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QUARRY SONNETS: A REFLEXIVE REPORT

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ABSTRACT

Quarry Sonnets was a research project on art and societal change investigating the value of artistic methodologies to decentre human perspectives and promote a multispecies society. This report reflects on the outcomes of a pilot trial in a former quarry in the Natural Park Serra de Aires and Candeeiros, Portugal. The pilot trial implemented a workshop with 45 art students and staff from six European Universities working in small groups in a collective effort to propose ideas for the Vale de Meios Quarry's rehabilitation, culminating in a public event with the local community and stakeholders. The workshop experimented with the quarry as a nexus for a multispecies conversation, exploring a framework that attempted to decentre human perspectives when considering ecosystem rehabilitation projects. The workshop generated ideas in partnership with the quarry ecosystem for further discussion and development with its stakeholders.



INTRODUCTION

Quarry Sonnets studied the contribution of artistic methodologies to decentre human perspectives and promote a multispecies society. The research project implemented a pilot trial in workshop format focusing on a traditional limestone quarry in the Natural Park Serra de Aires and Candeeiros, Portugal. The research aimed to impact the perception of a quarry and its potential rehabilitation proposals by inviting more-than-human perspectives to be included in its governance models. This text reports a weeklong workshop developed between the 19th and 27th of November 2022, with 45 participants (students and faculty members) from six European art schools.

The workshop functioned within a more-than-human framework to tease contributions to rehabilitation projects and share these perspectives with local communities and stakeholders. The workshop focused on formulating a situation (what it means to rehabilitate a former quarry?) rather than on its functional solution. The approach explored artistic methodologies to decentre human perspectives, to elaborate and expand existing societal considerations, and consequently, to impact multispecies relationships. The project departed from an art context, its operational field. However, it aimed to transpose artistic methodologies to non-artistic contexts, simultaneously contaminating human narratives with decentred perspectives and disseminating nonhuman perspectives that can contribute towards the complexity of a multispecies society.

This disciplinary mobility, from artistic to non-artistic contexts, is prone to misunderstandings and confusions that, nevertheless, have the potential to impact and enrich new perspectives, shaping novel propositions for existing problems. Quarry Sonnets' propositions are disinterested in developing functional and scalable panacea, which tend to replicate present problematics. Quarry Sonnets hopes to unbalance human perspectives, specifically exhausting methodological approaches structured in dualistic problem-solution narratives, which mostly reinforce their importance, i.e., geoengineering, technological-oriented propositions, or climate engineering.

The workshop was organized around four locations: the Centro Ciência Viva – Carsoscópio, Pé da Pedreira, Vale de Meios Quarry, and Algar da Pena. It included introductory lectures by experts and visits to sites of geological, environmental, and historical interest. The participants, with their different backgrounds (institutional, cultural, and artistic practices) and levels of expertise (faculty and students from different years and courses), were randomly divided into groups to propose ideas for the quarry ecosystem rehabilitation. The workshop culminated in a public event with the community and local stakeholders when the participants presented and discussed their proposals for the Vale the Meios Quarry. Although the local communities and stakeholders were crucial for the project, the proposal is best framed in its complexity of entanglements with the more-than-human world rather than a social-engaged practice.



This article overviews the transdisciplinary theoretical framework for the workshop, rooted in more-than-human perspectives, and its potential translation to non-artistic contexts, i.e., quarry rehabilitation. It discusses the workshop's methodological approach and specificities, reflecting on artistic methodologies' role in expanding notions of sustainability and green economy to the complexity of a multispecies society.

THEORETICAL FRAMEWORK

Lucy L. Lippard and Martin Arboleda have noted that geographies of extraction are entangled in a global apparatus of production and exchange reaching far beyond regional and national borders.¹ These practices are grounded in narratives that separate production and consumption processes from the appropriation of nature.² This separation of humans from nature facilitates extractive positions that, as noted by Jason Moore, are one more manifestation of the Capitalocene.³ Quarry Sonnets acknowledges these problematics, recontextualizing localized narratives in broader debates regarding extractivism and attempting to contaminate the dualist reasoning that detaches humans from nature.

Anthropologist Arthur Escobar (2018) suggests the plurality of worlds implicit in a pluriverse, where distinct epistemologies and seeds of knowledge coexist and cocreate interconnected futures rather than subscribing to a singular human-centred Universe. Anthropologist Veronica Strang suggests an expansion towards the nonhuman, repositioning humankind within a reimagined community of all living kinds rather than separating it.⁴ Donna J. Haraway investigates life's interrelational features: life is making-with, a sympoietic process in a world of cyborgs (life is interdependent with otherness).⁵ Anna Tsing's fungal stories remind us that the future is a multiplicity of entangled possibilities in a contaminated world.⁶ Astrida Neimans investigates human embodiment as a more-than-human event.⁷ Caroline A. Jones proposed a framework for contemporary artists who investigate life's organization regardless of the ability to perceive it – an aesthetics of Symbiontics.⁸

Quarry Sonnets followed these lines of inquiry, suggesting that a work of art might consider its more-than-human audiences rather than solely its human audiences. This framework was offered to the participants to be employed in developing their proposals for the Vale de Meios Quarry rehabilitation: how to develop a project for a quarry rehabilitation that considers its more-than-human world and decentres its human perspective? The project acknowledged its inherent complexity in conveying dissonant voices, paying attention to silent and muted voices, and exploring the role of the unknown when engaging with the intricacy of the ecosystem.

The project proposed a more-than-human framework to its participants. The proposal aimed to bring together different modalities of engagement with the quarry ecosystem, teasing relational methodologies and perspectives on a future rehabilitation proposal.



MULTISPECIES WORKSHOP IN THE QUARRY

The project's strategy was to implement a workshop with a more-than-human framework, bringing together participants (young artists) with distinct backgrounds to listen to the ecosystem at the Vale the Meios Quarry and collectively propose ideas for further development. The workshop Quarry Sonnets took place between 19 and 27 November 2022 in the Vale de Meios area.





The first contact with the stakeholders was in March 2022, followed by several preparatory trips between June and October, including a week of fieldwork in July. The early visits were crucial to preparing the workshop and having a distinct perspective of the area in different periods of the year and different contexts. These early experiences were later shared in the workshop and helped to shape its agenda, incorporating unforeseen elements, and allowing for a flexible approach to the predefined plan. This flexibility was crucial to managing unexpected problems and the constant rain throughout the workshop week, which shaped the participants' experience of the area. The workshop had two preparatory online sessions in the weeks before the workshop: an introduction to the project, a presentation of the theoretical framework, and the travel arrangements for the fieldwork week. Additionally, a list of relevant texts, podcasts, and online videos about the project's more-than-human framework was shared with all the participants.



The fieldwork (19 - 27 November 2022) started at Lisbon airport, where the students and staff from the six European art schools gathered before being shuttled to the Centro Ciência Viva – Carsoscópio. The participants arrived in groups but mostly did not know each other, contributing to a generalized excitement and curiosity at the airport. Their institutions selected them from Fine and Media Arts courses (undergraduates and graduates). The participants briefly saw each other during two online sessions, introducing the project and discussing its theoretical framework. The participating art schools were Escola Superior Artes Design.CR, Portugal; Limerick School of Art and Design, Ireland; FHV - Vorarlberg University of Applied Sciences, Austria; Bauhaus-University Weimar, Germany; Vilnius

Academy of Art, Lithuania; Lucerne University of Applied Sciences and Arts, Switzerland. Upon arrival at the Centro Ciência Viva, the participants organized themselves and occupied the dorms rooms before their first meal together.



On the first day, the participants had an introductory lecturer and visit to the permanent exhibition at the Centro Ciência Viva – Carsoscópio, on the geological specificities of the area, which is characterised by its Karst formations and several caves. The afternoon included a first visit to the quarry and a long walk in the area introducing the participants to the landscape and the surrounding quarries, which were not operating because it was Sunday.

At the end of their second dinner together, the participants were invited to write their names on a blackboard, creating groups of three or four participants, emphasizing their different institutions, cultural backgrounds, and interests rather than similarities. The participants diluted themselves among the groups, each with one participant from a different institution, including a Portuguese-speaking element helping to mediate conversations with the community, promoting a diversity of perspectives and avoiding similar approaches. Some participants were interested in new media practices (3D scanning and other digital representational methodologies). In contrast, others focused on traditional media (drawing and sculpture) or the communities' localized stories and social accounts. This diversity of perspectives was essential to generate debate but created many difficulties due to resistance to working with the different approaches and, foremost, working collectively.



In the second day, the participants had an introduction by the team from the Natural Park Serra de Aires and Candeeiros (ICNF/PNSAC) on the geological events shaping the park and quarry area and most importantly on the dinosaurs track visible on the quarry and, currently, transforming the narrative of this place from a quarry to a heritage site. The day was highly conditioned by the intense rain and the programme was adjusted to minimize its impact on the participants. Nevertheless, the group visited an operational traditional limestone quarry, and had the opportunity to see the owner, who is the only worker, working in the quarry.



The frequent rain shaping the relationship between the mountain and the participants was a defining element of the fieldwork. It brought to the participants' attention some difficulties in working in the quarry and living in the area. The exposure to the natural elements and harsh conditions of being in the quarry, which can vary in its extremes (cold and wet in the winter; hot and dusty in the summer), shape the mountain and how local human beings understand it. The embodied experience of wetness and tiredness mediate narratives of place, impacting the participants' relationship with the mountain and village's specificities: dust to mud, to dust.

The proposal for the groups was to engage in a multispecies dialogue with the quarry ecosystem and its surroundings. The participants were asked to develop proposals for quarry rehabilitation that considered the nonhuman communities living in the area rather than solely its human realm. The dialogue between the participants' perspectives was valuable but defiant. The participants had to negotiate and compromise working methodologies and interests in a limited timeframe, with unfamiliar colleagues, and in a stressful context of constant rain and collective accommodation.



Local people provided the catering service (hired) to create a closer relationship with the area and the community through local food. Breakfast and dinner were at the Centro Ciência Viva – Carsoscópio, and lunch was at the Community Centre in Pé da Pedreira, within walking distance from the Vale de Meios Quarry. It is worth mentioning that many participants reported an essential and unforeseen contribution made by the catering service; it allowed them to focus on the work without being concerned about meals, which created a necessary routine and focus on developing their proposals.



After lunch, the meals and the follow-up period were opportunities to rest and exchange stories between the participants and the community. The participants often expanded the conversations and work to the surrounding cafes in Pé da Pedreira. Although most participants did not speak Portuguese and the community mostly spoke Portuguese, an immersive curiosity between the participants and local people generated some form of exchange. Regardless of formal translations and clear communication between the people involved, it was possible to identify an exchange of ideas. Nevertheless, it was common to see the Portuguese participants translating for their groups, and a few villagers spoke English.



On the final day, the participants exhibited and presented their work to the community during a lunch offered by the Conselho Diretivo dos Baldios de Valverde, Pé da Pedreira, Barreirinhas e Murteira at the Community Centre in Pé da Pedreira. The event was advertised in local cafes and networks and opened to the population. The various groups set up a small exhibition space with small tables surrounding the lunch tables, facilitating the interactions between the projects and the event guests. The groups explained and shared their experiences with the community they met throughout the week. The different works reflected the participants' interests in specific media: three-dimensional scanning and photogrammetry combined with augmented reality, drawings and sculptures with local elements (clay, herbs, flowers), photographs of the area, proposals for possible events (artists in residencies, concerts, and sculptural park), sculptural model and drawings for a future stone museum.



THE VALE DE MEIOS QUARRY, COMMUNITIES, AND STAKEHOLDERS

The Vale de Meios Quarry is near Pé da Pedreira,⁹ Alcanede, in the Natural Park Serra de Aires and Candeeiros (ICNF/PNSAC). The area has been a source of limestone for many pavements and squares in Portugal and abroad, bidding cultural and economic entanglement between communities and practices of stone extraction, transformation, and its complementary activities. In 1998, dinosaurs' footsteps were discovered on site, tentatively from around 168,000,000 years ago. These distinct temporal dimensions remind us that humans are a minor footnote in a multispecies historical complexity that comprehends distinct global and localized imbroglios between ecosystem and their constituting agents (humans and nonhumans). After this unexpected discovery, the quarry's owners opted for its closure, primarily due to its limited economic viability after years of extraction and to preserve the newly found historical landmark.



The dinosaurs' track impacted the local heritage and generated an essential sense of ownership in an often culturally neglected community. The area is mainly known for its limestone and caves, slowly excavated by the rainwater that quickly permeates the soil, crossing the mountain before springing in the surrounding valleys. The remoteness of the communities and the hardness of living in this mountain area reinforce the role of nature in human narratives and their heritage. That is, there is an intrinsic respect from the local villagers towards the mountain due to their

inseparable relationship. Nevertheless, signs of a transformation in this relationship can be associated with contemporary times and the industrialization of limestone extraction. This industrialization, or modernization of production processes, increases the extraction speed, making it more profitable and resulting in higher disconnections between workers, quarry, and the ecosystem. The disconnection generated by the industrial extraction of limestone is distinct from the traditional extraction processes, which are slower and have a reduced impact on the mountain, thus making it more sustainable in longer timeframes.



The presence of the participants and their manifested interest in the local people and ecosystem impacted the voices that came forward. The several interactions with the community were opportunities for the villagers to voice old concerns through new ears and to a new audience. These international group of participants giving their time and attention to a remote location and its communities generated an element of curiosity in the community. An implicit interest and care for villagers and ecosystems created the conditions for open exchanges between the people involved.

Following an invitation to the local community, some villagers joined the group for lunch. At the same time, the participants soon discovered the village cafés, which became a hub for conversations and interaction with local inhabitants and quarry workers. These informal interactions contribute to a better understanding of cultural practices and local heritage, suggesting a strong link between the people and their ecosystem. For example, it was common to hear stories about cave exploration and bat encounters, local politics, or the necessary triangulation of knowledge to shape a good limestone pavement cube: a conversation between a hammer, a hand, and a stone¹⁰.

The project was only possible due to a close relationship with its stakeholders, namely the Natural Park Serra de Aires and Candeeiros (ICNF/PNSAC); the Conselho Diretivo dos Baldios de Valverde, Pé da Pedreira, Barreirinhas e Murteira; the Centro Ciência Viva – Carsoscópio; and the Câmara Municipal de Alcanena. The first point of contact was the ICNF/PNSAC, which supported the project's inception and facilitated a unique knowledge of the area.

The Conselho Diretivo dos Baldios de Valverde, Pé da Pedreira, Barreirinhas e Murteira, is a Commons Trust gathering four villages in the PNSAC and responsible for managing the commons land in the area, including the Vale de Meios Quarry, with deep links with its communities. They opened their doors to the group, facilitating the use of the community centre in Pé da Pedreira for the daily lunches and organizing the event on the final day opened to the community.

The Centro Ciência Viva – Carsoscópio and Câmara Municipal de Alcanena hosted the participants in their facilities by the spring of the river Alviela during the workshop. The *Centro Ciência Viva – Carsoscópio* functioned as the base station for the fieldwork, providing accommodation and facilities for breakfast and dinner and the evenings' group work. The Carsoscópio Centre is part of a network of Scientific Centres created to bring science closer to its citizens, congregating exhibitions and other public events. Additionally, it has facilities to temporarily host groups of scientists, students, and interested public. The Centre is dedicated to studying and understanding the park's natural environment, focusing on its geological and biological diversity. It showcases the park's geological and biological diversity, and the visitors can learn about its flora and fauna and different limestone formations: stalactites, stalagmites, and columns.

PARTICIPANTS AND PROPOSALS

The participants were higher education students from art schools primarily in the early stages of an artistic path. Although the participants knew the importance of working collectively and decentering their narratives, there were obvious difficulties in negotiating individual differences. The high number of participants and reduced experience in workshop contexts, the short duration and high intensity of the workshop format, and the difficulty of exploring a framework that decentres oneself might explain the difficulties encountered by the participants.



While the project positively impacted its participants,¹¹ it is arguable that two specific limitations affected the overall outcomes and depth of the proposals: the number of participants and the workshop duration. Ideally, the number of participants would be reduced to 10-16 people to facilitate the participants' interaction in the groups and increase the depth of the discussions. The time needed to establish a valuable connection with the ecosystem, including human and nonhuman communities, should be longer and closer to a minimum of three weeks. These could significantly improve the participants' relationship with the ecosystem, including local villagers (s) and human communities.

Moreover, although this might be a future concern, another possible interpretation might be that the participants needed more time to engage fully with the more-than-human framework. After comparing field notes with the participants' individual reports submitted after the fieldwork, there is evidence that future projects could benefit from an extended preparatory program regarding theoretical frameworks and individual and collective practices in a workshop environment.



The proposals were speculative, and regardless of their immediate viability, there was an emphasis on the local communities (human and more-than-human), their stories, and their specific entanglements, pointing to possible routes to follow:

- 1) Digitalizing the ecosystem, including its stories and tales of the quarry and its communities, preserving existing memories, and promoting the importance of localized knowledge.
- 2) Creating novel modes of exposure to the ecosystem to be implemented by the local communities through the production of artefacts and participatory practices where visitors engage with the quarry ecosystem: walks, drawings, and sculptures with plants and minerals from the area.
- 3) Creating a labyrinthic stone garden with local stones coexisting and celebrating the mineral world in the area and an anchor for an outdoor stone museum and other activities, linking the former quarry with other nearby spaces without further human action.



CONCLUSIONS

Quarry Sonnets harnessed the power of creativity, collaboration, and environmental entanglements to reimagine the Vale de Meios Quarry. This pilot trial investigated the potential of unbalancing human narratives in quarry rehabilitation. It explored artistic methodologies to engage communities, stakeholders, and participants in decentring their human-centred discourses and, eventually, contribute to formulating a multispecies society.

The speculative framework to decentre human perspectives introduced a sense of environmental entanglement, requesting that the participants considered the more-than-human world when developing proposals for the quarry rehabilitation. The workshop was an opportunity to tease the community's contributions, open conversations and facilitate languages and ideas for further appropriation and incorporation when reimagining the quarry. Although these speculative practices are predominantly intangible and subjective, the reasoning, shared experiences, and dialogues developed throughout are paramount to implementing future quarry propositions.

Decentring one's narrative is challenging, and the participants manifested these difficulties in the fieldwork, signalling potential complications when transposing these ideas and methodologies to non-artistic contexts, eventually less open to speculative and fictional reasoning. Nonetheless, the shared and intangible process suggests the value of employing artistic methodologies when engaging and amplifying local communities' voices and promoting more-than-human

perspectives. Artistic methodologies can help decentre human reasoning, impacting, and contributing to formulating future ecologies where society can be reimagined towards including its more-than-human perspectives.

The workshop attempted to transform the quarry into the nexus of a multispecies conversation, generating novel ideas to be further discussed. The project, future-oriented and speculative, aimed at impacting the formulation of a situation rather than focusing on designing and producing a functional solution. It considers whether artistic methodologies can be valuable in formulating novel questions, elaborating and expanding scientific and societal problems, and impacting future perspectives. The outcomes suggest this expansion is crucial yet challenging to implement, primarily due to ontological blind spots in contemporary Western discourses rooted in human supremacy over the more-than-human world. This promotes the idea of nature as an infinite resource for human consumption.

Finally, it is worth noting that local communities at Pé da Pedreira have a strong link with the mountain and the quarry. This embodied knowledge has been built with time in a continuous ontological relationship with the ecosystem that suggests an implicit awareness and respect towards the more-than-human world. Often, this article suggests that this localized awareness and embodied connection to the area is the foundational experience to expand sustainability and green economy to the complexities of a multispecies society. Quarry Sonnets' artistic methodologies contribute to teasing and valuing this intangible knowledge.

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SUPPORTING MATERIAL FOR PARTICIPANTS

Articles:

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Donna Haraway, Making Oddkin: Story Telling for Earthly Survival: <https://youtu.be/z-iEnSztKu8>

Rosi Braidotti, The concept of human has always been associated with relations of power: https://youtu.be/mb2_a-UX1OE

Astrida Neimanis, The Sea and the Breathing: <https://youtu.be/wLgfGWfzUU>

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¹ M. Arboleda, *Planetary Mine: Territories of Extraction under Late Capitalism* (London: Verso, 2020).

² D. Harvey, *The Limits to Capital* (London: Verso, 2018). M.de Lourdes Melo Zurita, D.C.Thomsen, T.F.Smith, A.Lyth, B.L.Preston and S.Baum, 'Reframing Water: Contesting H₂O within the European Union', *Geoforum*, 65, 2015, pp. 170–8. See also, E.A.Povinelli, *Geontologies: A Requiem to Late Liberalism* (Durham: Duke University Press, 2016) and E.A.Povinelli, *Four Axioms of Existence and the Ancestral Catastrophe of Late Liberalism* (Durham, Duke University Press, 2021).

³ J.W. Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital* (London: Verso, 2015)

⁴ A development of Benedict Anderson's *Imagined Communities* (an anthropological effort at recognizing the impact of distinct scales in human social structures), Veronica Strang, "Envisioning a sustainable future for water", in *Aqua- Water Infrastructure, Ecosystems and Society*, 70.4, 2021

⁵ D. Haraway and Cary Wolfe. *Manifestly Haraway*. Minneapolis: University of Minnesota Press, 2016; D. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*, Durham, Duke UP, 2016.

⁶ A. Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, Princeton: Princeton Univ. Press, 2015.

⁷ A. Neimanis, *Bodies of Water: Posthuman Feminist Phenomenology*, London; New York: Bloomsbury, 2017.

⁸ For example: Lisa Jevbratt's workshops on interspecies collaborations; Caitlin Berrigan's blood transfusion for dandelion plants; François-Joseph Lapointe's maps of his microbiome; and Sonja Bäuml's investigations in non-linguistic microbial communication.

⁹ The name of the village Pé da Pedreira can be translated as Foot of the Quarry marking one of the main accesses to an area of traditional limestone extraction.

¹⁰ Conversation with local quarry worker.

¹¹ The data was collected from the final reports submitted by the participants.