https://doi.org/10.1177/0018726702055007542>.
- Temper, L., Walter, M., Rodríguez, I., Kothari, A., Turhan, E., 2018. A perspective on radical transformations to sustainability: resistances, movements and alternatives. *Sustain. Sci.* <https://doi.org/10.1007/s11625-018-0543-8>.
- Tepperman, J., 2015. Activists Work to Stop East Bay Coal Exports. *East Bay Express*. Thesing, W.B. (Ed.), 2000. *Caverns of night: Coal mines in art, literature, and film*. University of South Carolina Press.
- Tormos-Aponte, F., García-López, G.A., 2018. Polycentric struggles: The experience of the global climate justice movement. *Environ. Policy Gov.* 28, 284–294. <https://doi.org/10.1002/eet.1815>.
- UNFCCC, 2016. *Report of the Conference of the Parties on COP 21. Conference of the Parties on its twenty-first session (COP 21) 1 (January), 1–42*.
- Văidianu, M.-N., Pavel, O., Călin, I.-E., 2014. Promoting arts-based activities for local sustainability: Danube delta case study. *Procedia - Soc. Behav. Sci.* 122, 105–109. <https://doi.org/10.1016/j.sbspro.2014.01.1310>.
- Veklerov, K., 2018. Federal judge strikes down Oakland's ban of coal facility operations. *San Fr. Chron.*
- Walters, J., 2018. *Energy agency rejects Trump plan to prop up coal and nuclear power plants.* *Guardian*.
- Wang, Q., Li, S., Li, R., 2019. Will Trump's coal revival plan work? - Comparison of results based on the optimal combined forecasting technique and an extended IPAT forecasting technique. *Energy* 169, 762–775. <https://doi.org/10.1016/j.energy.2018.12.045>.
- Wapner, P., Elver, H., 2016. *Reimagining Climate Change*, 1st Editio. ed.
- Warlenius, R., 2018. Decolonizing the atmosphere: the climate justice movement on climate debt. *J. Environ. Dev.* 27, 131–155. <https://doi.org/10.1177/1070496517744593>.
- Watts, J., 2018. The defenders. Nine activists defending the Earth from violent assault [WWW Document]. *Guard.* Website. URL <https://www.theguardian.com/environment/2018/jul/21/defending-earth-violence-murder-activists-land-corruption> (accessed 9.1.19).
- Weibel, P., 2014. Preface. In: Weiber, P. (Ed.), *Global Activism. Art and Conflict in the 21st Century*. ZKM.
- Williams, E.M., Hahn-Baker, D., Lee, R., Anderson, J., White, J., 2010. Behind the Fence Forum Theater: an arts performance partnership to address lupus and environmental justice. *NEW Solut A J. Environ. Occup. Heal. Policy* 19, 467–479. <https://doi.org/10.2190/ns.19.4.f>.
- Yardley, W., 2015. How Utah quietly made plans to ship coal through California. *Los Angeles Times*.