Dancing Landscapes of the Phlegran Fields

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Abstract: As an artist-researcher, at this conference, I share a screen work focusing on the supervolcano in Southern Italy known as the Phlegraean Fields (Campi Flegrei). The studies of this volcano have been at the center of my postdoctoral art-based research at the Lithuanian Academy of Music and Theatre. A volcanic caldera of Phlegrean Fields, characterized by an ongoing bradyseismic crisis, experiences slow ground uplift and subsidence accompanied by seismic activity. It is also one of the most densely populated areas near the city of Naples, hosting over half a million people. The caldera features several notable craters, including Lake Averno- believed by the Romans to be the entrance to the Underworld (Hades), active vulcano Solfatara, naturalistic oasis of Astroni, and many others. The Phlegrean Fields caldera is rich not only in natural wonders - thermal waters, craters, natural oasis, but also legends and historical heritage. Here lies a sunken city of Baia, the Amphitheater of Flavio, and the market columns falsely called Tempio di Serapide, which are natural “meters” of bradyseism. In a multidisciplinary framework of researching via art making, science, history, architecture, and geology merge. The video explores the landscape as a body and the body as a landscape through choreography and movement of the camera. Through dialogue with residents of Pozzuoli and Naples, as well as volcanology scientists, this work aims to deepen the understanding of what it means to live intimately with the challenges posed by bradyseism.

Keywords: Campi Flegrei, volcanoes, bradysism, art, dance

Introduction

This paper aims to contextualise what will be the outcome of a two-year post-doctoral research by artmaking - a series of video works on the Phlegrean Fields and its bradyseismic crisis. Artistic research, contrary to scientific research, does not seek concrete outcomes, but it results in artworks, texts, and new knowledge production. It applies various methodologies, often informed by artistic discourses, other disciplines, knowledge of the medium, and researchers' autoethnography. Artistic research produces art and insights that can further contribute to the discourses in the creative fields and in science.

Project *On the Land That Dances* is a means to underst better and explain what it means to live in intimacy with geological hazards, or more specifically, the phenomenon of bradyseism in Phlegrean Fields. The landscape of the caldera here is viewed as a body and the bodies of humans and non-humans - as landscapes. It is intended as a close collaboration with the members of the community in Pozzuoli, the Vesuvius Observatory of volcanic activities, the Crater of Astroni, Oasis WWF, Experimental & Physical Volcanology Lab at Ludwig-Maximilians-Universität Munich, and other individual and institutional bodies linked to Phlegrean Fields. Therefore, researching via artmaking allows to merge various forms of knowledge in new material forms and narratives. Using the movement of the human body and the camera, this research aims to rethink geological movements and instabilities, and expand understanding of what it means to live on one of the Earth’s supervolcanoes in the context of bradyseism.

1. Big things always win

“I like natural disasters,” wrote Walter de Maria, “and I think that they may be the highest form of art possible to experience.” In his bold statement, the landscape artist framed nature as a fellow creator and refused to see natural disasters solely through the lens of destruction. “For one thing, they are impersonal,” he explained. “Big things always win.” Easily mistaken for insensitivity, in fact, these statements are declarations of humbleness: “If all of the people who go to museums could just feel an earthquake!”

Figure 1 The Phlegrean Fields, satellite view

I have never experienced an earthquake. At least, not a strong one. I was lucky, though, because despite coming from a rather flat Lithuanian landscape, I have spent a good portion of my life living in seismic zones. For the last couple of years, I have been conducting artistic research in the Phlegrean Fields, a capricious volcanic caldera west and northwest of Naples, subject to the phenomenon of bradyseism—characterised by a slow uplift (or descent) of the ground, often accompanied by seismicity. In May, an earthquake of magnitude 4.6 shook Pozzuoli. It was just an hour after I left.

The current bradyseismic crisis has been ongoing since 2005 and has intensified in the last couple of years, drawing international media attention. This is how I learned about it, too. According to scientists from UCL and INGV, who published their findings in *Nature* magazine, there was a condition for soil rupture—that is, a volcanic eruption. At that time, luckily, I was living closer to Vesuvio. I knew of the Phlegrean Fields; I knew it was a huge volcano. But I had no idea it was active. In June 2023, I packed an emergency backpack and got ready for evacuation—under my own instruction, of course. My Neapolitan husband fatalistically smiled, reminding me that Neapolitans have lived with the volcanic threat for centuries and, most of the time, they got away with it. Volcanic eruptions are quite rare, and even rarer are violent ones. But they happen. In time, of course, I unpacked my emergency backpack as my fear shifted to admiration. I started to study. My Italian was still broken, so the project was challenging in many respects.

Figure 2 Film still, Tempio di Serapide

Volcanic eruptions, in most cases, can be predicted a few days in advance, allowing time for evacuation. However, the scale of the potential emergency at the Phlegrean Fields remains uncertain. About 40,000 years ago, the Campanian Ignimbrite eruption crossed mountain tops, causing volcanic winters and contributing to the extinction of the Neanderthal. Not all eruptions were equally violent; for example, the eruption five hundred years ago formed a new mountain, Monte Nuovo, in just a few days. A future eruption at the Phlegrean Fields would likely not be colossal. Nonetheless, geological disasters of any scale can cause distress, migration, and displacement. Volcanic earthquakes are even less predictable and, though lower in magnitude than tectonic ones, may occur quite frequently. In 2025, the area experienced around 5,700 earthquakes, with magnitudes up to 4.6. It is these frequent quakes, rather than an eruption, that cause the most concern among the local population.

Living in red zones of volcanoes and earthquakes, people adapt. The dormant states of the volcanoes produce a similar state of mind in their inhabitants. Many in the city of Pozzuoli would smile and say, “Well, we live with it,” or “we lived with this for thousands of years,” avoiding complaints. Partly, this is due to negative publicity and fear it will affect tourism and the restaurant business, on which the local population depends. Today, people are generally much more informed about bradyseism than they were in the 70s or 80s when earlier crises occurred. Self-organized Facebook groups, such as Quelli della zona rossa del vulcano Campi Flegrei, managed by community members, share the latest updates and provide space to share experiences, worries, ask questions, and receive expert comments. Locals follow sites by the Italian Civil Protection and the Vesuvian observatory, which publishes seismic information in real-time, uploads bulletins, and offers important community resources. This brings some calm, though it is relative. Some people interviewed for this research temporarily left Pozzuoli; some later returned, others moved away permanently. Many worry about their houses, not all of which are seismic-resistant. They notice new cracks in walls, pause renovations, and face insurance challenges, as housing built on the volcano is often not covered.

2. Art and rock

Stepping onto a volcano as an artist immediately places you in the extensive company of other creators. Pietro Fabris, a painter from the 18th century, captured volcanic eruptions of Mount Vesuvio, Phlegrean landscapes, and volcanic rocks in his astonishing aquarelles. He was commissioned by the English envoy Sir Hamilton, who was passionate about antiquity and geology. Until then, illustrations and drawings of volcanoes lacked realism and detail. Hence, Fabris’ pieces became not only a work of aesthetic value but also a document that stimulated the imagination of scientists of his time.

Figure 3 Pietro Fabris, Lake Avernus (Lago d'Averno) and environs

Figure 4 Pietro Fabris, Eight pieces of volcanic matter taken from the road leading from the Pisciarelli (spring) to the Solfatara

Using different media—text—Walter Benjamin, together with Asja Lācis, a Latvian theater director and avant-garde figure, wrote an essay in 1925 on the porousness of the city of Naples, referring to the main construction material used—Tuffo Giallo—or Yellow Tuff, a volcanic rock produced in a violent eruption on Campi Flegrei 13,000 years ago. This essay became one of the seminal works in the context of the Critical Theory of the Frankfurt School, comparing societal structures of Naples to the porous volcanic rock that also constituted the main building material in the city.

Perhaps less known but extremely significant to art and geology in Naples is the project Terrae Motus. It was an initiative by the Neapolitan gallery owner Lucio Amelio, created in direct response to the catastrophic 6.9 magnitude Irpinia earthquake in southern Italy on November 23, 1980. The earthquake caused widespread destruction and loss of life. Amelio invited prominent contemporary artists from Italy and around the world to create works responding to the earthquake, transforming the tragedy into a creative and social movement for renewal and solidarity. The collection now belongs to the Royal Palace of Caserta, featuring works by artists such as Joseph Beuys, Gerhard Richter, Keith Haring, Gilbert & George, Robert Mapplethorpe, Anselm Kiefer, and others.

Figure 5 Joseph Beuys - Terremoto in Palazzo, 1981

In contemporary art and film, geology and volcanoes seem to assume new significance. Artists reflect on deep time, the Anthropocene, and colonialism in the relationship between humans and rock. In Rock Bottom Riser, Silver Fern explores the deep and complex relationships between humans, nature, and the cosmos in the volcanic Hawaiian Islands. The film weaves together themes of geology, ethnography, astronomy, post-colonialism, and pop culture. Deborah Stratman, with Last Things, reflects on rock evolution (a concept usually attributed to living organisms) and highlights the illusion of stillness in the landscape. A filmmaker's collective, New Pessimism, living at the foot of Mount Merapi in Indonesia, describes their work as embodying a "new style of pessimism." They critically engage with social, political, technological, and ecological issues both in Indonesia and globally. Finally, Emilija Škarnulytė, a fellow video artist from Lithuania, filmed the sunken city of Baia, reflecting on deep time, archaeology, human trace, past, and possible futures. The ancient Roman town was sunken due to bradyseism and is also the focus of my study. All these great artists and writers informed my knowledge of how art, landscapes, bodies, and rock come together. I am grateful to them; they were my teachers, inspirations, and references.

3. Caldera and its humans

In Naples, the famous volcano is undoubtedly Vesuvius. It earned its reputation due to the tragic destruction of two Roman cities: Pompeii and Ercolano in 79 CE. Today, Mount Vesuvius enjoys a kind of celebrity status, with its memorable cone shape reproduced on almost anything Neapolitan. The last eruption of Mount Vesuvius was in 1944, still within living memory for a few, but continuing to fuel the popular imagination.

Phlegrean Fields, on the other hand, last erupted in 1538, when Monte Nuovo was formed. Its history stretches too far back for any human to remember, but there are records. The eruption of Monte Nuovo buried the entire medieval village of Tripergole (luckily with few casualties). The village was known for its ancient Roman thermal baths and villas. The eruption completely covered the village, destroying all buildings and hot spring pools. The landscape was dramatically altered in just a few days, significantly reshaping nearby Lake Lucrino and the surrounding coastal area.

Figure 6 Monte Nuovo, film still

Today, the Phlegrean Fields is one of the best-observed (in a scientific sense) calderas on Earth, hosting rich references to volcanic and human history. Extending well into the land and the sea, around 15 km in diameter, it features numerous craters, many surrounded by Greek and Roman legends. Here, architecture intertwines with geology and mythology.

Phlegrean Fields currently hosts around half a million people who have made the caldera their home. Living here has its advantages: rich soil produces amazing vines, fruits, and vegetables. Incredible thermal spots, such as Agniano and Stufe di Nerone, remain active and popular, but their construction dates back to the Greek and Roman eras. Living in a volcanic caldera also poses risks. As the Phlegrean earth slowly uplifts (rises) or subsides

(lowers) due to filling or emptying of an underground magma chamber or hydrothermal activity, the land moves. Bradyseism can persist over long periods, sometimes millennia, and is often accompanied by numerous small earthquakes. Bradyseism, along with eruptions, causes the land to be reclaimed from and then covered by water again, making the landscape prone to dramatic changes. Urbanization of the caldera dates back to 530 BC. Greek and Roman citizens built towns around the Gulf of Pozzuoli and, like people today, lived with the repercussions of volcanic activity. Ancient texts describe troubles as urban settlements were claimed by water. Greek and Roman cities were largely constructed from porous yellow tuff and puzzolana (pumice), rock materials generated by violent eruptions of the Phlegrean Fields 40 and 15 thousand years ago. It is common to see an antiseismic construction style used by the Romans called opus reticulatum. In today's bradyseismic crisis, housing safety and domestic construction remain urgent concerns for Civil Protection, alongside evacuation plans and questions about temporary shelter.

The last two bradyseismic episodes are still alive in the memories of people. After the bradyseismic crises in 1968–1972 and 1982–1984, the ground in Pozzuoli rose 1.7 and subsequently 1.8 meters. The community is worried about the possibility of displacement, similar to that experienced by the inhabitants of Rione Terra in Pozzuoli, where the entire quarter was forcefully evacuated within a day in the 1970s. Displacement remains a legitimate fear even today.

Figure 7 Film still, Dancing Landscapes, Volcanic Breath (Rione Terra)

4. Tracing intimacy through movement and collaborations

The scale of the Phlegrean Fields can best be perceived from space, extending the human senses through satellite, plane, or drone images. The supervolcano reveals its enormity as one moves farther away from it in space. So yes, big things always win. As I watch my father exhale his last breath, I remain humble, looking at the landscape of his body. Then I look at the landscape as a body, also breathing, reminding me of the limits of my senses and imagination. Big things always win. This volcano breathes, lifting the ground up and then sinking it into the sea. The volcanic breath is slow, extending tens of thousands of years into the past and future. How do you capture something like that? Perhaps you trace it, like Pietro Fabris did in his aquarelles, or scientists with their advanced machinery and monitoring technology. Through dance and other ephemeral movements, I begin to trace the intimate links between the volcanic landscape and its people.

A short film, *Dancing Landscapes, Volcanic Breath*, is presented at the conference exhibition. It is one of several films produced as part of the ongoing research project, *On the Land that Dances*. The short features the results of choreographic improvisational workshops by local professional and semi-professional dancers in key locations related to the history of bradyseismic activity and current crisis in the Phlegrean Fields. The video features Rione Terra, an ancient quarter of Pozzuoli; Darsena—the fisherman's port; the sunken city of Baia; the Roman marketplace; and various craters. The film aims to bring together the choreography of the camera and the choreographies of bodies into a story of living with the bradyseismic phenomenon in the past, present, and future.

Pattern seeking, as a conceptual prompt, was used while working with local dancer-participants and scientists. The Vesuvian observatory INGV and vulcanologists working there were pivotal in deepening the understanding of the phenomenon in question and the volcanic history of the caldera. Visiting old and modern observatories allowed a better understanding of the evolution of science in vulcanology. Complex monitoring systems and technologies present at the observatory today allow uninterrupted observation of the volcano 24/7, with signals from the depths of the earth being sent directly into the operating halls and devices of people living on the caldera. Movements get registered in the form of a graphic wave.

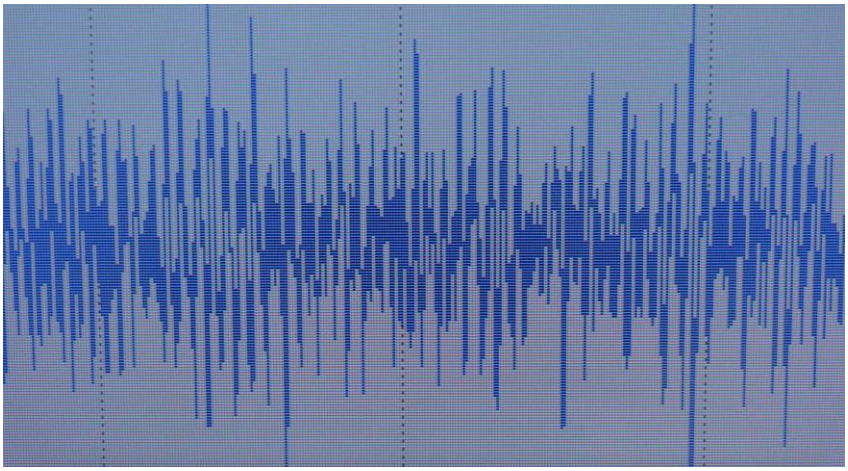

Figure 8 INGV monitor, Vesuvio Observatory, monitoring hall

This prompted me to think about sound in a film and the story of Sibylla Cumana. According to legend, she was a Roman priestess who lived near Lake Avernus. She read fortunes to Roman emperors, intoxicated with smoke—perhaps volcanic gas—as she saw visions and spoke in a cryptic yet powerful way. Virgil, in the *Aeneid*, made her legend immortal, passing into the future the story of Hades and Lake Avernus. Sibyl's only error was forgetting to ask the god Apollo to grant her eternal youth along with immortality. She shrank over centuries, getting smaller until only her voice persisted. Some say it can still be heard today. The volcano has its own voice too, known as a *boato*, or volcanic roar, just before seismic quakes hit the ground. Locals call it the "voice of Sophia," inspired by the active crater, Solfatara. I thought about using voice as the primary instrument in the film. Uran Apak, a voice artist and composer, produced a series of sketches that form the film's soundtrack.

But this is not the only legend that carries volcanic and seismic references into the future. Phlegrean Fields literally means “burning fields,” and it is believed to be one of the locations of the mythical ten-year fight—Titanomachy—between the older generation of gods, the Titans, and the Olympian gods led by Zeus. The conflict began when Zeus, saved from being swallowed by his father Cronus, freed his siblings trapped in Cronus’s belly. Zeus rebelled against the rule of the Titans—sons of the primordial deities Uranus (the Sky) and Gaia (the Earth). The Olympian gods won the fight and punished the Titans, with one of them, Typhon, being forever chained under the island of Ischia (or, as some say, Mount Etna in Sicily). Moving and trying to liberate himself occasionally, he causes the earth to tremble. In this way, bradyseism and volcanism stories of the past transmit into the future, speaking of something colossal, gigantic, and bigger than human. In the film, scale and a gaze beyond human become essential. The drone looking down and around volcanic craters loosely references the legend and the sensory capacity required to perceive the volcanic landscape in full scale.

And then there are textures and layering. The history of the Earth and life once present settle in the sediments of structural layers, creating new rock formations. Deep time, or geological time, is a calendar and history of the Earth that we are just learning to read. Human civilizations also leave a mark on the sediments. With Greek and Roman cities forming layers on top of the volcanic rock in Pozzuoli, our layer comes last. I thought about the fact that film, as a medium, also bears a time reference imprinted in its textures. In the 60s and 70s, during the bradyseismic crisis, film was the common recording medium. During the second bradyseismic crisis in the 80s, VHS came around. And today we capture digital images continuously, from satellites, 360 cameras, and thermographic recording. All these expressions were part of the experimentation process in the research.

And now that I am finishing this paper, I begin to think that small things win, too. I am moving to the end of this research with new connections, encounters, and understandings that have transformed my fear of the volcano into love. Surely, no art object or gesture can compare to a natural phenomenon. But art is rooted in time, and perhaps it can never be outdated, unlike science. It can always be re-contextualised. Contributing to the archive of knowledge and capturing experiences, it is a marker like the fossils on the columns of the Roman marketplace in Pozzuoli. We can move with time, with Earth, and with Titans. Movement is an agent of change. It points to the intimate connection between land and people, plant and soil, children and parents. It all comes together in an ephemeral, everlasting choreography. We can only capture a small part of it, with an imprint of now.

Researching via art-making allows new possibilities for methodological designs and it is interdisciplinary by nature. The project *On the Land that Dances* is weaving together geoscience, art history knowledge, and understanding of the relationships between various bodies - living and non-living - present on the volcanic caldera of the Phlegrean Fields. It embraces aspects of geoscience, archeology, filmmaking, art history, and architecture in creating new narrative forms and knowledge. Bradyseism re-shapes landscapes, but also the potential destiny of the built environments, and communities present on the caldera. It effects human experience within their lived body, the bodies of urban structures, and the caldera. Through a blend of scientific data, choreographic movement, and visual storytelling, the project reveals the fragile but enduring relationship between people and a changing volcanic terrain. This work responds directly to the urgent issues of resilience, adaptation, and creative engagement with volatile environments, speaking to the Strand OA2025 themes around crossing disciplines and imagining new forms of urban life.

Figure 9 Film still, Dancing Landscapes, Volcanic Breath

References:

D'Antonio, M. (2020) Campi Flegrei: A Slow Journey to the Roots of History Between Landscapes, Art, Flavours and Tradition. Naples: Ente Parco Regionale dei Campi Flegrei.
Dipartimento della Protezione Civile (2025) 'Bradyseism in the Phlegraean Fields', Rischi - Protezione Civile. Available at: https://rischi.protezionecivile.gov.it/en/volcanic/volcanoes-italy/phlegraen-fields/bradyseism-phlegraean-fields/ (Accessed: 19 October 2025).
Gelormini, N., director (2023) Art Night: Lucio Amelio. Rai 5, 13 December. Available at: https://www.raiplay.it/video/2023/12/Art-Night-Lucio-Amelio-1794678c-8f23-44d5-a17f-a02590eabb1e.html (Accessed: 19 October 2025).
Hamilton, W. (1776) Campi Phlegraei: Observations on the Volcanos of the Two Sicilies. Naples: Pietro Fabris.
Kilburn, C.R.J. et al. (2023) 'Potential for Rupture before Eruption at Campi Flegrei Caldera in Southern Italy', Communications Earth & Environment, 4(1), p. 123. doi: 10.1038/s43247-023-00842-1.
Mungos, S. (2019) Così il pianeta cambia pelle, 'I Campi Flegrei tra i più pericolosi nel mondo', in Vulcani. Milano: Ulrico Hoepli Editore S.p.A., pp. 153–170.
Oppenheimer, C. (2023) Mountains of Fire: The Menace, Meaning, and Magic of Volcanoes. Chicago: The University of Chicago Press, chap. 'Land of Gods', p. 33.
Peluso, A. (2025) 'Quelli della zona rosa Campi Flegrei', Facebook group. Available at: https://www.facebook.com/groups/quellidellazonarosa (Accessed: 4 October 2025).
Raicaldo, P. (2023) 'Lo sgombero del Rione Terra in Campi Flegrei', in Ragone, O. and Sannino, C. (eds.) Campi Flegrei: Tra fuochi della storia. Milano: La Repubblica, pp. 129–133.
Rapagnani, G. et al. (2025) 'New Findings on the Volcanic Structure of the Campi Flegrei Near Naples', GFZ Helmholtz Centre for Geosciences, 7 July. Available at: https://www.gfz.de/en/press/news/details/neue-erkenntnisse-zur-vulkanischen-struktur-der-phlegraeischen-felder-bei-neapel (Accessed: 19 October 2025).
Sample, I. (2023) 'Parts of Italian volcano stretched nearly to breaking point, study finds', The Guardian, 9 June. Available at: https://www.theguardian.com/world/2023/jun/09/parts-of-italian-volcano-stretched-nearly-to-breaking-point-study-finds (Accessed: 19 October 2025).
Škarnulytė, E. (2021) Sunken Cities. Film, 9 minutes.
Sirpettino, M. (1983) Il bradissismo di Pozzuoli. Scafati: La Nuova Stampa.
Silver Fern (2021) Rock Bottom Riser. Film, 70 minutes.
Walter De Maria (1960) 'On the Importance of Natural Disasters', in Kastner, J. (ed.) Nature. Cambridge, MA: MIT Press and London: Whitechapel Gallery, p. 24.