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DOSSIER

TREASURES OF THE SEA: ART BEFORE CRAFT?

Edited by Avinoam Shalem

TESOROS DEL MAR: ¿EL ARTE ANTES DE LA DESTREZA?

Editado por Avinoam Shalem

MOTHER-OF-PEARL INCISED WITH VERSES 51 AND 52 OF SURAT AL-QALAM ('THE PEN') AND WITH MAGICAL NUMBERS. NATIONAL MUSEUM OF HISTORY OF AZERBAIJAN, BAKU. Photo: Avinoam Shalem.

LIVORNO, LAPIS LAZULI, GEOLOGY AND THE TREASURES OF THE SEA IN 1604

LIVORNO, LAPISLÁZULI, GEOLOGÍA Y LOS TESOROS DEL MAR EN 1604

Hannah Baader[1]

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Abstract

The paper discusses a seascape made from hard stones that serves as the top of a table. The piece was commissioned by Ferdiando I de' Medici in 1601 and was made by the stonecutter Cristofano Gaffuri (d. 1626) after a drawing of Jacopo Ligozzi (1547-1627). It shows the harbor of Livorno from a sea-to-shore vantage point and is made from colored stones of various types and forms, among them agate, chalcedony and lapis lazuli. The paper investigates the intrinsic political and territorial claims of Medici power and its dominion of the Tyrrhenian Sea. These claims are emphasized by the representation of towers, cannon and the display of naval power; at the same time, the blue seascape opens up a fluid space that transcends territorial control, by invoking the vastness and dynamism of the sea. It is an uncontrollable space where natural forces are embodied by the large, creamy, blue and golden waves of lapis lazuli. The article analyzes the appreciation of precious stones as part of an early enviromental thinking of early globalization processes and the dynamics of seas and oceans.

Keywords

Maritime History; Natural History; Geology; Materiality of Art; Semiprecious Stone; Ulisse Aldovrandi.

Resumen

Este trabajo analiza un paisaje marítimo realizado con incrustación de piedras en un tablero de mesa. La sorprendente pieza fue encargada por Fernando I de Medici en 1601 y realizada por el cantero Cristofano Gaffuri (1626), siguiendo unos planos de Jacopo Ligozzi (1547-1627). Muestra en perspectiva el puerto de Livorno visto desde el mar y está compuesta por una serie de piedras de color de distintos tipos y formas; entre ellas el ágata, la calcedonia y el lapislázuli. El artículo investiga las

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pretensiones políticas y territoriales intrínsecas de los Medici y su dominio sobre el mar Tirreno. Dichas pretensiones quedan manifiestas en la representación de faros y cañones, y en el despliegue del poder naval. Al mismo tiempo, la marina en tonos azules abre un espacio fluido que transciende el control territorial al evocar la amplitud y el dinamismo del mar. Es un espacio incontrolable en el que las fuerzas naturales quedan enmarcadas por las grandes olas cremosas, azules y doradas del lapislázuli. Se analiza también el aprecio de las piedras como parte de una temprana conciencia sobre el medio ambiente y de una idea de globalización, interpretando el objeto como una especie de cartografía de la tierra, no sólo de Livorno, sino también de aquellos lugares con los que conectaba este puerto.

Palabras clave
Historia marítima; historia natural; geología; materialidad del arte; piedras semipreciosas; Ulisse Aldovrandi.

METHODOLOGIES AND DECEPTIONS

Treasures, whether they come from land or sea, are objects of desire in both an economic and aesthetic sense. If seaborne treasures are mainly products of trade and maritime power, tokens of material culture and empire-building, they are also associated with aesthetics, poetics, imagination and philosophy. As such, they can indicate the potentials and powers of the non-human. But let us start with a quotation from the German Enlightenment thinker Immanuel Kant:

«We have now not only traveled through the land of pure understanding, and carefully inspected each part of it, but we also have surveyed it, and determined the place of each thing in it. This place, however, is an island, and enclosed in unalterable boundaries by nature itself. It is the land of truth (a charming name), surrounded by a broad and stormy ocean. The true seat of illusion, where many a fog bank and rapidly melting icebergs pretend to be new lands and ceaselessly deceiving with empty hopes the voyager looking for new discoveries, entwine him in adventures he can never escape, and yet also never bring to an end».[2]

According to the philosopher from Königsberg, the ocean lures us on through deceitful promises and is the proper seat of illusion for the voyagers of reason. Without remaining in sight of the coastline, which represents instruction from experience, our thought remains without any reliable orientation. I have started with this quotation to show the deep impact of maritime metaphors on Western philosophical thought as well as on political and religious ideas. As often the case, the ocean is used as a metaphor and described as desirable, deceitful, and as a space of ambivalences, divorced from reason and truth.

Gazing from shore to sea or vice versa is classic figure of thought, but constructing or emphasizing the contrast between land and sea has an equally long tradition. This opposition left its traces in the histories of Herodotus, in Talmudic writings, and was incorporated into Christian and Islamic thought.[3] In the twentieth century it can be found in writings of the conservative German political philosopher Carl Schmitt, namely in his notorious *Land und Meer* (1942) where he stresses the contrast between land and sea as a driving force of history.[4] In a similiar vein, but

2. Kant, Immanuel: *Critique of Pure Reason*. Ed. and transl. Paul Guyer and Allen Wood. Cambridge, Cambridge University Press, 1998, 338-339. The original reads: «Wir haben jetzt das Land des reinen Verstandes nicht alleine durchreist, und jeden Teil desselben sorgfältig in Augensschein genommen sondern es auch durchmessen und jedem Ding auf dem selben seine Stelle bestimmt. Dieses Land aber ist eine Insel, und durch die Natur selbst in unveränderliche Grenzen eingeschlossen. Es ist das Land der Wahrheit (ein reizender Name) umgeben von einem weiten und stürmischen Ozeane, dem eigentlichen Sitz des Scheins, wo manche Nebelbank und manches bald wegschmelzende Eis neue Länder lügt und den auf Entdeckungen herumschwärmenden Seefahrer unaufhörlich mit neuen Hoffnungen täuscht, ihn in Abenteuer verflechtet, von denen er niemals ablassen und sie doch niemals zuende bringen kann». (KrVA235-236/B294-95).

3. Hartog, Francois: *The Mirror of Herodotus. The Representation of the Other in the Writing of History*. Berkeley, University of California Press, 1988; Freedmann, Harry: «Sea of Talmud». In: *Encyclopedia Judaica,* 2. ed., volume 18. Detroit, Thomson Gale, 2007, 228; Planhol, Xavier*: L'Islam et la Mer. La Mosquée et le Matelot, VII^e^-XX^e^ Siècle*. Paris, Perrin, 2000, 16-18.

4. Schmitt, Carl: *Land and Sea. A World-historical meditation*. Candor, NY, Telos Press Publishing, 2015 (*Land und Meer. Eine Welthistorische Betrachtung*. Leipzig, P. Reclam jun., 1942); see also: Gross, Raffael: *Carl Schmitt und die Juden. Eine deutsche Rechtslehre.* Frankfurt am Main, Suhrkamp, 2000.

with other political implications, Gilles Deleuze and Felix Guattari asserted that land and sea generate divergent kinds and conceptualizations of space.[5] The authors were interested in models of deterritorialization, and here they distinguish between the «striated space» of land and the «smooth» space of sea. For Deleuze and Guattari, as for Schmitt, oceans and seas are associated with the dialectic of control and freedom. It was particularly in France with the scholarly and literary works of Jules Michelet (1798-1874) and Fernand Braudel (1902-1985) that oceans and seas attained to the status of historical actors.[6] More recently a strong interest in the history of maritime trade, connectivity or connectedness has added another layer to the ongoing discussion and seems to have at least partially bridged the gap created by the methodological division between land and sea.[7]

As art historians concerned with aesthetic and artistic practices, we may ask how artists or craftsmen deal with the sea, especially in the early modern period when the oceans had became the treasure houses of the world as well as a sphere –if not the terrain– of imperial ambitions. How do seas and oceans translate into images and how do they transmit or even generate human fear, power and desire? What are the material and aesthetic implications of this process for craftsmanship and art?

A SEA IN STONE AT THE MUSEO DEGLI UFIZZI, FLORENCE

The object and image of the sea discussed here is a slab that serves as the top of a rather monumental stone table or *piano di tavolo*. It was made by the stonecutter Cristofano Gaffuri (1555?-1626) after a drawing of the miniaturist and painter Jacopo Ligozzi (1547-1627) (fig. 1).[8] Both were artists at the Medici court, but in different positions. Ligozzi was appointed as the court's main artist by the Grand Duke of Tuscany Francesco I and served for over two decades, whereas Gaffuri's reputation is obscured by a longstanding misconception of craftsmanship.[9] The piece manufactured in the so-called *pietre dure* technique was executed between 1601 and 1604; almost three full years were needed for its completion.[10] The final work is

5. Deleuze, Gilles and Guattari, Félix: *A Thousand Plateaus. Capitalism and Schizophrenia*. Transl. Brian Massumi. Minneapolis, University of Minnesota Press, 1987.

6. See Rancière, Jacques: *The Names of History. On the Poetics of Knowledge*. Minneapolis, University of Minnesota Press, 1994.

7. Horden, Peregrine and Purcell, Niklas: *The Corrupting Sea: A Study of Mediterranean History.* Oxford, Blackwell, 2000; Horden, Peregrine: «Mediterranean Connectivity: A Comparative Approach». In: *New Horizons. Mediterranean Research in the 21st Century.* Ed. Mihra Dabag, Dieter Haller, Nikolas Jaspert and Achim Lichtenberger. Paderborn, Ferdinand Schöningh, 2016, 211-224; see also Miller, Peter (Ed.): *The Sea. Thalassography and HistoriogH raphy.* Ann Arbor, The University of Michigan Press, 2013; Baader, Hannah and Wolf, Gerhard (Ed.): *Das Meer, der Tausch und die Grenzen der Repräsentation.* Zürich, Diaphanes, 2010.

8. Urbani, Patrizia: «Repertorio dei Manifattori di Ferdinando I». In: *Ferdinando I de' Medici 1549-1609: Maiestate Tantvm,* ed. Monica Biette and Annamaria Giusti, Livorno, Sillabe, 2009, 144-147, 146.

9. Cecchi, Alessandro, Conigliello, Lucilla, Faietti, Marzia and Acidini Luchinat Christina (Ed.)*: Jacopo Ligozzi. Pittore Universalissimo*. Livorno, Sillabe, 2014; Faietti, Marzia, Nova, Alessandro and Wolf, Gerhard: *Jacopo Ligozzi 2015. Mitteilungen des Kunsthistorischen Instituts in Florenz* 57, 2015; De Luca, Maria Elena and Faietti, Marzia (Ed.): *Jacopo Ligozzi, Altro Apelle.* Firenze, Giunti, 2014.

10. Giusti, Annamaria: *Pietre Dure: The Art of Semiprecious Stonework.* Los Angeles, Getty Publications, 2006.

the result of an extreme investment of labor, observation, diligence and material, an investment due to the complexity of committing images to stone.

The stone slab's measurements are 107 x 94 cm (42 to 37 inches). It is compounded of colored stones of various types and forms, among them red, black and several greens along with white and beige varieties all set against a large sea of blue lapis lazuli (fig.1 a). Taking a closer look, the spectator will perceive a fortified cityscape in the background with a harbor and pier, shipyards, an arsenal, and parts of a fortification. Tiny vertical strokes of black stone indicate the numerous ships that are

FIGURE 1. CRISTOFANO GAFFURI, BASED ON A DRAWING BY JACOPO LIGOZZ. TABLE TOP WITH A VIEW OF THE HARBOUR OF LIVORNO, 1601-1604. PIETRA DURA INLAY, CM 107 X 94. FIRENZE, GALLERIA DEGLI UFFIZI, INV. MOBILI ARTISTICI N. 1505. Photo credits: Gabinetto Fotografico del Polo Museale fiorentino, Florence.

FIGURE 1A. CRISTOFANO GAFFURI, BASED ON A DRAWING BY JACOPO LIGOZZI. DETAIL. Photo: author.

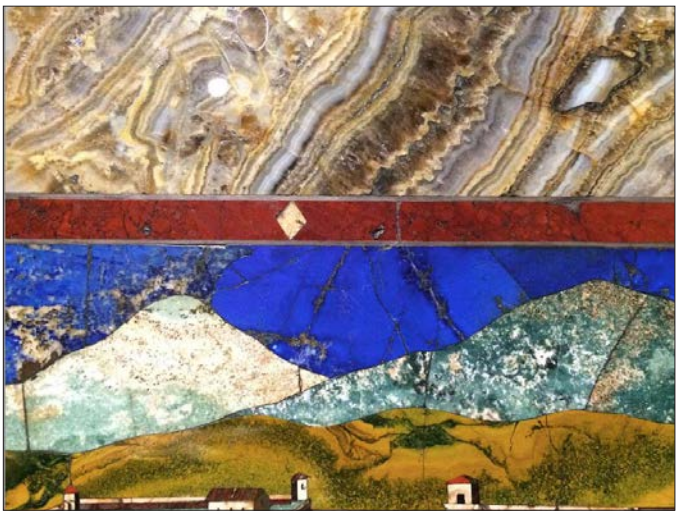

FIGURE 1B. CRISTOFANO GAFFURI, BASED ON A DRAWING BY JACOPO LIGOZZI. DETAIL. Photo: author.

anchored in the harbor just behind the jetty's walls and visible only as a series of masts (fig. 1 a and 1 e).

Discernable on the horizon are mountains colored in light and dark green shades and even in white alluding to the snowy mountaintops of the Apuan Alps (fig. 1a and 1b). However, by far the largest part of the image depicts a blue seascape plied by several ships. Among these vessels is a group of galleys on the right, there are smaller sailing ships in the middle ground along with a larger caravel with billowing white sail to suggest movement and velocity as it traverses the undulating waters of blue stone (fig. 1c). The tableau is framed by two red lines demarcating a larger frame, again made of naturally ornamented stone, in this case agate (fig. 1 and 1b). The sliced pieces of the frame's striped agate are symmetrically arranged, forming diagonal waving lines which apparently arise from the central axis of the slab. The stone's natural veins take up the overall dynamic of the image and its perspectival composition to create a dramatic effect with the rather high vanishing point and lines pointing both outside the picture plane and toward its very center.

The small vessels cross through a maritime space that is marked by a set of lighthouses. Of different forms and sizes, these towers demarcate and territorialize the blue space of the sea. A coat of arms in the upper part of the central tower clearly displays the Medici *palle*. Another indication of that same political power can be seen on the tower to the left which depicts a golden lion, the emblematic animal of Florence. Several seventeenth-century maps and descriptions of the Tuscany coastline and port of Livorno help us to identify the towers and assign them their respective names, such as the Torre del Mazzoco and the Torre del Fanale.[11]

11. Trotta, Giampolo: *L'antico Porto Pisano e la Torre del Marzocco a Livorno*. Livorno, Debatte Ortello srl, 2005; Frati, Piero: *Livorno nelle Antiche Stampe. Piante e vedute della Città dalla fine del secolo XVI alla fine del secolo XIX,* Livorno, Cassa di risparmi di Livorno, 2000.

An even closer look reveals that the group of ships sailing in from the right is a convoy of captured galleys (fig. 1 c). An extremely tiny red flag with a half moon indicates their Ottoman origin. They are being pulled into the Medici harbor by the black vessel at center among the galleys. This craft is adorned with a flag bearing a red cross on white ground. The flag is made from tiny pieces of red and white stone; it represents the heraldic sign of the Order of Santo Stefano, the maritime military order established by the Medici some decades earlier to enhance the military power of Tuscany. The creation of the order has been interpreted as a result of the political vacuum emerging in the Mediterranean in the course of the sixteenth century. Its task was to fight Ottoman and «barbarian» piracy, these actions themselves oscillating between piracy and legitimate defense.[12] In fact a small black rope made of hard stone, its width not exceeding 1 or 2 millimeters, binds the black vessel to the captured Ottoman one it is towing into Medici dominion –a treasure taken from the sea.

FIGURE 1 C. CRISTOFANO GAFFURI, BASED ON A DRAWING BY JACOPO LIGOZZI. DETAIL. Photo: author.

FIGURE 1 D. CRISTOFANO GAFFURI, BASED ON A DRAWING BY JACOPO LIGOZZI. DETAIL. Photo: author.

This triumphal scene is displayed within the vast space of a lapis lazuli sea undulated by large waves and suggesting that we the beholders are situated somewhere above these troubled waters. We look at Livorno from a sea-to-shore vantage point, as if placed above the waters, perhaps from the mast head of a sailing boat.[13] The territorial claims of Medici power and its dominion of the Tyrrhenian Sea are shown even more explicitly

FIGURE 1 E. CRISTOFANO GAFFURI, BASED ON A DRAWING BY JACOPO LIGOZZI. DETAIL. Photo: author.

12. Angiolini, Franco: *I Cavalieri e il Principe. L'ordine di Santo Stefano e la Società Toscana in Età Moderna*. Firenze, Edizioni Firenze, 1996; see also Monga, Luigi (Ed.): *The Journal of Aurelio Scetti: A Florentine Galley Slave at Lepanto (1565-1577)*. Tempe/Arizona, Arizona Center for Medieval and Renaissance, 2004; Greene, Molly: *Catholic Pirates and Greek Merchants. A Maritime History of the Mediterranean*. Princeton, Princeton University Press, 2010.

13. See Gehring, Ulrike and Weibl, Peter (Ed.): *Mapping Spaces. Networks of Knowledge in 17th century Landscape Painting.* München, Hirmer, 2014.

with a number of cannon placed in the central tower. The lighthouse's cannon, particularly the middle ones, are pointing directly back at us, –into the eyes, faces and flesh of the beholders (fig. 1d).

In sum, this seascape in stone is characterized by ambiguities. It shows elements of territorialization and military control, emphasized by the existence of lighthouses, towers, cannon and the display of naval power; at the same time, the blue seascape with its agate frame opens up a space of freedom that transcends territorial control. This fluid space of freedom is evoked by the vastness and dynamism of the sea. It is an uncontrollable space where natural forces are embodied by the large, creamy, blue and golden waves of lapis lazuli (fig. 1e).

LIVORNO

The harbor we gaze upon is that of Livorno situated on the western shores of the Italian peninsula, on the Tyrrhenian Sea, the main port of the Tuscan Archipelago. Livorno (also called Leghorn in English) served for nearly two centuries as what we today would call a «free port». It was a major site of early industrialization in Italy, one of the first Italian cities to have comprehensive electric streetlighting, and for a short period it was an elegant seaside resort attracting an international clientele.[14] From the seventeenth century onward it was home to a large and important Jewish community.[15] The city was also hosting sizeable Armenian and English «nations».[16] In 1764 Livorno witnessed the anonymous publication of *On Crimes and Punishments* by the legal and political theoretician Cesare Beccaria (1738-1794) which had a strong impact on constitutional thought. In 1881, Livorno became home to the naval academy of the recently unified Kingdom of Italy, and in 1921 it saw the founding of the Italian communist party. In the summer of 1943 it was heavily hit by a series of airstrikes, both the harbor and the synagogue suffering extensive damage.

In short, Livorno was and today still is a harbor city with many particularities that derive from its liminality, its pluralistic populace and communities as well as overlapping spaces and pertinent legal regulations. The city has a complex system of access points and closures to the sea, both in a metaphorical and physical sense and a differentiated system of thresholds and controls driven by trade and seafaring.[17]

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14. Cagianelli, Francesca and Matteoni, Dario: *Livorno, La Costruzione di un'immagine. Le Smanie della Villeggiatura*. Cisinello Balsamo – Milano, Silvana Editoriale, 2001.

15. Bregoli, Francesca: *Mediterranean Enlightment. Livornese Jews, Tuscan Culture and Eighteenth-Century Reform*, Stanford, California, Stanford University Press 2014; Trivellato, Francesca: *The Familiarity of Strangers. The Sephardic Diaspora, Livorno and Cross-Cultural Trade in the Early Modern Period*. New Haven etc., Yale University Press, 2009; Fratarelli Fischer, Lucia: *Vivere Fuori dal Ghetto. Ebrei a Livorno e Pisa*.Torini, Silvio Zamorani Editore, 2008.

16. Braudel, Fernand, Romano, Ruggiero: *Navires et Merchandises à l'entrée du Port du Livourne* 1547-1611, Paris 1951; see also Engels, Marie-Christine: *Merchants, Interlopers, Seaman and Corsairy. The Flemish Community in Livorno and Genoa (1615-1635),* Hilversum, Uitgeverij Verloren 1997.

17. Baader, Hannah and Wolf, Gerhard: «Asthetiken der Schwelle. Sieben Aspekte zur Morphologie und Tołpologie von Hafenstädte im Nachantiken Mittelmeerraum». In: *Hafen und Hafenstädte im Östlichen Mittelmeerraum von der Antike bis in Byzantinische Zeit. Neue Entdeckungen und Aktuelle Forschungsansätze/Harbors and Harbor Cities*

From 1601 to 1604 when Ligozzi and Gaffuri worked on the image in stone, Livorno was primarily a fortification and and as a city still in the first decades of its making.[18] It was bought by the Florentines from the Genoese in 1421 and was being used as a Florentine harbor in that same century.[19] Starting in the first half of the sixteenth century under Medici rule, the fortress and settlement of Livorno was constructed mostly *ex novo.* It only obtained the rights of a city in 1606 in a solmn ceremony. Livorno is situated on a small promontory south of Pisa, its placement here a response to the constant siltation of the vast area near the mouth of the Arno river, a geological process that had cut Pisa and Florence off from access to the sea and maritime navigation.

FIGURE 2. JACQUES CALLOT, AFTER A DRAWING BY BERNARDO POCCETTI (FORMERLY ATTRIBUTED TO MATTEO ROSSELLI)THE LIFE OF FERDINAND I DE MEDICI: THE GRAND DUKE ORDERS THE CONSTRUCTION OF THE FORTIFICATION WALLS OF THE LIVORNO HARBOR, 1614/1615. ENGRAVING, 20.3 X 30 CM. LONDON, BRITISH MUSEUM, MUSEUM NUMBER X,4.143. Photo: ©Trustees of the British Museum.

In 1580 Livorno had as few as five hundred inhabitants, but the numbers increased significantly in the following decades, this reinforced by trenchant political decisions and forced initiatives. Taking up his father and brother's older plans and projects, Ferdinando de' Medici (1549-1609) decided to further expand the fortified spaces through massive interventions in the environment, namely by digging canals and other waterways and building a large new fortress together with new city quarters.[20] By enlarging Livorno and its fortifications, Ferdinando I was creating an «island taken from land and sea» –to employ the words of a court panegyrist.[21] An etching from around 1614/15 by Jacques Callot depicts Ferdinando as the creator of Livorno, seated in his armchair and directing construction of the fortification walls through a sole finger pointed at craftsmen, slaves and other laborers (fig.2).

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in the Eastern Mediterranean from Antiquity to the Byzantine Period. Recent Discoveries and Current Approaches. Ed. Sabine Ladtstätter and Felix Pirson. Istanbul, Ege Yayinlari, 2015, 17-44; BAADER, Hannah and WOLF, Gerhard (Ed.): *Littoral and Liminal Spaces. The Early Modern Mediterranean and Beyond,* 56(1), 2014.

18. FRATTARELLI FISCHER, Lucia: «Livorno: Dal Pentagono di Buontalenti alla città di Ferdinando I». In: *Nuovi Studi Livornesi*, 19, 2012, 23-48; MONI, Liciano: *La costruzione di una città portuale*: *Livorno*. Livorno, Belforte e C. Editori, 2002; DANIELSON, Cornelia Joy: *Livorno. A study in 16th Century Town planning in Italia.* New York, Columbia University Press, 1986; *Livorno. Progetto e storia di una città tra 1500 e il 1600*. Exhibition Catalogue, Nistri-Lischi e Pacini Editori Pisa 1980; see also GUARNIERI, Gino: *Da Porto Pisano a Livorno Città attraverso le tappe della storia e della evoluzione geografica*. Pisa, Editrice Giardini, 1967; GUARNIERI, Gino: *Livorno Marinara: Gli Sviluppi Portuali, La funzione economica, la technica Commerciale –Marittima.* Livorno, Benvenuti & Cavaciocchi, 1962; NUDI, Giacinto: *Storia Urbanistica di Livorno. Dalle Origini al Secolo XVI*, Venezia 1951.

19. See MALLET, Michael Edward: *The Florentine Galley in the Fifteenth Century*. Oxford, Clarendon Press, 1967.

20. MATTEONI, Dario: «*La Costruzione della Città Nuova*». In: Livorno**,** *Op. Cit*. 121. GUARRACCINO, Monica: *Le Pietre di Livorno. Transito e lavorazione delle Pietre Dure per la Cappella dei Principi di Firenze nel secolo XVII*. Livorno, Sillabe, 2009.

21. See the inscription on a fresco by Matteo Roselli in the Casino Medici, representing the construction of the fortress of Livorno; see ACIDINI, Christina: *Il Mare di Firenze. Arti e collezioni al tempo dei Medici.* Firenze, Le Lettere, 2012, 83.

The decision taken by his elder brother to build the new harbor along with fortifications was of strategic importance for Tuscany's maritime aspirations. The building project included the completion of a canal 22 kilometers in length, the *canale dei navicelli*. This waterway, still existing today, connected Livorno to Pisa and the Arno river and from there on to Florence. Some two thousand slaves together with five thousand local workers were involved in its construction, and it finally opened in 1603.[22]

In 1601, Livorno was therefore a place of remarkable contradictions. It was a major site of slavery, with large numbers of mostly Turkish captives used for cheap labor and as human propulsion in the duke's galleys;[23] while at the same time, in 1591, Ferdinando had promulgated the so-called «Leggi Livornine», one of the first legal measures in Europe that guaranteed religious freedom to Livorno's inhabitants.[24] The laws included the right to possess all kinds of religious books and writings and were actually addressing Jews and Armenians; only at the nominal level did they also comprise «Moors» and «Turks».[25] Even if people of Muslim faith were in reality excluded from the grand-ducal protection, we at least know of a prayer space for Muslim slaves. Today the bronze figures of captive slaves in Pietro Tacca's 1626 monument to Ferdinando are disturbing reminders of this ambiguous past of alterity, domination and economic exploitation.[26]

In fact Duke Ferdinando, who came to power when he vacated his cardinalate after the death of his brother Francesco I, described Livorno in a document from 1603 as «the key to his dominion» –«Livorno è la chiave dei miei».[27] In 1601 he must have decided to commission a brilliant hard-stone image of this key to his realm while this was still under construction. Hence the final stages of construction of the actual harbor and fortress of Livorno and commissioning of its precious image was undertaken simultaneously; in fact, both the making of the parts of the city of Livorno and its image went hand in hand.

JACOPO LIGOZZI AND ULISSE ALDROVANDI: NATURE, STONES AND GEOLOGY

The petrified image Ferdinando commissioned was based on a drawing by the court painter and miniaturist Jacopo Ligozzi. His original sketch was lost in the process of the translation into hard stone. Both the existence and destruction

22. Previti, Marcella: *Il canale die Navicelli: Un legame d'aqua tra Pisa e Livorno,* Pisa. Ed. ETS, 2006.
23. Guarraccino, Monica, *Op. Cit*. Monga, Luigi (Ed.), *Op. Cit*.
24. Trivellato, Francesca (*op. cit.*), 97-100.
25. Trivellato, Francesca (*op. cit.*); see also Bellatti Ceccoli, Guido: *Tra Toscana e Medioriente. La Storia degli Arabi Cattolici a Livorno. Sec. XVII–XX.* Livorno, Editasca, 2008.
26. Rosen, Mark: «Pietro Tacca's Quattro Mori and the Conditions of Slavery in Early seicento Tuscany». In: *The Art Bulletin* 97(1), 2015, 34-57; Ostrow, Stephen: «Pietro Tacca's Quattro Mori. The Beauty and Identity of the Slaves». In: *Artibus et Historiae* 71(xxxvi), 2015, 145-180.
27. ASF Mediceo del Principato 67, c. 229. II.4.1603. See Frattarelli Fischer 1989, *Op. Cit*., 982. Frattarelli Fischer, Lucia, *Op. Cit*. 2006.

FIGURE 3. JACOPO LIGOZZI, AGAVE AMERICANA (*AGAVE AMERICANA L.*), 1577-1587 CA. BLACK CHALK, INORGANIC AND ORGANIC COLOR PIGMENTS, ON PAPER PARTLY PREPARED WITH LEAD WHITE, 67.5 X 46.5 CM. FLORENCE, GABINETTO DISEGNI E STAMPE DEGLI UFFIZI, FONDO MEDICEO, INV. 1928 O. Photo: Gabinetto Fotografico del Polo Museale fiorentino, Florence

of Ligozzi's drawing are documented in archival records.[28] Jacopo Ligozzi is most commonly known for his meticulous drawings of plants and animals, most of them made for Francesco de' Medici, in total some 150 drawings of *naturalia*, with a focus on plants, fishes and birds. Some are originating from India others from the Americas or «Indies» including such specimens as parrots or agaves (fig. 3).[29]

Ligozzi also painted parts of the decoration for the Tribuna of the Uffizi, now lost, but reportedly portraying all kinds of fish in the room's lower section. We also know of lost images of Elba and Livorno in the grottos of Pratolino, and these may have resembled the drawing he made for the tabletop. In his later career, Ligozzi worked extensively for the ephemeral visual apparatuses of Medici propaganda.[30] His early drawings of *naturalia* were particularly esteemed and used as prototypes both for prints and works in *pietre dure*.[31] It is even very likely that the painter experimented with pigments of both an organic and inorganic kind.[32] Among Ligozzi's painted work is also a strikingly insightful and critical allegory that shows the globe and the continents, especially the Americas, under the pressures of human avarice.

We know that Jacopo Ligozzi was in contact with the Bolognese naturalist Ulisse Aldrovandi (1522-1605) and visited his collections to *naturalia* in Bologna, intensively studying his collection of plants. In fact Ligozzi's drawings served as models for Aldrovandi's publications. As Paula Findlen has argued, the Bolognese philosopher and naturalist was engaged in the dream of a «transformation of knowledge into power».[33] We might connect Ligozzi's drawings to

28. GIUSTI, Annamaria, *Op. Cit*.

29. DE LUCA, Elena, *Op.Cit.* and FAETTI, Marzia CECCHI, Alessandro, CONIGLIELLO, Lucilla, FAIETTI, Marzia and ACIDINI LUCHINAT Christina *Op. Cit*.

30. BIETTA, Monica, GIUSTI, Anna Maria and ACIDINI LUCHINAT, Christina (Eds.): *Ferdinando I de Medici. Maiestate Tantvm.* Livorno, Sillabe, 2009. Ligozzi also executed a chiaroscuro painting of the Harbour of Livorno, for the funeral of Francesco I.

31. GALLORI, Corinna and WOLF, Gerhard: «Tre Serpi, tre Vedoce ed alcune piante. I disegni inimitabili di Jacopo Ligozzi e le loro copie e traduzioni tra i progetti di Ulisse Adrovrandi e le pietre dure». In: *Mitteilungen des Kunsthistorischen Instituts in Florenz*, 57(2), 2015, 213-251.

32. CECCHI, Alessandro, CONIGLIELLO, Lucilla, FAIETTI, Marzia and ACIDINI LUCHINAT, Christina, *Op. Cit*.

33. FINDLEN, Paula*: Possessing Nature. Museums, Science and Collecting and Scientific Culture in Early Modern Italy*. Berkley, Berkley University Press, 1996, 23 and 27.

naturalia with some of the convictions Ulisse Aldrovandi expressed in a letter to Grand Duke Francesco de' Medici in 1577. Here as elsewhere, the scholar makes reference to Ligozzi's work:

«There is no better thing in the world than painting as naturally as possible the things of this world, animals and plantlife, and to acquire knowledge of foreign species born in farflung lands. We can only know them through painting».[34]

Commenting on Ligozzi's paintings, Aldrovandi says that they seem «to be made from nature», or more precisely: «as if born in their natural habitat» («che paiano propriamente nate nel suo sito naturale»).[35] These phrases are the striking testimony of an early enviromental thinking. Adrovandi stresses his conviction that any plant or animal should be seen in its natural habitat and emphazises his wish to have more paintings of *naturalia*, whether these be plants, crustaceans, insects, worms or birds. Moreover, in the same letter, Aldrovandi also mentions stones among the natural things he wishes to be painted:

«For a perfect knowledge of the beauty of the larger parts of nature there should be paintings of all the stones since there are so many different types. It is wonderful to see them».[36]

Aldrovandi sent not only this letter to Florence but several stones whose origins, textures and qualities he describes at length. They came from places like Bohemia, Saxony, Naples and Egypt. It is worth noting that in Aldrovandi's thought, geology and geography are closely linked. The Bolognese scientist is interested in a specific stone as coming from a specific place, a place «on or beneath the surface of the earth» where the stone is «born» or «generated».[37] Stones and fossils were in fact among his major scientific interests, as were geological formations, and he was also fascinated by petrified wood. In fact, with his testament from 1603 he is the first scholar to use the word «geology».[38] Aldrovandi is in many ways making the claim for a new science of the earth with a focus of the study of minerals and stones. He continuously insists on the beauty of nature or the «larger parts of nature» and on their being far more interesting than any historical study of the ancient golden coins of deceased emperors.[39]

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34. «...non trovo al mondo cosa che mi paia che dia più vaghezza all'huomo et utilità che la pittura massime delle cose naturali; perchè per quei individui da un eccellente pittore depinti veniamo in cognitione delle spetie straniere quantunque in lontani paesi nate». (Letter from 27. 9. 1577) In: Tosi, Alessandro: *Ulisse Aldrovandi e la Toscana. Carteggio e testimonianze documentarie*. Firenze, Leo Olschki Editore, 1999,240.

35. Tosi, *Op. Cit*. 240.

36. «E per il perfetto compimento della bellezza della maggior parte della natura non lascerà a dietro tutte le sorte di pietre che per la figura determinata della pittura conoscer si possono». In: Tosi, Alessandro, *Op. Cit*. 240.

37. See, for example, the Aldrovandis letters of 1577, in: Tosi, Alessandro, *Op. Cit*. 235 and 238.

38. Vai, Gian Battista: «Aldrovandi's Will: Introducing the Term ‚Geology' in 1603». In: *Four Centuries of the World Geology. Ulisse Aldrovandi in Bologna 1603*. Ed. Gian Battista Vai and William Cavazza. Bologna, Minerva Edizioni, 2003, 65-112; see also Olmi, Giuseppe: *L'inventario del mondo. Catalogazione della natura e luoghi del sapere nella prima età moderna*, Bologna, il Mulino, 1992; and Fischel, Angela: *Naturerkenntnis und bei Konrad Gessner und Ulisse Aldrovandi*. Berlin, Gebr. Mann 2009.

39. Tosi, Alessandro, *Op. Cit*. : 240-242.

INFRASTRUCTURES: A HARBOR CITY, A CHAPEL AND A SEASCAPE

Some twenty years after Ulisse Aldrovandi wrote the aforementioned letter to Francesco, this latter's brother Ferdinando decided to construct a monumental sepulchral chapel for the bodies of his parents and brother at the western end of the family's church of San Lorenzo.[40] He and his architect envisioned the impressive interior space of the chapel as a structure completely covered by and embellished with all kinds of hard stones. An even richer decoration of precious and semiprecious stones was planned for the altar and ciborium. As in the case of Livorno, Ferdinando was taking up ideas first conceived by his father Cosimo. The master in charge of the construction had also been responsible for the planning of the city of Livorno –the court architect Bernardo Buonacorsi, called Buontalenti (1531-1608).[41] It is indeed revealing to see the two constructions together, both of which were planned and executed in the same decades.

Construction of the chapel –the Cappella dei Principi– started in 1601 coinciding with commissioning of the Livorno seascape. The plan of the chapel and especially its interior was so ambitious that it was never completely finished. What we see today is a later attempt to create a coherent structure out of one, if not of several, unfinished projects[42]. In many respects, however, it still mirrors many elements of the plans developed by Ferdinando and his architect. There were indeed several extremely costly and highly elaborate pieces of stonework executed for the chapel but never incorporated into its decoration. Judging from the still existing pieces as well as from surviving drawings and architectural plans, the chapel was intended to be much more extravagant, variegated and colorful than we see it today. It would have been completely covered with marble of different hues and have included several slabs showing landscapes worked in hard stone. Among the most amazing pieces made for the chapel were the two slabs designed for the main altar. The work on these pieces was most probably begun in 1605, which means shortly after the Livoro seascape was finished. Again, Ligozzi's drawings served as models for the composition. They display a decoration of sardonyx vases, red chalcedony lilies, lapis lazuli flowers, birds, amethyst grapes, agate butterflies and lithic caterpillars –and might give an idea of the both cold and exuberant sensation, the aesthetic sophistication and the material value that was envisaged by the Gran Duke (fig. 4 detail).

Some documents would seem to indicate that the chapel was even made to house the Holy Sepulcher to be transferred from Jerusalem.[43] The overall sum spent on the construction up until 1835 was estimated as half a million scudi. Hardly

40. Vaccari, Vincenzo Vaccaro: «La Cappella dei Principe: Un Sogno Incompiuto». In: *Ferdinando Primo de' Medici. Maiestate Tantvm.* Ed. Monica Bietti and Annamaria Giusti. Livorno, Sillabe, 2009, 126-131; Przyborowski, Claudia: «L'altare di Ferdinando I: Meraviglia Inattuata». In: *Ferdinando Primo de' Medici. Maiestate Tantvm.* Ed. Monica Bietti and Annamaria Giusti. Livorno, Sillabe, 2009, 134-143.

41. Fara, Amelio: *Bernardo Buontalenti*. Milano, Electa, 1995; Fara, Amelio: *Bernardo Buontalenti. L'architettura, la guerra e l'elemento geometrico*. Genova, Sagep Editerice, 1988.

42. Vaccari, Vincenzo *Op. Cit*. Fara, Amelio *Op. Cit*.

43. Bietta, Monica and Giusti, Annamaria, *Op. Cit*.

FIGURE 4. GIOVAN BATTISTA SASSI AND JACOPO FLACH, BASED ON A MODEL BY JACOPO LIGOZZI AND BERNARDINO POCCETTI, TABLE TOP WITH FLOWER VASES, BIRDS, GRAPES AND GRAIN EARS, 1603-1610 CA. PIETRA DURA INLAY, 95 X 184 CM. FLORENCE, GALLERIA PALATINA, INV. ODA 1911 N. 1512, DETAIL. Photo: author.

surprising then that after the death of Ferdinando the structure was compared to the pyramids in its attempt to achieve eternal durability; a comparison that was immediately rejected by the court.[44]

In order to acquire the materials for this monumental enterprise, Ferdinando began importing all kinds of hard and semiprecious stones to the Tuscan capital and its workshops. In 1602 he gave orders that anybody quarrying stone in Tuscany without his permission would be severely punished. At first he imported materials bought in Rome including 350 pieces of porphyry, fragments of damaged Roman statues and several sarcophagi.[45] All these materials were shipped to Florence via Livorno where the Duke established large workshops exclusively for the cutting of stones and marbles. Here Ferdinando's slaves had to saw the statue fragments into thin slices as well as those pieces coming in from quarries.[46] He was constantly trying to access new quarries and suitable stones, and craftsmen or artists like Bernardino Gaffuri would make trips to places like Corsica and Sicily in search of these.[47] As Monica Guarraccino has shown, the city of Livorno became an important

44. ROSSI, Ferdinando: *La Pittura di Pietra.* Firenze, Banca Toscana, 1967.

45. GUARRACCINO, Monica: *Le Pietre di Livorno. Transito e lavorazione delle Pietre Dure per la Cappella dei Principi di Firenze nel secolo XVII*. Livorno, Sillabe, 2009.

46. GUARRACCINO, Monica, *Op. Cit*.

47. ROSSI, *Op. Cit*.

center of stone craftsmanship and the site of much larger material transformations of treasures coming from the sea.[48] After they were cut the smaller pieces travelled the Arno to Florence where the complicated process of transforming them into images in *pietre dure* or *commesso* would begin in the duke's workshops. Among the main masters of this stonecutting art were Gaffuri and his family, but there were many others involved in the different stages of image-making.

The image of Livorno from stone –as realized by Ligozzi and Gaffuri– would therefore have been meaningful for the city's role in the larger enterprises of its ruler. In fact Livorno's fortification and expansion would become the infrastructure for construction of the funerary chapel, both projects planned and executed in the same decades. The meticulous seascape designed by Ligozzi and cut by Gaffuri might be considered a visual and material link between the two projects.

PIETRE DURE: MATERIAL TRANSLATIONS

Ferdinando himself described the technique of *pietre dure* or *commesso* as a singular Florentine invention. Indeed the technique as it was developed and adopted in Florence (and to a certain degree in Prague) is of great complexity.[49] Apart from hard work extreme skill and great sensitivity are also required. It means working both with the material and against it. Pieces of stone must be cut into single forms that fit together, a technique similar but not identical to *intarsia* work. In order to produce the lithic images, the craftsman and artist must work with a drawing or the copy of a drawing that will be cut into smaller units; these single units are then used as patterns to be cut from stone. The making of an image in *pietre dure* thus involves dual vision on the part of the artist and craftsmen. The first step translates an enviroment into a drawing –a setting with shades, forms and colors– whereas the second exploits the stone's visual potential by translating its specific qualities and geological forms into the single elements of the image. Only when this double process is successfully effected can the specific material qualities, veins and colorations of the stones be integrated to constitute the larger lithic picture. In a very conscious way the making of *pietre dure* combines two very different and even contradictory ways of seeing, namely «into» the material by studying the stone with its individual forms and veins while seeing an overall image composed of the different pieces. This double process creates the nearly modernist effects of some of those images made from stone. It could be described as an amalgam of «vibrant» matter and «cold» materiality.[50]

How much its disturbing abstraction can lead to uncanny effects is perhaps best seen in two surviving portraits from the same period. One of them is the portrait created around 1605 of Pope Clement VIII in ceremonial cloth, today kept at the Getty

48. Guarraccino, Monica, *Op. Cit*.
49. Giusti, Anna Maria, 2006, *Op. Cit*.
50. Bennett, Jane: *Vibrant Matter. A Political Ecology of Things*. Durham and London, Duke University Press, 2010.

Museum, and the other one is a slightly earlier portrait of Ferdinando's father Cosimo I (fig. 5). The artists not only meticulously translated the physiognomy of the first Grand Duke of Tuscany into stone but also the white laces of his elegant collar. Besides high craftsmanship and skillful elaboration, these portraits generate a rather disturbing visual effect through their petrified faces of eternal de-humanized flesh.

FIGURE 5. FRANCESCO FERRUCCI, BASED ON A PAINTING BY DOMENICO CRESTI DETTO IL PASSIGNANO, PORTRAIT OF COSIMO I DE' MEDICI, 1598-1609, PIETRA DURA INLAY, 50 X 65 CM. FLORENCE, OPIFICIO DELLE PIETRE DURE. Photo with courtesy of *Ministero dei beni e le attività culturali e del turismo. Museo delle Pietre Dure.*

STONES: AESTHETICS AND COSMOLOGIES

The appreciation of stones, their forms, shapes, veins, their resistant and durable materiality, is indeed part of various aesthetic practices. It is a widespread, as well as transcultural, religious and aesthetic phenomenon. Stones can be appreciated merely for their forms and durable materiality, but they also can demarcate certain spaces as well as lending themselves to ritual practices. In addition, they can be estimeed by reason of their assumed environment-influencing properties. At Jerusalem's Dome of the Rock, that venerated site of three monotheistic religions, the large unworked stone demarcates the spot where Abraham is believed to have sacrificed his son; the rough and unworked rock is enshrined with highly refined incrustations of marbles. Likewise the rare black stone inserted in the eastern corner of the Kaaba in Mecca, plays an important role in the *hajj* ritual of purification and pilgrimage. In the Inca Empire, stones and rocks with specific shapes can serve as markers of religious topographies.[51] In China, unworked stones are appreciated for their forms, as they are thought to represent macrocosmic processes of heaven and earth and are understood as structured concentrations of energy. Here we find not only the so-called scholar stones, collected and praised for their shapes and outer forms, but also cut screens made from marble, the emphasis being on the stone's veins, like the illustrated example dating back to the seventeenth century and now in Minneapolis[52] (fig. 6).

51. DEAN, Carolyn: *A culture of Stone. Inca Perspectives on Rock*, Durham, Duke University Press, 2010.
52. HAY, John: *Kernels of Energy, Bones of the Earth*: *The Rock in Chinese Art.* New York, China House Gallery, China Institute in America, 1985, 84-86.

FIGURE 6. CHINESE SCREEN BY UNKNOWN ARTIST, MING DYNASTY (17TH CENTURY) HUANG-HUA-LI, TIE-LI-MU AND TA-LI MARBLE, 215.27 X 179.07 X 105.41 CM. MINNEAPOLIS INSTITUTE OF ART, GIFT OF R. AND B. DAYTON, 96.120.7A-D. Photo: Public Domain (Minneapolis Institute of Art).

Hard and semiprecious stones had been a strongly cultivated passion of the Medici family ever since the fifteenth century. Lorenzo de' Medici was especially well known for his obsession with lithic objects, collecting stone vases and vessels of Roman or Hellenistic origin such as the Farnese Cup, cut from a single Indian sardonyx, or Sassanian and Fatimid stone vessels as well as contemporary productions made from sardonyx, agate, rock crystal, porphyry, lapis lazuli and amethyst.[53] It seems that Lorenzo not only appreciated the aesthetics of stones and gems but believed in their active or agentive properties and supposed healing and protective «virtues».

As we have seen, the aesthetic fascination with and religious veneration of stones can focus on a sole exemplar. Of equal fascination can be objects made from

53. ACIDINI LUCHINAT, Christina: Treasures of Florence. *The Medici Collection 1400-1700.* Munich, Prestel 1997; see also BAADER, Hannah: «Universen der Kunst, künstliche Paradiese der Universalität. Florenz, seine Sammlungen und Global Art History» I in Anführungszeichen setzen: *Kritische Berichte* 40, 2012, 48-59; FUSCO, Laurie and CORTI, Gino: *Lorenzo de'Medici, Collector of Antiquities: Collector and Antiquarian*. Cambridge, Cambridge University Press, 2006.

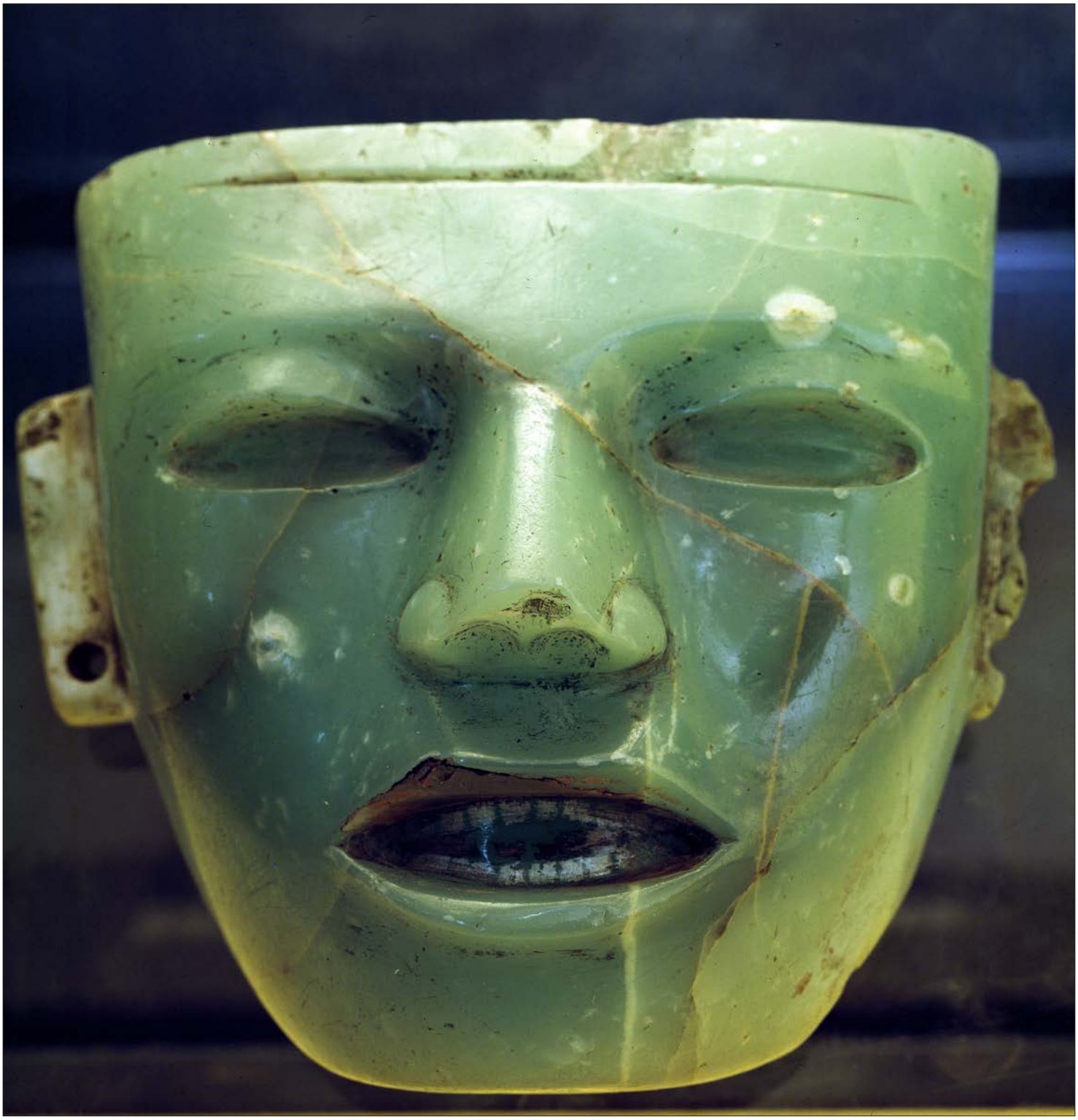

FIGURE 7. MESOAMERICAN MASK, TEOTIHUACAN CULTURE GREEN JADE, WITH INLAID RED LIPS AND WHITE TEETH. FLORENCE, MUSEO DEGLI ARGENTI, COLLEZIONE MEDICEA. Photo: per Concessione del Ministero per i Beni e le Attività Culturali / Raffaello Bencini/Archivi Alinari, Firenze.

different types of cut stone. Creating ornamental decorations and images by combining small pieces of colored stones is a well-established technique for decorating floors, as in the Florence Baptistery or in the Medici's private chapel. Images were made of single-colored pieces of small stones, like the Byzantine micro mosaic icon in the Medici Collections since the early fifteenth century. Both techniques have often been quoted as belonging to the genealogy of the technique of the *commesso* or *pietre dure* and then combined with an antiquarian interest in Roman stone intarsia or *opus tesselatum*. Here, I would also like to broaden our framework and think about possible inspirations and genealogies by including carved-stone objects from the Americas. These imported artworks were on display in the Medici collections. Not only the ducal court and entourage but also artists or craftsmen laboring in their Uffizi Gallery workshops might have taken interest in the lithic aesthetics of these works. Among them were a Mesoamerican Mixtec mask fashioned from turquoise, coral and mother of pearl, today at the Museo Pigorini in Rome, as well as a large mask made from green jade with inlaid red lips and white teeth, today in the Museo degli Argenti (fig. 7). These objects might well have had an impact on the creation of the Florentine *pietre dure*.[54]

CARTOGRAPHY, GEOLOGY AND THE LOCALITY OF STONES

In Western treatises of the time, stones were very often described with mention of their specific provenance. This petrological approach can be seen in Ulisse Aldrovandis short descriptions of particular stones, as too was the case with Agostino del Riccio in his *Istoria delle Pietre* compiled in Florence around 1597. A similar approach can be found in Ludovico Dolce's treatise on stones and gems, their qualities and virtues, published in Venice in 1565 and this a text that del Riccio often used as a reference for his own work.

Agostino del Riccio organizes his description of different stones according to regions or specific places. Among his chapter headings are «Grey Stone from Fiesole», «Mixed Marbles from Siena», «Tavertina from Volterra», «Paragone (black stone) from England», «Granite from Elba», «Stone called Occhiato («with eyes») from Antioch».[55] Of course sometimes these localities offer only very generic geographical information, like in the case of a stone called «oriental red», but in many other accounts the text contains more precise information. As Dolce tells us, every stone is «born» in a specific region and sometimes also differently in different regions: «Every region in the world generates other stones and gems», and »without a specific space of generation no stone could come into being».[56] If stones are part of the geological formation of the earth, collecting them can become a kind of mapping of the earth and a form of geography.

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54. Heikamp, Detlef: *Mexico and the Medici*. Firenze, Ed. Edam, 1972.
55. Del Riccio, Agostino: *Istoria delle Pietre.* Firenze, Ed. Paola Barocchi (S.P.E.S.), 1979.
56. Dolce, Ludovico: *Libri Tre di M. Lodovico Dolce nei quali si tratta delle diverse sorti delle gemme, che produce la natura, della qualità, grandezza, bellezza & virtù loro*. Venezia, Sessa, 1565.

This lithological mapping of the earth and geological formations might reveal a further meaning in both the aforementioned portrait of Cosimo I and the Livorno seascape. In the case of the portrait, except for the black stone in the background made from a piece of *pietra di paragone* imported from Flanders, all the other stones came from Tuscany.[57] The face and body of Ferdinando's father Cosimo, the first grand duke of the new state of Tuscany, is hence formed of materials taken from the territories of his state and dominion. The image of the potentate thus becomes an emblem of «naturalized» political power and rulership.

A broader geological and cartographical reading can also provide an important key for expanding our understanding of the seascape. As we have seen, the harbor of Livorno served as main center for the import and shipment of stones, including those coming from abroad, and so the image emerges as a map of the Medici's maritime global connections and trade networks, be they of stones or other merchandise. This dimension is most apparent with the lapis lazuli, the main «actor» in our image. The blue stone is likely imported from the Badakhshan Province of present-day Afghanistan, more specifically from the Sar-e-Sang mine in the Koksha Valley.[58]

Ferdinando had envisioned Livorno as the location for even more ambitious importations of further types of stones from new «sources». At his order, and under the command of Robert Thornton, in 1608 an expedition of vessels left the harbor of Livorno to voyage to Brazil and up the Amazon River. The explicit hope of this expedition was that it would return to Tuscany laden with gold, feathers and precious stones. Ferdinando stated this intention in a letter where he gives fairly precise instructions as to the aims and tasks of the expedition.[59] But when the expedition made port again in Livorno a year later, it did not meet the expectations. Moreover, Ferdinado was already dead, and so the enterprise remained without larger consequences for the Tuscan state. It could also be that in the year of his death, Ferdinando sent an expedition to the Mughal court in Delhi with the declared purpose of obtaining access to precious stones.[60] In any case an expedition from Florence must have reached Delhi between 1590 and 1640 and bringing with it the *pietre dure* image of a singing Orpheus, for the emperor Shah Jahan incorporated the work into the throne hall's marble screen, or *jharoka*, in the Red Fort in Delhi (fig. 8 and 9).[61]

57. Giusti, Annamaria: *Museum of Opificio delle Pietre Dure. The Official Guide.* Livorno, Sillabe, 2007.

58. Firenze Musei: *Lapislazzuli. Magia del Blu. Exhibition Catalogue.* Livorno, Sillabe, 2015.

59. Rossi, Ferdinando: *La Pittura di Pietra.* Firenze, Banca Toscana, 1967.

60. Zobi, Antonio: *Notizie Storiche riguardanti l'Imperiale e Reale Stabilmento dei lavori di Commesso in pietre dure di Firenze*. Firenze, Lemonnier, 1841; Zobi, Antonio*: Notizie storiche sull'origine e progressi dei lavori di commesso in pietre dure che si eseguiscono nel I. e R. Stabilmento di Firenze*. Firenze, Stamp. Granducale, 1853.

61. Koch, Ebba: *Shah Jahan und Orpheus. The Pietre dure decoration and the programme of the Throne in the Hall of Public Audiences at the Red Fort in Delhi*. Graz, Akademische Verlagsanstalt, 1988; Koch, Ebba: «Le Pietre dure ed altre affinità artistiche Tra la Corte del Moghul e die Medici». In: *Lo Specchio del Principe. Mecennatissmi Paralleli*. Ed. Dalu Jones. Roma, Edizioni dell'Elefante, 1991, 17-36.

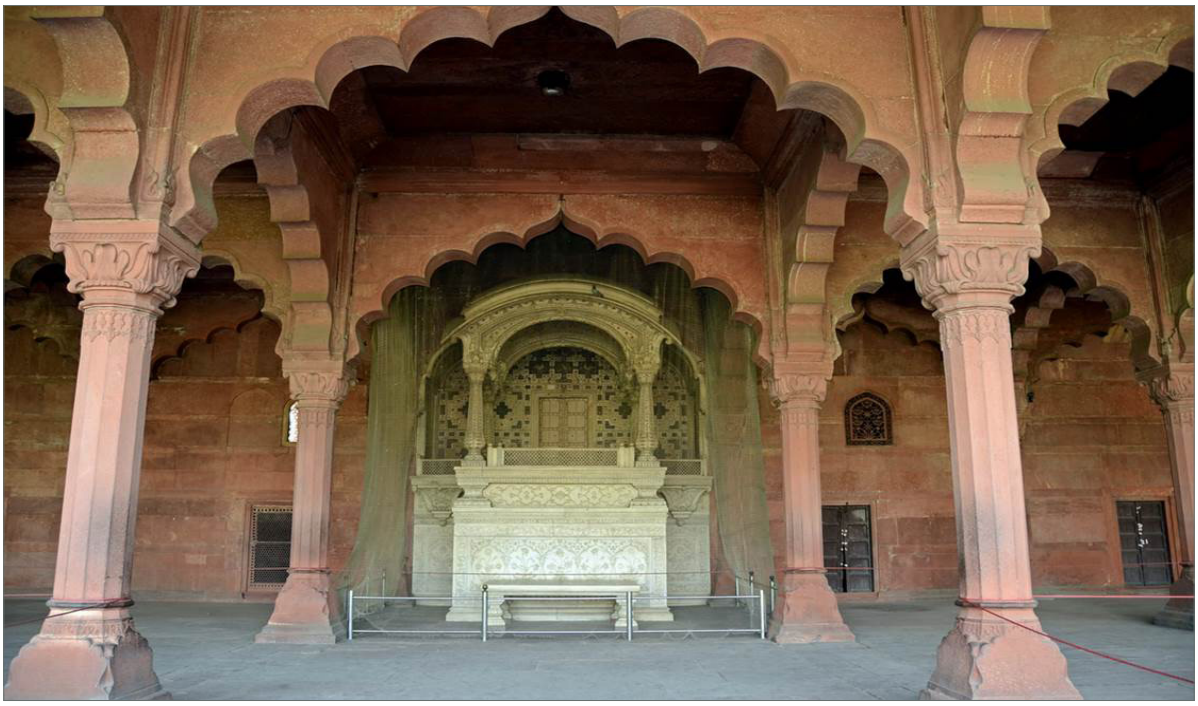

FIGURA 8. DELHI, RED FORT, SHAH JAHAN'S THRONE – *JHAROKA*, 1638-1648. Photo: author.

FIGURE 9. DELHI, RED FORT, BACK WALL OF THE NICHE BEHIND SHAH JAHAN'S THRONE – *JHAROKA*, 1638-1648. PIETRA DURA INLAY, ORPHEUS PANEL 22.7 X 14.5 CM. Photo: © Ebba Koch.

SEAS, STONE AND WATER

We know that Ferdinando liked maps and enjoyed looking at them in his apartments and in the course of his daily duties. We can also imagine him looking at

the stone image of Livorno, the site of his larger commercial and global ambitions and the place that in new ways would connect Tuscany with the Mediterranean and beyond. It was a miniaturized dream of Medici maritime dominion, trade and connectedness, translated into a cool and durable but still vibrant image in stone. It can be read as a map unfolded on a table with the beholder looking on it from above and in a position of control. The work, created over a period of three years, unfolds beneath the gaze of a ruler who would see a petrified image of his harbor, «the key to his dominion», which would bring the treasures of the sea to Tuscany. Ligozzi and Gaffuri's work can therefore be read as the petrified early-modern thalassic dream, that dream of a seaborne world of mobility and trade which can somehow be fixed in place. Translating the harbor and seascape of Livorno into stone might have indeed been part of a larger translation, namely the attempt, or desire, to stabilize the changing world and petrify it into lasting translucent forms.

In the case of a seascape, however, transforming water into stone or vice versa has further implications. Not only does Dolce repeatedly tell us that nature generates the form taken by stones in exactly the same way as an artist does his art, but stones themselves were thought to be made of fire and water.[62] This concept of the

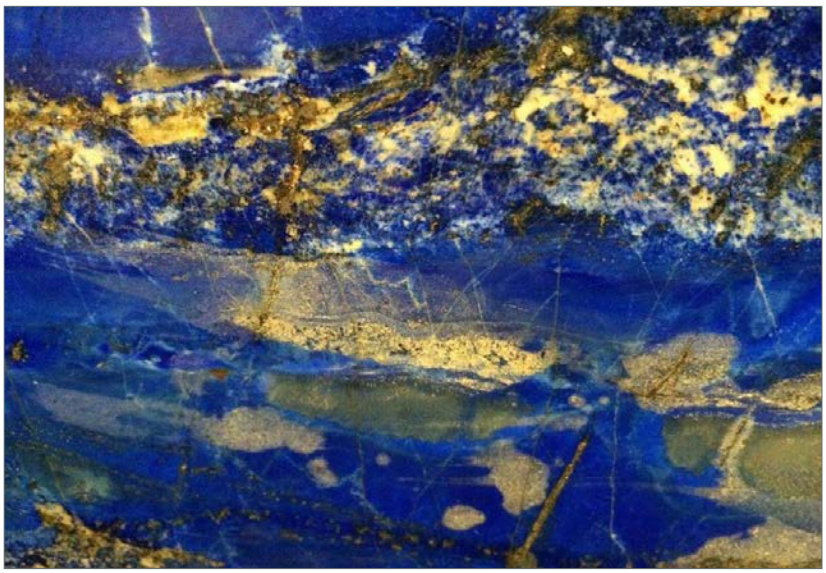

FIGURE 10. CRISTOFANO GAFFURI, BASED ON A DRAWING BY JACOPO LIGOZZI. TABLE TOP WITH A VIEW OF THE HARBOR OF LIVORNO, 1601-1604. PIETRA DURA INLAY, 107 X 94 CM. FLORENCE, GALLERIA DEGLI UFFIZI, INV. MOBILI ARTISTICI N. 1505. DETAIL OF IMAGE NR. 1. Photo: author.

geological formation of stones was reiterated by almost all early-modern authors as well as their precursors. According to this tradition, stones are liquid in nature and water is part of their «mineral virtue». This widely accepted view was used for the description of larger stone surfaces, like in Saint Mark's Basilica in Venice, where

62. BARRY, Fabio: «Walking on Water. Cosmic Floors in Antiquity and the Middle Ages». In: *Art Bulletin*, 89, 2007, 627-656.

the enormous marble slabs before the main altar were called «The Sea («il Mare») and thus evoking the vibrancy of their surface, if not cosmological .[63]

In the case of the Livorno seascape the lighter and darker parts of the lapis lazuli and the spread particles of the shimmering pyrite are translated into large waves and foam (fig. 10 detail). The vibrant materiality of the stone creates –and at the same time destroys– the illusion of the Livorno seascape and therefore plays both with and against mimesis, working with and against materiality, in its investigation of the stone's potential. It is both the intelligence and skills of artists and craftsmen which made possible this probing of the material and the dynamics of the earth and the perceiving mind. And it is to this extent that we might compare the lapis lazuli seascape with Titian's revolutionary woodcut of *The Crossing of the Red Sea* where the single strokes in the woodblock evoke the disturbing power of the sea –and of art as an aesthetic practice of both mind and material (fig. 11).

FIGURE 11. BERNARDINO BENALIO AND DOMENICO DALE GRECHE, AFTER A DRAWING BY TITIAN, *THE CROSSING OF THE RED SEA* WITH PHARAOH'S ARMY BEING SUBMERGED, 1514-1515 WOODCUT PRINTED FROM TWELVE BLOCKS ON TWELVE SHEETS, 121 X 221 CM. LONDON, BRITISH MUSEUM, MUSEUM NUMBER 1980,U.9.
Photo: ©Trustees of the British Museum.

63. BARRY, Fabio, *Op. Cit*.

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