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# Deep Blue Geomediations: Following Lapis Lazuli in Three Ecological Assemblages

*Patricia Pisters*

Stones, like us, stand at the intersection of countless lines crossing one another and receding to infinity, at the center of a field of forces too unpredictable to be measured... (Yourcenar xix)

## **Mining the Blue Mountain: Matter-Flow of the Machinic Phylum**

On my desk, next to my laptop, a small piece of lapis lazuli. My eye is captured by the intense blue from its most important component, the mineral lazurite. The stone also contains white calcite specks and some metallic glistening from its pyrite elements. Looking at the play of colors, feeling the weight and the surface of the rocky material, I am reminded of Marguerite Yourcenar's words at the end of her introduction to Caillois's *The Writing of Stones* when she invokes stones as force fields "at the intersection of countless lines crossing one another" (Yourcenar xix). And I wonder, what are the force fields and intersecting lines "receding to infinity" contained in this small piece of earthly material? How has this ultramarine blue become "the most perfect of all colors" (Cennini 36), as described by Cennini in his famous *The Craftman's Handbook* of the late Middle Ages? How has lapis lazuli traveled in the world, as an aesthetic object, as a perfect pigment for the most beautiful blue, but also been implicated in economic and political forces? What kind of "geomediations" traverse this deep blue stone? And if all these forces are too unpredictable to measure, as Yourcenar contended, is there another way to uncover some of the complex entanglements of the material and immaterial dimensions of this particular aspect of the lithosphere? A good starting place might be the Blue Mountain (Koh-e-Laguard) of the Sar-e-Sang mines in East Afghanistan where since 6,000 BC the best quality lapis lazuli has been extracted from the earth.

In 2009, artist Pieter Paul Pothoven traveled to Afghanistan in search for the Sar-e-Sang mines.<sup>1</sup> Intrigued by the extreme stability of the rocky

material in an extremely unstable environment (Afghanistan is a contested and mediated area in geopolitics, as will be discussed below), Pothoven started his investigations by traversing the inhospitable landscape of the Hindu Kush Mountains in Badakhshan, reaching the mines after an arduous journey. He was able to buy some of the stones from the local miners and, since then, has made a series of ongoing art works that invoke both the material and spiritual qualities of the stone and question the geophysical and political dimensions of art history and contemporary media culture. These works will be my guides in uncovering some of the hidden dimensions of the blue stone. Other guidelines are offered by new materialist philosophy that acknowledges the profound connections between the human and nonhuman, inspired by the work of Deleuze and Guattari.<sup>2</sup>

In *A Thousand Plateaus*, Deleuze and Guattari discuss mining in connection to metallurgy, miners and smiths being the first metallurgists that know how to follow and transform the forces of matter (404-415). While their remarks are mostly related to metal, Deleuze and Guattari indicate that also wood, clay, stones and minerals can be taken into account when they argue that metallurgy is not an exact science that discovers universal stable laws, since metallurgy is inseparable from several lines of variation: according to different qualities of the material itself (quality of the ore, varieties of the stones) and according to different processes of transformation (washing, polishing, grinding, mixing with wax and gum, heating, etc.). These variables make the materials both of singular order (each piece of rock is different), and according to its transformation processes, expressive of different levels of affective qualities. Deleuze and Guattari introduce the concept of a “machinic phylum,” which they define as “materiality, natural or artificial, and both simultaneously; it is matter in movement, in flux, in variation, matter as a conveyor of singularities and traits of expression” (409). Because of its constant flow and variation, the machinic phylum is very hard to measure indeed. Therefore, Deleuze and Guattari argue that the “matter-flow can only be *followed*” (409).<sup>3</sup>

So let's follow lapis lazuli, starting by asking how this rocky material is a machinic phylum, matter in movement, both singular and expressive? One of the first works that Pothoven made after his journey to the Blue Mountain mining area demonstrates the intrinsic variety of lapis lazuli. Scientific mineralogy classifies lapis lazuli based on specific elements such as lazurite, calcite, pyrite, diopside, sodalite and other elements that compose the stone (Schmidt et al.; Bicchieri et al.). However, talking to the local mine workers, Pothoven discovered that they categorize the stone just by viewing its color and structure, and thus distinguish thirteen varieties coming from the Koh-e-Laguard alone. In a series of five photographs, entitled *Laguard*, Pothoven reveals five of these varieties of

lapis lazuli, displaying the singularity of each rocky matter-flow while also indicating a way of categorizing by viewing stones.



Fig. 1a *Laguard, Sample 3/6, Zabzak, Adit #5*, Pieter Paul Pothoven, framed c-print, 2010. Courtesy of the artist and Dürst Britt & Mayhew Gallery, The Hague, NL

Fig. 1b *Laguard*, Pieter Paul Pothoven, series of 5 framed c-prints. Exhibition overview, *The Smooth and the Striated*, Nieuw Dakota, Amsterdam, NL, 2010



Each of these singular stones has its own expressive qualities that furthermore depend on the different operations that transform its properties. In a following section, I will return more explicitly to the transformative operations to turn these stones into aesthetics objects and images with different affective qualities.

### Three Ecological Assemblages

Here I first need to introduce another concept without which the machinic phylum cannot be grasped. Each matter-flow is only realized in particular “assemblages” that select, organize and stratify the materials (Deleuze and Guattari 406). An assemblage is a construction that has many human and nonhuman agents. In *Vibrant Matter*, Jane Bennett gives

the example of the electric power grid as an assemblage, which includes “humans (and their social, legal, linguistic) constructions” and “powerful nonhumans: electrons, trees, wind, fire, electromagnetic fields.” She explains further that because “each member-actant maintains an energetic pulse slightly ‘off’ from that of the assemblage, an assemblage is never a solid block but an open-ended collective, a ‘non-totalizing sum’” (24). Because of the open-ended character of the assemblage and the variations of matter in movement, it is useful to differentiate between different levels of assemblages, which I suggest to investigate along the lines of three ecologies (material, socio-political, mental) that fundamentally interconnect. So if I will treat these ecologies separately in the following, it should be kept in mind that this is only an artificial and temporary separation for the sake of explanation and shifting focal points or lenses. So, what are these three ecologies and why would it be useful to think in those terms?

In “The Three Ecologies” Félix Guattari proposes to “apprehend the world through the interchangeable lenses of the three ecologies” (134), as an ecological approach that does justice to the complexities modern society. At the end of the 1980s, when the article was written, Guattari was unsatisfied with the explanation of the modern world by postmodern discourse claiming the end of ideologies and other grand narratives (Lyotard). He reclaims an integral perspective that needs to address things according to a different logic, a logic of assemblages of human and nonhuman actants, a logic of processes and of intensive, expressive ensembles, because it “is quite simply wrong to regard action on the psyche, the socius, and the environment as separate” (134). Guattari is, in particular, wary of the role of media such as television and the emerging electronic media to propose simplified versions of the world in slogans, advertisements and easy consumption (the PC was introduced in the late 1980s, but in France “minitel” had been around as a precursor since 1982). Another force that plays on all three ecologies is what Guattari calls Integrated World Capitalism, or, Global Capitalism. Clearly Guattari’s text was quite visionary, indicating the influence of (social) media; planetary computation in globalized capitalism plays an important role in understanding the ways in which the world operates twenty-five years later.

When he discusses *mental ecologies*, Guattari emphasizes the need for a Batesonian “ecology of ideas” that surpasses individual psychology. Rather, we have to think of pre-personal systems of minds, affects or collective mentalities that operate on the mind (ranging from myths to scientific models). But most importantly, mental ecology demands “that we face up to the logic of ambivalence of desire” (141), wherever it is found (in individuals, in societies), always as a product of a complex subjective assemblage but not intrinsically inscribed in human nature

(142). Guattari talks about the mental ecology of fascism, referring to Le Pen in France (indicating that the mental can be collective as well as individual). In the realm of *social ecology*, Guattari raises the question of immigrants, the unemployed, the homeless and other marginalized. Here he already refers to Donald Trump, who in the 1980s was taking over entire districts of New York or Atlantic City, where he “raises rents, and squeezes out tens of thousands of poor families. Those who Trump condemns to homelessness are the social equivalent of the dead fish of environmental ecology” (135). Also, the alienating effects of mass media are mentioned by Guattari, who actually expresses the hope for a post-media age that knows a multitude of “subject-groups” (144).<sup>4</sup> Regarding *environmental ecologies*, Guattari emphasizes not only the need to defend nature (which always already has been an assemblage of nature and culture), but yet again, an integral approach that includes an ethics “appropriate to the general destiny of humanity” and storytelling that go beyond abstract information, and “engender universes of references and existential territories that include mental and social ecologies” (147).

In *Ecologies of the Moving Image*, Adrian Ivakhiv (33-48) conceives cinema as a process along these tri-ecological assemblages that partly overlap. He describes the environmental ecology in terms of material processes involved in cinema, including light-encoded chemicals, digital discs (full of metals and other resources, including waste), factories, the entire production process including studios, equipment, sets and people, but also distribution networks, movie theaters, television screens, computers and hand-held devices to play films. Cinema is also a social process that unfolds between humans, both in the making of a film as well as in its reception. And discussing cinema’s mental ecology, Ivakhiv includes the perceptual realm as well as the realm of ideas, meanings and consciousness filtering into everyday life. Along these lines of the three ecologies, it is also possible to approach lapis lazuli as a vibrant matter in its entangled assemblages.

### **Material Ecologies: Mining and Assemblages of Pigments**

Take the environmental and material processes embodied in lapis lazuli. Let’s first return to the Sar-e-Sang mines and the harsh conditions of the extracting of the stones themselves. The quality of the lapis lazuli ranges in color from “almost violet blue, through the royal blue of the gem quality to light blue, a turquoise and finally fewer pieces of brilliant green” (Herrmann 24). Mining is usually undertaken during the three summer months, rain, wind, snow and other icy conditions making the way up to the mountain extremely dangerous in winter. Except for the local mine workers, for centuries not many travelers have managed to reach

the actual mines, high up in the mountains of Afghanistan. And yet its stones have traveled the world to be found in ancient Egypt on the death mask of Tutankhamun; in jewelry and statues in Egypt, Mesopotamia and China; on ceramics and illuminations in Iran and Iraq; on Medieval murals in Italy; and in Renaissance paintings in The Netherlands (Colomban; Gaetani et al.; Chowdry). When Pothoven in 2009 finally reached the entrance of the main mine, all he could see was the darkness of the emptied grotto that he photographed. The resulting images, *In Absentia*, show a dark rocky void that are “the negative of the blue stone,” indicator of its absence in the Blue Mountain, and its dispersed presence over the world in artifacts and at works (Pothoven).<sup>5</sup> It is also a reminder of the condition of the mine workers, who risk their lives in their daily journey up the mountain to go into the belly of the mountain to blast, drill or cut out its blue matter with very simple tools and in unsafe conditions. Moreover, the photographs are framed in a black frame, the size of an average flat-screen television set, and from a little distance, *In Absentia* seems a television screen. Here one cannot avoid making connections to another layer of absence, namely in contemporary media culture where images of Western military operations have been dominating our screens, hiding the absence of a deeper understanding of the local situation. But here I am already moving towards the social-political and media ecology that I will touch upon in the following sections.



Fig. 2. *In Absentia*, Main Mine, Adit #4, Pieter Paul Pothoven, framed c-print, 2010. Photography: Gert Jan van Rooij. Courtesy of the artist and Dürst Britt & Mayhew Gallery, The Hague, NL

With respect to the material ecology, I want to zoom in on another aspect, which is the materiality of the stone itself, used as a pigment. Before 1830, the only way to obtain ultramarine blue pigment was from lapis lazuli that had the Sar-e-Sang mines as its main source (Herrmann).<sup>6</sup> From the fifteenth century onwards, the pigment is used in Dutch and Italian paintings but many painters made their own paint using, as James Elkins describes in *What Painting Is*, rather outlandish methods, very much like the alchemical methods of their day. Elkins describes the extraction of lapis lazuli as the pastille process: “they pulverized ore samples in a bag, mixed them with melted wax, plant resins, and various oils, and then kneaded the bag under a solution of lye to coax out the blue particles” (21). So here we clearly see how the machinic phylum, the matter-flow, changes in different processes of transformation. The resulting pigments would contain the geological particles, and their irregular crystallization and density would affect its particular color density, light absorption and reflection and its affective qualities. Each painter would have their own way of transforming rocks into their own particular hue with its own qualities (Albus). The lush velvety ultramarine blue of the Virgin Mary’s robe in Jan Van Eyck’s *Annunciation* (c. 1434), is very different from the celestial blue in Michelangelo’s *The Last Judgment* (1536-41), which differs in turn from the blue hues mixed with other pigments in Vermeer’s *The Girl with a Pearl Earring* (1665) and *A Young Woman Seated at a Virginal* (1670-1672). And these are just a few examples of the expressive qualities of the lazuli pigments from a rich tradition in art history.



Fig. 3 *Still Life with a Golden Goblet* (Pieter de Ring, c. 1650). Collection Rijksmuseum Amsterdam.

Because of its difficult geological mining conditions and its long traveling distances, natural ultramarine (which means “beyond the sea”) was as expensive as gold. Often it was used in combination with gold, especially in representations of Virgin Mary as in *The Wilton Diptych* (c. 1395; see Patoureau). Sometimes the color also appeared in Dutch Still Lives of the Golden Age. Pieter de Ring’s *Still Life with Golden Goblet* (c. 1650) is a telling example. Shiny green grapes, citrus fruit, a lobster and oysters, a golden goblet and other luxurious elements are displayed on a thick blue rug, painted in a



rich, dark ultramarine. The costs of its colored pigment are as important as its representation of wealth. And so here we see yet another expressive quality of the stone: its representation in a luxurious thick rug matches the wealth of the pigment itself. It was this painting and its material and immaterial expressive qualities that inspired Pothoven to his own ongoing artistic investigations into ultramarine.

In *Lapis Lazuli from Serr-i-Sang* (2012-2015) Pothoven collaborated with the department of Earth and Life Sciences of the Free University (VU, Amsterdam) to operate his own transformative processes on the material, cutting pieces of a large stone into ultra-thin slices, mounting them in between two thin glass plates and turning them into slides. The slides, projected on white walls, transport the Blue Mountain rock from Afghanistan literally into a Western art context, immersing the viewer not only in a wealth of blue light, highlighting the rocky surfaces of the actual stone, displaying the singularity of each slide. Moreover, this installation brings together the material of the stone itself, and its representation projected on the wall, as a modern variation of Pieter de Ring's double articulation of the materiality of the expensive pigment itself and its wealthy representation in the still life. We could say that *Lapis Lazuli from Serr-i-Sang* is a lithic still life, or rather, a lithic vibrant matter that draws attention to its own force and agency as colorist of our world pictures. The slides are projected in Leica slide-projectors, which is another significant element in this installation that I will discuss momentarily.



Fig. 4 *Lapis Lazuli from Serr-i-Sang* (Pieter Paul Pothoven, 2012-2015). Installation view, Punt WG, Amsterdam 2015. Photography: Gert Jan van Rooij. Courtesy of Dürst Britt & Mayhew Gallery and the artist.

Natural ultramarine pigment of lapis lazuli was very difficult to produce artificially. The first artificial blue was invented c. 1704 by German color-maker Diesbach, called Prussian blue, but which was a very different blue than ultramarine from lapis lazuli. Think for instance of Picasso, who used a predominantly Prussian blue in his Blue Period (1901-1904). Only after a competition, initiated by the French society for industrial improvement in 1824, was a synthetic ultramarine invented, named French ultramarine, developed by chemist Guimet. William Turner was the first painter accredited with the use of synthetic ultramarine in 1834 and from then on natural ultramarine was used less and less (Mangla). Thinking of synthetic ultramarine, it is of course hard to escape Yves Klein, who in the 1950s, with the help of a chemist, invented his own industrial ultramarine, which he patented as International Klein Blue (IKB). For Klein, blue has no dimensions, like the blue sky of Nice that inspired him in his youth to search for this color as a painter and artist (Banai).<sup>7</sup> And so for Klein, ultramarine is “vaporious, floating, timeless,” matching his desire to “leap into the void,” as staged in the photograph *Le Saut dans le Vide* (1960) where the painter staged himself jumping of a roof, throwing himself into the void. As Michael Taussig suggests in *What Color is the Sacred?* this voiding effect of the color might be related to the fact that under the microscope, natural and synthetic varieties of ultramarine look very different: “While the synthetic pigment has homogeneous, round crystals that produce a consistent all-the-same blue surface, the ultramarine derived from lapis lazuli has large, irregular crystals of varying transparency and [...] clustered together with particles of mica, quarts, calcite and pyrite [...]” (Taussig 41). Synthetic ultramarine lacks



Fig. 5 Pigment extraction, Geotechnical Laboratories, VU University Amsterdam, NL, 2017. Courtesy of the artist.

the mineral life that makes natural ultramarine so singular and moving. It is in this search for the singularities and expressive qualities of different processes of transformation that Pothoven's new project with lapis lazuli is developing different grounding techniques and their qualitative effects.

### **Socio-Political Ecologies: Trade Routes, Weapons and Geopolitics**

The material assemblages described above are profoundly connected to the physical movements of the stones and the bodies carrying them to remote places across the globe. Miners and merchants form specific trading assemblages. As mentioned earlier, lapis lazuli has been found across the globe, as early as 3,800 BC, especially in ancient Egypt and Mesopotamia (especially in and around Ur) as statuettes, amulets and as handles of daggers. Both archeological findings and modern spectroscopy indicate that much of the lapis lazuli was from Afghan provenance (Herrmann; Schmidt et al.). Long before the trade in lapis for its precious pigments in European painting, lapis lazuli was one of the constancies in the ancient trade along the Silk Road. The Wakhan Corridor, the narrow strip of land in northeastern Afghanistan in the Badakhshan region of the Sar-e-Sang mines was one of the silk routes. During the Han Dynasty (206 BC-220 AD), the Chinese sought Afghan horses and also found lapis lazuli that they took to China where it was used in Buddhist temples, (rock) sculptures, and jewelry. The Yungang grottoes near the city of Datong, for instance, is an enigmatic place of 252 caves with over 50,000 Buddha statues and statuettes and wall paintings covered in lapis lazuli (Ramirez). Marco Polo traveled along this route during the early years of the Yuan Dynasty (1271-1368) and reported of the Blue Mountain, though he never actually visited the mines. The Temple of Heaven in the Forbidden City in Beijing (built between 1406-1420) also features a wealth of blue lapis. Still today, lapis is very popular in China, and large online companies such as Alibaba sell lapis jewelry, polished and rough stones and objects. The trading of the rocks has always formed a close alliance with its material ecologies.

Obviously, these trades involve many different socio-political forces, of nomadic settlers, illegal miners and traffickers, rebellious resistance, warlords and corruption, the contours of which go way beyond the scope of this article. Here I can only highlight a few elements of this complex socio-political ecology that surrounds the blue treasures. Because of its strategic location and its natural resources, Afghanistan has been not only a player in global trading in the Silk route networks, but also a force field in geopolitics. In the 19<sup>th</sup> century, Afghanistan was the aim of both Russia and Britain to gain more control in the area in a long diplomatic confrontation referred to as The Great Game (1830-1895). In his search for lapis lazuli, Pothoven discovered that the first foreign traveler's accounts

of actually visiting the mines date from this period: "In 1838, John Wood, cartographer and lieutenant of the British-Indian navy, visited the mine on foot, and wrote a detailed personal account of its spatial properties" (Pothoven; Wood). Pothoven reproduces a black-and-white illustration titled *Shaft.Gallery.Drop.*, the first sketch of the mine, as part of his Lapis Lazuli project. In a very simple way, it signifies also the presence of foreign powers in Afghanistan and the mines. Since the end of the Second World War in 1945, America, Saudi Arabia, Britain and the Soviet Union (and later also Pakistan) have been intervening for control.<sup>8</sup>



Fig. 6 *Shaft.Gallery.Drop.* (Pieter Paul Pothoven, 2010, black and white print from book: *A Personal Narrative of a Journey to the Source of the River Oxus* by John Wood, 1872.

In 1979, the Soviet Union, called upon by the Afghan government, invaded the country to fight the rebellious Mujahedeen (who had received support from the United States). The fight was finally won in 1989 when the Russian army pulled back. In the 1980s, G. Whitney Azoy, anthropologist, US diplomat and Afghanistan expert, found a small ancient-Egyptian figurine in the library of the school where he was teaching and decided to journey to the Sar-e-Sang mines to return the small object to its original place in Mother Earth. In the film *The Quest for the Blue Mountain* (National Geographic, 1989), we can see the extreme conditions of the war-torn mountains. Azoy meets local traders, smugglers, Mujahedeen warlords and mine workers on a journey straight through the battlefield of Afghanistan of the 1980s (see also Azoy). Before he reaches the Blue Mountain, we have gotten a glimpse of the intricate socio-political assemblages surrounding the precious stone. On his journey to the Sar-e-Sang mines in 2009, Pothoven, too, got a glimpse of the role of lapis lazuli in the Cold War. The mine commander, who had lost a leg in the Soviet war, explained that Soviet helicopters tried to set foot in the valley to seize the mines but were shot by weapons paid in part through the trade of lapis lazuli. The Soviet Army never captured the mines. In another ongoing installment of his Lapis lazuli project, entitled *Dust Lungs*, Pothoven intends to analyze the Cold War via color, juxtaposing the heavy manual labor of

the miners with the abstraction of the color in modern art, exemplified by Klein's "void."



Fig. 7 Mujahedeen with US Stinger Missiles launcher, Afghanistan 1988. Photo: Robert Nickelsberg. Courtesy Getty Images.

Today, the situation has become ever more complicated. After 9/11 in 2001, Afghanistan moved again to the center of geopolitics when international troops hunted for Osama Bin Laden, the leader of Al Qaida, responsible for the attacks in the USA. In Afghanistan, Bin Laden was supported by the Taliban, Islamic fundamentalists (who often received training in *madrassas* in Pakistan), who took power from the Mujahedeen in the mid-1990s, and officially governed the country between 1996-2001 according to strict *sharia* laws. Even if the Taliban were banned from government in 2001, and the government is now headed by president Ashraf Ghani, the lapis lazuli mines in the Badakhshan Province remain most-contested grounds. In 2010, a US military report estimated Afghanistan's mineral wealth to be as much as \$1 trillion. According to reports of Global Witness, in 2013 the Lajwardeen Mining Company won a 15-year contract to extract the precious stones, valued at \$125 million a year (Mashal). However, within a few weeks, the company lost the mine to local militia, led by commander Abdul Malik, supported by several corrupt Afghan officials. While the Taliban never managed to take hold of the difficult mining terrains, they have now moved in, and enforce the militia to split the profit of the mining, earning the Taliban millions a year from the blue trade. Hoping to regain control over the mines one day, the Lajwardeen Company in the meantime buys stones from the militia and the Taliban. And in spite of government transport blocking, the illegal trade goes on. No wonder President Ghani expressed the fear that Afghanistan is "faced with the curse of natural resources" (Mashal 2).

Having sketched just a very incomplete picture of the socio-political assemblages around the precious stone, it is clear that it embodies huge value. It has been traded along the Silk Route since ancient times, finding

its way to different corners of the world, especially China. In more recent times, the mines have played a crucial role in financing the resistance of the Mujahedeen against the Soviets, but imagine now how many weapons the Taliban can buy for their share in the recent takeover by the militia. Between these constantly shifting powers and forces, there is the fate of the local people and mine workers, and most of the rest of the Nation, who remain by and large without any resources.

### **Mental Ecologies: Aesthetics and the Meanings of Blue**

While these complex and slippery socio-political forces by all means have to be taken into account, the attraction of the stone surpasses its monetary trade value. In fact its aesthetic and symbolic properties, as I already touched upon in the first section when discussing the quality of its pigments in Western art history, are directly implicated in its value, giving it sometimes magical properties, sung by poets, captured in pigments on countless paintings, but also symbolically referred to in language, in popular culture, and art cinema. Lapis lazuli is associated with love, purity, longevity, and spirituality; the color blue itself has even wider significance.

"[...] Two Chinamen, behind them a third / Are carved in Lapis Lazuli / Over them flies a long-legged bird / A symbol of longevity [...]" (Yeats). William Butler Yeats's poem "Lapis Lazuli" from 1936 reveals some of the Chinese lazuli traditions. For his seventieth birthday in 1935, Yeats received a Chinese lapis lazuli stone dating from the reign of the Qianlong Emperor (1739-1795).<sup>9</sup> The blue rock was carved in the semblance of a mountain with temple, trees, a path, and Chinese men. Yeats investigated the significance of the stone as a symbol of Chinese wisdom, spirituality, and mindfulness of death. The reference to the actual lapis lazuli, however, only appears in the last stanza of the poem. The poem begins with a reference to the bombing of London by Kaiser Wilhelm's Zeppelins during the Great War. In 1936, Hitler had come to power and established the German Air Force, which reawakened memories for Yeats and his contemporaries (McCormack). Besides the political context in interbellum Europe, and reflections on different notions of tragedy in Western and Eastern culture, Jerusha McCormack analyzes how in the last stanza, Yeats's poem brings the old Chinese stone to life, "allowing the energy of the rock to write him, channeling the life-force that is *qi*" (McCormack 11). Here, Yeats's delight of seeing the smallest details in the stone such as "every discoloration" and "an accidental crack" becomes a way of entering into the energy of the rocky "vibrant matter." The poem transforms the lapis mountain from a lifeless object into an event, a counterweight against the dead ends of the tragedy of imminent politics in the

West. By entering the forces of nature, Yeats “leaps into another vision of what it means to be human” (22). Western visions of the world as one of opposing forces (leading to war and tragedy, raised in the first part of the poem) are now replaced by the possibility of “immortality” by entering the forces of nature through this stone by translating his observations into words.<sup>10</sup> Yeats’s lapis lazuli poem calls for a different approach of matter that refers back to Asian traditions, and which today regains importance in new materialism and the movement of matter in Deleuze and Guattari.



Fig. 8 A carved lapis lazuli mountain, 19th century. Photo attribution unknown. Source: blogspot.com.

The changing history of the color blue has been described in Western art history (Pastoureau) with reference to the “campo celeste,” heavenly blue of the vast skies, and to the rich blue of the robes of the Virgin Mary in the Middle Ages, indicating her purity and holiness. In the Middle Ages, blue came to be associated with royalty. In the fifteenth to seventeenth centuries, influenced by, among others, the Protestant Reform, blue (like black) became “a color with moral implications” (85) associated with decency. And jumping to the nineteenth century, it became the color of Romantic melancholy, when Goethe’s *Werther* was often depicted in a blue coat (138-139). In the same period, blue also became a military color, often associated with the French army who introduced navy blue in many official uniforms, depicted for instance in Edgar Degas’s painting of *Achille de Gas as a Naval Ensign* in 1856. By then, lapis lazuli was mostly replaced by Prussian blue and other synthetic blues that started to appear in the nineteenth century.<sup>11</sup> Picasso’s Blue Period has been already mentioned

and was clearly associated with a very depressive period in the painter's life. The blues as a genre in music equally calls up this atmosphere of sadness, hardship and melancholia.

In cinema, too, the color blue can be traced in variegated value associations. To mention but a few obvious titles, we already get an impression of the chromatic resonances that come with blue. In contrast to the often cool and distant feeling that blue invokes, the genre of erotic "blue movies" connote it as "hot," ranging from Andy Warhol's *Blue Movie* (1969) to *Blue is the Warmest Color* (Abdellatif Kechiche, 2013). In *Blue Velvet* (1986) David Lynch evokes the contrast between innocence and perversion through the classic Bobby Vinton song, performed by Isabella Rossellini in a blue velvet dress. *Blue Steel* (Kathryn Bigelow, 1990) connotes blue to weapons and the police force in a story where the main character meets her "blue steel" mirror image. In *Trois Couleurs: Bleu* (Krzysztof Kieslowski, 1993), the melancholic tone of the color in elements of the *mise-en-scene* and lighting translates the mourning of a woman who loses her husband and daughter in a car accident; this affective quality of blue is put in an assemblage with the composition of (the healing effects of) a musical score for the European Union (which has a blue flag as its symbol). Obviously, much more can be said about the different transformations, affective qualities and symbolic meanings of blue in popular cinema. However, I want to zoom in on one expressive blue that is literally a moving matter, Derek Jarman's *Blue* (1993).

*Blue* consists entirely of an ultramarine-blue screen with a beautiful poetic soundtrack. While the project took shape between 1987 and 1993, Jarman, who was diagnosed HIV-positive in December 1986 when the disease seemed without remedy, gradually lost his eyesight. While the image remains a static blue, it comes to life in the sounds of bells and chimes, the wind, whispers, musical instruments and voices (from actors John Quentin, Nigel Terry, and Tilda Swinton) reading excerpts from Jarman's reflections. *Blue* was initially inspired by Yves Klein's monochromatic *IKB 79* that Jarman first saw in 1974 in the Tate Modern (Stuebner 212) but eventually it became his own confrontation with blue (in the end Jarman dropped all explicit references to Klein). "Blue come forth / Blue arises / Blue ascend / Blue come in" (107). With this calling for blue, Jarman starts his journey into the blue. In *Chroma*, his book of colors, the text of the film is presented with a few additional pages of reflections on blue that do not appear in the film, where Jarman opens with a reference to Leni Riefenstahl's film *The Blue Light* (1932): "Blue light. A spectral light. Leni's full moon falling through a crystal grotto in the High Dolomites. The villagers draw their curtain against the blue. Blue brings night with it" (103). In this film, Riefenstahl herself plays a young woman who lives





Fig. 9 *Blue*, Derek Jarman, 1993, 35mm film shown as video, high definition, color and sound, Tate Gallery London, GB, 1993.

in solitude in the mountains, secluded from the nearby village. At full moon, she visits a very hard-to-reach (several men found their death trying to follow her) crystal grotto that radiates a magical blue light. A foreign visitor, a painter from the city, manages to find her in the grotto among the blue crystals, and it won't take long before the villagers

overcome their fear of finding their way into the mountain to extract its wealth. It is hard not to see the connections to the Blue Mountain and all its ecologies described above that are embodied in the lapis lazuli stone, even if Riefenstahl's work has to be seen in its own particular, problematic assemblages (she would soon become Hitler's favorite filmmaker). "Blue brings night with it," including the darkness of the interior of the mountain, the historical night of war, and Jarman's own night of his approaching blindness and death.

Jarman also refers to Chinese lapis that resonates with Yeats's poem: "The blue Buddha smiles in the realm of joy. Dark blue embroidered with gold. There are gold flecks in the lapis. Blue and gold are eternally untied. They have affinity in eternity" (104). Later, included on the soundtrack of the film, Jarman recalls Marco Polo stumbling across the Blue Mountain, "sitting on a lapis throne by the river Oxus [...] blue canvases fluttering in the wind. Blue people from over the seas ultramarine – have come to collect the lapis with its flecks of gold" (113). While the image remains monochromatic and seemingly static, the soundtrack moves across all forms and shades of blue, in all its living and transforming affective qualities, full of labyrinthine crystallizations, brilliance, depth and vibrations that color all other observations that Jarman makes about his life, his progressive illness and his imminent death. Observations about the uncertainty of the illness, mixed with images of "hell on earth," the waiting room and side effects of the drugs, are juxtaposed with memories of lovers, dance raves and happy times, childhood memories of India, fragments of music and sounds of nature (the sea in particular), but also with newspaper references to refugees in Bosnia, and a myriad of blues. This unique composition makes Jarman's *Blue* a deeply moving meditation on

life and death, beyond the boundaries of human life, ending in: “Salt lips touching / In submarine gardens [...] Our life will pass like the traces of a cloud / And be scattered like / Mist that is chased by the / Rays of sun [...] I place a delphinium, Blue, upon your grave” (124).

As a moving matter, a machinic phylum of matter-flow and matter-energy, blue in all its shades, but in particular in its ultramarine lapis lazuli variations, translated in all kind of aesthetic objects, ranging from statues to paintings, music and cinematographic images, can take on an incredibly wide range of affective qualities and imply many different meanings. Its vibrations can be considered cold and hot, fragile and strong, vast and deep. In the chromatic spectrum, blue “gives other colors their vibration” (Jarman 105). In our consciousness, our mental ecologies, blue has a special place that reminds us, par excellence, how our own materiality, the materiality of our bodies, is fundamentally connected to the body of the earth. To speak with Michel Serres, perhaps blue invited us to “meditate on our ways of knowing” and invites us to experience how the human and nonhuman actually are “Biogea”: “the sea, my lover; our mother, the Earth [...]; this beautiful breeze which inspires the spirit, a spiritual mistress; our light friends, the fresh and flowing waters; and our brothers, the living things... are henceforth no longer objects” (Serres 31-32).

And so it is perhaps also significant that one of the first works that Pieter Paul Pothoven made when he returned from the Sar-e-Sang mines



Fig. 10 *Chromakey*, installation view. De Service Garage, Amsterdam, NL, 2010. Photography: Charlott Markus. Courtesy of the artist and Dürst Britt & Mayhew Gallery, The Hague, NL

was *Chromakey*, a blue screen made from ground lapis lazuli stones. It is a monochromatic screen that contains the material of the earth (including its reliefs and structures) that embodies all three ecological assemblages, and points towards all its multi layered meanings, anything but void.

### Media Ecologies: GeoMediations in Blue Stone

*Chromakey* also entails another important element, and that is its explicit reference to the media.<sup>12</sup> Chroma keying is a post-production technique for visual composition in film, television and video games. Chroma keying can be done with any distinct monochromatic background, but blue and green are more commonly used because they differ most from human skin color (Jackman).<sup>13</sup> Actors wearing blue clothes in front of a blue screen will “lose” their body. Blue-screen technology was developed in the 1930s and 1940s in Hollywood and is used to place characters in all kind of different environments and other special effects. More generally, Pothoven’s *Chromakey* refers to the media coverage of the War in Afghanistan that is always “colored” by the perspective of the parties involved (often foreign nations), “the people in blue” (the Afghan people), disappearing often in the chroma keys of our global-media apparatus.

The blue screen of *Chromakey* brings me to my concluding remarks about our contemporary media as triple-folded ecological processes that are in many different ways connected to the earth, and more particularly, as in my case study here, to the Blue Mountains. When Pothoven started his search for lapis lazuli, he first looked for the mines on Google Earth. While the mines have existed for ages as almost mythical places without any images and no visitors, and the country has been quite dangerous to travel for many decades, it is quite easy to find the mines on the surface of the Earth, captured and transmitted by satellite images. As Pothoven describes his Google Earth explorations: “Start in Fayzabad, in the province of Badakhshan, approximately 150 miles Northeast of Kabul. Follow the Kokcha River upstream through the Hindi Kush. After a journey through a breathtaking landscape you will find yourself in the mine village of Sar-e-Sang (source of stone). Zoom up the naked mountain slope and you will see the mines. Zoom in further into the black holes. For a moment, you will feel you are truly entering the caves, but turn around and you will find yourself on a steep slope of pixels” (Pothoven). So Google Earth helped Pothoven get a first impression of the mines, long hidden from sight. In his work *Shaft.Gallery.Drop* mentioned earlier, he acknowledges the first cartographer, John Wood, who started to map the mines (with all its ambiguous consequences, as have been detailed above).

The first person who photographed the mines in Sar-e-Sang was the German geologist Karl Brückl (who referred to the mines as Serr-i-

Sang), who published a scientific report on his findings in 1936 (Brückl). The report included seven black-and-white photographs that Brückl took with the first commercially produced 35mm Leica camera. As a gesture of remembering connectivity, Pothoven used Leica projectors and Leica slide trays to project his lapis lazuli slides described earlier. Moreover, in an accompanying documentation poster, Pothoven reproduced four of the black-and-white photographs of Brückl. Here he also recalls that this camera was developed by optical engineer Oskar Barnack, who developed the 35mm photo camera as result of his asthma and the difficulties (short of breath) he experienced hiking through the mountains with the then-heavy photography equipment. Another human-nonhuman assemblage of our blue machinic phylum where, body, landscape and technology are profoundly connected.



Fig. 11 *Lapis Lazuli from Serr-i-Sang*, detail, Leica slide tray with 36 slices of lapis lazuli mounted between glass (2012-2015). Courtesy of the artist and Dürst Britt & Mayhew Gallery, The Hague, NL

If we follow the lapis lazuli of the Serr-i-Sang mines across the different ecological assemblages as I have attempted to do above, we can consider the deep-blue stone itself as a particular form of “geomeditation” in which the material of the earth itself becomes an agent with variegated singular properties, containing its vibrancy, luminosity, color and energy that transforms into different forms of expression, touching humanity with

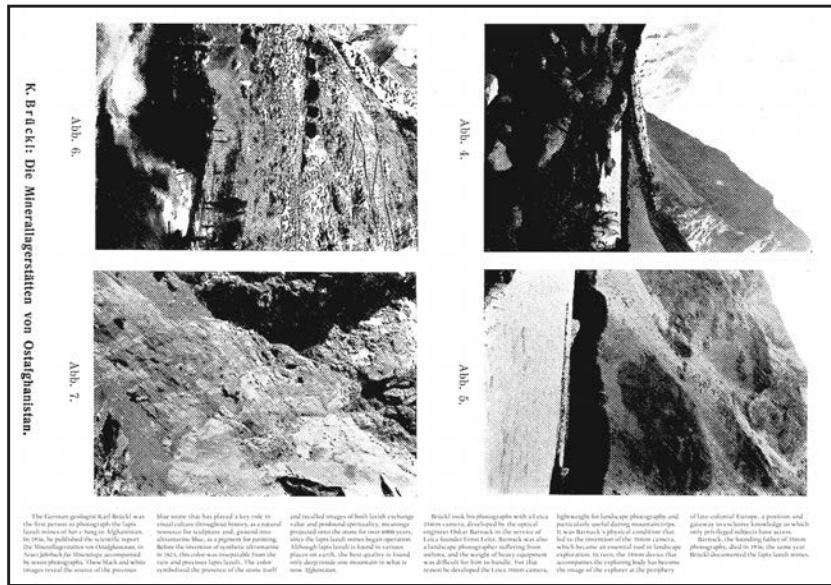


Fig. 12 *Lapis Lazuli from Serr-i-Sang*, detail, take away poster (graphic design by Anton Stuckardt) with images from *Die Mineralagerstätten von Ostafghanistan*, K. Brückl, 1936. Courtesy of the artist and Dürst Britt & Mayhew Gallery, The Hague, NL

a sense of mortality and immortality, earthly connection and transcendence. Moreover, the stone is a reminder of what Jussi Parikka calls the “geology of media” (Parikka), a reminder of the fact that all our media, far from being in an immaterial cloud, are profoundly connected to our planetary resources, and that the ease with which Google Earth gives us virtual access to the world deeply depends on its material, which can only be accessed at high costs of human and nonhuman labor. In fact, we could see the multi-layered stories enfolded in the small, blue piece of rock, which was there all the time on my desk, as an allegory for geomediations of all sorts. The difficult, largely hidden zigzagging path to the mountains “at the center of a force field” of human and nonhuman players. Maybe they are too complex, too unpredictable and hard to uncover, absent in the earth itself, but present across the globe, all coming together in that last image of lapis lazuli as the entire planet, which is after all, the Blue Marble.

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### Notes

1. The name Sar-e-Sang is sometimes spelled differently but this spelling is the most common. I will only refer to *Serr-i-Sang* when I refer to a particular artwork of Pothoven who here uses the spelling of geologist Karl Brückl, to which the artwork refers.
2. New materialism rejects the hierarchical opposition between subject (active; human; etc.) and object (passive; nonhuman; etc.) and acknowledges in one way or another energy, agency or the “force of things” (Bennett 1-19). It is beyond the scope of this article to investigate the different positions within new materialism, or its relation to object-oriented ontologies and speculative realism. See Dolphijn and Van der Tuin; Coole and Frost.
3. This makes metallurgy a “minor science” (or “nomad science”), which differs from “major science” (or royal science) in its approach. In *A Thousand Plateaus*, Deleuze and Guattari pay special attention to the ways in which minor science (which follows the matter-flows in different assemblages based on knowledgeable intuition) and major science (which analyzes, calculates, and models and is based on reproducible knowledge) are constantly in interaction (367-374).
4. Guattari did not foresee the current phenomenon of our filter bubbles (Pariser), even though he is well aware that every assemblage can be reterritorialized in integrated world capitalism.
5. See also <http://durstbrittmayhew.com/artists/pieter-paul-pothoven/>
6. Other places where lapis lazuli is found include Canada, Myanmar, Siberia, the Ural Mountains, Germany, Italy, California, Chili and Colorado. The Afghan mines remain, however, the oldest and best-quality source.
7. Nuit Banai raises the many paradoxes in Klein’s work, such as his artistic and revolutionary work that was always in competition with his self-interest as savvy businessman (145).
8. See, for more insight in the very complex political webs of Western involvement in Afghanistan since the Second World War, *Bitter Lake* (Adam Curtis, 2015).
9. The stone was a present from Harry Clifton, to whom the poem is dedicated.
10. In *On Being Blue*, William Gass investigates “blue things” and especially the “the words which say them” in Western poetry and culture (Gass 90).
11. For dyeing cloth, indigo is the pigment, which has a very long and rich tradition that is beyond the scope of this article.
12. In computer terms, the Blue Screen refers usually to Blue Screen of Death (BSOD), the error display on a Windows computer system after a fatal error, or system crash (which in Windows 8 includes a sad emoticon).
13. For contemporary digital filmmaking, the green screen is more common because digital cameras retain more detail in the green channel. The Bayer pattern for color filters in digital cameras give more pixels to green (in correspondence to the human eye’s greater sensibility to green (Hubel et al.))

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