

Academic Environmental Narratives: A study in the Light of Audiovisual Methodologies



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Abstract

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Beginning about a decade ago, it has been possible to observe in Argentina the emergence of documentary productions on environmental issues shot by university groups along with community social actors. The guiding questions of this work are: What do this type of environmental documentaries tell? What are their stories and images about the environment? What environmental struggles do they reveal? Do they show scientific research findings, collective action plans, or both? Based on a methodological approach that allows for an audiovisual narrative analysis, this article aims to understand how stories and images about the environment are constructed within the domain of scholars and the university, together with community actors. To this end, experiences of audiovisual creations by two Argentine universities are studied. The productions have been made in collaboration with environmental community organizations between 2007 and 2009. The methodology of analytical decomposition-recomposition of audiovisual language provides a tool that allows us to trace the process of image and sound construction when related to environmental issues. This work belongs to the field of socio-environmental studies and is based on the developments of qualitative audiovisual methodology in sociology; it is also part of a wider framework of interest on production, social mobilization and circulation of audiovisual images related to environmental issues, in particular, images of documentary nature.

Keywords: Environmental Narrative, Documentary Image,
Audiovisual Methodology



Introduction

Research devoted to the study of environmental collective action in the Metropolitan Area of Buenos Aires and other regions in Argentina has shown that since 2005-2006 the environmental demands have gained greater visibility than ever before while at the same time boosting the levels of joint work between actors and collectives, which are expressed through different languages of appreciation (Merlinsky, 2013).

Since that initial moment a new process of production and distribution of audiovisual images related to the environment started to become evident, not only through screenings of environmental professional films in commercial cinema, theatres and cultural centres, but also through the distribution of low-budget environmental documentaries. Within this last group we find productions made by people and groups from the scholars-academic-university world along with members and representatives of environmental community organizations.

However, why does this work focus on a kind of documentary production that is a result of different initiatives within the domain of scholars and the university? As part of a wider research project, we were part of an audiovisual creation process that allowed us to learn about similar experiences in other universities in Argentina. During that process we found out that not only our audiovisual work but also other academic productions had been made in collaboration with environmental community associations that demanded the public university to make environmental issues on their territories visible.

Another common feature in common of the audiovisual productions analysed is that they are documentary experiences related to 'Latin American community filmmaking', which were made with limited economic resources and a low expertise level in filmmaking.

This first approach to academic documentaries on environmental issues encouraged a deep methodological and epistemological reflection about our own audiovisual practice within the domain of scholars-university. Therefore, not only does this article belong to the realm of socio-environmental studies but also to qualitative methodological audiovisual investigation in the field of social sciences.

We claim that academic documentaries both as social research instruments and as a means of communicating knowledge can give visibility to the different ways in which actors from the scientific and university domains problematize certain environmental causes as legitimate social concerns. The guiding questions of this work are: What do academic documentaries produced in collaboration with environmental community actors tell? How are stories and images about the environment put together? What environmental causes do they reveal and what

kind of socio-technical controversies are present in them? Do they show scientific research findings, collective action plans or both?

In the research conducted as part of my PhD dissertation, six documentary productions (professional and amateur) screened at different spaces in Buenos Aires were analyzed and compared. The aim was to answer the following questions: what roles do environmental documentaries play in the social and political construction of the environmental issue in Argentina? Why do different institutions and networks of actors decide to use them to present their views about the environment? What environmental narratives can be identified in each of the documentaries?

In this article we analyze two of them, of amateur production, whose screenings took place in non-commercial film circuits with the institutional support of two public universities of Argentina. To this novelty (being documentaries produced and sponsored by universities) is added another characteristic unheard of in the academic world, which renders them worthy of specific analysis: they were part of a round table film debate during the Sociology Symposium of the University of Buenos Aires (UBA) in 2011 and 2013. They are titled: *Escupiendo al cielo* (Spitting to the Sky, 2007; EAC) by the National University of Luján (UNLu) and the "Environmental Assembly of Luján" and *Atravesando el río* (Going Through the River, 2009; AER) by UBA, the "Assembly of Self-organized Neighbors Affected by CEAMSE" and the "Lomas de Zamora Hydric Forum".

Taking into account the narrative aesthetic and discursive analyses of audiovisual language, the aim of this article is to understand how the academic actors co-construct along with community actors the different stories and images (narratives) on the environment. The methodology of analytical decomposition-recomposition of audiovisual elements (Casetti and Di Chio, 1991) serves our purpose. It is a tool for the narrative analysis of audiovisual sources that consists of watching each of the documentaries on a primary chronological-sequential disaggregation basis (López Hernández, 2003). According to Baer and Schnettler (2009), the value of the audiovisual narrative analysis as a qualitative methodology in social research lies precisely on the 'hyper subjective' character of audiovisual narrations, since they help create a more real image of what is happening (objectivity) and a more honest image of the task of 'recording', and the ways of its representation (reflexivity).

It is important to highlight that although we mainly analyse the audiovisual sources, the information is supplemented by a series of interviews to the filmmakers that seek to grasp in what sense certain resources were used, as such matters shape the peculiarities of the audiovisual narrative. Four interviews were made: two to the filmmaker of UNLu and two to the members of the UBA filmmaking team (one to me, as filmmaker, and one to another member of the team). The questions aimed at knowing in depth the narrative resources chosen

by the filmmakers, how they organized the project (format, technical and aesthetic resource; team's make up and dissemination circuits). On the basis of these axes we proceed to the qualitative analysis of the interviews to complete the comparison between the two documentaries.

In the first section, theoretical tools from social constructivism enable an analysis of the audiovisual stories and images featured in each documentary. Also, certain concepts of the sociology of collective action are developed, which are useful to reflect about why academic productions started choosing the format of audiovisual documentaries as research instruments and means of communicating knowledge in the specific domain of socio-environmental studies.

In the second section, we analyse the selected academic documentaries on environmental issues. Finally, we share our findings in relation to the role of the university in the construction of scientific knowledge and its dissemination, and offer a brief reflection on the use of qualitative audiovisual methodologies in the interpretation of environmental issues in contemporary Argentina.

How to approach academic documentary narratives on the environment?

We adopt the approach of social constructivism in relation to environmental discourses or narratives mainly the work of Hajer (1995) to understand the narratives that are present in the academic documentaries on environmental issues. The author refers to such narratives as discourse coalitions formed by a set of actors who produce a concatenation of images and storylines related to the meaning of the environment and nature. That is to say, discourse coalitions allow different groups of social actors to provide arguments in different moments of their social lives through images and story lines that are intertwined with the social practice they develop. Thus the following question arises: which are the discourse coalitions specific to environmental issues?

On the one hand, the ecological modernization narratives (Hajer, 1995) can be identified. Its main argument asserts that environmental problems are inherent to the economic activity and, thus, institutional arrangements oriented to its prevention are factually possible (Hajer, 1995; Harvey, 1996). This approach promotes images of a sustainable economic growth that places scientists in a fundamental role, and provides the corporate world with a potential green industry to be exploited. According to Harvey (1996), the ecological modernization internalizes the conflict and, therefore, does not question the capitalist system.

On the other hand, and in contrast to ecological modernization, there are narratives specific to movements demanding environmental justice. These are alternative views whose stories and images show opposition to economic activities considered detrimental to human health and the environment, and that do not

trust the expert scientific discourse, for which reason they seek to construct alternative rationalities (Harvey, 1996: 386). Movements for environmental justice tend to appeal to communal principles of justice based on equality, and they demand an equal distribution of environmental advantages and damages at the local and/or regional level.

In terms of the meaning that academic documentaries acquire, there is no doubt it relates to the need for scientific validation, social recognition of the issue and transmission of scientific concepts to a wider audience. Thus, the need for scientific dissemination is explained by the dynamic of socio-technical controversies that arise from environmental issues (Callon, Lascoumes and Barthe, 2001). These socio-technical controversies refer to discursive disputes and argumentative points of view in which expert and counter-expert knowledge collide, since they question the borderline between scientific-technical discourse and alternative knowledges from the social life. The actors involved look for scientific endorsement, but from the uncertainty about risks emerges counter-expert knowledge that challenges the terms in which 'the technical' and 'the social' are defined and, therefore, the capacity of scientific expertise to answer certain questions. Both the social and scientific endorsement come into play in this dialectic process, and the environmental documentaries analysed here become true tools not only to strengthen the position of a certain viewpoint but also to persuade a wider audience. In this way, a dialectic movement is established between scientific-technical research and the re-configuration of collective environmental action.

In contemporary societies, the growing accumulation of scientific knowledge about our natural and social surroundings does not entail an equally growing certainty about the conditions in which we live. Quite the contrary, knowledge is being permanently disputed both individually and collectively. In an era of "reflexive modernity", it is necessary to focus on the socio-technical controversies build around "manufactured uncertainties" (Beck, Giddens, and Lash, 1994) to be able to understand the latter. In this sense, the analysis of environmental documentary narratives and their contexts of production/circulation is a possible way to grasp such uncertainties and disputes from a sociological perspective.

But how could we approach the study of environmental documentary narratives? The time-sequence analysis is a technique through which all the information provided by the audiovisual sources second by second (images and sound), appearing as the film discourse develops, is gathered in a spreadsheet. This information is provided both by the visual and sound resources used. With regards to the former, we paid special attention to the video frame in extreme close-ups, close-ups, medium shots and long shots, as well as to the lower third (additional information) and images from archives. As for sound resources, we focused on the music and post-production sound effects.

The disaggregation into images and sound entails subtracting for a moment these basic components of audiovisual language from its concatenation in the film and subsequently recomposing them into a socio-historical storyline of specific inquiry of the depiction of environmental issues in Argentina. This is a method of interrogating images and sound through the practice of segmentation and later reorganization into points of argument. In this sense, studying documentary productions means developing a “disassembling practice where the components of the image are dissolved and redistributed according to a new strategy and where concepts intersect with components” (Bouhaben, 2014: 14-15). Therefore, audiovisual language can be subject to a narrative analysis thanks to both the elements of signification related to the story itself modulations, breakings of the voice, gesture, expressions and the context in which these stories are produced, i.e. interactions, dynamics of conversation, stages (Baer y Schnettler, 2009: 13).

Based on the above mentioned conceptual and methodological perspectives, we present the analysis below each academic documentary, from UNLu and UBA.

Escupiendo al cielo by National University of Luján and the ‘Environmental Assembly of Luján’

The documentary *Escupiendo al Cielo* (EAC) is a low-budget audiovisual production shot between 2006 and 2007 by an engineer from UNLu, who was helped by an expert in media and communications. The filmmaker and engineer who was interviewed thinks of the documentary as a political diffusion tool aiming at films that stir debate, where there is no intention of turning something into fiction but instead the camera narrates what happens with the resources at hand. Along the same lines, there is no interest in the films being screened at professional festivals or commercial circuits, but at alternative spaces. In this case, EAC became a piece of educational material used during an event of environmental awareness in local high schools, as part of a university extension course of UNLu.

EAC portrays the collective action taken to denounce contamination of the Luján River due to discharges from a tannery located in Jáuregui, Municipality of Luján, Buenos Aires Province.

The story begins with a series of events that trigger the demonstrations of 2006. The people of Jáuregui conjure up the quiet country life in which anyone can enjoy a bike ride or go canoeing down the river. That idea of a peaceful life can be seen in the first images of the documentary followed by the visions on how this lifestyle has been disturbed in the last years.

In fact, the core of the narration depicts alarming situations: health problems in babies and doubts regarding the quality of water for household use. The mud along the river banks also started looking weird. The alleged contamination is expressed



Figure 1. Jáuregui neighbors rowing in the Luján river (long shot).



Figure 2. Jáuregui neighbors riding their bikes [long shot].

through the description the inhabitants of Jáuregui give in accordance to what they perceive with their senses, as the testimony of one of the interviewees shows:

Filmmaker:- Do you feel any smell?

Don Carlos:- Yes, there are days that, depending on how the wind blows,

it gets in through the bathroom window and I have to spray air freshener because it is suffocating.

Filmmaker:- Does it wake you up?

Don Carlos:- It wakes you up! Yes! That smell irritates the throat...



Figure 3. Contaminated mud along the river banks in Luján River [medium long shot].

[Images show the poor appearance of the river and are accompanied by an electric and somewhat gloomy sound, then the image fades into black. Immediately after the image of Don Carlos appears on screen; he is an 86 years old inhabitant of Jáuregui (close-up, face profile)]

After that, the documentary features Greenpeace reports and research by experts from the Centre for Environmental Research of the National University of La Plata (CIMA-UNLP), which typified the industrial discharges and confirmed the contamination with chromium.

Now, the storyline of the documentary can be defined: some scientific studies show that certain industries that use chromium in their productive processes are contaminating the river and damaging the health of a town that used to live quietly and peacefully. In line with that, and with background folkloric music, we see images of Jáuregui one after the other, portraying what the testimonies highlight:

'This is a traditional town' [images of the parish church]; 'Houses have gardens' [images of the houses]; 'It is a very beautiful town' [images of the river]. These testimonies are usually shot in close-ups and medium shots of the interviewees. Sometimes the camera follows the chores every one of them do and, at other times, it switches from medium shots and close-ups to extreme close-ups of the hands and of the most touching expressions.



Figure 4. Polluted Luján River [short long shot].

In the story the voices of representatives of local organizations can also be heard, such as EcoVida, H2O, Asociación de Lucha Contra el Cáncer (ALUCEC, Association to Fight Cancer) and Scout groups; they start acknowledging one another little by little and seeing they are brought together by the same environmental cause, which ultimately obliges them to take joint action and create the 'Asociación EcoVida en el Oeste Bonaerense' (AEVOB, Eco Life Association of Western Greater Buenos Aires) and, later, the wider Asamblea Ambiental de Luján (Environmental Assembly of Luján), supported by the club, the parish priest and young students from secondary school.

The points of argument these discussions trigger are organized around the levels of contamination of the water and soil, the issue of the groundwater being affected, and the volume of water extraction and effluents discharged into the river. In fact, one of the controversies the camera captures is introduced by the technical discourse represented by the voice of the tannery's engineer, who states that the

water of the effluent has 01.02 parts per million of chromium and it accumulates in the course of the river. In response to this statement, the filmmaker who is interviewing asks the company's engineer what is going to be done about that and whether the tannery has any remediation planned. The engineer answers that it is not advisable to clean-up but rather wait for the current to wash it away [images of Curtarsa's engineer (close-up) and then the river flow showing white edges (chromium presence)]. When Curtarsa's engineer finishes uttering his words, his voice is still heard in an echo and the following phrase is repeated: 'The current has to wash it away.'



Figure 5. Don Carlos, inhabitant of Jáuregui [close-up, face profile].

The dialog between Curtarsa's engineer and the filmmaker engineer of EAC reveals that the representative from the company does not deny the presence of chromium among the effluents of production; what is more, he gives very precise figures. From this point onwards, questions are posed to some scientific experts of UNLu. One of them is a doctor specialized in ecotoxicology, who explains the problem as follows:

The thing is that human industrial activity processes chromium in such a way that it solubilizes it and then it gets spreads through the different environments in the ecosystem. It is more widely used in some specific industries: electroplating, leather industry, and some tannery processes. Their effluents are very high on chromium salts. There is a real possibility that it reaches groundwater and now

we have cases of groundwater contamination by chromium in the Greater Buenos Aires and farther into of the Province, and there are also great amounts of heavy metals. Chromium is carcinogenic, it produces irritations, intestinal discomfort, anaemia, and alterations in the nervous system.



Figure 6. Ecotoxicologist of UNLu [medium long shot].

Thanks to the specialists' statements, there are no doubts about what is happening; then the documentary starts showing moments of intense collective action to get the industry to step back and stop contaminating. At this point, the argument starts portraying a specific moment in the struggle when popular power imposes itself massively and takes part in the special sessions of the municipal city council, the local authority that deals with the matter in the year 2006. This shows what the citizens managed to achieve at that moment: that municipal authorities pay attention to the issue. After the opening of the first session, the list of speakers included different representatives of the mobilized organizations. One of them was the representative of H2O, who said:

No to contamination. What does 'No to contamination' mean? First of all, it means to recognise its existence, accept it, so as to be able to fight it (...). We listened to the Vice-secretary of Environmental Policies of the Province who said we are indeed affected in the 'enjoyment of our property' (those were his words). And you know he is right! He is right! That is what we want: to enjoy our own properties: his, of all of you here. And what is that property? Life. That is the greatest property.



Figure 7. Neighbors of Jáuregui with signs in their hands, attending the special session of the municipal city council and listening to the words of the representative of the organization H2O (medium long shot).

It becomes clear that the environmental community organizations from Jáuregui have to face a discourse from state authorities that seems to minimize the problem arguing it all boils down to the defence of property enjoyment and who, when considering the possibility of shutting down the industry, accuses the organizations of being against local sources of employment. The latter argument is typical of a developmental narrative (Svampa, 2008) frequently found in the discourse of public administration. In particular, it is very common for local authorities to use that argument, making the neighbours confront each other in the struggle for two kinds of rights: the right to a healthy environment vs. the right to work.

The ensuing testimonies belong to the representatives of traditional organizations, such as the Boy Scouts, and organizations that emerged from the struggle itself within the network AEVOB. A quick analysis of who is part of the network shows a significant presence of religious institutions, which played an important role in this space.

Another matter worth highlighting about the story is that print and television media did not take long to broadcast the hostility between environmental community organizations and government authorities. Archive images of local newspapers are shown in the documentary in relation to this, as well as the coverage of the case in national and television media.

By the end and during the last scene, we see images of ALUCEC women leading one of the protests organized during the Day of Tradition parade, where also youngsters, kids and representatives of organizations can be seen protesting and wearing surgical masks. The sounds alternate between the firefighter's music band (which was part of the parade) and the noise of the crowd clapping, where the last sound sometimes merges and gets mixed up with the river flow, and at times goes together with the original folkloric music. The focus is on people protesting while holding a banner that says: 'No to contamination. Yes to healthy life.'

Atravesando el río from the University of Buenos Aires along with the Asamblea de Vecinos Autoconvocados Afectados por la CEAMSE

One of the documentaries of the project *Atravesando el río* (AER) is called *Una Orilla escondida* (A Hidden Shore) and it deals with the collective action regarding the risks of contamination due to urban solid waste coming from the landfill site located in the coastal strip of the River Plate, which makes up the coastal border of the municipalities of Avellaneda and Quilmes. We, the filmmakers, are part of the Group of Environmental Studies (GEA) of the Gino Germani Research Institute (IIGG) of UBA and it was made in collaboration with the 'Asamblea de Vecinos Autoconvocados Afectados por la CEAMSE' (AVAAC), a network of local organizations.

The urge to make these documentaries came from the need expressed by the representatives of territorial environmental organizations we encountered during our research, but the idea of making it in the context of an action-research scholarship was the result of having obtained institutional funding for its subsequent dissemination in different neighbourhood spaces and educational institutions.

Having our travel expenses, the handycam and the final editing costs covered, we began working on the documentary between 2007 and 2009. We were six people in the team: three sociologists (including myself), two anthropologists and an advanced documentary filmmaking student. While we thought how to narrate in audiovisual language the cases of environmental risk we had been researching, the sociologists and anthropologists started studying video techniques for social investigation (in particular to be able to collaborate with the film student). At the same time, and to move forward with the project, we began applying participatory research methodologies by meeting with members of the organizations to agree upon the documentary storyline. We conceived of it as a more powerful tool than the classic dissemination materials produced in the university.

As for the latter, we contemplated several dissemination circuits such as local neighborhood associations, cultural venues, schools, and universities. We wondered: how can we raise awareness among the inhabitants of the Buenos Aires

metropolitan area about environmental problems directly affecting them? We felt deeply mobilized as graduates and researchers; we had to take on the commitment of helping spread the information about different environmental problems that remained for the most part unknown by a wide sector of the population, but that we knew about thanks to social research.

Eventually, with the production team and the organizations we agreed upon a storyline for the documentary: the way in which urban solid waste has been managed in the Metropolitan Area of Buenos Aires for the last three decades using landfills has led to a critical situation, since it is one of the most pressing sources of contamination for the environment and human health in the urban area. For this reason and in a context of social crisis, networks of territorial organizations began emerging in the areas adjoining the landfills to fight against CEAMSE and the whole package of policies and laws that had given authorization for its operation as the sole way of treating and managing waste.

In the late 90's and in the midst of the 2001 crisis, the members of AVAAC warned about the situation of environmental emergency in the area, due to the harms caused by the landfill. They posed demands for strategies to disseminate information about the issues, as well as policies for the reduction of the health risks in the area. That is how it is presented in one of the testimonies of Gabriela Merlinsky, sociologist at UBA, researcher and coordinator of GEA in IIGG:

At that moment began the challenging of an historical organization of the Metropolitan Area of Buenos Aires (in relation to the management of solid waste), which is CEAMSE, and the different actors took positions. This ultimately led to the closure of the landfill, which was indeed collapsed.

While the story goes on, we can see archive images of the protests of 2001 in Plaza de Mayo, epicentre of the most important political events in Argentina. After that, protests against CEAMSE are seen, the signs read: 'Smells that kill come from CEAMSE'; 'Art. 41 Right to a healthy environment'.

The audiovisual narration poses questions about the problem of contamination due to urban solid waste by analysing the following argumentative points: the moment in which the technology of landfilling was established (since 1977), the event that made the worst damage (stacked landfill, and fires in 1998 and 1999), and the growing demonstrations (2000-2004) until achieving the final closure of the facility in 2004.

Although many of the testimonies are reconstructed making use of the medium shot in a talking head style (the interviewee is normally sitting down), they are also sometimes shot in medium, full, and long shots, and thanks to this we can see their activities (occasionally, the filmmaker/researcher is also shown).



Figure 8. Researcher of IIGG-UBA [medium close-up shot].

The story shows the controversies of technical nature regarding the area in which the landfilling site lies, as well as the discussions on the technologies related to environmental matters for waste managing within CEAMSE. The strong questioning of the landfill in particular, how it was managed in Villa Domínico lies basically on three fundamental critiques: its location, the lack of leachate and gas management, and its creation during the last military dictatorship.

The first critique refers to it having been set up in a low area, in a coastal zone of the River Plate where a wetland can be detected. As the neighbours testify, this location prevented them from being able to benefit from public access to the river. The second point refers to the failure to comply with any and all of the measures that would have reduced risks, i.e. setting up leachate treatment plant so as to avoid groundwater contamination, and take the appropriate measures to prevent waste from stacking, and thus control gas emissions. The plants for the treatment of leachate and gas emissions were set up only after the demands for it started to surface. This becomes clear when hearing testimonies of the representatives. This is how one of them expresses it:

This is not land nor fill: this is a dumping ground!!!
(Very emphatically.) They had the obligation to install a polyethylene layer, but they haven't. And that resulted in the contamination of the groundwater, all the groundwater is contaminated... CEAMSE did a terrible irreparable damage!!!



Figure 9. Representatives of the Wilde Assembly [medium close-up shot]

Here we see the counter-expert knowledge constructed on the basis of everyday life experience and the local knowledge of the community, contrasting with some accounts from technical discourses based on expert knowledge and scientific grounds. An example of this discourse is shown through the chief engineer of the degassing plant, who asserts that the plant installed in the landfill managed to have 20 times less emissions thanks to burning, which turns methane gas into carbon dioxide:



Figure 10. Engineer explaining how the degassing plant works inside the landfill [medium shot].

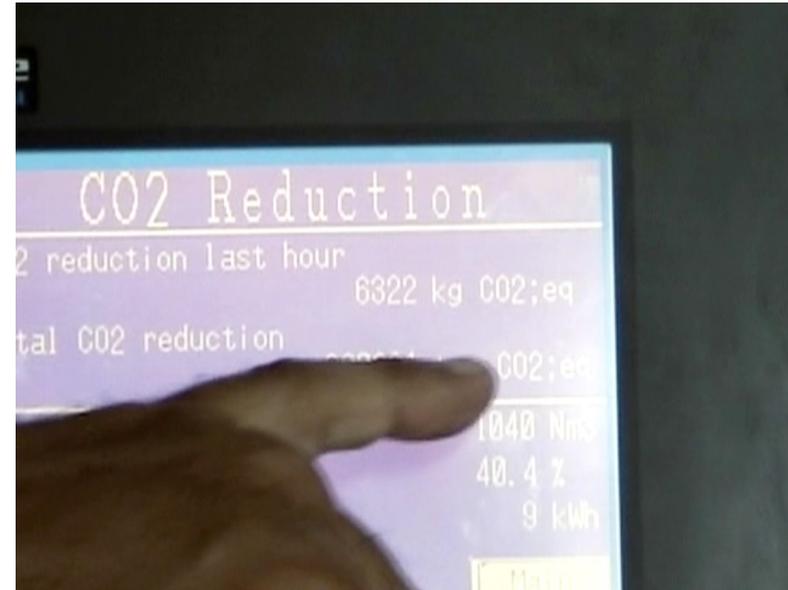


Figure 11. The engineer shows methane reduction levels in the computer [close-up].

It is interesting to focus here for a moment since there are expert voices that disagree with the engineer of the CEAMSE gas processing plant. In fact, the researcher in chemistry of UNLP's CIMA argues that what the gas processing plant does is based on a theoretical equation that can ultimately be related to the Kyoto agreement and the business of turning to a market of green bonds. From his point of view, the presence of numerous other volatile compounds many of which are carcinogenic is the most critical issue regarding gas emissions in the landfill [images of the chemist in his office in CIMA-UNLP (medium long shot). While the audio of his testimony goes on, information in the third lower explains the potential harm gases as benzene and xylene might cause.]

This is another example of the socio-technical controversies that arise, in this case not between the expert and counter-expert discourse but within the technical-scientific field itself. In this particular case, there are differences between the technicians working in the private sector and the scientist and researcher working in the public university, to which different individuals and social actors turn to. In fact, the scientist mentions the organization of mothers that live in a building complex located near the landfill; they institutionally approached CIMA-UNLP so that their researchers could conduct a study profiling gas emissions.

These are the words of one of the representatives of the organization of mothers

“Madres de las Torres de Wilde” who works in the first aid health centre of the complex FONAVI:

We started [investigating] the subject when the children began getting sick, some even died, as my child... There was something very odd because suddenly in the first 4 months 22 cases of leukaemia and lymphoma appeared in the neighbourhood. All cases began in the summer of 1999. They continued at a lower rate until 2001. That was when we decided to investigate the landfill since it was the nearest thing and the smell could be felt. We would say: ‘What a smell! What a smell! What could that be?’ And, well, then we started inquiring, talking to engineers, environmental specialists...

[Images of the interviewee while we tour through the facilities of the closed landfill riding on a CEAMSE van (close-up.) She is seen sitting down in the front passenger seat and talking, face profile. While she continues her story, front pages of local newspapers are seen, they read: ‘CEAMSE: The heart-breaking story of a grandmother about her 8-year-old grandchild's leukaemia.’ Also featured are images of the mothers in demonstrations, holding signs and candles, demanding for the immediate closure of the landfill.]



Figure 12. Representative of Madres de las Torres [profile close-up].

This testimony shows how local citizens themselves (in this case, the mothers) are the ones who identify the patterns originating an environmental health problem in a vague set of symptoms, which are later diagnosed as diseases unknown until then. In fact, the ‘Madres de las Torres’ start deploying a series of mechanisms for searching and putting information together that led to an epidemiological study, even though it was initiated outside the medicine field (Merlinsky and Fernández

Bouzo, 2007).

Once the closure of the landfill was accomplished, the conflict changed the focus of discussion towards the environmental liability of the closed landfill and its remediation, and the potential set up of an urbanisation megaproject called “Nueva Costal del Plata” (New Coastal Area of the Plata). The “Madres de las Torres” agree with this project, while the other organizations of the network speak against it because they argue that the mega project threatens the wetlands and the public access to the river. Finally, images of the sun shining above the River Plate coast are featured, images we had already seen sneaking between scenes in other parts of the story. Meanwhile, the song with which the story started is heard again: ‘Río’ by the band Aterciopelados, who sing: “The waters from the river come, running, and singing. They walk by the city while dreaming they are clean, they are clear...”

Conclusion

In the previous two sections we analysed and described two documentaries driven by people and groups from two public universities: the National University of Luján, in the case of Escupiendo al Cielo (EAC), and the University of Buenos Aires, in the case of Atravesando el Río (AER). The objective of examining both documentaries was to observe what each one of them tell, how they construct their stories and images about the environment, what environmental causes and socio-technical controversies they develop, and what is the role of scientific knowledge in its interaction with other kinds of knowledges related to the environmental collective action. As it was mentioned before, the comparison was made by disaggregating narrative elements (visual and sound) in an attempt to think about the depiction of two specific environmental causes.

In addition, through the interviews to the filmmakers we could get to know the narrative, aesthetic and technical resources of each documentary in depth, as well as the different ways in which the teams came together and the dissemination circuits for each project.

From a holistic approach, we chose to analyze an experience in which I am involved as researcher of the UBA and as filmmaker, with the aim to compare it to a similar experience, and so be able to reflect upon our own creative research practice and collaborative dissemination.

First, both documentaries used low-cost technical resources to try to make visible different environmental problems in semi-rural (EAC) and urban (AER) areas. In the case of EAC, while at the beginning the purchase of a handycam and the cost of homemade editing were covered by a filmmaker, afterwards he obtained financial aid from UNLu. In the case of the UBA, the camera, editing and travel expenses

were covered by a research-action scholarship.

Second, we can observe that the environmental narratives of academic actors are mainly based on associations with community members so as to demand environmental justice. The images intend to record stories of socio-environmental struggle, proving the power of collective protest actions and the importance of community identities when getting involved in environmental causes of their own local area.

The documentary EAC shows the dramatic situation of the town of Jáuregui, and it calls for an identification of the viewer with the local environmental collective action through a series of images that praise the natural beauty of the town and its biodiversity, which are now threatened. Thus, the desire to express everything that a healthy community life entails becomes evident, and is linked to the pleasant enjoyment of the immediate surroundings.

But the story does not only register the struggle of the people while extolling the beauty of its environment and the placidity of the small-town lifestyle, it also offers the voices of experts whose studies scientifically certify the presence of chromium in the waters of the Luján River. There is also a registry of interactions among the different actors in shared spaces, such as demonstrations and municipal city council sessions. The documentary shows a story in a chain of interviews using medium close-up and extreme close-up shots, displaying the most subjective expressions.

Another critically important point in the story is related to the will to actively participate in community assemblies to confront the local political and economic powers while expressing the right to live there and to defend their own lives as well as those of their children and grandchildren. We also find the defense of the traditional environment of the town: the tree, the river, the landscape; based on the principles of both secular environmental justice and Catholic faith, which has a great influence in the area of Luján.

As for the documentary AER, it invites the viewer to analyse the points of dispute and the emerging categories of collective action related to waste, presenting the 'more academic' discourse of social sciences. In this regard, it can be noticed that the work in AER emerges from a research performed by the filmmakers, and the story is organized through the different testimonial interventions of the social researcher and coordinator of the Group of Environmental Studies interviewed. The story is indeed structured around the social construction of risk and the analysis of the environmental conflict in the southern part of the Metropolitan Area of Buenos Aires. Another indication of the academic nature of AER is the fact that the documentary project was possible thanks to a Research & Action Grant, as already mentioned.

However, this academic narrative is not the only point of view. In every stage of the documentary we worked together with the organizations so they could determine what they wanted to tell about their experiences and how. In this way, the story was put together using the testimonies of the different representatives of organizations, former officials and specialists.

To sum up, each audiovisual production made by graduates of both universities is in different ways involved with the organizations that demand environmental justice, and they take position in relation to each moment of the collective action they deal with in their productions. The points of view of the filmmakers/researchers/community actors participating in the analysed productions are undoubtedly in favour of the defense of life, and in opposition to the concept of development and discourses on ecological modernization. In both cases, the documentaries functioned as synergy-generating projects between: a) the need of community actors to make local environmental risks visible; b) the commitment of public universities to generate and disseminate systematic knowledge about different environmental problems, and c) the possibility of experimenting on the basis of an unusual product within the academic world that can nevertheless favor dissemination of knowledge and debates around manufactured uncertainties in our times.

With regards to the latter, it is worth mentioning that the depiction of the environmental collective action shown in both documentaries speaks to us about the birth of a tool in the domain of academics and the university. In the case of EAC, it triggers the research about environmental audiovisual communication carried out by the filmmaker-engineer. In the case of AER, it acts as a dissemination tool that resulted from a series of research and action-research projects focusing on the study of environmental collective actions in Buenos Aires. It should be noted that in the last case mentioned, the work carried out by a team of sociologists, anthropologists (who, along the process, trained themselves as filmmakers of social research), and a film student was fundamental.

In this regard, these are audiovisual tools that can be considered both as alternative methods of scientific dissemination for the domain of academics and the university and as a form of community filmmaking inasmuch as they are part of an array of local environmental collective actions.

That is to say, this kind of documentaries are clear examples of environmental "community filmmaking" (Mannay, 2016; Sandercock and Attili, 2010; Murthy, 2008) because even though these are productions made by actors from the domain of academics and the university, the truth is that they try to make visible experiences seeking to find full social recognition of alternative voices often rendered invisible by the mass media.

In the case of EAC, the project was originally driven by a filmmaker and engineer of UNLu, who afterwards succeeded in engaging community and university actors in the dissemination of the documentary as part of an extension program in local high schools. As for the AER, the initiative resulted from a demand expressed by environmental organizations that the university should adopt a disseminating role, a responsibility it finally took by forming a group of filmmakers-social researchers and securing funding in the context of a research-action project.

In sum, the new experiences of audiovisual creation that bring together universities, scientific knowledge and environmental collective action do not seem to be linear and homogeneous processes in any way. This is not only due to the different levels of involvement of both scientific and community actors, but also to the narratives used in each case, which have their own peculiarities. The audiovisual methodology of decomposition and recomposition (in line with other classic qualitative methodologies) allowed for the analysis of such peculiarities while proving that audiovisual resources are valid documents of social inquiry that make it possible to trace the process of image, sound and narrative construction linked to contemporary environmental issues.

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