

Where the stones lie: between historical practices and spatialities.
EUI & LARHRA-CNRS Workshop in Florence (16–17th June 2025)

ABSTRACTS

Caroline Callard, La pulsion extractive au XVI^e siècle : un premier « âge minéral » de la modernité ?

À la Renaissance, le développement des mines et l'engouement humaniste pour les savoirs naturalistes portent un accent nouveau sur la dimension souterraine de l'extraction des ressources, que le Moyen Âge avait semblé vouloir « oublier ». Le XVI^e siècle voit ainsi se former un paradigme extractif nouveau, que traduit l'élaboration de la catégorie de fossilia, réunissant toutes matières extraites du sous-sol : pierres, métaux, minéraux et fossiles.

Cette communication propose de faire de ce paradigme l'un des symptômes d'un premier « âge minéral » de la modernité. En s'appuyant tant sur les textes des naturalistes, que sur l'examen des pratiques et des « mises en arts », ou encore sur les documents officiels encourageant l'extraction des « matières terrestres », on montrera comment les substances minérales sont redéfinies par l'attention accrue portée à leur exploitabilité.

Les « pierres », terme auquel on conservera sa féconde indétermination, deviennent ainsi au XVI^e siècle l'objet d'une tension entre stabilité ontologique et mobilité technique : ce qui fait la pierre, c'est d'abord ce qui la défait — l'extraction, la manipulation, la transformation — au croisement des savoirs savants et vernaculaires, des gestes techniques, et des affordances matérielles.

Adam Mezes, Dangerous Exhalations – Unearthing corpses and ores in an 18th-century Habsburg mining colony

The present paper examines the fascination that 18th-century Habsburg colonial authorities developed with the extraction of two vastly distinct underground items: minerals and human corpses. With the newly conquered province of the Banat of Timisoara, the Habsburgs gained a territory rich in silver, gold, and copper mines. Mining, however, was hindered by various threats that decimated settlers, such as unhealthy environmental conditions, diseases, and blood-sucking revenants. Called *vampir* or *moroi* by the local Orthodox Serbian and Romanian population, these evil corpses had to be exhumed, identified, and executed. Relying on manuscript sources of the provincial administration, and on published chemical and mineralogical treatises, the paper argues that the similarities between the acts of digging up mineral ores and human bodies allowed contemporaries to recognise them as parallel technologies aimed at controlling and understanding the subterranean world.

Kyra Grieco, What is marble? Multiple ontologies of a living stone

For those who extract, transform, die or live off it, Carrara marble is more than 'just' stone. Its specific features and ontological multiplicity exceed the mineral category, generally understood as an icon of immobility, inanimateness, and silence. From the quarries where it is extracted to the laboratories and industrial plants where it is transformed, marble walks, sings, pushes and grows, thereby exhibiting a natural vitality which human arts and crafts permit to maintain. At the same time, the increasing mechanisation and rhythm of marble extraction also lead marble powder to seep, coat, smother or poison its living surroundings, raising new forms of criticism and concern among local inhabitants.

Based on ethnographic fieldwork in the Carrara marble basin, carried out between 2021 and 2023, this paper will explore the multiple ontologies of marble through the social practices of extraction, transformation, and environmental protest. In order to underscore the relational aspect of these ontologies as situated socio-technical interactions with the environment, it will start by illustrating and analysing three relations to marble: those of a quarryman, a stone mason, and an environmentalist.

These different actor's relations to stone in its diverse forms – as mountain, block, and powder – will lead to question the unity of marble as a socio-material category in itself. Finally, a closer look at stone taxonomy, practices and characteristics – with a detour through the world of 'synthetic' marble and robotic sculpture – will allow advancing some considerations on the politics of (re)production of stone as a meaningful category in the context under study.

Alexandre Claude, Discovering Rocks and Shaping Local Natural History: The Case of the Green Corsican Jasper

In 1593, a green gabbro, the diaspro di Corsica, was found in the Corsican mountains, near Orezza. It was one of the many new, and ever-seen, marbles, jaspers, alabaster, and other mixed rocks that were 'discovered' in the second half of the sixteenth century to be extracted and crafted. A report about the Ligurian quarries stated in 1610 that 'in the coming years, many more jaspers are expected to be found in our territory, especially in Corsica, than have been discovered in many past years.' Indeed, these 'discoveries' expanded the diversity of local stones, and actors involved in these discoveries contributed to updating the knowledge about the land, its underground and materials. However, the so-called 'naturalists' seem to keep giving more attention to the mineral substances or the exotic 'discoveries' than to these new rocks.

The green Corsican 'jasper' is the focus of this paper, for it embodies this contrasting relationship between the knowledge raised during the prospection/extraction process – which mainly centres on the rocks' localisation, workability, and visual qualities – and the naturalists' writings – which mainly centres on the rocks' history, formation and growing conditions. The investigation of nature was done in different terms by different groups of actors (stone workers, surveyors, rulers, scholars, collectors) and working on how they differently contributed to the discovery of the material will enable us to grasp how each of the groups envisioned local and observational knowledge, how they shared – or not – information, and what role newness is playing in the early modern understanding of nature.

Dominique Brancher, Itinéraires lithiques de Montaigne

En 1774, Meunier de Querlon dédicace la première édition du Journal de Voyage de Montaigne à Buffon, le « Pline françois » — il estime pourtant le Bordelais peu intéressé par

l'histoire naturelle, comme s'il en excluait le monde minéral. Or c'est bien un chemin de pierre qu'emprunte Montaigne : il va dans la pierre (en s'engouffrant « dans le ventre des Alpes »), sur la pierre (sa curiosité épigraphique), la porte même en lui, puisque les calculs lui laminent les reins. Par l'enchaînement continu du corps qui s'émeut et de l'espace dans lequel il se meut, le *Journal* suggère un continuum lithique entre *naturalia* (pierres des reins, roches et minerais) et *artificialia* (bâtiment, statue, inscription), l'attention au produit fini se reportant souvent sur la qualité de la matière minérale, le processus de fabrication ou les moyens techniques mis en œuvre. La parataxe caractérisant le style du *Journal* mime ce contact direct du corps et du monde, agités de flux, vents et éboulis imprévisibles, et pareillement livrés à la contingence, mais n'en explicite pas les joints logiques ou analogiques. L'esthétique de la surprise qui sous-tend le texte va de pair avec une phénoménologie de la déviance où le regard de Montaigne marque et démarque comme « remarquable » ce qui s'écarte des horizons d'attente. Dans ce « territoire des écarts », le tri opéré par l'écriture cerne dans l'espace ce qu'il appelle « lieu » ou « place », où se déploient les éléments d'une « grammaire topologique » qu'on analysera en combinant outils littéraires et approches anthropologiques de l'espace.

Deux axes principaux guideront notre réflexion : I. La connexion entre pierre et hasard, en tant qu'elle décrit des trajectoires dans l'espace (organique et physique). On lira ici le *Journal* à la lumière de la *Physique* (II, 4-6) et de la distinction aristotélicienne de la fortune τύχη, et du hasard ταυτόματον, qu'illustre l'exemple topique de la chute d'une pierre frappant un passant. Montaigne connaît bien cette notion de ταυτόματον fondamentale à la météorologie et à la biologie, et l'étend à un art du voyage, à une psychologie, à une poétique enfin, influencée par le clinamen du *De natura rerum* de Lucrèce qu'il a annoté. Le *Journal* ne cesse en effet de travailler le motif de la chute (pierres « tombées » *de* ou *dans* ses reins ; chute dans la mélancolie) en jouant avec son cas (de *cadere*, chuter). Cette gravité ou ce poids de la pierre (d'où vient la « gravelle ») qui tire le malade vers le bas, est-elle susceptible d'être contrecarrée par un *art* d'écrire conjurant le principe d'inertie (étymologiquement « sans art ») ? II. La dislocation caractérisant l'approche montaignienne des pierres et sa relocation dans le texte. Selon le paléographe Armando Petrucci, les produits lithiques de la culture graphique sont destinés à être durables, mais finissent également par être le lieu de refontes et de dissimulations, de prolongements dans le temps et de déplacements dans l'espace ; plus encore, ils présentent des pièges et des tromperies, qu'il s'agit de déjouer. Montaigne au contraire s'arrête à ces disjonctions, en fait le cœur même de sa phénoménologie et le vecteur d'une ironie sociale et politique. Il n'est attentif qu'à l'errance de fragments lithiques exilés d'un tout, aux pierres qui ne se trouvent pas où elles devraient être, ou qui surgissent subrepticement ; aux inscriptions qui soulignent l'anonymat, promettent ce qui n'a pas été tenu. Il donne à voir l'inscription illisible, invisible (« rien dedans, nulle pierre de taille, rien d'écrit ») ou raturée, tout ce qui se dérobe et manque, et par là résiste à la prétention épistémique et herméneutique de restituer le passé, de construire une cohérence. Tout parle mais plus rien ne peut être déchiffré, et le *Journal* se fait mémoire paradoxale de ce qui menace pérennité et plénitude.

Claire Conklin Sabel, Conducting to the Knowledge of the Universe and Trade': the Role of Goldsmiths in Materialising the Early Modern Globe

Goldsmiths and jewellers were highly mobile artisans in the early modern world. In addition to working with precious metals and stones, many also prospected for mineral deposits and examined the material environments where they formed. Focusing on Dutch and British East India Company networks that developed over the course of the seventeenth century, this talk will follow goldsmiths' travels to regions rumoured to abound in gold and precious gems across the Indian Ocean. The only known sources of diamonds in the early modern period, mines in

South and Southeast Asia were already well-established nodes in Indian Ocean trade networks, which attracted Europeans to the region as much as its famous spices. Goldsmiths who voyaged to the East Indies visited mines and markets, and conveyed resulting insights from Asian environments and interlocutors to their clients, investors, business partners, and interested scholars (sometimes one and the same). In addition to these itinerant experts, the domestic goldsmiths' trade also facilitated the exchange of information about the places where precious minerals formed. I argue that such information both influenced the questions and methods used to study the nature of the earth in the seventeenth century. Precious stones epitomised the problem of universal processes producing diverse patterns of mineral occurrence, while furnishing novel commercial networks and actors to investigate this phenomenon.

Lola Cindric, Inventing and mastering the craft of stone inlaying: hierarchisation of skill between Florence and Āgra

The craft of stone inlaying – also known as 'pietra dura' – uses the natural hues of stones to make mostly figurative representations. It blossomed mainly in Florence and Āgra, where both productions emanated from powerful rulers. The use of stone inlaid decorations played a significant part in the Medici's and the Mughals' scheme to convey their authority through the patronage of arts. In such strategies, the time-consuming technique of stone inlaying, as well as the semi-precious materials and the skill involved in its making, expressed the wealth and connoisseurship of their patrons. From the 1600s, in order to procure materials for their stone manufacture in Florence, the Medici family sent agents and private merchants to India who then set trade networks across Italy and South Asia. During the 19th century, as the imperial conquest was gaining ground in India, some British actors initiated triangular circulation of persons, information, visuals, artefacts and materials related to stone inlay between the metropole, its colony and Italy. In this context, many authors drew an analogy between the Florentine and the Mughal stone inlays, eventually leading to debates about their respective qualities and the transfer of the former to South Asia. The origin of this craft in South Asia has indeed often been credited to Florentine artificers, alleging the technique had been passed on to their Mughal counterparts during travels to India in the late 1500s/early 1600s. Yet to this day, no concrete evidence has been brought forward to substantiate this assumption, deeply rooted in colonial narrative. The documentary corpus of 19th- and 20th-century English and Italian sources I gathered, combined to a material study of artefacts, converge to demonstrate how a Florentine primacy was built in comparison to other sites of production across Europe and South Asia. The analysis of discourses, visuals and concrete actions shows that Florence's prevalence was argued through two main arguments: the invention and the mastering of this peculiar craft. Recounting the ideological apparatus behind the comparison between Florence and Āgra, my research critically analyses the Eurocentric bias that informed diffusionist theories as well as the supremacist agenda they served. This presentation would focus on that process by which during the 19th century a locally restrained, very specialised know-how becomes the starting point of a comparison between two very distant cities, adding on to a global hierarchy already established. A superlative vocabulary revolving around glory, prestige and pride, led to axiological narratives about the two different productions carried out in Florence and in Āgra. The comparative process of 1) analogy, 2) differentiation and 3) hierarchisation served to assert the superiority of Florence and, by extension, of Europeans – in turn legitimising the 'civilising mission's narrative of the colonial enterprise.

Leonardo Ariel Carrió Cataldi, Lodestones, magnetic compasses and social conflicts in the Sevillian hinterland (mid-16th century)

The magnetic compass has been at the heart of a traditional history of technology underpinning successful narratives of the spread of early modern European empires. As a composite artefact made of different materials, the working of the magnetic compass relied on magnetism as a physical principle and on the magnetic stones (often magnetite), as the material agent behind that principle. My paper aims at reshaping the history of this key artefact from a material, social, and political perspective by taking as a case study the lodestone and the Sevillian hinterland during the mid-sixteenth-century Spanish empire.

Although considered as an ordinary stone if compared to the flourishing market of precious metals and gemstones during the early modern period, lodestone's importance increased due to long-distance voyages. Indeed, sailing across the Atlantic entailed two important challenges. On the one hand, magnetic declination emphasised the problem of the "trustfulness" of the lodestone. On the other, it became crucial either to identify which stone should be used in order to magnetise long enough the compass needle or to find "good" stones in the New World in order to get the instruments ready for the return travel. Operating mainly within an Aristotelian framework that struggled to explain the power of the lodestone to attract things, sailors, pilots, naturalists, cosmographers and political actors got involved in discussions and conflicts about the quality ("virtud"), the shape, the geographical origin and the social provenance of stones that offered some guarantees to navigate across the oceans.

By addressing this problem from the above-mentioned historiographical angles and on the base of a variety of printed and archival sources, my talk seeks to contribute to the themes at the core of the workshop in different ways. First, my paper will pay attention to particular socio-spatial configurations (the Sevillian hinterland) that framed the understanding of the lodestone and redefined its qualities in relation to new geographies of the empire. Secondly, discussion on ordinary or "useful" stones may contribute to better assess the "preciousness" of the others that have been on the focus of specialised literature over the last decades. Lastly, in more general terms, by considering the compass as a "mineral instrument" that blurred the limits between nature and artefacts I intend to raise the question of the writing of the history of technology as the story of a distance between societies and their environment.

Margherita Trento, From Coast to Hinterland: Pearls in Tamil South India, 1532–1750s

Since antiquity, pearl fisheries along the Coromandel Coast have been embedded in a web of social, religious, and political relations. Traditionally dominated by the Paravar diving community, these fisheries became sites of intensified exchange and negotiation from the 15th century onward, with the growing influence of Muslim merchants and, later, Portuguese and Dutch colonial powers. The mass conversion of Paravar fishermen to Christianity in the mid-16th century, under the influence of Jesuit missionaries, marked a strategic realignment within an evolving colonial and religious landscape. Yet, even as new actors and ideologies emerged, older systems of value and exchange surrounding pearls endured.

This paper traces the movements of pearls as they were fished and sold, counted, bought, gifted, or consecrated across coastal and inland Tamil regions, to understand their uses and significations within these old and new networks of power and belief. Particular attention is given to the triangulated relationship among the fisheries, inland political dynasties such as the Nayaks of Madurai and the Sethupathis of Ramnad, and key temples they sponsored – especially Avudaiyar Koil, Tiruchendur, and Rameswaram – which historically held rights to pearl fishing revenues. Drawing on sources including a Tamil confessional, European travel

accounts, copperplate inscriptions, a Śaiva scripture, and a treatise on ‘pearl mathematics,’ the study explores the connections and disjunctions between coastal trade systems and inland ritual and political cultures.

Elisa Andretta, *Lithic Encounters in Sixteenth-Century Rome. Bezoars from the Two Indies between Knowledge and Geopolitics*

In the course of the sixteenth century, interest in the stony concretions found in the stomachs of ruminant animals – known as bezoar – spread across medical, mercantile, and collecting circles, engaging both elites and professional milieus. The missionary, commercial, and diplomatic networks that traversed the city of Rome helped to establish these natural objects, marked by their ambiguous status and growing therapeutic reputation, as a notable presence in the urban landscape. The quantity and quality of bezoars preserved in the many pharmacies and courts – equipped with domestic apothecaries and collection – of the polycentric city of the popes contributed to an acceleration in the processes of knowledge production about these substances. Yet around them also clustered doubts and criticisms, particularly with regard to two perceived issues: the proper use of bezoars in medicine and the risk of their falsification.

Through a cross-examination of treatises, medical opinions, and archival documentation, my paper seeks to shed light – starting from the Roman case – on this process of refining knowledge about bezoars. It explores the actors and spaces involved, as well as the various technical and epistemological operations of which these objects were the focus, and their effects on both therapeutic practices and the internal dynamics of a medical arsenal in constant transformation, shaped by the economic and geopolitical forces of the time.

Miruna Achim, *Radiant idols. A natural history of conversion in sixteenth-century Mexico*

The section on stones in Book 11 of the Florentine Codex* begins with instructions for prospecting for precious stones underground: experienced prospectors wait at sunrise to spot a trail of vapor emerging from the ground. It is the breath of the precious stone, they say, and there they dig to extract them. The section then describes different types of precious substances, beginning with chalchihuitl (roughly translated as jade), the most valued of all Mesoamerican stones, followed by turquoise, opals, rubies, pearls, shells, and so on. This talk aims at reading the section on stones in the Florentine Codex both as a site for making knowledge about the natural world across lapidary, linguistic, and cultural traditions, and as an instrument of evangelisation in mid-sixteenth century Mexico, some decades after the conquest of Tenochtitlan by the Spanish. The two functions of the codex are intimately linked, as the book’s chief architect, Franciscan friar Bernardino de Sahagún suggested.

First, I delve into the pre-Hispanic techniques – cutting, honing, polishing with abrasives – employed for making preciousness, by making matter gleam, glisten, and send forth rays of light. The scarcity of pigment – brought about by the epidemics that cut off trade networks in the 1570s, when the section of stones in the Florentine Codex was being illustrated – led painters to working out ingenious solutions, whereby stones are depicted not with color, but through their material and linguistic associations with other precious matter. Radiance, in other words, is not innate, but made through language, drawing, and technique. Second, I turn to the Florentine Codex – described by Sahagún alternately as a ‘treasure-trove of the Mexican language’, a ‘very rich chamber of things in this land’, and a ‘mine with all manners of metals and precious stones’ – as a compilation of words and images that could be used for the purposes of conversion. For, can one remain indifferent to the fact that the same techniques

used for bringing out radiance in stones could work to prepare Amerindians to come face-to-face with the radiance of Christianity? Finally, close with a series of episodes of extirpation of idolatries, where the hardness of stone stands for the recalcitrance of the idolatrous.

The *Florentine Codex* is the product of decades of conversations, following the conquest of Mexico, between Franciscan friar Bernardino de Sahagún and Nahua interlocutors. Divided into 12 books, running over 2000 pages long and over 2400 images, the *Florentine Codex* is one of the richer records on the forms of social, moral, and economic organisation of the Nahua world at the time of the Spanish conquest, with topics ranging from gods and kings to common folk, from rhetoric to soothsaying, from omens to 'earthly things.'



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