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“This thesis takes the form of three volumes. Vol. 1 presents a set of text-led parts and chapters. Here the illustrations employed guide the reading of the textured theoretical arguments. Vol. 2 takes the form of an ‘image gallery’, where the primacy of the textured visual argumentations take over the task of describing and analysing the broader situation. Vol. 3 consists of an architectural portfolio that opens the analysis through the textured nature of design. Vol. 1 and Vol. 2 are closely related, but instead of imposing a fixed structure by punctuating Vol. 1 with the imagery of Vol. 2, two separate volumes are created that allow for a flexibility in the manner one ‘reads’ the material; one can, for example, place one volume next to the other or read them as two stand-alone documents. Vol. 3 advances a discourse on architectural design as it unfolds the techniques, methods and methodology employed for the ‘making’ of four speculative design propositions. Framed around three design briefs, the four design projects proposed here have both situational and programmatic specificity. This tripartite Architecture by Design presentation documents process rather than offering a resolution, as the thesis opens and presents its own thickening of marble. All together, Vol. 1, Vol. 2 and Vol. 3, offer a network of active and textured ‘readings’ of this Architecture by Design thesis.”

DECLARATION

This is to certify that the work contained within has been composed by me and is entirely my own work. No part of this thesis has been submitted for any other degree or professional qualification.

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ABSTRACT

Athens insists on representing white marble as the material embodiment of the city, and consequently white marble is persistently present in mythologies of the city. This thesis argues that in perpetuating these myths that make consistent appeals to idealised 'white places', the reciprocal and mytho-poetic relationship between marble's materiality and the Athenian metropolis is progressively over-simplified. The result of this particular, reductive historiography is that today the contemporary *opsis* (architectural surface and image) of marble stimulates an emotional (pathetic) perception of the material that, by extension, fosters a marble-image of Athens that is truly pathetic. This *pathos* is clear if we consider the violent gestures that accompanied a series of recent anti-austerity riots in which rioters deliberately tore marble veneers from numerous modern and contemporary urban edifices. Despite the apparent senselessness of this act of dissent toward the superficiality of the current Athenian politico-economic apparatus, these actions in fact exposed the superficial manner in which the material has been employed to re-present Athens as an imaginary place. This thesis regards the perceptible absence of marble brought (inadvertently) to the surface during these riots as an opening to a deeper understanding of marble's materiality.

'Following' the agency of marble's matter, this Architecture by Design thesis presents three potential ways of re-instituting what matters in Attica's marble. Firstly, the thesis advances a theoretical argument for the mutually constitutive relationship between marble and Athens, where obsolete illustrations and *a priori* dogmas regarding notions of matter and materiality, image and *opsis*, landscape and ecology are challenged (*Vol. 1*). Secondly, the thesis presents a re-presentational visual archive as an expressive essay of both marble's *opsis* and of Athens' marble-image (*Vol. 2*). Thirdly, the thesis evokes the *poetics* of marble as discourse along with a portfolio of architectural design as it materialises a series of speculative design propositions that are placed in specific charged contexts across the broader Attic (metropolitan) landscape, and which address practices of marble concerned with the marble-image of Athens (*Vol. 3*). Read in conjunction (or in disjunction), these three means of re-situating marble's materiality within its inherently aesthetic and, by extension, political ground mobilise the material's asperity. In this way, the material's intrinsic textures, tensions and differences are projected into the making of marble's *opsis* —an *opsis* that in turn re-informs and enriches the making of Athens' imageries.



THE MATTHEW ARCHITECTURE GALLERY

MINTO HOUSE
20 CHAMBERS STREET
EDINBURGH, EH1 1JZ



2 — Proposed plan for Athens, Eduard Schaubert and Leo von Klenze, 1833

The impetus for the making of preparatory exhibition 'ATHENS' IMAGE-*OPSIS*:*The Asperity of Attica's Marble*, was threefold: firstly, it aimed to spatialise all the practice-based material produced during this research-by-design undertaking as an assemblage; secondly, it sought to 'test' a spatial configuration appropriate to the drawing of a final exhibition that would accompany the PhD viva; and thirdly, it afforded an opportunity to revisit the textual/visual arguments raised in this research before the final composition of this document, the PhD Architecture by Design thesis. During this spatial exploration through exhibition, all the practice-based material was grouped into three components. The imprint of all three components in the space of the Gallery refers to its subject matter: Attica and the Athenian metropolis. The arrangement echoes and disrupts the axuality of the neoclassical plan of Athens materialised during the establishment of the modern Hellenic state in 1836, and still structuring the Athenian metropolis today.

Citing Marble in Attica.

This first component of the proposed exhibition includes a map of Attica (at 1:50,000) and a marble ground (at 1:1). The map depicts geological, hydrological, infrastructural and urban features of Attica and establishes a section, diagonally cutting across this territory, that becomes the basis for a generative indexing of a series of complex material exchanges. This cartographic exploration sits in correspondence with a horizontal surface placed beneath. This surface, elevated from the wooden floor of the Gallery, consists of eight tiles of white Dionysos Marble (400 x 400 x 20 mm, *vein-cut* and polished). The arrangement of these tiles replicates and challenges the main territorial divisions proposed by Johannes A. Kaupert and Ernst Curtius in an early cartographic project for Athens, produced at the beginning of the nineteenth century. This first component, this section through the metropolitan landscape, becomes the place to which one returns in order to locate oneself in the space of the exhibition, and through which to locate the two subsequent components.

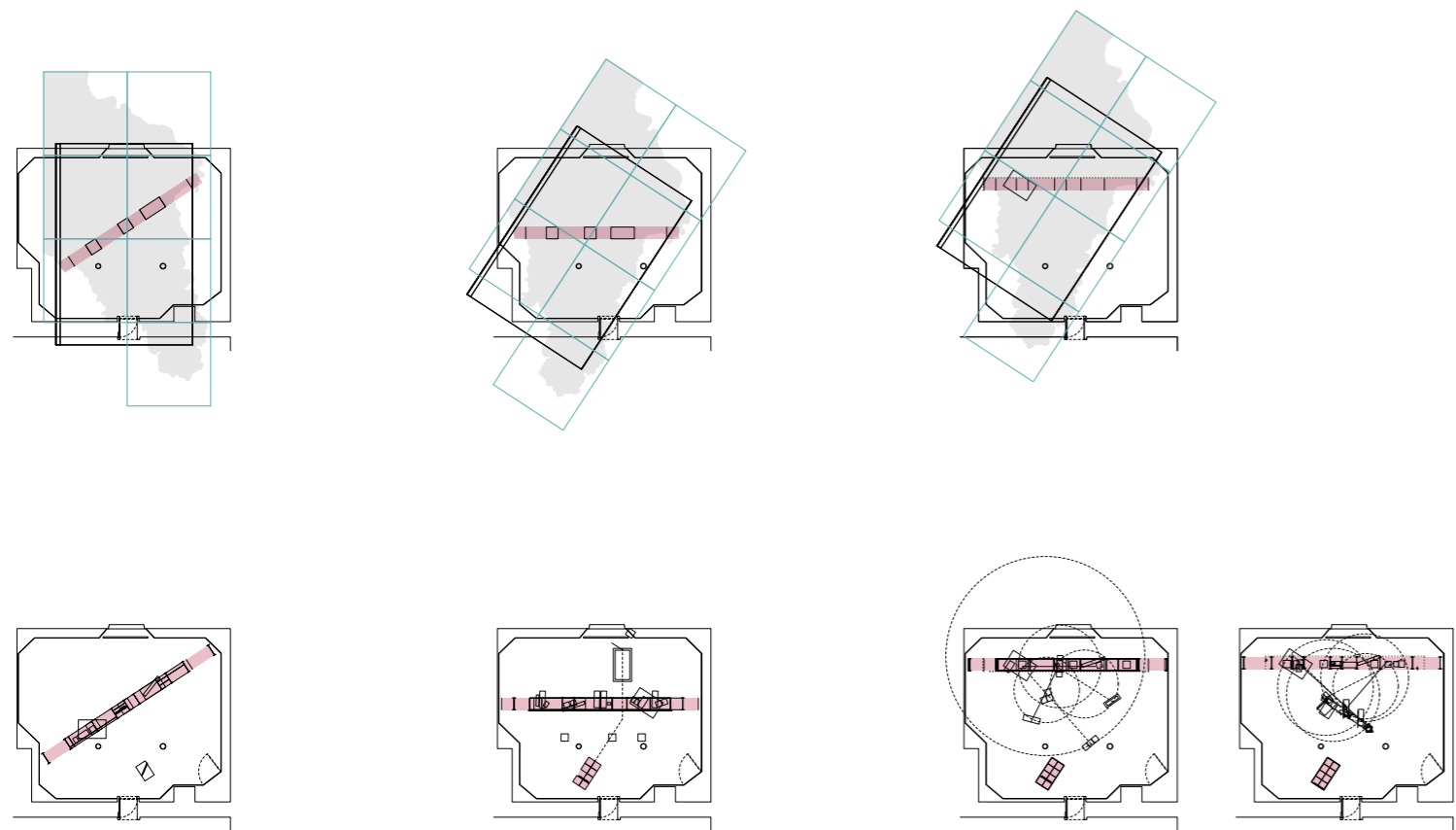
Marble Cabinet.

The second component spatially materializes part of the section inscribed in the 1:50,000 map, stretching from the centre of the Athenian metropolis to Mount Pentelicon to the north east. The 'cabinet' holds an archive of the various methods, techniques, representations and scales explored during the 'making' of four architectural design propositions that occupy this section. The intricacy of this component's materiality, as well as its status as a repository or archive, suggested its neutral (orthogonal) placement in the Gallery in relation to the 'situated' section of component one.

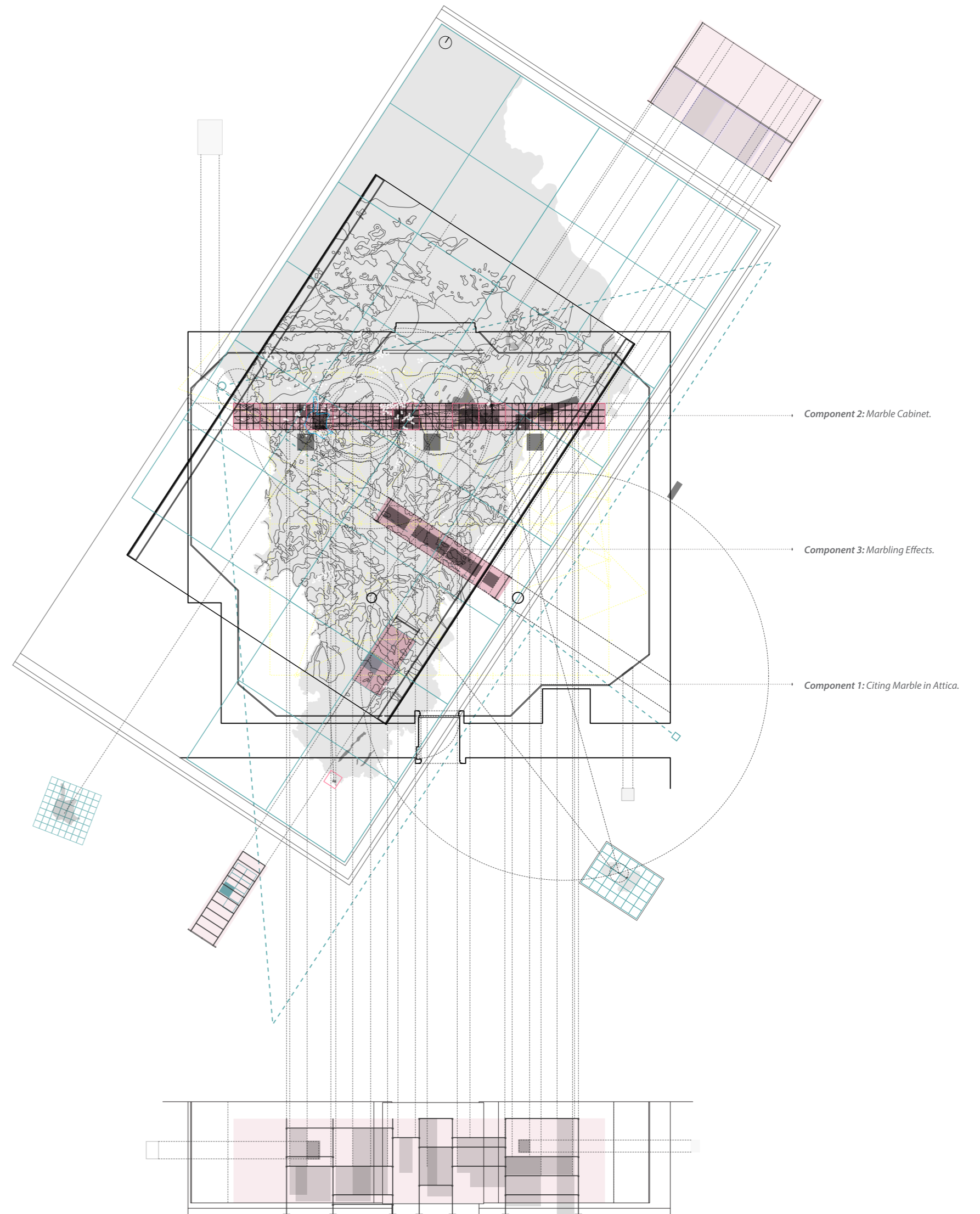
Marbling Effects.

The third component, four 1:500 models sited along the section line between Athens and Mount Pentelicon, are positioned between the other two components. This three dimensional section reproduces a distilled version of the cabinet, focusing on the specific contexts in which the four suggested architectural programs (the designs of Syntagma Square, a Marble Union, a Marble College and a Marble Scholar's Centre) are anchored.

The intention in presenting this preparatory work here is not that it acts as a placeholder, a sample or primer for an exhibition yet to come, but rather that it suggests something critical to the underlying methodological principals guiding this by-design research enquiry. The presentation of any 'objects' within this thesis risks misrepresenting this enquiry. The production of architectural propositions, in their different degrees of finality, is only a means by which this thesis advances. As such, the preparatory work undertaken for the exhibition, the investigative models and drawings, the different translations between media, all hold the same status: they are exploratory. Subsequently, the documentation of the final exhibition forms part of this document but not at the expense of this exploratory work.



3 — Drawings produced during the making of the exhibition, Maria Mitsoula, 2015

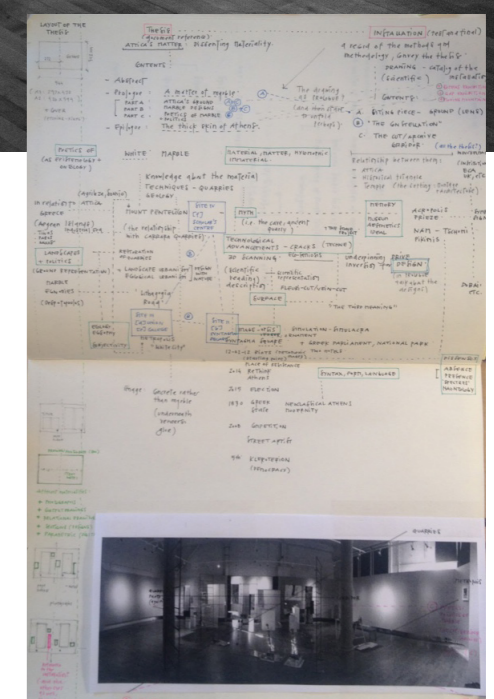


FRONT MATTER — v



5 — The arrangement of the three components in the Gallery, Maria Mitsoula, 2015

4 — The making of the 'ATHENS' IMAGE-OPISIS: The Asperity of Attica's Marble' exhibition, Maria Mitsoula, 2015





6 — Parthenon, Zacharias Stellas, 1970

Opening the thesis through this exhibition also provides a means of introducing Athens and the Attic landscape through material: the material of the exhibition (the work produced) but also the intrinsic material of that landscape, marble. Marble is key to Athens' materiality; it weighs heavily on the city and the subjectivities of the citizens. In his novel *The Names* (1983) Don DeLillo, as David Harvey notes, illustrates the "tension between absolute [powerfully present] and relational [unstable] meanings" attached to this materiality.¹ Mainly set in Greece, the novel opens with a description of the protagonist's reluctance to climb the Acropolis hill. James Axton, an American businessman who has lived in Athens for a long time, tries to stay away from the Acropolis. Those worked marbles, Axton narrates, "make the business of seeing them [...] a complicated one. So much converges there. There are obligations attached to such a visit."² As the references to the Acropolis increase throughout the novel, so too does Axton's hesitance to approach the marble monument. It requires "a wrenching effort to avert [his] eyes" from the "somber rock," and only as the narrative concludes is a long-postponed encounter finally fulfilled. In the novel's final stages Axton 'hypnotically' approaches until, now standing on the Acropolis, he realizes that the marble monument "wasn't aloof, rational, timeless, pure." Rather, he observes:

I couldn't locate the serenity of the place, the logic and steady sense. It wasn't a relic species of dead Greece but part of the living city below it. This was a surprise. I'd thought it was a separate thing, the sacred height, intact in its Doric order. I hadn't expected a human feeling to emerge from the stones but this is what I found, deeper than the art and mathematics embodied in the structure, the optical exactitudes. I found a cry for pity. This is what remains to the mauled stones [...] this voice that we know as our own.³

In Axton's description we might observe something of the architect Aldo Rossi's description of historic permanences. In *The Architecture of the City* (1966), Rossi names as primary urban elements those elements that hold national identity and that operate through collective memory. Rossi categorizes them either as pathological monuments, those elements that 'retard' the process of urbanization, or as propelling elements, those elements that can integrate a city's permanences whilst presenting the history of the city as more than a collection of symbolic functions. Put in Rossi's terms, propelling monuments (as DeLillo's description of the Athenian marble monuments) bring past into present, "providing a past that can still be experienced."⁴ Such monuments put forward a notion of history that allows for productive transformations. Writing of Athens, which for Rossi becomes a city-state *par excellence* for the study of complex interrelations between urban development, the relationship of city-region, politics, myth and materiality, Rossi argues:

Athens represents the first clear example for the science of urban artifacts; it embodies the passage from nature to culture, and this passage, at the very heart of urban artifacts, is conveyed to us by myth. When myth becomes a material fact in the building of the temple, the logical principle of the city has already emerged from its relationship with nature and becomes the experience, which is transmitted. [...] The reality of Greek art and Greek cities presupposes a mythology and a mythological relationship with nature.⁵

As I will discuss in the introduction that follows, this mythological element is critical here, but this Architecture by Design thesis argues that instead of returning to an elaboration of the relationship between marble and Athens through the contested and tensioned understandings that DeLillo's writings (and Harvey's reading of DeLillo) narrate or Rossi's 'propelling' monuments elucidate, there is an opportunity to open up a new discourse on both the contested and 'propelling' relationships between the material and the city today. This thesis implicates architecture, politics, nature and myth in an international arena. It considers the marble materiality of Athens as a specific site of global culture. The exhibition, presented in its incompleteness here, is just one attempt of several to expand on this uniquely Attic materiality.





2 — Athens, Vincenzo Castella, 2001



3 — Dionysos Marble Quarries on Mount Pentelicon, Maria Mitsoula, 2011

WHITE WESTERN MARBLE

Rossi's description of the passage from myth to material provides a useful entry point into this thesis; cities, here, are understood as materially in-formed constructions, so much so that specific materials become inextricably linked to certain cities.¹ In the case of contemporary Athens, even though the city is marked by the physical presence of concrete – innumerable concrete blocks of houses spread from Attica's four main mountains to the metropolis of Athens – it is still the white marble that, in the mind's eye, constitutes the city. As DeLillo's protagonist discovers, marble holds a dual identity in Athens: it is simultaneously material and immaterial, it exists both palpably in the world and virtually in the mind-set of the Athenian population. Crucially, however, the affectivity of virtual marble is no less than that of marble as a material presence, and marble's virtual identity has become deeply embedded in Athens' imaginaries. These imaginaries have had profound implications. The city's marble monuments have become attached to the highly proclaimed mythical constructions of classical Athens. In turn, through particular epistemologies certain Athenian imaginaries have come to represent the cosmological cornerstone of Western culture. The marble Parthenon, for example, was brought into the conventions of European Enlightenment epistemology through the drawings of French and British architects, archaeologists and artists in the early eighteenth century, and subsequently formed the basis of a rationalist empiricist historiography.² Subsequently, the proliferation of representations that followed those first imagings have resulted in an infinitely 'romanticised' and 'fantasized' marble-image of Athens that brings together marble, the city of Athens and the Attic landscape of Homeric Greek mythological heroics. At the same time, with the establishment of classicism as a dominant Western aesthetic style, a plethora of theoretical approaches further re-appropriated the materiality of the ancient Athenian marble monuments. These approaches permeated into an even broader individual and collective western unconscious during the nineteenth and twentieth centuries.³

Today, these imaginaries are equally affective. Current discourses that revolve around the marble materiality of the city are based on a compound relation between the Acropolis as a sublime national symbol and the Acropolis as the epicentre of a universal archetypal reference. This double nature has been extensively analysed. The archaeologist Dimitris Plantzos writes, for instance, that the Acropolis represents a "disputed *topos*, a cultural identity of sorts contested between Greece on the one hand and the 'Western world' on the other."⁴ In a similar tone, in *Cosmopolitanism and the Geographies of Freedom* (2009) the geographer David Harvey notes that "the Acropolis 'belongs' simultaneously to radically divergent imagined communities."⁵ The result of this tension is such that one not only comes to the contemporary city of Athens with a specific way of looking at the marble monuments but also with a specific set of 'marble' images for Athens already forged in one's mind. Such understanding, even if it is contested, visualizes a way of seeing, perceiving and representing the marble-image of Athens and marble's *opsis* (a term I will elaborate below, but that we might provisionally define as both 'image' and 'architectural surface') that relies on a strong essentialist and reduced notion of the marble materiality of Athens. This Architecture by Design thesis takes this doubly reductive imaginary of Athens as its point of critical departure. The thesis deconstructs key illusory processes that have reinforced this troubled image of the city, and presents a more imbricated, periplicated and textured series of views of Attica's marble. The thesis not only resists the foreclosing mentality driven by the dramas of recurrent politico-economic crises as they simultaneously meet the rational-romantic tensions of a European Enlightenment propelled by imperial and economic privileges elsewhere, but also opens the possibility to conceive new marble imaginaries for the city of Athens, Attica and Greece that can be projected both within and beyond its immediate landscapes. The thesis engages in processes that necessarily work across realms that are historical and contemporary, aesthetic and political, and, Greek and global.

The first example that I will examine is a direct consequence of these global politics. In the turbulence that followed the global financial crisis of 2008, rioters in Athens engaged in violent acts of breaking marble as a form of 'dirty



4 — A protester smashes marble with a hammer during clashes with police near the Parliament, AFP/Getty Images, 2008

5 — A protester throwing marble at riot police near the Parliament, Petros Giannakouris, 2010

protest' (as Athenians inflicted a form of self-harm on their collective 'body' to express their disagreement with current political practices). This thesis contends that such visceral expression not only arises from but also relies upon inter-subjective political relations. There is no doubt that this damage is intended to be affective. That it affects all (virtually) and not just some (materially) is an important observation. Such acts assault the very bases of sensibility. They rupture views that fix marble as an 'ideal' material, they expose the stubbornness of both marble and the Athenians, but they also expose the relation between aesthetics and politics at the core of representational dynamics. They expose an inextricable relation between people and landscape, but also that the materiality of a situation is a more complex issue than a simple adequation between the material and representations of a place.

Throughout this thesis I will refer to the 'Attic' as a way of holding this relationship of place, material and people. Attica, in a geographic and historical sense, is the triangular peninsula of eastern Greece that projects into the Aegean Sea and encompasses both the landscape and city of Athens; the 'Attic' is commonly considered to be that which holds the metropolitan character of Athens. In addition to this primary meaning, the Attic also refers to the literary style of the Greek language with peculiarly Athenian characteristics. Prompted by Dorian Wiszniewski's reading of Giorgio Agamben's notion of metropolis I will add a third dimension to this notion of the Attic.⁶ In the lecture 'Defining Metropolis' (2006), Agamben examines the etymology of the word metropolis as 'mother city' (μητρόπολη in Greek) with its strong connotation "of maximum dislocation and spatial and political dishomogeneity."⁷ The etymological and ancient point of view, Agamben continues, "raises a series of doubts about the current idea of the metropolis as an urban continuum and relatively homogeneous fabric."⁸ Agamben (supplementing the large class of Foucauldian apparatuses) proposes that:

we keep the term metropolis for something substantially other from the city, in the traditional conception of the polis. [...] I would say that the metropolis is the *dispositif* [apparatus] or group of *dispositifs* that replaces the city when power becomes the government of the living and of things.⁹

I shall call an apparatus [*dispositif*] literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures, behaviours, opinions, or discourses of living beings. Not only, therefore, prisons, madhouses, the panopticon, schools, confession, factories, disciplines, juridical measures, and so forth [...] but also the pen, writing, literature, philosophy, agriculture, cigarettes, navigation, computers, cellular telephones...¹⁰

Holding the capacity of 'capturing, orientating, determining, intercepting, modeling, controlling, the gestures, behaviours, opinions, or discourses of the Athenians and the Westerns,' marble consistently becomes a metropolitan apparatus, bringing together the individual and singular with the international and global, that as Agamben reminds us we will be able to confront only if we "penetrate the processes of subjectivation that the metropolis entails in a more articulated way, deeper."¹¹ This deeper articulation is what I propose here as a third articulation of the Attic. If the gestures of the political acts described above are examined in greater depth we can re-evaluate marble, materiality and architecture as interwoven but distinct aspects of the 'metropolitan apparatus' and, as such, observe that they are worthy of greater consideration than the recurrent tendency to arrange figures and materials into perceived categories that operate between national and universal symbolism.

POETICS OF MATTER

Material and materiality are complex notions. Both terms, as they become associated with concepts such as substance, form, content, expression and perception, have come to carry multivalent meanings that are charged with philosophical, aesthetic and political implications. In this introductory section I will, therefore, establish a framework that I consider productive for an understanding of ‘material’ that, instead of yielding an etymological examination of the central word (matter) from which both material and materiality derive in vernacular English, revisits the philosophical development of ‘matter’ within the Western tradition. This framework, which will be present throughout the thesis, evolves around an analysis and critique of hylomorphism, an ancient model that renders a binary opposition between two constituents: matter and form. According to the hylomorphic model the latter (form, the mental) is privileged over the former (matter, the physical).¹² In design terms, this model is most evident in the low priority material receives when compared to other architectural matters (such as structure or space). For example, as Gernot Böhme notes in his essay ‘Staged Materiality’ (1995):

Wood, glass, steel and marble as elements of architecture [...] no longer designate materials in themselves, but qualities of appearance, the more characteristic, the better. [...] Decades ago, Jean Baudrillard spoke of the *valeurs d’ambiance*. Nowadays this phrase should probably be translated as ‘theatrical value.’¹³

Echoing Böhme’s observations, the architect Katie Lloyd Thomas writes in the introduction of the edited collection *Material Matters* (2007), “material is rarely examined beyond its aesthetic or technological capacities to act as a servant to form.”¹⁴ Lloyd Thomas recognises that today materials are primarily discussed either as superficial finishes and state-of-the-art technology or as value products of a commercial development. Such false attentiveness to material and materiality does not only elicit the primacy of form of the ancient hylomorphic model but also promotes the limited role material acquires as bare representation. Under such schemes, Lloyd Thomas argues, the role of the architect becomes that of “mythic form giver.”¹⁵ A shift towards a critical understanding of material and materiality, or what Lloyd Thomas calls ‘material attention’, entails a constant engagement with matter’s philosophical background while incorporating the material’s social, cultural, political, institutional, technological, technical and ecological implications. Put differently, Lloyd Thomas argues that such “attentiveness to material does not [...] only happen through intellectual research, but is part of the manual work of craft of fabrication,” and that is the manner through which one can reject the master principles inherited from the Greek philosophers.¹⁶

To expand on this framework for thinking material I will briefly return to that ancient understanding of the matter-form split, first through Plato’s discussion on cosmology and then through Aristotle’s metaphysical discussion on substance (being), before briefly examining how this legacy has evolved in philosophical thinking. In *Timaeus*, Plato advocates that perfect forms can only exist in the ideal realm, the realm that the intellect can comprehend by reason, uncontaminated by matter. For Plato, any material realization of the ‘ideal’ constitutes a poor copy subject to change and decay. As the philosopher Vilém Flusser explains in his essay ‘Form and Material’ (1999):

the world of phenomena that we perceive with our senses is [for Plato] an amorphous stew behind which are concealed eternal, unchanging forms which we can perceive by means of the supersensory perspective of theory. The amorphous stew of phenomena (‘the material world’) is an illusion, and reality, which can be discovered by means of theory, consists of the forms concealed behind this illusion (‘the formal world’).¹⁷

In that Platonic perception, Flusser continues, artists and technicians become tricksters and traitors since through their makings they “cunningly seduce people into perceiving distorted ideas.”¹⁸ In contrast, Aristotle’s hylomorphic framework, presented in his *Metaphysics*, examines a matter-form relationship that relies on Aristotle’s broader four-fold theory of causation. Aristotle’s four causes, the four ways of articulating the successive changes through which something is materialized, presented in his *Physics*, consist of: (i) ‘the material cause’, that material from

which a thing is generated; *(ii)* ‘the formal cause’, the shape that the material realizes; *(iii)* ‘the efficient cause’, the agent who shapes the material; and lastly *(iv)* ‘the final cause’, the aim (or better *telos*) of that compound matter-form relationship as a complete thing.¹⁹ According to Aristotle, the creation of a bronze statue would, then, allude to all four causes: the statue’s *matter* (bronze); the statue’s *form* (figure); the statue’s *agent* (the sculptor responsible for that matter to manifest through a specific form); and the statue’s *purpose* (the function for which the matter was materialized through that form as a finished product). Such causality ultimately depicts a ‘form-receiving passivity’ where ‘making’ begins with a form in mind, subsequently imposed upon an inert and passive material.

Drawing on Aristotle, the philosopher Martin Heidegger challenges that reductive rationale of teleology. Heidegger becomes interested in uncovering the essence of modern technology in relation to the question of being as a constitutive factor in human life (being-in-the-world). In *The Question Concerning Technology* (1954), he argues against the consideration of the four Aristotelian causes in isolation and suggests instead four modes of ‘occasioning’. “The four ways of being responsible bring something into appearance,” Heidegger writes.²⁰ For Heidegger, therefore, form is indebted to technology, technology is indebted to material, and material is indebted to function. In this way, Aristotle’s “means to an end” is now replaced by an ontological process of revealing that pulls together *techné*, *poiesis* and *epistémē*.²¹

In addition to Heidegger’s elaboration of technology as an originary form of bringing something into presence, philosopher Gilbert Simondon puts forward a critique of the doctrine ofhylomorphism in relation to a concern for technology and the primacy of ontogenesis as non-reducible to the imposition of form. Written around the same time as Heidegger’s *The Question Concerning Technology*, Simondon’s essay ‘The Genesis of the Individual’ (1964) brings together technology, ontology and epistemology through his key concept of *individualization*. Revisiting Simondon’s theorisations, Brian Massumi explains that that for Simondon, “[t]here is an individualization of thought [...] by the same token by which there is an individualization of matter, on the physical plane and from there on to plane of life, and following —or prolonging—the same constitutive principles.”²² Against the ‘form-receiving passivity’ of matter that Aristotle’s hylomorphic model portrays —a model that for Simondon, anthropologist Tim Ingold explains, could be summarized as “a man who stands outside the works and sees what goes in and what comes out but nothing of what happens in between, of the actual processes wherein materials or diverse kinds come to take on the forms they do” — Simondon analyses a branch of manufacture (the making of bricks) as a process of becoming that revolves around a multiplicity of inventive and eventive moments.²³ For Simondon, as Massumi explains, matter takes the form of a “*form-taking activity* immanent to the event of taking-form.”²⁴

Simondon’s writings have greatly influenced the thinking of Gilles Deleuze and Félix Guattari, who in their *A Thousand Plateaus* (1987) further extend Simondon’s thought. Deleuze and Guattari write that the problem of the hylomorphic model is that

it assumes a fixed form and matter deemed homogeneous. [...] But Simondon demonstrated that the *hylomorphic* model leaves many things, active and affective, by the wayside. On the one hand, to the formed or formable matter we must add an entire energetic materiality in movement, carrying *singularities* or *haecceities* that are already like implicit forms that are topological, rather than geometrical, and that combine with processes of deformation: for example, the variable undulations and torsion of the fibres guiding the operation of splitting wood. On the other hand, to the essential properties of matter deriving from the formal essence we must add *variable intensive affects*, now resulting from the operation, now on the contrary making it possible: for example, wood that is more or less porous, more or less elastic and resistant. At any rate, it is a question of surrendering to the wood, then following where it leads by connecting operations to a materiality, instead

of imposing a form upon a matter: what one addresses is less a matter submitted to laws than a materiality possessing a *nomos*.²⁵

In ‘Material Complexity’ (2004), Manuel de Landa closely reads Deleuze’s and Guattari’s quote, as he further describes the two modes of conducting scientific research that Deleuze’s and Guattari’s ‘Treatise on Nomadology’ puts forward. The minor or *nomad science* is connected to the way the artisans and craftsmen (minor scientists) collaborate with an active material in order to tease a form out of it, rather than ‘commanding’ its matter. Guided by intuition, minor scientists (similar to the alchemists of the sixteenth century) perceive and evaluate material as they grow knowledge out of their close engagement with a particular craft. It is that empirical ‘know-how’ that is stored in the form of skills that with the emergence of the major or *royal science* (that is chemistry, mechanization and industrialization) were replaced by a series of objective and scientifically measurable properties of the materials. De Landa argues that much of the knowledge gained about the complexity of materials, the ‘know-how’ of materials, has today been lost by the de-skilling that has accompanied routinized modes of production.²⁶ What can reverse the grip of hylomorphism then —while simultaneously providing an opportunity to embrace contingency, process, and change— is an understanding of material production that draws out potentials immanent in a world of becoming. Deleuze and Guattari highlight that the “matter-flow can only be *followed*,” and call on us to “follow the matter-flow as pure productivity.”²⁷

Deleuzian and Guattarian materialist thinking is also evident in Brian Massumi’s writings, best exemplified in Massumi’s description of the processes taking place when a woodworker makes a table. For Massumi, the qualities of the piece of wood “are more than simply logical properties or sense perceptions. They envelop a potential —the capacity to be affected, or to submit to a force [...] and the capacity to affect, or to release a force,” manifested, at any point, through both physical and mental forces.²⁸ Massumi writes:

The woodworker brings the qualities of the wood to a certain expression. His interpretation is a creation, not just of a physical object, but of a use-value, a cultural object [...]. The training he received is a particular institutionalization of craftsmanship formalizing knowledge accumulated over centuries by countless people. What product he makes from the wood is defined by the cultural needs and fashions of countless others. Interpretation is force, and an application of force is the outcome of an endless interplay of processes natural and historical, individual and institutional.²⁹

The relationship between the woodworker and the wood acquires for Massumi a reversible role. Rather than presenting the material as content and the craftsman as an agent that gives form to matter, the material’s materiality is framed by both the forces that went into materialising the physical object as an expression and the tool the craftsman employs. Similarly, craftsman and tool play that double role of being an agent of expression and the content of an institution attached to the system that provides the craftsman’s training. Depending on the framing, that which is content becomes expression and vice versa.

What one draws from this brief philosophical detour is that *matter* and *form* are inseparable. Although the status of these two constituents and the complex processes through which the two come together have been debated in philosophy since antiquity, the hylomorphic paradigm still predominates today, accounting for a perception of materiality attached to “figures of passive, mechanistic, or divinely infused substance,” as the political theorist Jane Bennet argues.³⁰ Following Bruno Latour’s *Politics of Nature* (2004), and extending the long trajectory established by the New Materialists, Bennet adds an ecological and political dimension to a definition of her process-oriented materialism (‘vital materialism’) where causality and agency get complicated. Bennet’s vital materialism seeks to release “the capacity of things [...] to act as quasi agents or forces with trajectories, propensities or tendencies

of their own.”³¹ Returning to architecture through Lloyd Thomas’ summary in *Material Matters*, Lloyd Thomas suggests that such a process-oriented materialism can become more acute in architecture.

Architecture must explore materials [as a part of a network of forces and actions] if it is to use them responsibly, to open itself to the potentiality of new and ‘old’ materials and to reach an understanding of how materials may be productive of effects, both experiential and political, as it already has to some extent in relation to space.³²

This Architecture by Design thesis seeks to draw out the *poetics* of Athens’ marble rather than categorically reduce its materiality by passively awaiting an activation. In that sense, the engagement with Athens’ marble here is not attached to a quest for ‘authentic’ marble workings of past epochs or to purely technological and economic form-making considerations, both of which tend to induce fetishized and superfluous understandings of the material. These hylomorphic schemes fail to acknowledge the variability of Athens’ marble, or ‘marble’s complexity’ as De Landa would argue. Rather, marble is examined in this thesis as an expression of its materiality, where the materiality of marble presents itself as an ongoing historicity that is thick, and capable of providing a deeper understanding of the consistently contested relations between marble and Athens. Such ‘material attentiveness’ can offer a more nuanced approach to architectural production for the contemporary city of Athens.

MATERIAL AND MATERIALITY

Existing treatises on Athens’ marble are primarily attached to either historical, metaphysical and phenomenological studies conducted by art historians, archaeologists or architects who have an interest in heritage projects, or to ‘objective’ investigations that tend to evaluate marble by scientifically measuring the material’s technical properties. I echo Robert McAnulty’s ‘What is the Matter with Material’ (2005), in which he denounces recent uncritical obsessions in architectural discourse driven by technological fascinations with an exploration of material. Such engagement with the material is reduced to linear processes instead of incorporating the multiple fields of forces embedded in material’s materiality. McAnulty’s argument of ‘*thinking thick*’ is illustrated in his juxtaposition of Stan Allen’s ‘material practices’ with Robert Somol and Sarah Whiting’s post-critical ‘projective practices’. Allen presents a notion of ‘material practices’ as an open field “governed by the hard logic of matter and forces, which behave according to verifiable rules, but without regard for consistency or the conventions of rational expression.”³³ In so doing, Allen distances himself from hermeneutic practices and their discursive methods that concentrate on analytical, linguistic models and commentaries (for instance, Mark Wigley’s ‘built discourse’). Sadly Allen’s observations, McAnulty argues, have been translated into reductionisms that return to fixed, formal imagings and hylomorphic schemes. Somol and Whiting, on the other hand, present an alternative to the established paradigm of criticality —which, for Somol and Whiting, has been completely exhausted by disciplinarity— that they call ‘projective architecture’. Their projective architecture “shifts from the understanding of disciplinarity as autonomy to disciplinarity as performance or practice.”³⁴ Somol and Whiting explain that such a move from a critical architectural practice that focuses on reflection, representation, and narrative to a projective practice “does not necessarily entail a capitulation to market forces, but actually respects or reorganises multiple economies, ecologies, information systems, and social groups.”³⁵ McAnulty’s views resonate with Somol’s and Whiting’s theorisations. McAnulty sees in Somol and Whiting’s projective practice an intricate web of interactive relations that “allow matter to be configured into its appearance as the stuff of materiality,” abolishing the distinctions between the abstract and the tangible and therefore reconciling the immaterial and the material in what could constitute a nuanced approach for design and architectural production.³⁶ McAnulty concludes:

what we should remember is that it is not the thick itself that is of interest but the process by which the thick is thickened. Thickening organises matter into new relationships by deepening our sensitivity to resonant relations. When they succeed, we feel the rumble of exhilaration that comes from being ‘in the thick of things.’³⁷

McAnulty proposes the model ‘force-reaction-reorganization’ as a theoretical concept that could mobilize such a thickening. Drawing analogies with the dynamic organisations and re-organisations of matter naturally embedded in ecological structures, McAnulty notes that it is a ‘figureless-yet-configured’ articulation that causes change. In a sense, McAnulty’s model recalls Gregory Bateson’s definition of epistemology formulated in *Mind and Nature* (1979), framed around a similar triadic formulation and expressed as “*stimulus, response and reinforcement*.”³⁸ Bateson examines the three components and their complex cybernetic circuits of interactions as an interplay of learning; it is a constant matter of reinforcement, Bateson argues — ‘response’ reinforces ‘stimulus’, ‘reinforcement’ reinforces ‘response’, and so on. While articulating a broader definition for such active processes of knowledge (epistemology) Bateson writes: “As science, epistemology is the study of how a particular organism or aggregates of organisms *know, think, and decide*. As philosophy, epistemology is the study of the necessary limits and other characteristics of the processes of knowing, thinking, and deciding.”³⁹

I re-appropriate McAnulty’s and Bateson’s triadic formulations through the processes of this Architecture by Design thesis. The aim of the design inquiry into Athens’ marble is to ‘stimulate’ Athens’ marble materiality as something animate, vibrant and informed, to ‘respond’ and ‘react’ to Athens’ contemporary socio-political apparatus and to ‘reinforce’ or ‘reorganise’ ways to reinvent the constructive autopoietic and thick potentialities of matter/marble. Oscillatory processes between writing, recording, modelling, archiving, drawing and exhibiting present multiple means through which this thickened matter/marble is viewed, while simultaneously asserting marble as the agent that opens critical discourse. The manner of the search, Bateson argues, “is plain to me and might be called [...] *multiple comparison*.”⁴⁰ As Bateson underlines, an overlay of one image (what I will describe as an *opsis*) of the world with a tautologous image cannot intensify knowledge or make one come to terms with any material complexity. This thesis engages in a more complex and convoluted process to be sure that marble’s matter matters.

MATERIAL

In order to stress the complex oscillations, interactions and textures created by the diversity of these modes, the thesis takes the form (undoubtedly occasioned by its material) of three volumes. *Vol. 1* presents a set of text-led parts and chapters. Here the illustrations employed guide the reading of the textured theoretical arguments. *Vol. 2* takes the form of an ‘image gallery’, where the primacy of the textured visual argumentations take over the task of describing and analysing the broader situation. *Vol. 3* consists of an architectural portfolio that opens the analysis through the textured nature of design. *Vol. 1* and *Vol. 2* are closely related, but instead of imposing a fixed structure by punctuating *Vol. 1* with the imagery of *Vol. 2*, two separate volumes are created that allow for a flexibility in the manner one ‘reads’ the material; one can, for example, place one volume next to the other or read them as two stand-alone documents. *Vol. 3* advances a discourse on architectural design as it unfolds the techniques, methods and methodology employed for the ‘making’ of four speculative design propositions. Framed around three design briefs, the four design projects proposed here have both situational and programmatic specificity. This tripartite Architecture by Design presentation documents process rather than offering a resolution; this thesis promotes process as the only form of resolution. A resolution to form rather than a form of resolution. Form is only one mode of forming. This thesis thus opens and presents its own thickening of marble. All together, *Vol. 1*, *Vol. 2* and *Vol. 3*, offer a network of active and textured ‘readings’ of this Architecture by Design thesis. A considered

look through each volume before beginning any detailed reading is, however, recommended, and the exhibition recorded in the Front Matter of this document is intended to facilitate and encourage this initial immersion into ATHENS' IMAGE-OPSIS: *The Asperity of Attica's Marble*.

VOLUME 1: PART A AND PART B

Two contemporary situations trigger the theoretical discussions in both parts of this volume of the thesis (*Vol.1*). Part A starts with an examination of the damage done to the marble in *Syntagma Square* in 2012, while Part B begins with an exploration of the current methods of marble extraction in the underground quarries of Mount Pentelicon. More specifically, Part A sets up a speculative reading of the marble materiality of Athens through a multiple reading of a photograph taken in 2013 during a visit to Syntagma Square. The first chapter of Part A articulates various ways of looking at the photograph itself and also the marble depicted in that image, where marble becomes an architectural surface that dresses the urban space of the square as much as an image of the Athenian city. Roland Barthes', W.J.T. Mitchell's and Jacques Rancière's theorisations on 'image' are juxtaposed with Aristotle's understanding of *opsis*, while an exploration of the effects and affects of such architectural material surface (*opsis*) is elaborated through readings of Johan Joachim Winckelman's aesthetics regarding the 'ideality' of the whiteness of marble in the Hellenic classical antiquities, Semper's provocative theories on the polychromatic surfaces of those antiquities and Loos' modern 'ornamented' architectural spaces.

In the second chapter of Part A, I revisit Syntagma Square's damaged marble ornaments but this time from a social and political point of view, as I unfold a series of architectural competitions alongside a reading of Jacques Rancière's 'dissensus', Michael Hardt's and Antonio Negri's 'multitude', and David Harvey's 'right to the city'. The material transformations of the square, illuminated through these recent competitions, are also examined in parallel with the historiographies attached to the construction of the Hellenic Parliament building, situated in front of Syntagma Square.

Moving away from the Athenian city centre, the first chapter of Part B provides a close reading of the recent methods and methodologies employed for observing, representing and handling the marble in the productive quarried landscapes of Mount Pentelicon. Driven by the technological advancements of our digital era, the contemporary means of quarrying have now redefined the *techne* of the cutting of marble, and by extension the way of evaluating the material's image-*opsis*. These parametric (immaterial) representations of the material are juxtaposed with the sixteenth century layout drawings (*traits*) employed for the precise cutting of stone prior to the construction of complex architectural forms as these were meticulously re-drawn by Robin Evans.

Zooming out from the technicalities of drawing the material, the second chapter of Part B portrays the intricate material exchanges that have taken place between the marble landscapes of Mount Pentelicon and the marble city of Athens throughout the centuries, as I unfold the changing perceptions of the understanding of landscape through cultural geography and visual culture, mainly through Denis Cosgrove's and W.J.T. Mitchell's writings of the 1990s. The second chapter of Part B concludes with a commentary on a series of architectural design methodologies and that renewed interest in 'landscape' advanced by James Corner, Charles Waldheim and Stan Allen. The second chapter also adds an ecological dimension to those investigations by calling upon Mohsen Mostafavi's writings, in particular, Mostafavi's evocation of Félix Guattari's psychoanalytic 'ecosopic cartographies'. Reading Guattari in this light offers useful insights into how we might re-think the complex relationships between marble, the Athenian city, Attica's landscape and architectural design.



6 — *Landscaping of the area surrounding Acropolis*, Hélène Binet, 1989

7 — *Drawing from the series 'Attica Landscape'*, Dimitris Pikionis, 1949



MATERIALITY

Two exhibition catalogues, which image a different view of the marble materiality of Athens, have informed the layout of the three volumes of this thesis. The first catalogue accompanied the exhibition *Sentimental Topography* held at the Architectural Association School of Architecture in 1989. This catalogue gathers a series of projects that image the vision of the Greek architect Dimitris Pikionis (the same generation as Le Corbusier and Mies van der Rohe) to imagine an alternative 'Greekness' to those persistent neoclassical marble prototypes. Influenced by the artist Giorgio de Chirico, Pikionis produces a series of drawings entitled 'Attica Landscape' (1940-50) as a vehicle for promoting a notion of 'Greekness' that resides in the materials and techniques of the land rather than returning to classical idealized imageries of the post-renaissance period. Kenneth Frampton describes Pikionis' drawing investigations as a kind of an 'onto-topographical sensibility' that simultaneously raises issues of 'being' with 'sculptural' readings of the Hellenic context.⁴¹ Pikionis' most celebrated architectural project is the design of an urban pedestrian area around the Acropolis, commissioned by the city of Athens in 1954. By collecting ancient relics along with residual material — a result of the shameless demolition of the nineteenth-century neoclassical Athenian architecture — Pikionis presents on Philopappou hill an urban collage of past and present material fragments. For architect Dimitris Antonakakis, Pikionis' scheme becomes both "a mirror and also a form of protest that invites us to evaluate the way Athens had been demolished with unbelievable barbarity by the Athenians."⁴²

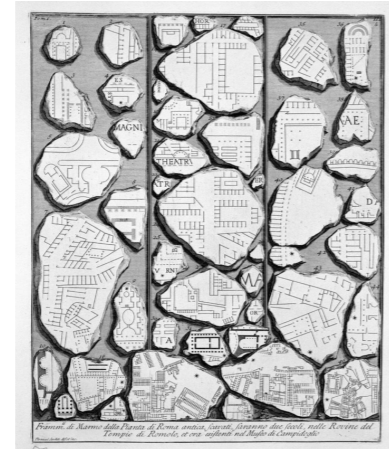
The second catalogue, published for the exhibition *The building of the Hellenic Parliament*, which took place at the Hellenic Parliament in Athens in 2009, consists of two volumes: the first includes visual and archival material (such as paintings, photographs and drawings) of that same building interwoven with a textual analysis of the politics of its construction, while the second volume presents a set of conventional architectural drawings (plans, sections and elevations) that acts as a record of the material transformations of the building, initially designed by Friedrich von Gartner in 1835 and compiled in tune with the dominant European neoclassical ideologies of the time.⁴³

By following the dimensions of these two catalogues I intend to place my thesis in series with them (and vice versa). Seeing the three volumes of this thesis in relation but also as an extension to these two catalogues, offers a literal thickening and virtual texturing of Athens' image-*opsis* and Attica's marble.

Part A

AN ATHENIAN MATTER OF MARBLE





2 — *Fragment of the Severan marble plan*, Giovanni Batista Piranesi, 1756

3 — *Scenographia Campi Martii*, Giovanni Batista Piranesi, 1762

This chapter opens with the following question:

Why does marble's white materiality matter in the contemporary city of Athens?

I will address this question as I unpack the complex imageries of Athens' marble, beginning with a multiple reading of the image used as the cover of Part A; Photograph 01, or what I have named 'Scenography of Syntagma Square', a title prompted by Piranesi's title for his re-castings of the Campo Marzio in Rome.¹

'SCENOGRAPHY OF SYNTAGMA SQUARE'

I will start with a straightforward description of *Photograph 01*. *Photograph 01* depicts damage done to (and with) marble in Athens' most celebrated public square, Syntagma Square, as a result of the violent material dislocations during the numerous political demonstrations that have taken place in the city since 2008. The most destructive of these demonstrations occurred on Sunday 12th February, 2012. This particular photograph shows the balustrade along the west side of the square with the marble veneer torn from the surface during this demonstration. The photograph also records a street art project undertaken in the aftermath of that single event, in which a street artist has 'highlighted' this damage.² To deepen this rather simplistic narration I would argue that the marble fragments, in conjunction with the traces of pink paint in the foreground of *Photograph 01*, expose a particular process of material de-construction, as well as the earlier techniques used in the construction of the square itself, while forecasting its potential re-construction. In architectural terms, the ground of the square ruined by the demonstrators reveals how marble was, in this specific instance, technically applied as decorative ornament. This ruination therefore uncovers, in other words, marble's relation to a structure and another material that lies beneath that ornament. Furthermore, the depth (or thinness) of that surface is exposed, along with marble's natural structure (its texture, density, and porosity), informing us of the intrinsic resilience that marble possesses as material. But what is perhaps more compelling in this image is the graffiti; the form of writing expressed through the pink paint. Although one cannot identify any written word in the conventional sense, the pink highlighter pen—that visual symbol associated with both actions of reading and writing/drawing—seems to illuminate an underlying concern for contemporary Athens. Similar to the way in which a reader highlights what matters in a text while reading, the street artist 'marks' a present absence of marble in the city. The pink paint follows the silhouettes and thresholds of the broken material, drawing our vision to a complex relationship between this actual absence of marble and a perceived absence of matter. The erratic line 'drawn' by the highlighter pen evokes, then, a set of intricate linkages among the political, social, cultural, symbolic, technical, technological and architectural properties of marble in that image and, I would argue by extension in the marble-image of Athens, that move beyond any straightforward description of *Photograph 01*.

Photograph 01 was taken a year after that destructive political riot of 2012. As the author of the photograph, I was, firstly, fully aware of the photograph's compositional and technical aspects as I set out to capture the scene.³ I was also familiar with similar imagery circulating through the mass-media representation of this particular act of ruination; in a sense, I approached Syntagma Square with a certain propensity.⁴ Photojournalistic essays, documentary films, newspaper articles, etc. (always accompanied by striking visual material) recorded a series of impromptu responses with regard to the fate of the square's marble materiality.⁵ For more than a year journalists framed a spectrum of images of Syntagma: images documenting the riot, in which protesters were breaking the marble veneers and hurling the fragments at the riot police (sometimes, the broken fragments were just thrown at the streets, causing them to splinter into even smaller pieces); images that captured the aftermath of the riot, when the streets seemed to be repositories of marble fragments; images of people touching the remaining broken



4 — *Damaged marbles*. Collage compiled from media coverage dating from 2008 - 2012



5 — *Methávrio (2669 fragments of marbles from Greek riots)*, Boris Lafargue, 2011

marbles; images of the detached marble dumped in skips; and images of art sculptures made of the tossed marbles. In all of these images, the notion of ruination was palpable and, to a certain extent, one might say also beautiful.⁶ However, these contemporary representations of deteriorating marble did not invoke the appreciation of ‘ruin’ (in the nostalgic, picturesque sense) that still haunts the ‘authentic’ marble structures of Athens.⁷ On the contrary, the headlines read: ‘Syntagma Square: a perpetual shame’, or ‘More than a year since Athens riots, Syntagma’s wounds are still gaping’.⁸ The photojournalistic view portrayed Syntagma’s situation as a fearful sight, to the extent that they became insistent on a particular type of *katharsis* for those marble veneers and, by extension, for the square. This response made clear that what emerges almost reflexively after such material and urban disruptions is the urge to restore ‘truthfully’ what is damaged.⁹ What is perhaps more remarkable though is that in most of these descriptions the material damage was referred to as traumatic, as negatively affecting the “display of the capital city;” what was clear was that this ruination was making Athens blush, or ‘turn pink’.¹⁰ Strangely, in this abundance of spectacle that dominated the daily news, the (literal) pink paint —that of *Photograph 01*— around the ‘traumatized marbles’ was not discussed. It seemed that it had escaped critique (or perhaps had just escaped my attention), even though graffiti in Athens (especially since 2008) plays an important role as the means of political protest.¹¹

During fieldwork conducted in February 2013, initially scheduled to draw out the extent of the material and urban damage, I was surprised to encounter that the broken marble fragments I had been following through the media for almost a year had actually, literally turned pink. The contemporary matter of marble I was interested in re-drawing had been explicitly highlighted (see *Photographic Essay 1: Pink Paint in Vol. 2*).¹² Although short-lived, this adventitious discovery, captured in *Photograph 01*, generated a framework for a hypothesis: moving away from conventional and traditional descriptions such as those photojournalistic views that solely present white marble through what Baudrillard might term its ‘theatrical value’ (a ‘whiteness’ that preserves the city’s ‘brightness’), I argue that *Photograph 01* (and the archive of associated photographs taken during that fieldwork) provides both the evidence of how white marble has repeatedly been employed as a solely aesthetic syntax, superficially as a veneer, but also of how the material transgressions perpetrated by the rioters, which in the first instance seem as unconsidered and superficial as that theatrical white marble, can be considered as openings to a deeper understanding of the issues propelling the protests. *Photograph 01*, Syntagma Square and the record of the broader architectural context of the city centre of Athens establishes a field of operations for the development of a deeper argument on Athens’ materiality that is elaborated throughout Part A of this document. More specifically, in *Chapter ii* I will stress a reading of the contemporary socio-politico-economic Athenian apparatus as this emerges from a reading of *Photograph 01*, while offering a parallel historical reading of specific marble edifices. However, I will suspend this particular analysis in order to offer a theoretical description of *Photograph 01* as a ‘traumatic photograph’. In so doing, I will engage with psychoanalytical understandings of ‘trauma’ and philosophical theorisations of the ‘image’, along with further interpretations of the latter through its relation with language as presented in Greek tragedy and in the fields of visual culture and art. Ultimately, I aim to present a more layered, textured and complex description of *Photograph 01*. At the end of *Chapter i* this description will open up an architectural discussion regarding a theoretical re-articulation of architecture’s primary element, that of the architectural façade, and of the façade’s construction as material image (*image-opsis*).

MATERIAL AND URBAN TRAUMAS AND TRAUMATIC IMAGES

The ‘trauma’ set forth by the photojournalistic recordings is rooted in an understanding of the term ‘trauma’ as a merely external wound; put simply, it was the violent gestures of the angry rioters that caused these wounds. Up to

a point the statement is accurate. Some rioters fell back on presenting their protests in reductive political language (and to a certain degree it therefore became similar to that political language to which they were opposed) and literally vandalized the city’s marble. In this sense Syntagma Square’s *destruction* came from the outside, from inflictions of violence rather than inquisitive means. However, the consequences of these gestures that brought to the surface an absence of marble—an absence highlighted by the pink paint around the present absent marbles— re-animates a deep ontological *deconstruction* regarding marble’s materiality as the image of Athens; this ontological deconstruction is far more profound than the straightforward mourning of the loss of marble’s ‘staging of materiality’ (in Böhme’s sense) that was promoted in the media. Throughout this research, I follow the impetus of this destruction of marble to encourage ways of deconstructing that romantic ideology that derives from a reduction of the material to ‘symbolic capital’. As a way of deconstructing such a fixed understanding, I will speculate upon the traumatized marbles of *Photograph 01* as a manifestation of a spectre of the material that awakens a repressed Athenian memory of the marble-image of the city.

The French philosopher Jacques Derrida’s reading of the spectre (or ‘*revenant*’) constitutes a pun on ontology that brings up a repetitive coming together of the Being of the past with that of the present and future; “one cannot control its [the spectre’s] comings and goings because it begins by coming back,” Derrida writes.¹³ This coming and going is the cornerstone of Derrida’s notion of ‘hauntology’. Crucially, for Derrida, this is not a historical project, a project in a linear chronological sequence, rather the priority of ontological presence is replaced by an existential curiosity that simultaneously focuses on the past, present and future by deeply sensing the presence of that which is absent. In an ‘*hauntological*’ sense, then, we might say that the rioters’ gestures and the street artist’s response to the aftereffects of the riots show how (to, like Derrida, invoke Marx and Engels) ‘a spectre is still haunting Athens, a spectre not of communism necessarily but of a present-absent consciousness.¹⁴ The common traditional perception of marble based on the glorified imagery of classical Athens, which prevailed during the creation of the modern ‘White City’ in the nineteenth century, is still ingrained into today’s aesthetic system (a system in which the Greek protesters are also implicated).¹⁵ Following Derrida, this particular perception of marble “is neither living nor dead [...]: it spectralizes; [...] it figures both a dead [...] and a ghost whose expected return repeats itself, again and again.”¹⁶ As that spectre returns to the present, the marble absence depicted in *Photograph 01* becomes a representation of a material trauma that also becomes internal, a trauma that weaves together absence with presence and present with past.

Understanding the trauma conveyed by the destruction of Athens’ marble edifices in this light could allow for a deeper future *kathartic* confrontation with the aftermath of the urban damage caused by the riots than the mere restoration of the conventional marble-image of Syntagma square. In his paper ‘Trauma within the Walls: Notes Towards a Philosophy of the City’ (2010), the Australian philosopher Andrew Benjamin proposes a conceptual framework for understanding and deconstructing ‘urban traumas’. Benjamin sees the city as “having been, in part, constituted by repression and thus by a form of systematic forgetting.”¹⁷ Through incidents inflicted by violence—such as the political protest of February 2012—that which is repressed comes to the surface, and what comes to the surface can also be productively worked and re-worked. Benjamin’s argument relies on a Freudian psychoanalytic interpretation of trauma on one hand, and a notion of *stasis* (civil strife) on the other. Benjamin’s text takes on an uncanny specificity for the Athenian trauma by relating Sigmund Freud’s theory to a reading of Aeschylus’ tragedy *Eumenides*, which takes place in the mythical and democratic city of ancient Athens.¹⁸ Benjamin notes that Freud’s notion of trauma, developed in his essay *Beyond the Pleasure Principle* (1920), maps a complex plural entity. Such an entity includes an original external event that has been internalized and a later experience (a ‘*deferred action*’ or ‘*Nachtäglichkeit*’ in German) that motivates that earlier repression and allows the event to manifest itself as traumatic; Benjamin writes, “the setting contains that which while present, its mode of being present has inscribed within it the presence of a memory that has been repressed.”¹⁹ Freud’s concept of the ‘deferred action’ becomes, for

Benjamin, that determining factor that entails the transformation and reinstitution of the original event, making what was initially repressed the place for further exploration. In addition to a Freudian interpretation of trauma, Benjamin also refers to a particular instance mentioned in *Eumenides* where the goddess Athena (the patron goddess of the city-state) constructs a ‘catastrophe’ in the city, after which fear (Benjamin rightly translates it as that to which we are unaccustomed) and uncertainty inhabit Athens. The precariousness of that unaccustomed fear, which Benjamin argues has similarities with the political notion of *stasis* —as “the element that cannot be mastered but which demands constant engagement guided by [worldly] wisdom” (Freud’s psychoanalytic formulation of the ‘deferred action’)— becomes for Benjamin the foundation for a democratic city, and a way through which the city can further explore and deconstruct its traumas; or even avoid its repressed memories in the first place.²⁰

In this instance, the distressing experiences that occurred during the specific political protest of February 2012 could be associated with Benjamin’s understanding and usage of Freud’s ‘deferred action’. During that protest, a particular repressed urban memory was not only identified but was also materialised as a material trauma, while the seriality of these events —the breaking and throwing of the marble has been a recurrent activity in similar dissents taking place in Athens since 2008— acts as a constant rehearsal of the traumatic event. However, instead of merely examining the acts of those protesters in such a manner, my suggestion here is to see *Photograph 01* itself as another form of ‘deferred action’ through which to process the complexity of that material and urban trauma in the contemporary Athenian city. In so doing, I will unfold another theoretical reading of this photograph as a ‘traumatic image’.

In ‘Reinventing the Medium’ (1999), the American art historian Rosalind E. Krauss writes that Walter Benjamin’s two essays ‘A Small History of Photography’ (1931) and ‘The Work of Art in the Age of Mechanical Reproduction’ (1936) denote the transition from a historic and mere aesthetic appreciation of photography to a theoretical and political one. Benjamin underlines in these essays a photograph’s impact on the formulation of a visual experience that holds a tension between human perception and the *aura* (or better the lack of ‘aura’) of the work of art —“the camera introduces us to unconscious optics,” Benjamin writes.²¹ Although Benjamin’s view lies in the technological advancements of the period, Kraus argues that it represents a critical point in the history of photography that in turn “marked the site [...] of many ontological cave-ins” in the twentieth century.²² Through Roland Barthes and Jean Baudrillard, and more specifically through their respective books *Camera Lucida: Reflections on Photography* (1982) and *Simulacra and Simulation* (1981), two directions towards a theory of photography as ‘paradigmatic medium’ are recognised. Following Benjamin’s theorisations, the art historian Margaret Iversen notes, Baudrillard’s and Barthes’ trajectories represent “the simulacral and traumatic moment of this [photography’s] history —first as the space of the depthless simulacrum, and then as the site of the return of the real.”²³ Here, I will engage more closely with the writings of Barthes, who offers a definition of the ‘traumatic photograph’ in his anthology *Image-Music-Text* (1977). However, the discussion will primarily be guided by Barthes’ later phraseologies, namely ‘the third meaning’ and the ‘punctum’. The two terms as photograph’s specific characters (*essence*) are beautifully extrapolated in the writings of Iversen: ‘What is a photograph?’ (1994), and *Beyond Pleasure: Freud, Lacan, Barthes* (2007). In particular, as Iversen unfolds Barthes’ theory of the photograph’s wounding ‘punctum’ she draws parallels not only with Benjamin’s early observations but also with a Lacanian psychoanalytic theory on trauma and a model of vision.

In order to understand Barthes’ philosophical theorizations on ‘photograph’ a broader setting is essential. In general, Barthes’ writings on the photograph (that also include cinematic images) demonstrate two distinct phases that refer to different philosophical stances. In *Mythologies* (1957) Barthes unmasks the *myths*, the ways in which mass culture signifies and manufactures (false) meanings. Acting as a semiologist Barthes demystifies



6 — Still from *Ivan the Terrible*, Sergei Eisenstein, 1944

in *Mythologies* the encoded messages of the photograph. In contrast, in his last book, *Camera Lucida*, Barthes ventures away from the critical project of structuralism and the discursive methods of semiotics, and thus eschews all sociological, political, historical—even technical— understandings of photography. Following instead a quasi-phenomenological approach, which for Iversen is loaded with both *affect* and *desire*, Barthes now seeks to theorize the elusive, ‘other’ meanings, the meanings of the photograph that can’t be linguistically signified. Such an approach, Iversen continues, offers a critique to the de-realizing simulacra that Barthes saw “as the ever-diminishing value of a simulacrum image-world.”²⁴ The Barthes of *Camera Lucida* makes photography “the means of conveying the unique perceptible or sensible quality of a being.”²⁵ Jacques Rancière supplements Iversen’s reading of Barthes, as the French philosopher further explains that ‘late’ Barthes makes amends for “the sin of having wished to strip the visible world of its glories, of having transformed its spectacles and pleasures into a great web of symptoms and a seedy exchange of signs.”²⁶ In *The Future of the Image* (2003) Rancière presents both phases as a different articulation of ‘image as speech’: “the former made its [image’s] silence speak; the latter makes this silence the abolition of all chatter.”²⁷ On the whole, Barthes’ trajectory from semiotician to ‘hauntologist’ offers a theoretical understanding of the photograph that is insightful to consider in a reading of *Photograph 01*.

Perhaps the first instance that Barthes recognizes photograph’s independence from any language-system stems from his definition of the ‘traumatic photograph’. In ‘The Photographic Message’ (1961), long before *Camera Lucida*, Barthes challenges semiology’s agenda when he writes:

The traumatic photograph (fires, shipwrecks, catastrophes, violent deaths, all captured ‘from life as lived’) is the photograph about which there is nothing to say; the shock-photo is by structure insignificant: no value, no knowledge, at the limit no verbal categorization can have a hold on the process instituting the signification. One could imagine a kind of law: the more direct the trauma, the more difficult is connotation; or again, the ‘mythological’ effect of a photograph is inversely proportional to its traumatic effect.²⁸

The understanding of trauma promoted by Barthes here suggests “a suspension of language, a blocking of meaning,” which sequentially implies that the subversive function of trauma cannot lead to any further theorization of the photograph itself.²⁹ Descriptions of *Photograph 01* as ‘traumatic’ in that sense would, therefore, stop at this single reading. Influenced by Brechtian aesthetics (as Barthes himself admits), this notion of the blockage of language-meaning reappears more expressively in his later essay ‘The Third Meaning: Research notes on some Eisenstein stills’ (1970), which paves the way for his most famous theorization of the photograph, that of the ‘punctum’ in which another understanding of ‘trauma’ seems to play a critical role.

Taking as starting point a still from Eisenstein’s *Ivan the Terrible* (1944), which depicts “two courtiers, two adjutants, two supernumeraries ... [that] are raining down gold over the young czar’s head,” Barthes acknowledges a threefold meaning in that specific photograph, and by extension in any photograph.³⁰ The first is the informational level; it is the level that includes “everything I can learn from the setting, the costumes, the characters, their relations, their insertion in an anecdote with which I am (vaguely) familiar,” Barthes writes.³¹ By analogy what I could read in *Photograph 01* as the image’s first meaning is a particular staging of the square through the ruined marble veneers. For someone who is also vaguely familiar with the city of Athens another connection is possible, this time between the square and the broader Athenian setting, that is, between the square and the building of the Hellenic Parliament that borders the eastern side of the square. Barthes dismisses at once an analysis on this level. Echoing his earlier writings in *Mythologies*, the second meaning of the photograph, Barthes proposes, is the symbolic. This level is further stratified into three other types of symbolism; namely the ‘referential’, the ‘diegetic’ and the ‘historical’. In the specific still, Barthes explains that the symbolism of the event (in particular, the shower of gold) could be further described though the imperial ritual (‘referential symbolism’); an understanding of gold as the sign of power and wealth (‘diegetic symbolism’); and lastly an understanding of gold through a broader “scenography



7 — Fleuri-Cut, Vein-Cut, 'Third (other)-Cut', Maria Mitsoula, 2014



of exchange” between psychoanalysis, economy, and dramaturgy (‘historical symbolism’). If the first level is that of communication, then this second level is that of ‘signification’ and that which demands an analysis through a semiotics. As a result of the multi-layered character of all the symbolizations and their complex intersections with other disciplines, such semiotics is ‘highly developed.’³² Barthes’ in-depth analysis of the ‘gold’ in that specific still could extend to a similar analysis of ‘marble’ in *Photograph 01*. The familiar perception of marble as the sign of beauty, opulence and power, would denote the ‘diegetic symbolism’ of *Photograph 01* while marble’s implications with various disciplines such as art history, architecture, and economy in the broader Western culture could be rethought as the ‘historic symbolism’ of the image. As for the ‘referential symbolism’, this would perhaps involve the actions of the political protest of 2012, which resulted in the breaking of the urban marble veneers. On the whole, Barthes’ symbolic meaning constitutes a complete sign, which is not only intentional but also belongs to a greater common symbolic lexicon that Barthes names ‘*the obvious meaning*’, that “comes to seek me out.”³³

Barthes “*read[s]; receive[s] a third meaning.*”³⁴ The semiologist cannot name the signified of the third type of meaning. However, the semiologist can clearly see —‘sense’— its penetrating traits. Contrasting it to the previous levels of communication and signification (or that of denotation and connotation, as it appears in the earlier essay ‘Rhetoric of the Image’ (1964) this third level carries a certain similarity with the ‘traumatic photograph’, in the sense that neither is structurally situated. Describing a moment of breakdown in the codes of signification, Barthes argues that the third meaning is the “passage from language to *signifiante*,” or to what produces mute signifiers. Barthes explains that he uses Kristeva’s theoretical concept of *signifiante*, which Barthes further elaborates in the *Pleasure of the Text* (1975) as that meaning that “*is sensually produced.*” He writes that *signifiante* “places the subject (or writer, reader) in the text not as a projection...but as a ‘loss’, a ‘disappearance.’”³⁵ Returning to the specific Eisenstein still, Barthes ‘reads’ as the third meaning of the photograph all those accidents that interrupt both histories and discourses. The texture of the make-up, the whiteness of the complexion, the hairstyle, among others are described as ‘poetical’ gaps that open up the photograph to an emotion; it is “what one wants to defend: an emotion-value, an evaluation.”³⁶ Relocating such ‘reading’ into *Photograph 01*, I would argue that the asperity of marble that is revealed now that the veneers are broken is such a ‘poetical’ gap. Barthes considers this level as an incomplete sign, which he names ‘*the obtuse meaning*’ —that “*which is blunted, rounded in form.*”³⁷ This description is further revised in his theorization of the ‘*punctum*’ presented in *Camera Lucida*. In the famous distinction between the ‘*punctum*’ and the ‘*studium*’ of the photograph, Barthes identifies two ways through which a viewer immerses themselves in a photograph. Through the ‘*studium*’, the viewer constitutes a generalized and internally coherent manner in order to decipher and interpret the photograph (something similar to ‘the second meaning’ of the photograph). Through the ‘*punctum*’, the viewer becomes surprised and struck by the photograph’s affective power; “*punctum* is a sting, speck, cut, little hole -and also a cast of the die [...] the accident that pricks me (but also bruises me),” Barthes argues.³⁸ Returning to *Photograph 01*, the pink paint marking out that ‘other’ type of marble ‘cut’ —when compared, for instance, to the common types of industrial marble cuts (i.e. *fleuri-cut* and *vein-cut*) that constitute further textures of marble’s materiality before the veneer was broken— is the ‘accident’ of the image that implicate the viewer’s subjectivity.

Taking on the similarities between the *punctum* and the third meaning, Iversen introduces another aspect of their relationship while pointing out their key differences. The third meaning of the photograph as a “supplement that my intellection cannot succeed in absorbing” is blunt, whereas the *punctum* of the photograph as a ‘detail’ ingrained in the viewer’s memory is sharp.³⁹ The bluntness of the third meaning implies, for Iversen, “an acknowledgment of subjective loss” where the sharpness of the punctum “reactivates a trauma [and] awakens the Real of that loss.”⁴⁰ Alluding to the famous Lacanian triad (Symbolic-Real-Imaginary) Iversen returns to a psychoanalytic definition of trauma as Barthes’ driving force for the theorization of the photograph; in so doing Iversen ultimately introduces another description of Barthes’ ‘traumatic photograph’. Influenced by Walter Benjamin’s writings of the 1930s

regarding the shock effects of the anti-auratic art (and by extension Benjamin's interpretation of the Freudian notion of trauma), Iversen argues that Barthes re-appropriates Benjamin's understanding of trauma. Yet for Iversen, Barthes' re-appropriation also acknowledges a Lacanian reading. Expanding the notion of the Freudian trauma, the French psychoanalyst and psychiatrist Jacques Lacan interprets trauma in *The Four Fundamental Concepts of Psycho-Analysis* (1973) as a 'missed encounter' with the 'Real'. Opposed to the 'Symbolic', The 'Real' is that which amongst his three psychoanalytic orders resists representation. Iversen's explanation is that Lacan's 'Real' depicts what is "cast out in the traumatic formation of the subject through its insertion in the imaginary and symbolic orders."⁴¹ Without submitting to any semiological analysis that would dogmatically signify a meaning and then in turn situating that meaning into fullness —as is the case with Lacan's 'Imaginary' (the internalized and narcissistic identification of an ideal ego)— according to Iversen Barthes' 'punctum' as Lacan's 'Real' holds fragmented, incoherent and un-coded qualities. The viewer experiences the 'punctum' of the photograph through a disruption in the field of vision.

Barthes refers to the Lacanian 'Real' at the beginning of *Camera Lucida*, hinting at the way this is registered in the perceptual field. He writes:

In the Photograph, the event is never transcended for the sake of something else: the Photograph always leads the corpus I need back to the body to see; it is the absolute Particular, the sovereign Contingency, matte and somehow stupid, the *This* (this photograph, and not Photography), in short, what Lacan calls the *Tuché*, the Occasion, the Encounter, the Real, in its indefatigable expression.⁴²

Lacan's investigation of the scopic drive in 'The Split between the Eye and the Gaze' offers a critique of the classical (geometrical and conscious) model of vision. As Rosalind Krauss notes, Lacan proposes "a dialectic between deictic and distich, [...] between this! and absence"⁴³ In classical optics, the existence of a single point of view creates a space of pointing (this!) that coordinates our visual field. This deictic quality (the 'eye'), Iversen writes, makes the viewer conscious and in control of what he perceives; this "self-reflective consciousness is founded on a misrecognition, which in the visual register would be called a 'scotoma' [...] a blanking out of something that is traumatic."⁴⁴ Iversen compares the deictic quality to the 'studium' of the photograph. This could also extend to the 'second' or symbolic meaning of the photograph if we return to Barthes' earlier essay on the Eisensteinian still. However, on the other hand, Barthes' punctum is closer to Lacan's Gaze and his "anamorphic stain;" it is what "escapes from the grasp of that form of vision that is satisfied with itself in imagining itself as consciousness," Iversen argues.⁴⁵ Following Iversen's line of thinking I would argue, then, that the pink paint around the broken marbles of *Photograph 01* —as the 'punctum' and by extension a 'missed encounter'— can be "experienced by the subject as a painful intrusion, as a trauma" that turns the viewer's gaze toward the unsymbolisable subject.⁴⁶ Such vision asserts the alterity of the subject and the subject of *Photograph 01*, opening up a possibility for rethinking the material and urban trauma of Athens beyond the pure externality attached to the violence inflicted by the rioters. Such '*animation*' of the image, as Barthes would argue, is "the attraction which makes [that specific photograph] exist."⁴⁷ *Photograph 01* is not a banal image.

DRAWING ON IMAGE-OPSIS

Leaving behind the framing of 'trauma' that guided the previous descriptions of *Photograph 01*, I will now follow Rancière's criticism of Barthes' *desire* to locate the 'punctum' of the photograph in relation to the 'studium' as the 'double poetics' of the image. For Rancière this desire "arbitrarily separates the polarity that causes the aesthetic image constantly to gravitate between hieroglyph [understood in a verbal sense] and senseless naked presence

[visual experience].”⁴⁸ The polarity to which Rancière refers is in fact an oppositional dynamic between ‘word’ and ‘image’ that can be traced back to the ancient metaphysical framework of Aristotle’s *Poetics*, and more specifically to Aristotle’s notion of *opsis* (image). In 1967 the philosopher Richard Rorty coins the term *linguistic turn* as a way of highlighting the primacy of textual representations and the importance of thinking about everything (culture, nature, society, politics, etc.) as ‘textually’ structured. As a response to Rorty’s linguistic turn, and by extension Aristotle’s separation of image from the power of word, the theorist W.J. T. Mitchell suggests another ‘turn’ in his *Picture Theory* (1994) that he names *the pictorial turn*, resonating with a broader shift in the theoretical understanding of image that is realised during the late-twentieth century through visual culture.⁴⁹ Mitchell explains that his visual ‘turn’ is “a trope, a figure of speech” that can open up the pluralistic nature of image rather than the metaphysics that underpin Rorty’s ‘linguistic turn’ or Aristotle’s *opsis*.⁵⁰ Holding certain similarities with his contemporary art historian Gottfried Boehm’s *iconic turn*, Mitchell points out that a series of similar ‘turns’ in philosophy have already made us question the “assumption that language is paradigmatic for meaning.”⁵¹ Such trajectory includes very different intellectual movements. Mitchell lists, for instance, Charles Sanders Peirce’s ‘icon/symbol/index’; Nelson Goodman’s ‘languages of art’; Jacques Derrida’s material-written traces; Michel Foucault’s rupture between “the discursive and the ‘visible’, the seeable and the sayable;” Merleau-Ponty’s discussions of the entanglement of the vision with the flesh of the world; and Ludwig Wittgenstein’s ‘captive image.’⁵² Mitchell argues that ‘showing’ and ‘telling’, or in other words representation and discourse, constantly overlap making impossible the formation of “a ‘theory of pictures’ or a ‘science of representation.’”⁵³ Instead of re-theorizing ‘image’ itself, Mitchell proposes then the compound term *image-text* as a way of seeing ‘showing’ in ‘telling’ and vice versa. Towards such a ‘future of the image’, Jacques Rancière describes a similar approach to Mitchell in his notions of *sentence-image* and the ‘aesthetic image’.

These recent inquiries into the matter of image offer another reading of *Photograph 01* and the marble depicted within that could potentially make us ‘witness’ even more than “the immediate alterity of the image —that [was] in the strict sense, the alterity of the One,” as discussed earlier through Roland Barthes.⁵⁴ Influenced by Mitchell and Rancière’s composite terms (*image-text* and *sentence-image*) I suggest here what I will call image-*opsis*. The reason for employing *opsis* is threefold. Firstly, I revisit *opsis* as image from the Aristotelian perspective attached to an ancient Greek rhetoric in order to discuss in greater detail that dialectic that had to be overturned through both Rancière and Mitchell. In Aristotle’s definition, however, there is another dimension that I shall argue is insightful to consider in the context of the contemporary city of Athens since, beyond the obvious distinction between *opsis* and language, Aristotle also designates the primacy of myth over *opsis*. The third reason for drawing on *opsis* is an architectural one. In Modern Greek, *opsis* (ὄψη) is the architectural drawing of the orthographic representation of a scheme as it appears externally from one side. Put simply, *opsis* is the drawing of an elevation or façade and even more generally *opsis* can be understood as any material surface. *Opsis* as façade calls then for a mechanical construction of view. Although the compound term image-*opsis* I suggest here might therefore seem tautological, it deliberately provokes a tension from one definition to the other, from the theorizations of ‘image’ as ‘image-text’ and ‘sentence-image’ to an implication of ‘image’ as *opsis* unique to the Greek context, as well as to an architectural reading of material surface.

Let me first outline Aristotle’s notion of *opsis* (ὄψις, in Ancient Greek). In the Aristotelian and also mythical Athenian context, *opsis* (or *opseos kosmos*) is one of the six parts that constitute the poetics of tragedy: *mythos* (myth), *ethos* (characters), *lexis* (word), *dianoia* (thought), *opsis* (image) and *melopoiia* (music). Tragedy, Aristotle argues, is the mimesis not of human life but of human actions and their enactments on stage, and Aristotle presents these six parts in three groups according to their mimetic capacities: (a) the parts which imitate, or in other words the objects of the representation (*mythos*, *ethos*, and *dianoia*), (b) the parts with which one imitates, or the media in which the action is represented (*lexis* and *melos*) and (c) the part which represents the manner of imitating

(*opsis*).⁵⁵ Aristotle’s attention is directed to the first triad and mainly to *mythos*; this triad, Aristotle argues, and not the lower half of the six parts determines the overall impression the dramatic work makes on the viewer.⁵⁶ Within this triad Aristotle puts particular emphasis on the importance of the language as the element that dictates the quality of the tragedy, since according to Aristotle word (*lexis*) belongs to the poet’s field of knowledge. By means of sensuous language, tragedy arouses the emotions of pity (sympathy) and fear (the ‘unaccustomed’ that Andrew Benjamin referred to through the tragedy of *Eumenides*) in the audience in order to bring about the *katharsis* of such emotions.⁵⁷ As for *opsis*, Aristotle relegates this to a secondary role. He writes,

What is fearful and pitiable can result from *opsis*, but also from the inner structure of events, which is the higher priority and indicates a superior poet. *Mythos* ought to be so structured that even without seeing it (performed), the person who hears its events experiences horror and pity at what takes place —such as the *pathos* that one experiences when hearing the *mythos* of *Oedipus*. To create such *pathos* through *opsis* is a less artistic method and requires material resources. [...] Those who employ *opsis* to create a sense not of the fearful but only of the monstrous have nothing at all in common with tragedy, as it is not every pleasure one should seek from tragedy, but an appropriate kind.⁵⁸

In a similar manner to Barthes ‘first meaning’ of the photograph (as examined through an Eisenstein still in the previous section), *opsis* for Aristotle is limited to the communication of the visual apparatus of the tragedy (i.e. the staging of the play, the costumes of the actors, etc.). In this sense, although *opsis* according to Aristotle produces concrete perceptual appearances these are insubstantial when compared to the appearances delineated by linguistic means when a tragedy is merely heard or read.⁵⁹ The *myth*, constructed by *lexis*, enables the viewer to re-imagine the action narrated instead of the reality present on the stage; such materialization of appearances created in the imagination would lead to *katharsis* —Aristotle’s pedagogical means of controlling the simultaneously sensual and intellectual registrations.⁶⁰ Aristotle’s separation of *opsis* from *lexis*, and the privileging of the latter, recall Plato’s rejection of the perceptible world of visible (real) appearances for the purposes of privileging an intelligible world. In ‘The Distribution of the Sensible’ (2004), Rancière discusses the passage from Plato to Aristotle as that which not only reflects two different conceptions of *opsis* (image) but also two different historical forms of political ordering. Plato’s conception of image as a simulacrum (of a painting, a poem, a stage) different to the ‘true arts’ marks what Rancière calls the ‘ethical regime of images’. Such a regime demonstrates “a matter of knowing in what way images’ mode of being affects the ethos, the mode of being of individuals and communities,” and also mirroring the semi-totalitarian state described in Plato’s *Politeia* (*The Republic*).⁶¹ Aristotle’s elaboration of mimesis is different to Plato’s suspicion of simulacra, since for Aristotle the most realistic mode of representation is a type of mimesis that enhances the knowledge of real life. Yet, since tragedy imitates an action rather than real life the ‘material resources’ that *opsis* entails can then only be obstacles to the real.⁶² Exemplified by the dramatic speech as well as the hierarchical political structure of the Greek *polis*, Rancière’s ‘representative (or poetic) regime of images’ reflects that tradition. This regime moves away from the ethical constraints of the Platonic vision and examines a particular coupling of *poesis* with *mimesis* as a set of hierarchies of the different mimetic expressions. Rancière writes: “I call it representative insofar as it is the notion of representation or mimesis that organizes [and also divides] these ways of doing, making, seeing, and judging.”⁶³

The distance established between *lexis* (readable or sayable) and *opsis* (visible) in the binary theories of classical poetics is rather elusive today. That “images may be read as texts is hardly news [...] it is the prevailing wisdom, the latest thing,” Mitchell argues.⁶⁴ In defining his ‘pictorial turn’ Mitchell insists on stressing that infinitely reciprocal relationship —*lexis* is grounded in *opsis* as much as *opsis* is grounded in *lexis*.

Whatever the pictorial turn is [...] it should be clear that it is not a return to naive mimesis, copy or correspondence theories of representation, or a renewed metaphysics of pictorial “presence”: it is rather a

post-linguistic, post-semiotic rediscovery of the picture as a complex interplay between visibility, apparatus, institutions, discourse, bodies and figurality. It is the realisation that *spectatorship* (the look, the gaze, the glance, the practices of observation, surveillance, and visual pleasure) may be as deep a problem as various forms of *reading* (decipherment, decoding, interpretation, etc.) and that visual experience or “visual literary” might not be fully explicable on the model of ‘textuality.’⁶⁵

Opening with a quote from Gilles Deleuze’s *Foucault* (1988), which describes the move from image to word (or from word to image) as un-linkable, Mitchell in ‘Beyond Comparison: Picture, Text, and Method’ (2002) proposes that composite concept ‘image-text’ as a possible way of rethinking the problematic gap and fissure to which Michel Foucault refers.⁶⁶ As with the definition of his ‘pictorial turn’, Mitchell avoids a definite description of his ‘image-text’ that could presuppose any fixed or uniform relations between image and word. However, in the introduction to *The Future of Text and Image* (2012), Mitchell delineates three possible ways of understanding the interactions of the two media. First, there is a version of the ‘image-text’ that can be manifested literally and thus presented in a very normative structure, for example, conventional understandings of photographic essays. Second, where the relationship between image and word can be figuratively displaced through metaphors, symbols and other representational tropes. Yet, it is “a third thing” that ‘image-text’ entails that can tackle “the traumatic gap of the un-representable space between words and images.”⁶⁷ Possibly hinting at Lacan’s theorizations of the unconscious Gaze, Mitchell describes this gap as “a site of conflict, a nexus where political, institutional, and social antagonisms play themselves out in the materiality of representation.”⁶⁸ Mitchell’s ‘image-text’ seeks to overturn the methodologies emerging from corporate and institutional comparative methods that result in the homogeneous articulations of the two previous versions of the image-text while facilitating a type of connectedness that explores the heterogeneous field of the two representational practices. As an example, the illuminated books composed by the English poet-painter William Blake constitute for Mitchell a paradigmatic way for visualizing ‘image-text’; Blake’s ‘image-texts’ successfully fluctuate between complete disjunctions (illustrations without any textual reference) and complex conjunctions (condensations and displacements of verbal and visual codes).

Mitchell and Rancière have followed similar paths (as Mitchell himself admits), both venturing to articulate that the visual-verbal forms of expression and perception cannot be distinguishable.⁶⁹ While Mitchell discusses this through the term ‘image-text’ and William Blake, Rancière employs Jean-Luc Godard’s video *Historie(s) du cinéma*. Through Godard’s film Rancière voices the existence of the ‘sentence-image’, a concept that can be also found in a novel, a theatrical performance and a photograph. Rancière notes:

The sentence is not the sayable [or readable] and the image is not the visible. By sentence-image I intend the combination of two functions that are to be defined aesthetically — that is, by the way in which they undo the representative relationship between text and image.⁷⁰

Rancière’s ‘sentence-image’ marks the transition from the representative (or poetic) regime of art —as elaborated earlier in the context of the Aristotelian *opsis*— to the third regime of art that Rancière calls the ‘*aesthetic regime*’. According to the sequence that Rancière establishes, each regime designates its emancipation from the previous one, and transforms the particular configurations of the sensible (*aistheton*) that the previous regime assumes. Rancière’s aesthetic regime as a historical development of the representative regime is thus liberated from the dichotomous structures of mimesis and their cause-and-effect relationships. Rancière writes: “I call this regime aesthetic because the identification of art no longer occurs via a division within ways of doing and making, but it is based on distinguishing a sensible mode of being.”⁷¹ The usage of ‘sensible’ here is, of course, attached to what is perceptible by the senses (*aistheton*) instead of what is prudent, since for Rancière the configuration of that *aistheton* (or the ‘*distribution of the sensible*’ in his words) is what creates a new configuration of relationships between productions, sense perceptions, thoughts, and actions.⁷² If the role of the text under the representative

regime is that of the conceptual linking of actions and the role of the image is “the supplement of presence that imparted flesh and substance to it,” under the re-distribution of the sensible that occurs with the transition to the aesthetic regime this logic is overridden.⁷³ In the ‘sentence-image’ as an example, Rancière continues, the role of the text (as sentence) still remains that of linking but the image has now an active and mainly disruptive function; the sentence component of the ‘sentence-image’ holds the paratactic quality of continuity while the image component breaks that continuity, providing an infinite oscillation between the two poles. In such heterogeneous configurations, Rancière notes, words and images do not always have to be physically present, since “the visible can be arranged in meaningful tropes” where the sayable/readable “deploy[s] a visibility that can be blinding.”⁷⁴ Here, Rancière sets up a critique of Barthes’ ‘double poetics’ of the photograph. According to Rancière, the photograph (among other media) holds a triple power:

[...] the power of singularity (the *punctum*) of the obtuse image; the educational value (the *studium*) of the document bearing the trace of history; and the combinatory capacity of the sign, open to being combined with any element from a different sequence to compose new sentence-images *ad infinitum*.

The discourse that would salute ‘images’ as lost shades, fleetingly summoned from the depths of Hell, therefore seems to stand up only at the price of contradicting itself, transforming itself into an enormous poem establishing unbounded communication between arts and mediums, artwork and illustrations of the world, the silence of images and their eloquence.⁷⁵

What Mitchell and Rancière’s theoretical frameworks undeniably suggest is a radicalization of the Aristotelian notion of *opsis* as image. Let me now bring together this radicalization and the other connotations of the word *opsis* in returning to *Photograph 01* to offer a last, speculative reading of its imagery as image-*opsis*. If we accept that *Photograph 01* is spectral (it carries a hauntological presence) and an ‘educational value’ (*studium*) of marble, then rather than seeing the broken, pink-painted and absent marbles of *Photograph 01* as a depiction of marble as decoration (marble-as-*opsis* in the Aristotelian sense, i.e. affective but ultimately subservient to the richer explication possible through *lexis*) we might come to see the ‘textural’ dimensions to this *opsis* that, ‘combined with elements from different sequences’, carries the *myth* of an idealized Athenian city (‘the combinatory capacity of the sign’). In this way, where *myth* in Aristotle’s writings represents the consequential narrative of the operations of a heroic society and *opsis* is the mere ornament to that *myth*, in contemporary Athens it is through the marble *opsis* that the *myth* and a particular ‘image’ of the city is further constructed. It is a *myth* that the protesters embrace when they deconstruct that marble *opsis* but also a myth highlighted by the street artist. More importantly, it is a *myth* that the state materializes in order to re-inform that ideal ‘image’ of the city (as I will elaborate in **Chapter ii**). Therefore, while these individuals and institutions treat marble’s material surface as pure decoration, all act on an understanding of marble’s *opsis* as an image that holds some ‘textural’ ground. What is at stake when I propose to see *Photograph 01* as image-*opsis* is marble’s *opsis*. In reading *Photograph 01*, then, I suggest a move towards a deeper understanding, and also an enrichment, of the operative quality that marble as both image and architectural surface can bring to the image of the contemporary city of Athens; *Photograph 01* can be a ‘place of becoming’ rather than a re-articulation of the fixed mythological character of marble. *Photograph 01* as an image-*opsis* of Athens then visually draws to our attention that conventional and romantic perception of marble (already incorporated in our sensorial experience) and at the same time exposes the precariousness of its ‘textural’ and mythical associations. This protracted (convoluted perhaps) description of *Photograph 01* suggests, as Rancière would argue, such images as this can never be “a simple reality.”⁷⁶

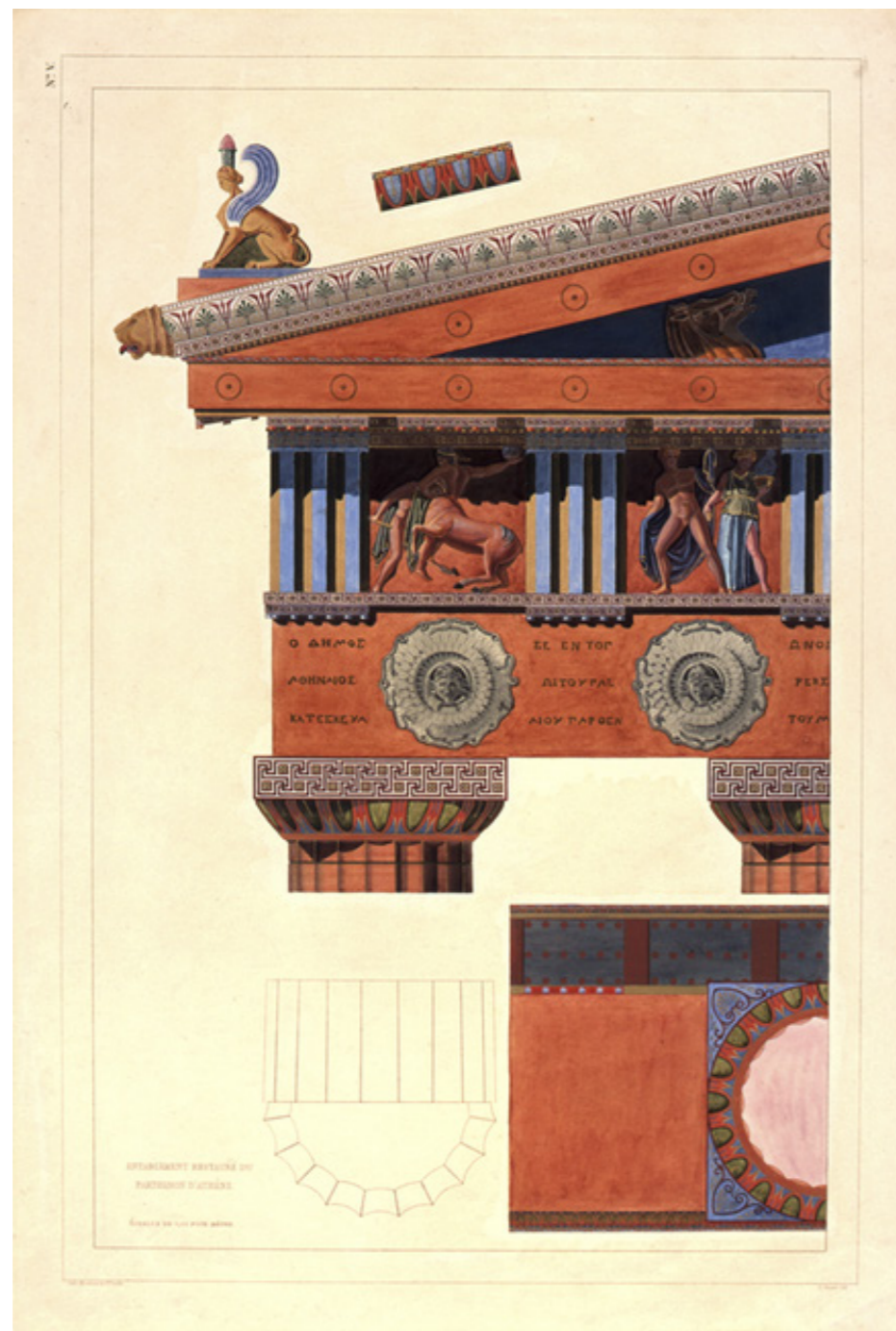
RESURFACING OPSIS IN ARCHITECTURE

Just as opsis as image has undergone a reaffirmation of its mythologies, so has opsis as façade. As that binary opposition between opsis (as image) and word, opsis as façade or even more generally opsis as any architectural surface (as the marble opsis depicted in Photograph 01) is often seen through a pervasive opposition within the Western tradition of architectural history. More specifically, opsis in architecture is either discussed as a ‘superfluous’ decoration —an ornament produced purely for ‘pleasure’— or in the context of its ‘textural’ significance as ‘deep skin’ (borrowing Paul Valéry’s phrase), and its treatment fluctuates from one to the other in different historical periods as one prioritized over or subordinated to the other. A number of architectural critics have recently returned to the importance of the architectural opsis for the practice of design. Central to this contemporary interest is the impact of digital technologies on the processes of architectural production.⁷⁷ However, rather than challenging the theoretical complexities of the relationship between the decoration-‘deep skin’ dialectics of opsis, this ‘digital turn’ instead turns opsis into a fashionable trend, while its materiality becomes merely a measurable and quantitative surface. Such uncritical approaches result in widening the gap between the two poles further, while the relationship between opsis and architectural design is further thinned-out. Andrew Benjamin’s paper ‘Surface Effects: Borromini, Semper, Loos’ (2006) starts with a similar observation, as Benjamin attempts to offer a way of releasing the potential capacities of opsis. In so doing, Benjamin provides a productive decontextualisation of those architectural historical genealogies that have already provided theorizations of opsis: “it is only by construing the history of architecture theoretically that it will become possible for history to play a role in [...] modalities of practice,” Benjamin argues.⁷⁸

Benjamin tests the hypothesis that *opsis* is space-making and space-defining —that it carries and registers matters of program, material, and affect— by bringing together three architects from three different epochs, namely the seventeenth-century Italian architect Francesco Borromini, the German architect Gottfried Semper of the mid-nineteenth century and the Viennese architect Adolf Loos of the early twentieth century. Benjamin’s re-articulation of *opsis* (or what Benjamin calls architectural surface) as a dynamic and generative field that produces difference echoes Deleuze, according to whom “the surface and that which takes place at the surface is what ‘renders possible.’”⁷⁹ Benjamin writes:

surface should be understood neither as a merely structural, nor as a merely decorative aspect of building. Rather the creation of surfaces (interior walls or façades and so on) organises a program which allows for a reading of the space of architecture. The latter formulation —the space of architecture— has a double register. On the one hand, it refers to the specific architectural works, to particular buildings, and how they effect and affect the subject. On the other hand, it makes a broader, theoretical point about the way that architecture is conceived as an effect of the possibilities inherent in the materials used in the making of surfaces.⁸⁰

Prompted by Benjamin’s hypothesis emerging through his critical commentaries on Borromini, Semper and Loos’ theories and practices, I shall open up a discussion of the two architects Semper and Loos as a means of concluding *Chapter i* of Part A. The main reason for returning to such a discussion here is because the historical context established between these two architects —which is comprehensively described in Harry Francis Mallgrave’s introduction to Gottfried Semper’s *The Four Elements of Architecture and Other Writings* (1989) as well as in Mark Wigley’s *White Walls, Designer Dress: The Fashioning of Modern Architecture* (1995)— sets up that broader Western intellectual background under which marble as *opsis* was re-introduced to Athens in 1835 as a particular extension to neoclassical architecture and as a way of imaging the modern metropolis.⁸¹ Moreover, an anachronistic reading of both Semper and Loos can assert another way of thinking about the operation of the *opsis* of marble in relation to the marble-image of contemporary Athenian architecture (see *Drawings: Syntagma Square’s Ground as an Image-Opis of Athens* in Vol. 2).



8 — Detail of the Parthenon Temple, Gottfried Semper, 1836

Let me begin with Semper's legacy, and also with the way Benjamin reworks and brings Semper's legacy into his own argument. Benjamin begins by juxtaposing Semper's architectural theorizations with John Ruskin's definition of architecture. In *The Seven Lamps of Architecture* (1849), Ruskin presents architecture as an art that "adorns the edifice raised by man for whatsoever use."⁸² Without focusing on the influence that nature or religion had in Ruskin's thinking, Benjamin translates Ruskin's formulation as a contrast between 'adornment' and the 'pure presence' of architecture, that is, architecture's function ('edifice'). Adornment is for Ruskin a mere after-effect distinct from that on which it is placed and it is in this sense that Ruskin's understanding provides "the backdrop against which both the radicality and the commitment to the form of materialism that structures Semper's conception of architecture can be understood," Benjamin notes.⁸³ Contrary to Ruskin, Semper's *The Four Elements of Architecture* (1851) explores the role of 'adornment' through the function of the 'hanging carpet' (or 'true wall') as key to the theoretic origins of architecture; through adornment, along with his four 'motives' (hearth, roof, enclosure and mound), Semper redefines the realm of architecture. Moving away from Marc-Antoine Laugier's notion of the 'primitive hut' and Quatremère de Quincy's concept of 'cabin', the woven surfaces and the colourful patterns of the 'textile wall' constitute in Semper's account a creatively enclosed spatiality. Such *opsis* hold for Semper cultural and social dimensions; "their texture, their sensuous play, their textuality, like that of the language [...] opens up a space of exchange," Wigley explains.⁸⁴ For Semper, Wigley continues:

Architecture begins with ornament. It is not just that the architecture of a building is to be found in the decoration of its structure. Strictly speaking, it is only the decoration that is structural. There is no building without decoration. It is decoration that builds.⁸⁵

Semper's discussion on the evolution of *opsis* as the means by which spatiality is constructed was instigated by the discovery of polychromatic antiquities; Semper's theorisations are quite pertinent in a reading of the white Athenian marble. Although the theory of polychromy was the driving force behind Semper's writings, the arguments surrounding the polychrome debate that haunted architectural theory in Germany and France in the mid-nineteenth century were rather acute. At first driven by Quatremère de Quincy's theory of polychromy published around 1800, Semper, along with Jacques Ignace Hittorff, was one of a number of colour 'extremists', infamous for their polychromatic renderings of the antiquities. They were directly opposed by another group of art historians and archaeologists writing from the early 1750s who passionately denied polychromy altogether.⁸⁶ In his rather influential *History of Ancient Art* (1764), Johan Joachim Winckelmann praises the ancient Greek marble constructions, especially compared to the Roman ones, portraying them as the ideal classical model. Winckelmann delineates the aesthetic premises of that ideal as he brings together the beauty of pure form and pristine whiteness; "the whiter the body the more beautiful," Harry Francis Mallgrave highlights.⁸⁷ Archaeological evidence however, including Semper's own discoveries made when visiting the ancient sites (including the Parthenon in 1831), confirmed the existence of traces of paint on numerous monuments. Semper's observations, published as a small pamphlet entitled *Preliminary Remarks on Polychrome Architecture and Sculpture in Antiquity* in 1834, reinforce his belief that the ancient architectures are now 'naked' (in the sense of pure white marble mass) simply because the coloured layers have been weathered off.

Semper's appreciation of colour continues to be prominent in his *The Four Elements of Architecture*, where he claims that polychromy as a non-decorative 'material' was introduced into Greece from the East, and in particular through the primal activity of looming found in the Assyrian civilizations. It reappears in *Style in the Technical and Tectonic Arts; or Practical Aesthetics* (1863), where Semper examines polychromy as enabling the emancipation of form from a notion of naked structural necessity. Mallgrave further explains that, for Semper, the solid constructions of Greek antiquity carry the Oriental "mode of surface decoration (the structural-symbolic meaning) [understood as both artistic and expressive] intrinsic to hollow-body construction" but as a "second masking of the already masked technical-symbolic function" and it is in this sense that the polychromy of those

constructions becomes spiritualized.⁸⁸ Supplementing Mallgrave’s interpretation, Wigley argues: “Architecture is literally in the layer of the paint that sustains the masquerade in the face of the new solidity;” quoting from Semper’s *Style* Wigley adds: “[the paint] was the most perfect means to do away with reality, for while it dresses the material, it was itself immaterial.”⁸⁹ The Athenian and Hellenic marble therefore acquires another dimension of immateriality in Semper’s thinking, Wigley continues:

The marble is transformed from the traditional paradigm of authenticity into a ‘natural stucco’ a smooth surface on which to paint. Its smoothness is no longer identified with the purity of its forms, but as the possibility for a certain texture. Architecture is no longer the decoration of a naked structure. The sense of the naked is only produced within the supplementary layer itself. [...] All differences are literally inscribed in the surface.⁹⁰

What Semper’s thesis first contradicts is the hegemonic view that emerged from Winckelmann’s aesthetics. More importantly though, by emphasizing the importance of polychromy, Semper challenges the classical hierarchical relationship between form and idea: colour “becomes the material instance of form [...] the affirmation of the materiality of form,” Benjamin writes.⁹¹ Semper’s way of seeing *opsis* through polychromy dissolves, then, the distinction between structure and ornament while turning one’s gaze towards the interiority of architecture. Citing Semper, Benjamin explains that instead of solely accounting for external factors (symbolic values, as was the case in Barbarian architecture) the Greek ornamentations “are emanations of the constructive forms and in the same way they are the dynamical function of the parts to which they belong.”⁹² The notion of polychromy therefore becomes rooted in Semper’s elaborations of the ‘textile wall’ as that which constitutes the original enactment of spatial essence and enclosure (*Umfriedung*), as well as central to his thesis on ‘dressing’ (*Bekleidung*) presented in *Style in the Technical and Tectonic Arts*.⁹³ Semper’s ‘dressing’ similarly speaks of an *opsis* interlinked with both form and idea, inseparable from material, materiality and the technique of such materiality; “it is the ‘mastery’ of material,” Wigley supplements.⁹⁴ In Benjamin’s re-activation of Semper then, *opsis*

becomes the history of the way materials realize the wall effect. The wall effect is spatial division, although only ever as a result. Hence, it becomes possible to question both the quality of the space produced and the material creating it since spatial division is produced (effected) by the work of specific materials.⁹⁵

Moving to the early twentieth century, Semper’s theorizations on the principle of ‘dressing’ take another form, as the decorative attributes of *opsis* are rejected in favour of complete purification. “Semper’s figurative masking of reality is transposed [...] into a literal mask,” Mallgrave writes, as the search for the essence of architecture starts to evolve around the ‘feeling’ of space.⁹⁶ According to Wigley, this shift from “the sensuality of decoration to the abstraction of form through the progressive removal of ornament” can mainly be attributed to Adolf Loos’ essay ‘Ornament and Crime’ (1908).⁹⁷ In this essay, which is seen as the key formulation of modern architecture (appropriated by Le Corbusier, among others), Loos argues that “ornament is no longer organically related to our culture, it is also no longer the expression of culture” and this is why “[t]he evolution of culture is synonymous with the removal of ornament from objects of daily use.”⁹⁸ This stripping of ornamentation towards the creation of ‘mute’, white façades was considered a demonstration of intellectual power. However, many architectural theorists would later become very critical of Loos’ position. Colin Rowe, for instance, voices his concern regarding the loss of the metaphoric gesture of the vertical surface to generate effects and in turn affect the observer.⁹⁹ Rowe writes:

The vertical surface can only remain the threshold of understanding. For while the plan, as a document addressed to the mind, will always be the primary concept, the vertical surface, as a presentation addressed to the eye, will always be the primary percept, will never be other than the beginning of comprehension.¹⁰⁰

Usually, Semper’s views are discussed as contradictory to those of Loos and his advocates; the former promote the ‘textile wall’ as the primary architectural element and its supporting structure as a secondary matter, while the latter regard the excessive decoration as a mere sign of cultural degradation. However, for Benjamin (reiterating

Mallgrave and Wigley’s observations) the ‘ornamental’ conception of architecture assigned to Loos must be read beyond the degeneracy of the ‘criminal’. Loos’ “distancing of ornamentation,” Benjamin notes, “needs to be read [...] as a move to the centrality of the surface,” and certainly not in opposition to Semper’s theories.¹⁰¹ Loos is not against ornament as such, rather Loos offers a critical re-figuration of *opsis* within modernity, ultimately sublimating rather than suppressing ornament. In Loos’ ‘Principle of Cladding’ (1898) for example, which for Wigley is a direct reference to Semper’s thesis on ‘dressing’, Loos argues that each material holds an intrinsic language of form and it is through the operation of that material cladding that form emerges. He stresses however that cladding cannot be represented through ‘dressed’ materials that merely imitate, as this would be pure fetish (and thus ‘crime’). In other words, cladding for Loos is not separated from its relationship to material and this is what brings his thesis closer to Semper’s thinking on ‘dressing’. The presence of cladding relates to the materiality of space and is therefore integral to the interiority of architecture. For Loos then, “the perception of the building becomes the perception of [...] that layer of cladding,” a layer that stands between structure and ornament and “within which all distinctions are produced by being inscribed into the surface,” Wigley adds.¹⁰²

Looking at the heavily ‘ornamented’ interiors of *Haus Müller* (1930), for example, such as the patterned floors, sumptuous veined and polychromed marble sheathings, Oriental carpets, etc. (that from a Loosian point of view are not decorative but space-creating) these materials ‘dress’ (create) space while generating effects. In his essay ‘Architecture’ (1910), Loos argues that this is precisely the role of architecture: to arouse moods and then “give to these moods concrete expression.”¹⁰³ Loos writes:

the *architect*, first senses the effect that he intends to realize [...] in his mind’s eye. He senses the effect that he wishes to exert upon the spectator: fear and horror if it is a dungeon, reverence if a church, respect for the power of the state if a government palace [...]. These effects are produced by both the material and the form of the space.¹⁰⁴

Of course, Loos’ notion of spatiality is not merely the result of ‘cladding’. The volumetric dimension of his *Raumplan* works in conversation with the material surfaces and it is in that sense the Loosian *opsis* on the whole, Benjamin argues, which becomes a “surface [that] distributes programmatic differences.”¹⁰⁵ Extending Benjamin’s observations even further within modernity, we could, for example, similarly evaluate Mies van der Rohe’s *German Pavilion in Barcelona* (1929). Using Loos’ materials, Mies creates a space that “becomes a function of the specificities of the materials,” suggests architectural theorist Michael Hays.¹⁰⁶ Even the representations of the German Pavillion made by van der Rohe capture architectural space as luxuriating in the operation of the *opseis* of materials. In these beautiful collages, the space of the drawing, and thus the space of architecture, is ‘dressed’ by an assemblage of images depicting materials such as travertine, marble, tinted glass, chromium, statues, etc. Following Benjamin’s historical re-activation, then, in conjunction with Mallgrave and Wigley’s insightful observations, *opsis* becomes a matter of material existence that is capable of articulating spatial conditions, able to transgress the strict boundaries between the decoration-‘deep skin’ dialectic. Situating *opsis* in architecture as a plural field of activity — “a locus of plural possibilities” — that discerns potentiality, makes one question the way marble’s *opsis* has been represented in the modern and contemporary context of Athens. I will discuss this further in the next chapter through the modern building of the Hellenic Parliament and the contemporary context of Syntagma Square.¹⁰⁷



9 — Interior of Haus Müller, Prague, Adolf Loos, 1930



10 — Interior Perspective of German Pavilion, Barcelona, Mies van der Rohe, 1928

12-02-2012: WHEN ATHENS 'LOST ITS MARBLES' (AGAIN)¹⁰⁸

Keeping in mind the previous theoretical and architectural explorations of *Photograph 01* as image-opsis, let me start this second chapter of Part A by extending these investigations into an analysis of Athens' contemporary political context. Together, the broken, pink-painted and absent marbles of *Photograph 01* speak of concerns about Athens' current politics. In what follows I will further examine the complexity of the political and aesthetic syntaxes evident in this contemporary image. In relation to social practices and architectural design, I will unfold a set of histories of the contemporary marble ground of Syntagma Square (*Marble Opsi* 2) and the marble façade of the modern Hellenic Parliament (*Marble Opsi* 1). I will do this simultaneously through this chapter and by drawing out, or, in other words, by presenting a site reading of the context into which I speculate and further elaborate the materiality of Athens' and Attica's marble (see *Design Briefs: Present Material Absence* in Vol. 3).

Since 2008, the year that signifies the start of the ongoing global financial crisis, Syntagma Square has been an urban field of constant political contestation, principally due to the presence of the Hellenic Parliament at the head of the square, the symbol of the country's political power.¹⁰⁹ As already stated, the square suffered major ruination on Sunday 12th February 2012, which is (at the time of writing) the most recent in a series of damages inflicted by rioters since December 2008.¹¹⁰ That same day, the Greek government approved a deeply unpopular austerity bill in order to secure another bailout from the International Monetary Fund (IMF), the European Union (EU), and the European Central Bank (ECB).¹¹¹ The anti-austerity riots spread across the axis of Panepistimiou Street that connects Syntagma (*Constitution*) Square to Omonoia (*Concord*) Square, where most of the public administrative and financial institutions are situated. Using hammers and crowbars some protesters stripped a significant quantity of white marble from several prominent edifices. These broken marbles formed rudimentary munitions that were hurled at the riot police.¹¹² The riot on the 12th February resulted in the damage of nine listed buildings, while at least a hundred other edifices were defaced.¹¹³ The quantity of broken marble collected the following day was estimated at around fifty tons at a value of around two million euros. For most Athenians these gestures were 'nasty' as, in their eyes, "marble shows nobility [...] and character."¹¹⁴

The Greek architect Yoryos Tzirtzilakis interprets these gestures differently. Tzirtzilakis discusses how what he calls "the flight of the stone" by multitude of people (people with veiled or 'faceless' faces) constitutes a collective, political act that not only encompasses the aesthetic but also forms the basis for the formation of new political subjects. In his paper, Tzirtzilakis reflects on two photographs. The first depicts a multitude of broken stones scattered over an Athenian street, the second captures the moment that a singular protester is throwing one of these stones. For Tzirtzilakis, the two images (collectively) speak of an animate stone that "encapsulates the embodiment of the multiple body."¹¹⁵ Tzirtzilakis moves on to connect such a hypothesis with a mythological and etymological description of the re-creation of the human race, specifically the myth of *Deucalion* and *Pyrrha*. This myth narrates Genesis (as presented in Ovid's *Metamorphoses*), and establishes for Tzirtzilakis a linguistic connection between the body of the stone and a multitude of people.¹¹⁶ According to the ancient imagery, when Zeus decides to destroy the human race by the Great Flood he asks Deucalion to build an ark that he and his wife, Pyrrha, would occupy in order to reach Mount Parnassus. Upon landing on the mountain, Themis advises the two sole survivors to cover their heads and throw behind them the 'bones' of their 'mother'. The couple interprets 'mother' as land (mother earth) and 'bones' as the body of that earth (the material of mother earth), and Deucalion and Pyrrha throw the mountain's stones. In flight the stones start to lose their rigidity until they eventually turn into flesh. This myth is linguistically significant in Greek. The word stone (*laos*, or *λάας*, in ancient Greek) and a multitude of people (*laos*, or *λαός*) share the same root, which is also the suffix in the compound word *Hellas* (the official name of the country) and by extension *Hellenas* (a Greek).¹¹⁷ What Tzirtzilakis extrapolates from these readings is that the act of 'the flight of the stone' that takes place in the contemporary city of Athens is an act of

11 — *Deucalion and Pyrrha Repopulate the Earth*, Hendrik Goltzius, 158912 — *Rioter throwing marble at the police*, TMCNet, 2012

dissent (employing Rancière’s theorization of the term) that brings together mythological symbolisms and ancient institutional agencies (such as the notions of *demos*) as well as that contemporary political concept of ‘multitude’, formulated by the collective project of Antonio Negri and Michael Hardt.

I will expand a little on these concepts. Rancière develops his dissident politics-aesthetics in *Dis-agreement: Politics and Philosophy* (1999), and more recently in *Dissensus: On Politics and Aesthetics* (2010), as an antidote to democratic theories and practices that have consensus at their core. Rancière writes about the tension between dissensus and consensus:

Disagreement [or dissensus] is not the conflict between one who says white and another who says black. It is the conflict between one who says white and another who also says white but does not understand the same thing by it or does not understand that the other is saying the same thing in the name of whiteness.¹¹⁸

Consensus refers to the configuration of a field of perception-in-common, an instance of what I have called the ‘distribution of the sensible’, even before it becomes a predisposition toward deliberation. [...] its essence is the affirmation of the preconditions that determine political choice as objective and univocal. “Consensus discourse” in political thought asserts that political action is circumscribed by a series of large-scale economic, financial, demographic, and geostrategic equivalences.¹¹⁹

Rancière argues that our societies have established a rational agreement regarding a common that focuses on pacifying all political differences while radicalizing wrong. Consensus, then, as a “machine of power [and vision],” reduces politics to homogeneity and democracy to a saturated mode of the ‘distribution of the sensible’.¹²⁰ Put differently, consensus shrinks socio-political space by creating easily identifiable subjects with specific interests and values. In that sense, common refers to the management of wealth distribution or to what Rancière names ‘police’. On the other hand, dissident politics is a local, precarious, and contingent activity that disturbs the saturated order established by that ‘police’. Thus although, both disagreement and dissensus are usually understood as oppositional, Rancière sees in these terms an opportunity to delineate ambiguities and discrepancies over the common as the necessary ingredients for its efficient re-formulation. Disagreement and dissensus question the meaning of that certain ‘same’ (common) by changing the way political subjects are seeing, thinking and acting and, thus, retraces the instituted divisions of the given perceptive field of the common. Similar provocations in rethinking politics through a process of an emerging collective political subjectivation come from Negri and Hardt, who in their *Multitude: War and Democracy in the Age in Empire* (2004) theorize ‘*multitude*’ as an open and inclusive network “that provides the means of encounter so that we can work and live in common.”¹²¹ Written as a continuation of their *Empire* (2000), the two political philosophers distinguish their ‘*multitude*’ from a series of other collective entities such as the people, the masses, the crowd, the rabble, the working class, etc. Stressing the difference between what they translate as *people* or *mass* and *multitude* they write: “the people [and also the mass] is one,” where “the multitude [...] is many.”¹²² People, as the masses, are characterized by all sorts of differences. Yet, where *people* undermine their diversities and end up forming a single identity, *mass* merges all differences into indifference; the mass consists of passive social subjects who are vulnerable to manipulation. Instead of shaping such uniformity, the invigorated notion of ‘*multitude*’ encourages a heterogeneous multiplicity. In their words: “the multitude is composed of a set of *singularities* —and by singularity here we mean a multiple social subject whose difference cannot be reduced to sameness, a difference that remains different.”¹²³ Hardt and Negri’s ‘*multitude*’ is a powerful agency that —although capital constantly attempts to transform it into a unity (that is *people*)— holds the capacity to form and re-form an inclusive democratic global society in a period of biopolitical production: “the flesh of the multitude [...] continuously expands social being, producing in excess of every traditional political-economic measure of value.”¹²⁴ Through Hardt, Negri and Rancière, then, new forms



13 — *Aganaktismenoi (Occupy) Movement in front of the Hellenic Parliament, 2011*

of ‘commoning’ are theorized that are based on processes of a collective individualization and emancipated social relations that Tzirtzilakis picks up in his reading of the two photographs.¹²⁵

However, whether the protesters who “vandalize” the city’s marble materiality forge a new political consciousness that can productively engage with those understandings of ‘common’ is clearly put under strain if we examine another form of protest. Inspired by the Arab Spring and the Spanish *indignados* among others, the *aganaktismenoi* (translated as ‘outraged’ but more commonly known as Occupy) movement emerging a year before the riot in 2012 creatively re-appropriated the marble ground of Syntagma Square, and in so doing re-defined the relationship between the square and the Hellenic Parliament.¹²⁶ By literally transforming that architectural public space the *aganaktismenoi* movement upset those dominant policies which indicate certain ways for engaging with urban space, and thus put forward a materialization of a “common in constant remaking.”¹²⁷ As Tzirtzilakis read the gestures of the ‘faceless’ protesters through Rancière, Hardt and Negri, so the architect Stavros Stavrides describes the Occupy movements as “the emergence of those who did not count before but demand to take part,” who, through their internal differences, discovered a notion of common that allowed them to “communicate and act together.”¹²⁸ In other words, Syntagma square in 2011 came to resemble the classical assembly of an ancient Athenian *agora*, a social structure of a diverse variety of political subjects.¹²⁹ Maria Kaika also reads these inscriptions in the urban field of Syntagma Square as prompts that “push the ‘right to the city’ debate beyond its more theoretical pursuits,” while creating stronger bonds between theories of urban studies and the *praxis* of visionary spatial articulations.¹³⁰ Kaika’s theoretical framework introduces another dimension, as Kaika describes Cornelius Castoriadis’ conceptualizations (in particular Castoriadis’ *radical imaginary of society*) in order to argue that urban space does not only provide the field where social meaning is enacted but also where changes are instituted.¹³¹ Prior to Rancière, Hardt and Negri’s writings, Castoriadis’ work interprets the creation of imaginary significations in each society —instituted by that society (i.e. values, language, images, materials)— as expressions of a society’s collective identity. These imaginary significations provide, for Castoriadis, the means through which social identity emerges and thus how society comes into being as a collective. Imaginary significations orient, then, not only the values but also the activities of the political subjects that live in a society. In this regard, the emergence of the *aganaktismenoi* movement in May 2011 began to shape a social imaginary for a common that held the capacity of pre-figuring an emancipated society, while influencing definite spatial strategies.

Regardless of their theorizations, these patterns of protest represent more productive engagements with politics and space than those expressed through the breaking of marble. This more aggressive form of protest, David Harvey suggests in a lecture given in Athens in 2014, is far more capable of stimulating adverse effects in our current neoliberal contexts as they often tend to encourage “a form of militarization” that demands a greater control of urban space by the state.¹³² Indeed, by August 2011 the police had regained full control and purified the square of all the traces attached to the activities of the protest movements. At the same time general policing was intensified, such as fencing off public spaces in front of the building of the Hellenic Parliament and other governmental public buildings located around the square and placing police officers in private banks and luxury hotels (such as the Grande Bretagne and King George that delimit the northern side of the square). In spite of these operations, alternative forms of protest continued to take place in the square, staging a series of statements of political and aesthetic syntaxes of dissent that Syntagma Square has accommodated since 2008 and earlier.¹³³



14 — Marble portico of the Hellenic Parliament, 2009



15 — Excavation for the siting of the marble tomb of the Unknown Soldier, 1928

MARBLE OPSIS 1: SYNTAGMA SQUARE'S 'GRAND DRAPE'

In the plethora of the media images capturing the material transformations of Syntagma Square since 2008, the eastern *opsis* (façade) of the Hellenic Parliament usually seen in the background of those images remained intact.¹³⁴ The nineteenth-century white marbles that make up, for example the building's exterior staircase, door and window frames and Doric pillars, remained intact and appeared to retain their 'purity' and 'ideality' —as was the case with the marble Tomb of the Unknown Soldier, which stands between the façade of the parliament that overlooks Syntagma square and the square itself. Following the aftermath of the demonstration in February 2012, the government installed a permanent fence in front of the monument blocking access to a former public plateau in the city. However, the marble Tomb, designed by the Greek sculptors Fokiona Rok and Kostas Dimitriadis in 1928, had already significantly changed the spatial relationship between the building and Syntagma Square. The plateau, laid out during the implementation of Emmanuel Lazaridis' broader architectural scheme, had altered the natural topography of the city, literally 'elevating' the building. Since 1932, the building of the Hellenic Parliament has sat on a podium, making its *opsis* a stage set for the public square.¹³⁵

The decision to locate the monument in such close proximity to the building clearly reflects the political ideologies of the most tumultuous period in Modern Greek history.¹³⁶ In the architectural competition brief issued by the government at the time, only a few years after the 'Asia Minor Disaster' of 1922, the brief referred to the monument as an important place for the collective memory of the city. Structured around 'a narrative of death' the marble monument would, according to then Minister of War, strengthen the national identity of Greeks.¹³⁷ Following Greece's defeat in the Greco-Turkish war the government held a referendum, the result of which was the abolition of the monarchy.¹³⁸ This significant political change was registered in the urban structure of the square and had a further impact on the internal spatial organization of the building of the Parliament itself, which until then had solely served as a palace, first for the royal family of King Otto and subsequently, for King George I and his family. The Greek architect Andreas Kriezis designed a series of modifications made to accommodate the new architectural program, of which the most radical was the demolition of the central wing in order to house the debating chambers.¹³⁹ With the exception of an additional entrance to the northern *opsis* (façade) of the building —that continued the neoclassical language envisioned by Friedrich von Gartner in 1835— all the other *opseis* remained the same, as they are today.

After visiting Athens in 1835 to agree on the site for the Royal Palace, the German architect Gartner returned to Munich to finalize the drawings of the exterior scheme for the building, the interior decoration and its construction details.¹⁴⁰ By this time, Gartner was the official architect of the Bavarian court and had already completed several architectural projects in Munich, which was among the most important centres of neoclassicism. Since the mid-eighteenth century neoclassicism had been cultivated as the dominant architectural and artistic style in Europe, promoting an understanding of ancient Greece and of Hellenic white marble as symbols of 'purity' and 'ideality'.¹⁴¹ In this sense, the building of the Royal Palace that was erected in modern Athens in 1836 echoes the design principles and aesthetic values of a North-European imaginary of classical Athens that, for archaeologist Dimitris Plantzos, has now returned as a kind of '*heterotopia*' to its 'natural' environment. On the whole, the architecture of the modern capital "was from the outset conceived as a *heterotopia* of Hellenism, a Foucauldian 'other space' devoted to Western Classicism in view of the Classical ruins it preserved," Plantzos suggests.¹⁴² Even practically, the five hundred builders, stonemasons, marble-sculptors and other workers recruited for the construction of the building were Bavarians, Prussians, Italians, and many nationalities other than Greek, while the ancient marble quarries —inactive since the 5th century when they provided the marble for the construction of the Periclean program— were put back into operation; these quarries were the preferred source for the white marble of the building. The German-educated Greek architect Stamatis Kleantes, who had also been commissioned with



16 — *Revolution of the 3rd September 1843*, F.C. Hackenwill, c. 1843

the Prussian architect Eduard Schaubert to draft the first master plan for the modern capital, became the sole supplier for that symbolic material.¹⁴³ At the same time, the potential use of more ‘authentic’ marble —taken from fragments scattered on the Acropolis hill— for the building’s façades was encouraged, since it was believed that such a gesture would further reinforce the rhetoric of that ideal image of Athens’ mythical past.¹⁴⁴ At the end, these views were dismissed.¹⁴⁵ Nevertheless, the allusion to ideality through material embodied by the neoclassical Palace —“extensively decorated in white marble”— was the reason why the specific scheme became legitimized in the eyes of society, concurrently empowering a perception of its marble *opsis* as monumental.¹⁴⁶

The historian Siegfried Giedion would probably have described such *opsis* as ‘*pseudomonumental*’ however. Giedion is critical of the type of monumentality that flourished in the nineteenth century.¹⁴⁷ In his collection of essays *Architecture, You and Me: The Diary of a Development* (1958), Giedion argues that most nineteenth century architectural and urban practice advanced an understanding of tradition that was “mercilessly misused and devalued by the representatives of the ruling academic taste.”¹⁴⁸ In his essay ‘On Monumentality’ (1944) more specifically, Giedion writes:

[...] the great monumental heritages of mankind became poisonous to everybody who touched them. Behind every great building of the past leered the faces of its misusers. This was the period of pseudomonumentality. The greater part of the nineteenth century belongs to it. Its models of the past were not imbued as in the Renaissance with a strong artistic vision leading to new results. [...] Those obedient servants of the ruling taste have devalued and undermined the taste and the emotions of the public and brought about the extreme banalisation which still exists today.¹⁴⁹

Giedion verily attacks those nineteenth-century historic reconstructions that for him undermine the collective memory of public space. Such an approach, Giedion suggests, fuelled by romantic and nostalgic sentiments, did not allow architects to engage properly with the societies of the time, or shape innovative spatial schemes for their communities as their predecessors had with, for instance, the Athenian *agora*, the Roman forum or the medieval square.

MARBLE OPSIS 2: ATHENS’ GROUND

In front of the more opaque marble *opsis* of the Parliament, the ground of Syntagma Square as another marble *opsis* of Athens, as noted at the beginning of this second chapter, more clearly becomes a stage for an elaboration of the political and social changes of Athenian life. I will now expand on the material transformations of this square through a series of key architectural competitions that are associated with the history of its marble materiality.

In 1835 a piece of land, measuring 250 x 140 metres, was expropriated from private owners and, along with the foundations for the Royal Palace, a square was carved out of the sloping ground. A few years later, a marble staircase, which mirrors that of the eastern façade of the newly built Palace, was added to the square, connecting the ground of the square with the higher level on which the Palace is situated. During the early years of King Otto’s reign, the square (or Muses’ Garden as it was then known) was perceived as an extension of the adjacent National Gardens, a “locus for recreational activities” with cypresses, palm trees and a round marble fountain.¹⁵⁰ Following a popular uprising in 1843, when Athenians gathered in the square to express their disagreement with the politics of the time and forced the King to accept a constitution, King Otto granted the first constitution of modern Greece. It is following this event that the square acquires the name ‘Syntagma’ (meaning ‘Constitution’). In 1896, the first modern Olympic games were held in Athens and Syntagma Square was moderately redeveloped



17 — *Syntagma Square*, Dimitris Harissiadis, 1956

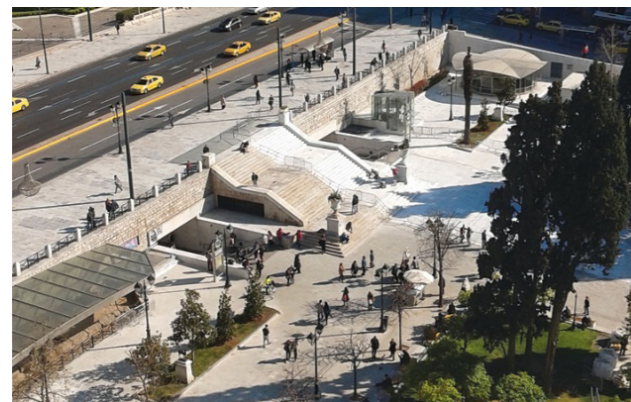
18 — *Syntagma Square Construction Study*, Anaparastasis

to accommodate a tram stop. World War II and the Civil War resulted in the destruction of most of the neoclassical context that surrounded the square, and during the Nazi occupation Syntagma Square became the site of major bloodshed.¹⁵¹ By the 1950s the square had become the centre of a variety of commercial activities, while its ground filled with coffee shops and marble-topped tables. However, it is not until the 1990s that the square’s materiality changes drastically, when the Municipality of Athens decided to replace its previously fine gravelled surface with white marble tiles.¹⁵²

On the occasion of the 2004 Olympic games, the Unification of the Archaeological Sites of Athens S.A. issued an architectural competition for another re-surfacing of its ground.¹⁵³ The main objectives of this competition were the re-laying of the square with marble tiles, and the preservation of all the nineteenth century historical edifices found in the square (such as the marble staircase, the round marble fountain and the marble sculptures.). Amongst the many entries, some of which radically challenged the political role of the square and by extension the political role of design, the first prize (which was partially implemented) promoted conventional design thinking, continuing the aesthetics imposed in the 1990s.¹⁵⁴ This latest reformation ran in parallel with an underground infrastructure project (the construction of the Attiko Metro), which included a vast archaeological excavation. During the deconstruction of the marble ground of the 1990s —before the re-surfacing with new marble tiles began— the workers realized that the material applied during the first marble ‘embellishment’ was made up of ‘recycled’ marble veneers that had come from several Athenian cemeteries, placed face down to conceal the engravings.¹⁵⁵ At the same time, the archaeological discoveries brought to light the site’s deeper historical layers: a number of cemeteries dating back to the proto-geometric period and Byzantine times; a Peisistrasian aqueduct and coppersmiths workshops from the 5th century B.C.; Roman public baths; and the ancient gate of the Valerian Wall.¹⁵⁶ Since 2000, with the Syntagma Station operating near the Parliament building, the square has become a busy transport hub. However, the flow of people has changed pattern; reaching or leaving the square now predominantly happens from the underground entrances of the Metro station. In this sense, today Syntagma’s ground mainly operates as a marble-clad urban corridor.

During the two-month occupation of Syntagma Square in 2011, the *aganaktismenoi* movement reactivated the vitality of the square by transforming its ground from a transit point to a complex spatial organization that consisted of various micro-clusters. But the material damage that occurred afterward resulted in a great deconstruction of the square’s ground. Immediately after the damages of 12th February 2012, the Municipality of Athens was sceptical about the extent of the restoration and whether a return to the marble-image of the pre-2008 square was appropriate. The argument against the full repair of Syntagma Square’s marble materiality was twofold. Firstly, there was still the dread that similar forms of protest would reappear, and secondly, the debt-ridden state did not have the resources to fund such a project. However, in spite of these concerns the Greek journalist Dimitris Rigopoulos argues that the state’s decision not to stop the fountain from flowing over the broken marbles was an attempt “to boost public morale” through a demonstration of continuity.¹⁵⁷ The Mayor of Athens began examining alternative material for Syntagma Square’s ground that focused on the “removal of all the marble elements from the square” and their replacement with more durable and less ‘dangerous’ materials (namely, concrete).¹⁵⁸ While the state was seeking sponsors to finance the project, some of the urban equipment of the square was temporarily fixed. The square’s marble benches were, for instance, replaced with timber, and some of the broken marble railings of Syntagma Station were replaced with steel; strangely though, the form of those steel railings imitated the aesthetics of the previous marble balustrade.¹⁵⁹

At the end of February 2012, the state announced the European architectural competition *ReThink Athens: Towards a New City Centre* and its plan to re-define, by means of pedestrianization, the broader public space stretching from Syntagma Square to Omonoia Square, the axis of Panepistimiou Street where protesters march. The competition

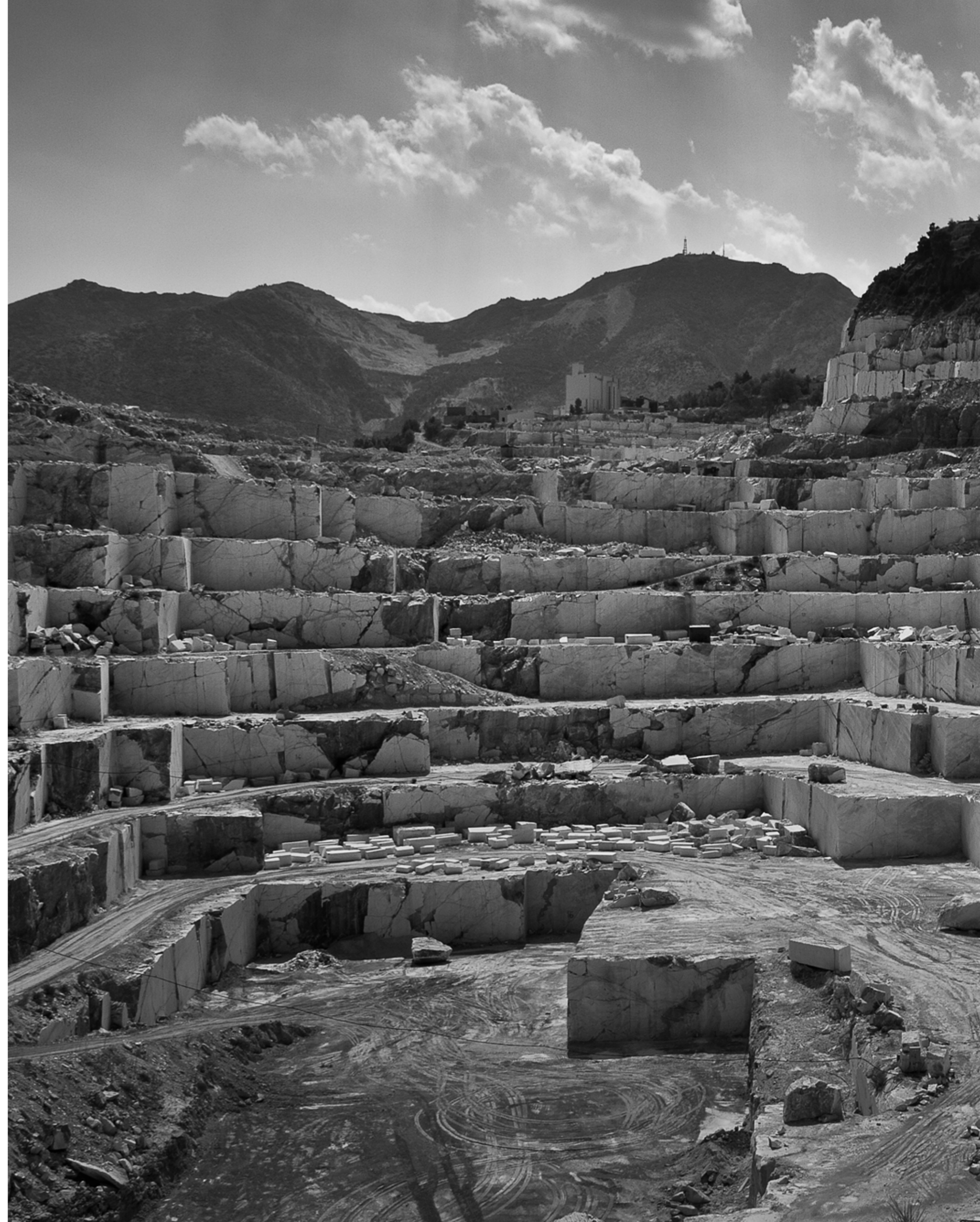


19 — *Cleaning the marbles in Syntagma Square*, ATHENS VOICE, 2014

20 — *OKRA's winning scheme for ReThink Athens*, OKRA, 2012

was entirely funded and organised by the Onassis Foundation, pursuant to a joint Ministerial decision issued by the Ministries of Environment and Infrastructure and the Attiko Metro S.A. The Onassis Foundation referred to the aim of the competition as an “aesthetic and environmental upgrade” of the central public space of Athens that could re-enhance the commercial, administrative and economic character of the Athenian city centre while respecting the “historical and cultural identity of the capital.”¹⁶⁰ Such interest in an architectural competition for the specific section of the city —just a few weeks after that destructive riot— seemed promising, since it was an opportunity to respond architecturally to the ongoing political dissents while re-examining the materiality of the city.¹⁶¹ Immediately though, concerns were raised regarding “the function, timing and location” of the competition as Lila Leontidou notes, and questions were raised as to whether this “organized redevelopment” corresponds to another gentrification scheme in Athens’ broader decaying centre.¹⁶² Furthermore, hopes of a politically-specific response were nullified with the selection of the winner; the winning proposal by the Dutch landscape and architecture design office OKRA follows conventional design thinking, and is primarily structured around the creation of a ‘sustainable’ framework of greenery.¹⁶³ The original completion date for the scheme was 2014, but in November of that year the European Commission issued an ultimatum to the Hellenic state demanding they halt the implementation of the design proposal. The rationale behind such a demand was that a country in the midst of financial crisis should not invest in architectural programs that are merely ‘aesthetic.’ On the contrary, during periods of such scarcity national resources ought to be spent ‘reasonably.’¹⁶⁴ Disappointed by the development the Onassis Foundation, along with the relevant Ministries, began considering alternative ways for putting the scheme into action, but in June 2015 the Supreme Court annulled *ReThink Athens*, accepting an appeal by a group of Athenians who questioned the legal status of the competition,¹⁶⁵ arguing that the design brief contradicted the Regulatory Plan of Athens as detailed in the Urban Master Plan of the Municipality of Athens.¹⁶⁶

Despite this, Syntagma Square’s ground was eventually ‘purified’ (see *Photographic Essay 2: Whitening White Marble* in *Vol. 1*). A restoration project started at the beginning of 2014, almost two years after the destruction of 2012, following the state’s authorization to allocate private funds for the cleaning of the square. In other words, the Municipality of Athens and the Ministries of Culture and Tourism accepted a donation from the owner of the two luxurious hotels adjacent to the square. The restoration involved dismantling of all the marble veneers that were either broken or heavily damaged and replacing them with a new set of marble veneers.¹⁶⁷ This time though, composite marble aluminium honeycomb panels were employed, as this new technology has been proven to provide a much more resistant and hardwearing material than the usual stone veneers.¹⁶⁸ The donation also covered the cost of removing all the traces of graffiti, and further polishing of the remaining marble pieces, along with the proper preservation of the nineteenth century marble edifices. This type of *katharsis* re-affirmed that the romantic and dominant perception of marble in Athens cannot be detached from Athens’ ‘brightness’ —that imaginary of Athens as the ‘White City’ of popular cultural imagination. Perhaps even more importantly though, this decision to integrate state and private interests in Athens’ mostly political square illustrates David Harvey’s concern that ‘the right to the city’ is falling into the hands of corporate capital, and therefore capital’s increasing power in ‘designing’ the aesthetics and qualities of our cities. “Quality of urban life has become a commodity, as has the city itself, in a world where consumerism, tourism, cultural and knowledge-based industries have become major aspects of the urban political economy,” Harvey writes.¹⁶⁹ In this sense, the marble ground of Syntagma Square demonstrates, once again, a superficial use of marble in Athens. Looking closer and more carefully at the installation of the new shiny marbles and the way these are integrated into the broader context of the square, one can clearly realise that the technical skills applied to such architectural restoration are pathetic; I echo here Jean Baudrillard’s argument regarding the failure of our societies to recognize technique as a political and social practice and instead to keep promoting it as merely “a mechanism of acculturation.”¹⁷⁰



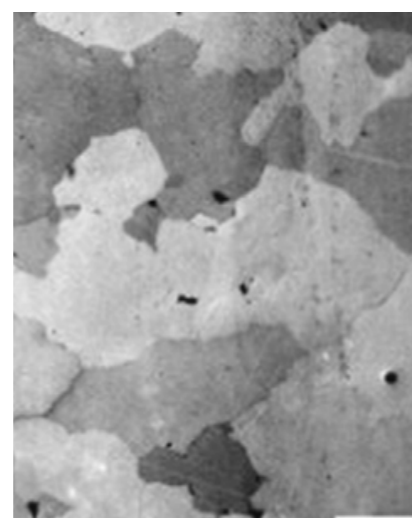
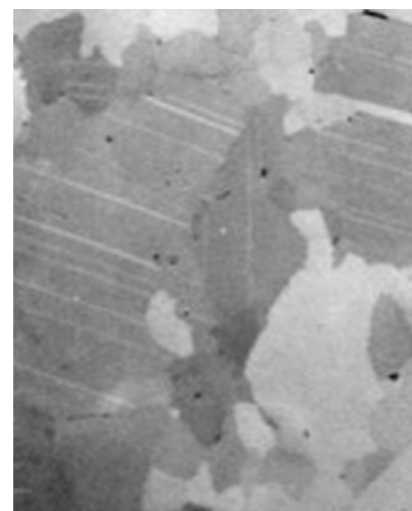
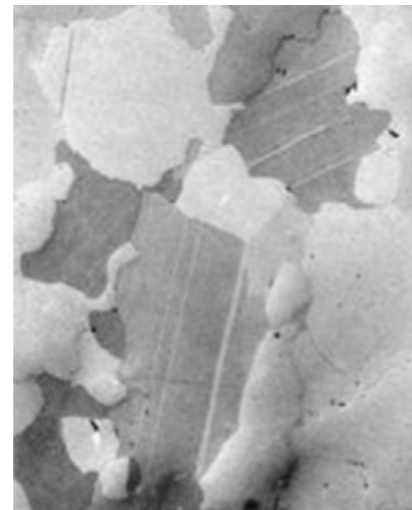
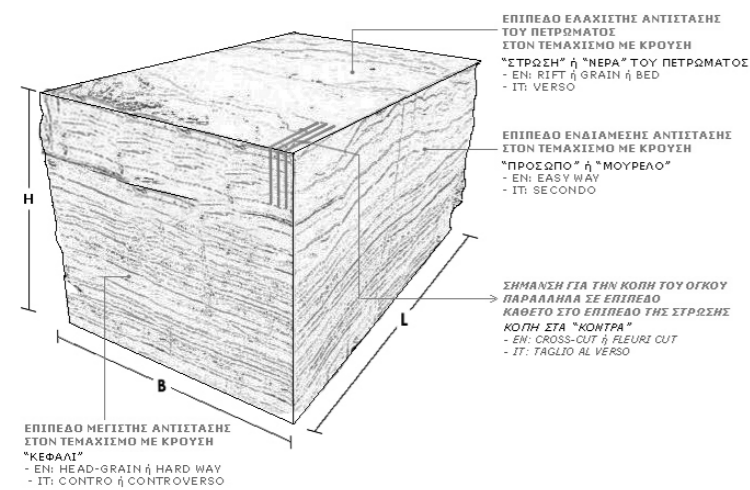


2 — Opencast and underground quarrying operations, DIONYSSOMARBLE S.A. Archives, 2011

MARBLE CUTS

The site visit to Syntagma Square in 2013 described at the beginning of Part A, occasioned a perceptive, critical discourse on the square, as it was *Photograph 01* (and all of the images presented in *Photographic Essay 1: Pink Paint*, included in *Vol. 2*) that opened up something of marble's complex materiality and of the relationship between the material and the specific context of Athens and Attica. In a similar manner, the material collected during another site visit, this time to the central 'place' of marble production, proved equally insightful. *Dionysos* quarries (partially depicted in the cover image of this chapter and further recorded in *Photographic Essay 3: Marble's Surface Structures* in *Vol. 2*) are situated on the northeast slopes of Mount Pentelicon, at an altitude of 460 meters.¹ Nine opencast operations, performed through bench quarrying methods, and three underground operations, carried out by pillared chamber quarrying methods, further inform the materiality and image-*opsis* of this landscape. The landscape formed by opencast operations (also known as surface quarrying) resembles stepped constructions; each bench (step) is slightly angled and its height usually reaches up to ten metres. Walkways that facilitate the hauling of the material are created on each bench, and ramps connect one bench to the other, ultimately leading to a sunken 'square' at the lowest level of these manufactured constructions. The landscape formed by underground operations creates labyrinthine networks. As operations extend, the tunnels produced in the bedrock of the earth turn into polyhedral chambers that retreat deeper and deeper inside the mountain. In both cases, these irregularly 'designed' spaces are mere by-products that patently reveal the material that is absent; this exposure of absence in conjunction with the overwhelming haptic character of the present marble triggers profound emotion. Being in the gigantic underground chambers intensifies and stimulates all senses: these spaces generate a specific smell, humidity, temperature, darkness, noise and echo. This aura, and the inhuman scale of these rooms, is contrasted by various anthropomorphic registers, such as the steel and wooden ladders used by the labourers and the numerical writings or steel plates that mark the exposed marble surfaces.² During the site visit in August 2011 however, these immediate sensory impressions became secondary, as the allure and awe of the marble landscapes shifted to the ways the material is cut: first, by observing the choreographed, coded hand gestures of the quarrymen directing the enormous excavators; and then —and even more importantly for this research— by engaging in scientific discussions with engineers and geologists who prepare, through digital representations of the mountain, the drawings that today always precede the act of quarrying marble.³

Quarrying, as the Latin origin of the word suggests (*quadrum* which translates as 'a square'), implies the cutting of blocks from the body of a mountain in shapes as regular as possible; at *Dionysos* quarries the finite and measurable marble unit that is typically extracted measures 4m(w) x 10m(l) x 6m(h) and weighs around 28 tons. After the detachment of each unit, the block is classified either as 'healthy', and thus marketable, or as unmarketable. Such characterization is based on the amount and size of marble's natural faults —the discontinuities found in the volume of the marble block and often present on its surfaces— as well as on additional defects that the process of extraction might have caused. The three perpendicular surfaces of the squared marble block are traditionally known as the *face*, *head* and *morel*.⁴ Each of them exhibits different behaviour with regard to cutting; the *face*, for instance, is the 'softest' surface of the material.⁵ Aside from the mechanical properties that each of these three different surfaces of the block illustrate, *face*, *head* and *morel* also encapsulate the multiple *opseis* (surfaces and images) of marble. This becomes more obvious in the series of secondary and tertiary marble cuts that follow the primary cutting of marble, as marble's matter continues to take various forms. While the methods for the primary cuts have not changed significantly throughout the centuries (since antiquity the squared monolith has been the principal method of quarrying), the technological advancements in the machinery of cutting (diamond wire saws, etc.) have radically affected the way the material is worked and employed, and by extension perceived.



By convention since industrialization there are two methods for cutting marble slabs and tiles from marble blocks. The first, *fleuri-cut* (also known as cross-cut), is the cut parallel to the natural bedding plane that yields an image of marble as a mottled pattern. The second, *vein-cut*, images the layers of the sediment as elongated shapes, as it is cut perpendicular to the natural bedding plane.⁶ The thickness (or thinness) of the marble veneers is attached to market standardizations (usually 20 or 30mm), but also dictated by aesthetics; today, for example, there is an evident fetish for the thinnest possible, yet highly textured, marble surface. On one hand then, fleuri- or vein-cuts display the varying levels of the stone's natural resistance to cutting and a corresponding commercial value relating to the ease or difficulty of each act of cutting (usually, fleuri-cuts are more expensive), and on the other hand, fleuri- or vein-cuts explicate the value marble's *opsis* holds as commodity-sign. In this latter symbolic and commercial sense, the cuttings of a mountain's matter are designated as a trite technology of surfacing, a commodification of nature driven by capitalist production. Yet collectively, primary, secondary and tertiary marble cuts (even those marble cuts that occurred in Syntagma Square between 2008-2012 as discussed in Part A) contain a 'dense agency' that—as any other knowledge system that acknowledges the importance of 'cuts' and 'cutting' for its advancement, for example, anatomical cuts—archives a complex force of geological, scientific, technological and technical as much as cultural, social, political, and economic dimensions.⁷ I will further expand on the knowledge generated by the process of marble cutting in the context of the landscape here as I unfold a contemporary immaterial reading of the mountain and marble. Such a reading outlines the technologies employed and methodologies practiced in the current underground excavations of Mount Pentelicon, and through these technologies and methodologies I speculate upon, record, draw and re-draw marble's natural faults, before deconstructing and re-appropriating the mountain's materiality. From such a present-day understanding, I will return and conclude this first chapter of Part B with an earlier immaterial imaging-drawing of stone that relates to the *techne* of stonecutting and the science of stereotomy advanced mainly in France between the sixteenth and seventeenth century.

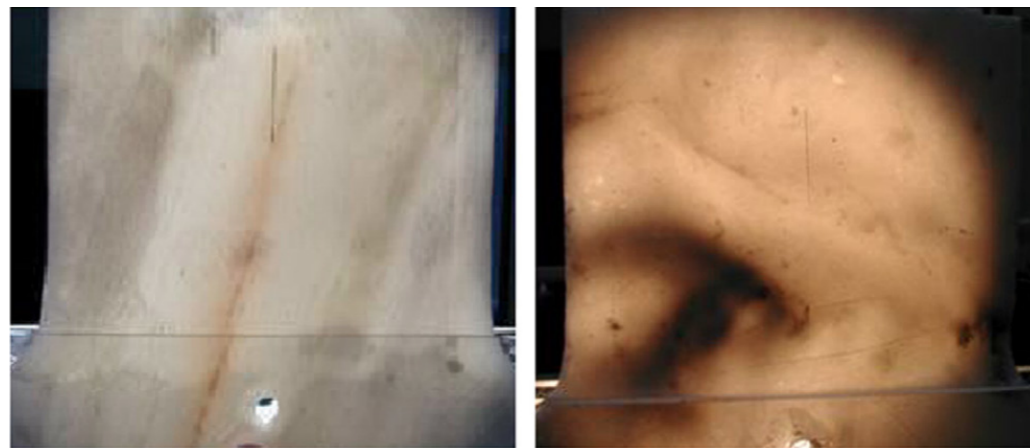
FROM MATERIAL TO IMMATERIAL FAULTS, BACK TO MATERIAL

Before examining the latest approaches to marble quarrying employed in the underground quarries of Mount Pentelicon, I will start with a rather simple (yet useful) description of the material from a strictly geological point of view, in other words, a description of marble's *petrogenesis* (materialisation as stone). Based on the different ways of their formation, rocks are generally classified into three major groups:⁸ (i) igneous rocks involving volcanic processes; (ii) sedimentary rocks formed by the accumulation and compaction of eroded rocks and organic debris; and (iii) metamorphic rocks brought into being by the transformation of igneous, sedimentary or even older metamorphic rocks due to tectonic movements, high temperatures and intense pressures at certain depths beneath the earth's surface over periods lasting millions of years. Marble, more specifically, is the product of the metamorphism of (mainly) limestone, where limestone is a sedimentary rock formed at the bottom of seas by the compression and cementation of white granules of calcite, initially invisible even under the microscope.⁹ The limestone deposits along with other sedimentary layers have gradually shifted and shaped mountain ranges where marble materialises in strata interlayered with schists. The cleavages and foliations that occur during the process of metamorphism transform the initially 'immaterial' crystals of calcite into an interlocking mosaic of larger crystals, visible even to the naked eye—a process known as recrystallization.¹⁰ The degree of crystallization, observable through thin and ultra-thin petrographic cuts (500-10 μm), and the presence of other materials (known as *impurities* or *imperfections*) that are incorporated with the calcite during its recrystallization, affect marble's appearance as well as marble's mechanical properties. The 'impurities' that are registered as markings in marble's fabric result in a rich variety of 'textured' marbles; and it is this 'texture' that also affects the commercial

3 — *The three surfaces of a squared marble block*, MARMAROnet, 2010

4 — *Fleuri-Cut and Vein-Cut*, Maria Mitsoula, 2014

5 — *Optical micrographs of Dionysos marble*, Stavros K. Kourkoulis et. al., 2009



6 — Dionysos marble plates in common-light beams, Stavros K. Kourkoulis et. al., 2009

7 — Detail of Auguste Rodin's The Kiss (1889), Il Marmo, La Vita, 2014

value of the stone when employed as architectural ornament —usually, the more textured the marble's *opsis*, the higher the value.¹¹

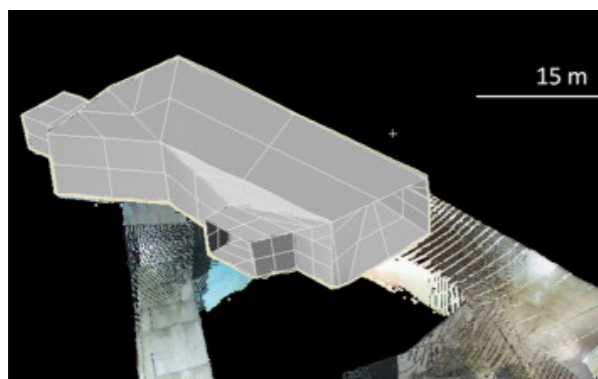
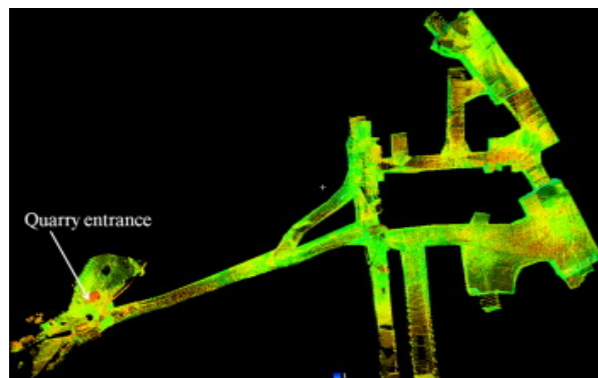
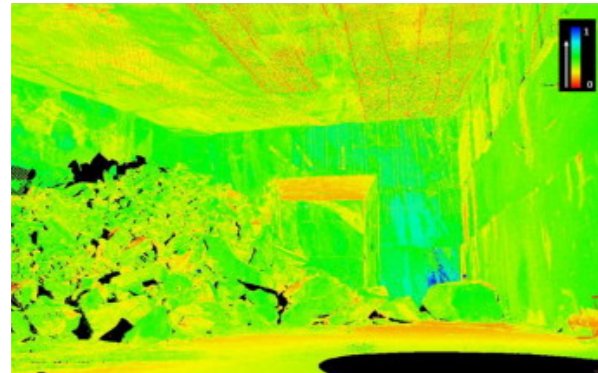
No variety of marble, therefore, can be chemically pure. However, there are types of this non-homogeneous and anisotropic material with uniform colour tones and undetectable markings, as is the case with the white marble extracted from Mount Pentelicon. Almost exclusively composed of calcite (98%), these white marble surfaces are quarried either as bluish-greyish white with very small black dots (lower Pentelic marble formation, extracted from the ancient and modern quarries) or as snow-white with very fine ash-green and silver veins (extracted from Dionysos quarries).¹² The dominance of whiteness allows light to penetrate into the marble's surface, while the polygonal facets of the calcite crystals allow light to interact further with its structure; when exposed to light, marble cuts up to 1cm expose marble's faceted radiance.

It is that transparency and scintillation that makes white marble's matter resemble the waxy appearance of human flesh, further delegating Mount Pentelicon's matter —similar to other white marbles that have been exploited in the broader Mediterranean basin since antiquity— as an 'ideal' material.¹³ However, such romance of the atmospheric aura of white marble was challenged by Manolis Korres' research, as the Greek architect and archaeologist turned to more material (corporeal and technical-technological) understandings of the 'ideal' marble workings of antiquity in the context of Attica. Rather than focusing on the mythological and phenomenological matters with which ancient marble workings are typically imbued, Korres argues in *From Pentelicon to the Parthenon* (1995) that there is an immense epistemological value in analysing the laborious methods employed for marble cutting. Studying the traces left on Mount Pentelicon by the tools of the ancient quarrymen, Korres explains how the craftsmen, artisans, and architects carefully observed, examined and controlled the geological factors associated with the material's genesis as well as artistic, geometrical and mechanical considerations. The differences and tensions intrinsic to a body of an almost veinless, white marble block are not readily apparent to the naked eye. In order to identify the material's vulnerabilities, the ancient quarrymen had to evaluate the seriousness of the faults embedded in the mass of marble by conducting

small exploratory cuttings in the places where they suspected the existence of a *fissure* in order to test the cohesion of the marble along the length of the fissure. Test cuts of this kind have been detected on the concealed surfaces of some of the entablature blocks at the east end of the Parthenon during the course of restoration work.¹⁴

This systematic experimental and empirical research of marble's matter advanced metallurgical technology and thus the development of stone-cutting tools used for quarrying, but also the development of other metal implements with which the ancient masons further worked the material. For instance, metal clamps were inserted in those places in the marble block in order to reinforce the material against cracking at the same time the equipment for lifting and transporting marble blocks and the implements for carving and smoothing the marble surfaces were developed. Extremely thorough and illustrative, Korres' study solely focuses on the methods and methodologies centered around ancient marble quarrying, and as a result it is primarily of archaeological and historical importance. Briefly commenting on the modern quarrying processes, which have been devised to increase speed and cost efficiency, Korres argues that the empirical know-how of the material, which was stored in the form of the skills of those early quarrymen, craftsmen, artisans and architects is now lost due to the compartmentalization of the procedures of quarrying into distinct and separate managerial, commercial, scientific, intellectual activities.

I shall briefly extrapolate Korres' insightful remarks with regard to the current underground quarrying operations of Mount Pentelicon. Underground exploitation was established at Dionysos quarries in the mid-1990s, mainly

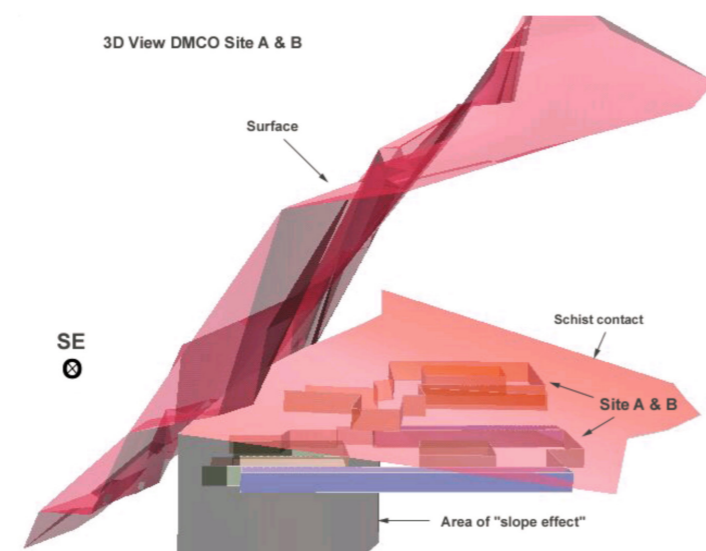


8 — Scan of an underground chamber, Claudio Vanneschi et. al, 2014

9 — Plan of the chambers based on 3D scan, Claudio Vanneschi et. al, 2014

10 — Digital reconstruction of a chamber, Claudio Vanneschi et. al, 2014

11 — 3D model superimposed on topography, DIONYSOMARBLE S.A. Archives, 2011



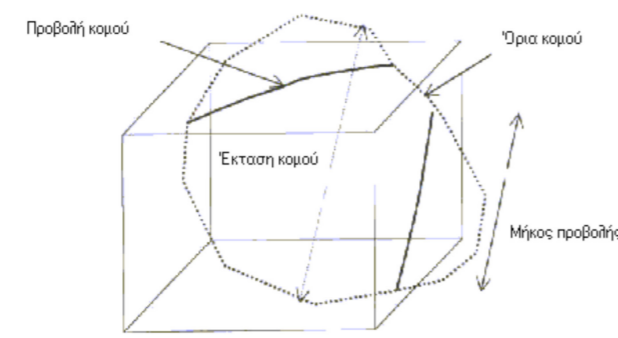
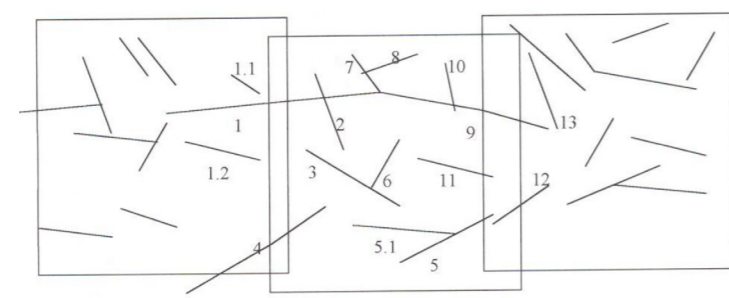
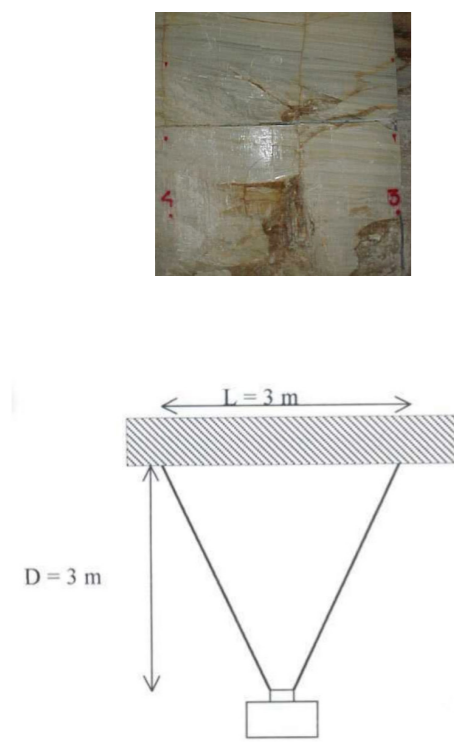
as a result of environmental factors but also because of the gradual exhaustion of surface deposits. The research programmes, initiated by the European Union in 2000, brought together academic institutions and mining corporations with the aim of advancing methodological approaches for the proper planning and programming of underground operations. In particular, the research methods developed for the Italian Carrara quarries —from which a similar white marble has been extracted since the beginning of the Christian era— greatly influenced the techniques of extraction in the underground Dionysos quarries. Still experimental in status, the production of marble deriving from this type of quarrying does not exceed ten per cent of the total amount of the quarried material in this productive part of the mountain. Starting from the highest bench of the already existing opencast quarries, the first incision on the vertical surface of the mountain subsequently turned into a tunnel, a chamber and then a series of chambers. Technical regulations set a height limit for these chambers at around thirty metres. When the chambers reach that benchmark a horizontal slab remains and underground excavation proceeds beneath it, creating multilevel structures inside the mountain —at the moment, the height of the underground chambers in Dionysos quarries is at 21m.¹⁵ The material that is to be extracted must be drawn from the ‘healthy’ areas of the mountain. It is thus important to recognise those faults embedded in the mass of the stone, which today are generally classified either as regular (consisting of nearly parallel lines) or irregular and hazardous (small, numerous and found in all directions). After the removal of the ‘healthy’ marble what remains in the chambers is the ‘less healthy’ stone that will, however, serve as structural pillars. Pre-tensioned cables are surgically inserted to the remaining mass as reinforcement. The tension of the wire increases the vertical forces on the surface preventing the movement between the volumes of rock that could lead to failure. On the whole, then, the methodologies required have a twofold aim: first, to ascertain the precise measurement of the planes of weakness, as this will lead to consistent (in terms of quality) marble cuts —allowing for price guarantee— and secondly, to design a safe spatial development of the underground extraction based on that precise mapping of the faults. Hence, the natural language of marble —materialised through those faults that exhibit the material’s sensibility (its flows, striations and resistances)— becomes, in the context of a productive excavation activity, a diagram that accepts an economic (rather an ecologic) rationale from the outset.

Such a working approach was advanced further through new 3D digital technological means in the Carrara marble quarries in 2013. It is explained in depth in the scientific paper ‘Geological 3D modeling for excavation activity in an underground marble quarry in the Apuan Alps (Italy)’ (2014). This methodology, performed in Italy and also followed in Mount Pentelicon, encompasses multi-dimensional and multi-perspectival pictoralisations of the quarried landscape, and combines satellite mappings of the mountain along with interior surveys of the underground chambers. In other words, traditional topographic planimetric views and geological cross sections of the mountain, which record information regarding the natural bedding and foliation are combined with terrestrial laser scans (TLS), photographic panoramic illustrations of the underground quarries and computer-aided design software for the construction of a three-dimensional digital model of this landscape. More specifically, all the accessible exposed marble surfaces, both inside and outside the underground chambers, are photographed and scanned with the purpose of recording, indexing and designating all their surficial fault structures. Every time the instrument of the TLS emits light a point is registered, as this light reaches a marble surface of the quarried area. Each point holds detailed geometrical information, “determined in a spherical polar coordinate system by measurement of the azimuth and zenith angles. In this way every point has specific coordinates in a local reference system.”¹⁶ Superimposing the scanning data with the high resolution photographic images, and the earlier topographic-geological mappings, a more accurate characterization of the faults is fathomed by means of stereographic projections, while the previous geological cross sections of the area are now re-informed along with the engineering surveys, essential for resolving stability and safety issues of the remaining marble walls inside the underground chambers.

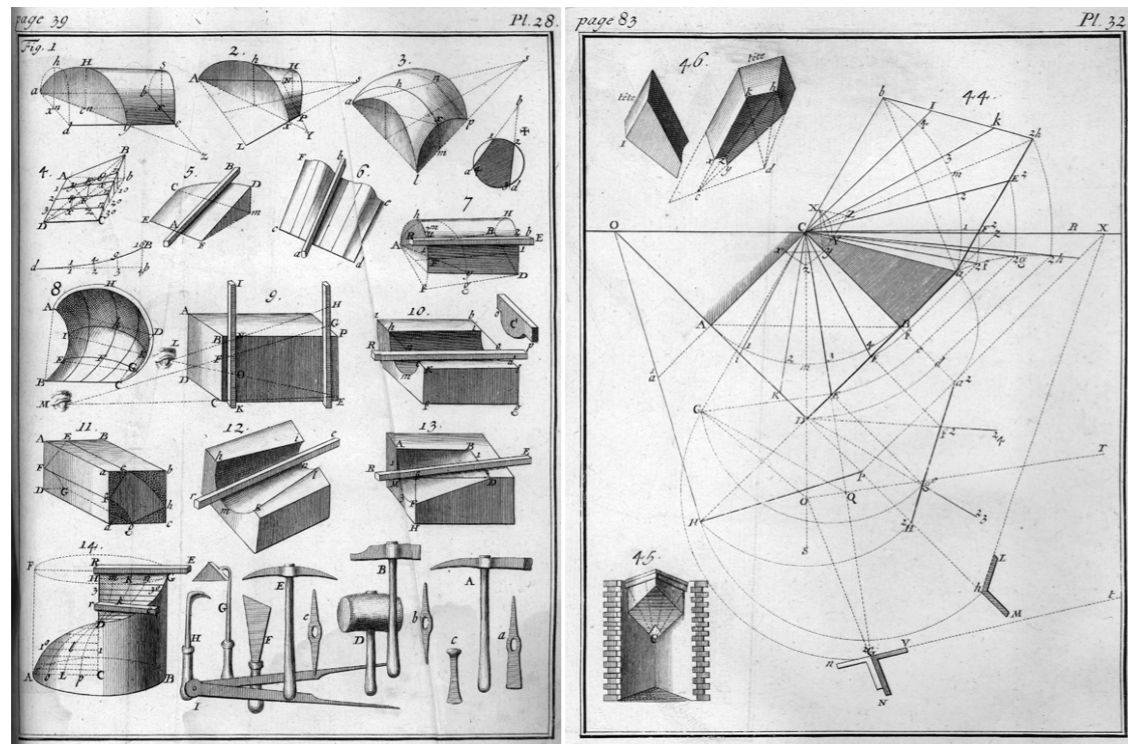
The new 3D representational methods for surveying the underground area and the specific geological setting seem to enact strange oscillations between material and immaterial imaging processes. The acquisition of the large number of points cloud from the Terrestrial Laser Scans is translated through a process known as *registration* and elaborated by means of the software *Rhinoceros*. Rather than creating a complex mesh that usually undergoes a significant reduction —as the act of meshing tends to leave out some of the recorded information (consequently resulting in less 'realistic' depictions of the quarried area)— a representation of the quarry with *Non Uniform Rational Basis-Splines* (NURBS) is generated.¹⁷ These constructed surfaces seem to establish a more reliable imaging of the form of the underground quarry as surface, although still, some inconsistencies appear; these inconsistencies are further digitally corrected and recalibrated as the intention is to acquire the best reworkable parametric surface. Such a procedure ultimately becomes more effective (in terms of engineering and extracting the best quality marble) than operating conventionally in the real environment. Thus, while quarrying is literally an extraction of material, the recent methodologies, drenched in empiricist epistemologies, gesture towards an abstraction of the technique of quarrying. It becomes a material-drawing-out-through-the-immaterial that, in a sense, re-institutes the material's very 'materiality'. This parametric intrusion into the material surface constitutes a parallel intrusion into any space that employs the marble in developing an architectural image; the parametric logic of the survey signifies structural relationships while uncovering latent structures of formal organizations, which, even as survey, can already be read as the 'making' of architecture and landscape. The research methods employed in the contemporary marble landscape are, then, insightful for understanding the complex agency that any primary, secondary, or tertiary marble cut carries in the 'making' of the marble-image of Athens.¹⁸

FROM MATERIAL TO IMMATERIAL TRAITS, BACK TO MATERIAL

From these immaterial imagings of marble produced by the present-day apparatuses employed in the underground chambers of Mount Pentelicon, I will now go back to the sixteenth century, when stone, geology, geometry, engineering and architectural drawing become closely connected through the trait, another immaterial imaging of the material (another survey technique that can be read as a basis for 'making' architecture and landscape). Drawn with plain lines and cut from paper, traits were geometric tracings that were employed prior to any precise cutting of stone for the creation of complex architectural forms (for example, vaults, arches, staircases and specific appurtenances).¹⁹ Although traits, which were first introduced during the transitional period between classicism and the baroque, are usually discussed in relation to the evolution of architectural styles (and thus attached to issues of form, structure and ornament), the technique of traits was retained in France until the nineteenth century.²⁰ However, despite existing for a long time in the industry it seems that the technical apparatus has not been significantly influential in contributing to architectural practice or discourse. It is not my intention here to undertake this task, as this particular framing is not relevant to the Athenian city of that time (still under the Ottoman Empire). Rather, what I am interested in briefly developing here is an analysis of the construction of the trait itself, which seems to hold a strong bond between practice, science and theory, especially in contrast to the contemporary digital pictoralisations of the material (those prepared prior to cutting the stone from the mountain) or any industrial secondary, tertiary cutting that follows that primary cut. The traits of the sixteenth century became the basis of the technical art of stereotomy, storing useful knowledge for the stone-cutters, while simultaneously illustrating the intellectual skills of the architect who drew them. In that sense, traits are perhaps closer to that ancient understanding of working (with) the material that Manolis Korres' research speculated upon; even though traits were probably unknown to the ancients.²¹

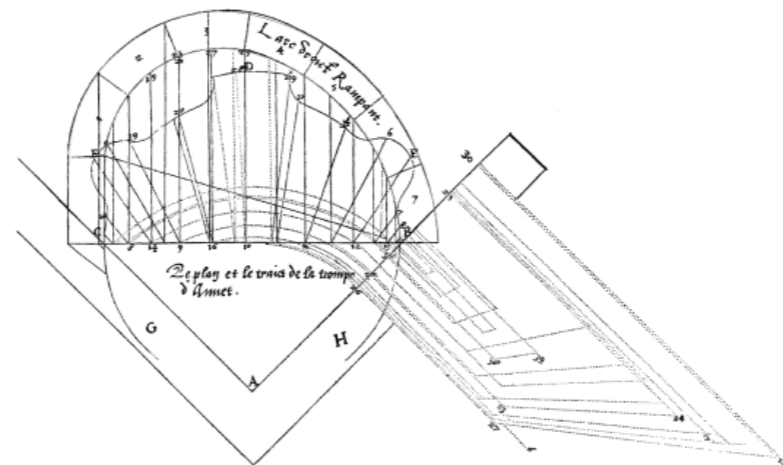


12 — Diagrams of marble fault lines based on photographic surveys, DIONYSOMARBLE S.A. Archives, 2011



13 — *Traité de stéréotomie à de l'architecture*, Amédée-François Frézier, 1738

14 — *Trait for the trompe of Anet*, Philibert Delorme, 1567

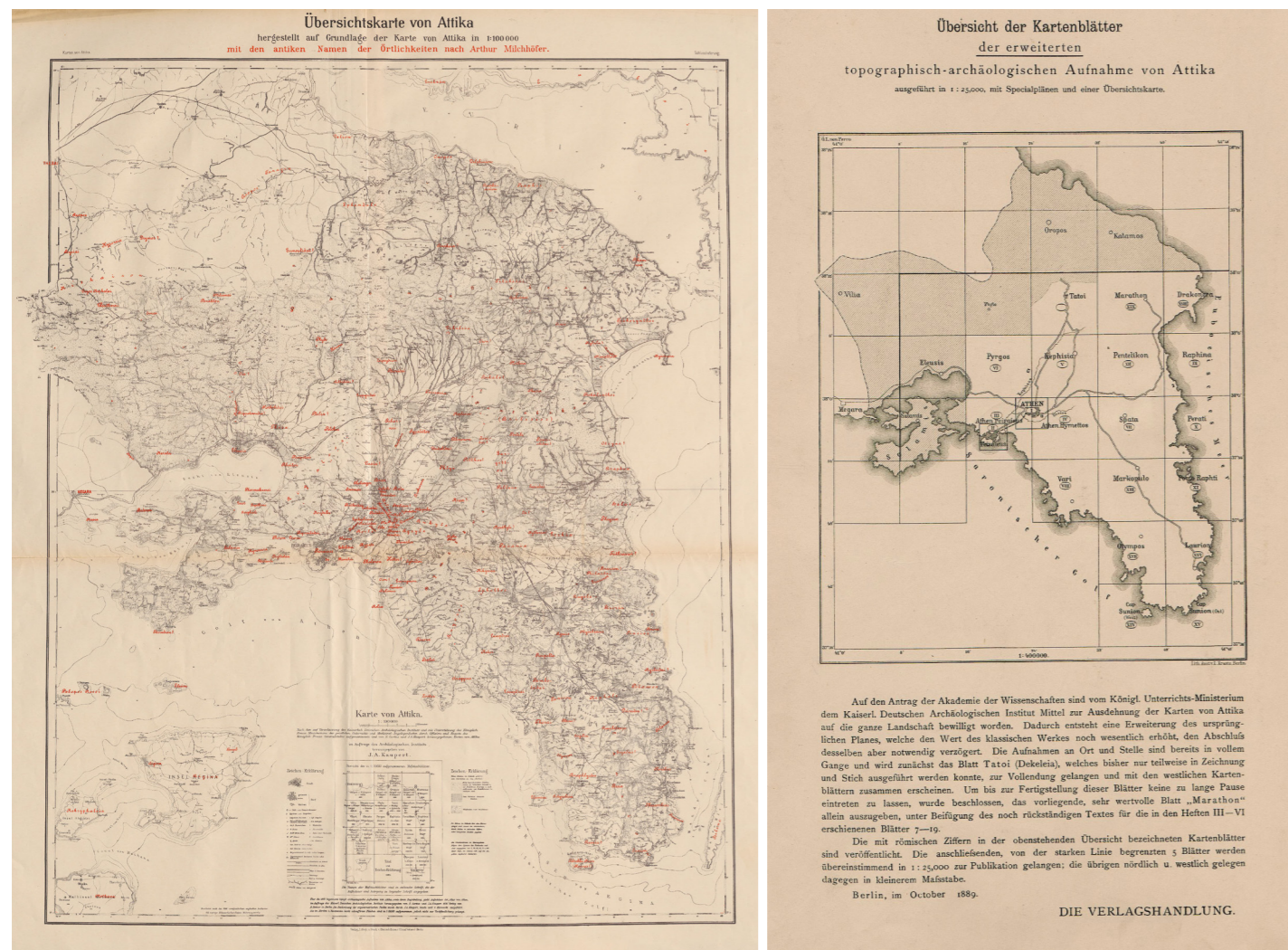


The most celebrated *trait* was drawn by the French architect Philibert Delorme for the design of the *trompe*—a suspended vaulted structure, entirely made of stone—for a small cabinet for King Henry II at the Château d'Anet, constructed between 1549 and 1551.²² Delorme, “an almost exact contemporary of Palladio,” published a treatise of the French Renaissance in 1567, entitled *Premier Tome de l'architecture* in which a detailed explanation of such stereotomic drawings was first illustrated.²³ Delorme presents the sophistication and complexity of his design innovation, pointing out the difficulty of executing such a ‘daring’ structure that defies gravity. The drawing techniques and geometric methods employed for the *trait* at the Château d'Anet were further examined through the reproductions of Robin Evans. “Plac[ing] his trust in visual evidence over theoretical formulation,” as Stan Allen notes,²⁴ Evans reconstructs Delorme’s *trait* and a perspective of that *trompe*, highlighting the importance of the role of projective geometry in architecture (which for Evans is affiliated with image, imagery and imagination, in contrast to the compositional geometries that are aligned with the science of measure and order).²⁵ In the chapter ‘Drawn Stone’ in *The Projective Cast* (1995), Evans offers his own illustration of the fifteen separate layers that were superimposed in the making of the *trait*.

The most confusing thing about the *trait* is that there are 15 separate drawings superimposed. Each of these 15 drawings represent a different horizontal or vertical site through the *trompe*; each one is therefore a more or less cryptic “picture” overlaid on the others in such a way as to give the required information. Nearly as confusing is the lack of differentiation between sections lines and projectors (projectors being the parallel lines used to transmit the position of salient points from one sectional slice to another).²⁶

Starting from a plan and a vertical section, both drawn to scale, and by means of rotation and overturning, Evans explains the two kinds of folding (one on a horizontal line and one on a vertical line) that are required in order to move from the projected “pictures” (*opseis*) of the drawn *trait* to the built *trompe*. A third kind of folding is responsible for the flattening of those three-dimensional *opseis* into a two-dimensional sheet, where each face is now drawn full size and used as a template for the stone-cutter to apply to the surfaces of each block of stone.²⁷ The imaginary lines of the *trait*, holding the aesthetic properties of their own interior construction, are not transcribed into the material. Only the lines that indicate the actual thing are traced on the stones, which are mainly (but not exclusively) worked off site, before being assembled as prefabricated items on site, ultimately materializing a perfectly unified form.

Traits are, therefore, unusual architectural representations. They oscillate between the intellectual difficulty of their interior rules of construction and the physical, laborious difficulty of constructing heavy stone forms. Instead of a clear division between theory, science and practice, or between architect and mason/fabricator (as is the case in most of the contemporary marble cuts), such blurring informs the form of the *trompe*. The finishes result, Evans notes, looks almost like ‘paper’ without losing “the sensuous character of stereotomic masonry,” as “the skeletal ideality of the *trait*” exports some of its qualities to the form it defines without being an actual ‘picture’ of that form.²⁸ Projective geometry therefore, Evans argues, does not just facilitate the materialisations of *traits*, rather *traits* are generated by that projection. In this sense, immaterial *traits* advance the material and vice versa.

15 — Outline map of Attica with the ancient names of the localities, drawn by Arthur Michhöfer in *Karten von Attika*, 1895-1903

16 — Map sheets of the topographical and archaeological recording of Attica, Ernst Curtius and Johann A. Kaupert, 1895-1903

‘THE ATTIC LANDSCAPE’

While the previous chapter offered a close examination of marble in the contemporary productive quarried landscape of Mount Pentelicon, opening up a connection between the methods of stone cutting in classical antiquity and the architectural drawing in the sixteenth century, *Chapter ii* examines the reciprocal relationship between the mountain and the city of Athens. From that ‘marble place’ on Mount Pentelicon, many other white marble places have originated, and in this sense the quarried mountain is rendered as both a material and imaginative “place of places,” borrowing the phrase employed by the geographers Veronica Della Dora and Denis Cosgrove to describe the intricate geographies of mountains.²⁹ Put differently, the geological matter of Mount Pentelicon has been used to construct past and present marble imageries of Athens.³⁰ However, as its innards are removed and its inner surfaces grow the outer landscape of Mount Pentelicon becomes an increasingly over-textured (over-written) place. It is a material palimpsest, the English historian W. G. Hoskins would argue, which carries the traces —as material absences— of a plethora of urban, architectural places and *opseis*.³¹ On one hand, then, the marble quarries become vital ‘historical documents’ for the landscape they mark and, on the other, they draw out metropolitan measures (see the *Drawings: Mountain and Metropolis’ Marble Excavations and Constructions, Ruinations, Reconstructions* in Vol. 2).

In his poem *The Attic Landscape* (1857), Herman Melville highlights a very familiar instance of this conspicuous relationship between marble, the mountain, the metropolis and architecture, as the American writer muses upon “the clear-cut hills” of Mount Pentelicon’s “carved temples faces.”³² Melville visited Athens in the mid-nineteenth century, at a time when one could clearly see the mountain facing the ancient marble monuments (and vice versa) and when a fascination with the imagery of the ancient quarried landscape of Mount Pentelicon as a touristic attraction was as powerful as that of the classical monuments in the Athenian metropolis.³³ Today, the excessive urbanization of Athens —buildings are constantly encroaching on the mountain— and the polluted air over Attica often obstructs their direct visual connection, however the romanticized imaginary of such reciprocity is of course still very strong. The current productive landscape of Mount Pentelicon (Dionysos quarries) that was examined in greater detail in the previous chapter is located on the (northeast) side of the mountain, hidden from the sight of the city, and yet these ongoing quarrying activities keep re-appropriating the material presence of Mount Pentelicon. I will here unfold some of the key transformations of the natural environment of the mountain, focusing on the historical emergence and constitution of its quarried landscape. Although analytical, this historiography is rather insightful as it exposes a complex series of material exchanges between Mount Pentelicon, the Athenian metropolis and Athens’ architecture, underlining the role that this landscape and its matter has played in the sociocultural formation of the city.

On the whole, the natural Attic landscape is diverse both in terms of its geological background and topographic relief, while human intervention has a very long history of disrupting Attica’s natural ecosystems.³⁴ Four mountains shape the triangular peninsula of Attica: the rocky (limestone) Mount Aegaleo to the west; the densely forested Mount Parnitha to the north (which is the tallest of the four); Mount Pentelicon to the northeast; and Mount Hymettus to the east. To the south, Attica stretches towards the Saronic Gulf. On one hand, these mountains embrace the hilly plain (known as the Attic basin) on which the city of Athens spreads out to the port of Piraeus, and on the other hand, each of the mountains separates that Attic basin from plains and valleys beyond. Looking from the highest point of Mount Pentelicon (1,109m) towards the southwest, one can distinguish the Athenian metropolis and the Saronic Gulf, turning to the northeast reveals the field of Marathon and Marathon bay, as well as a number of the Aegean islands.

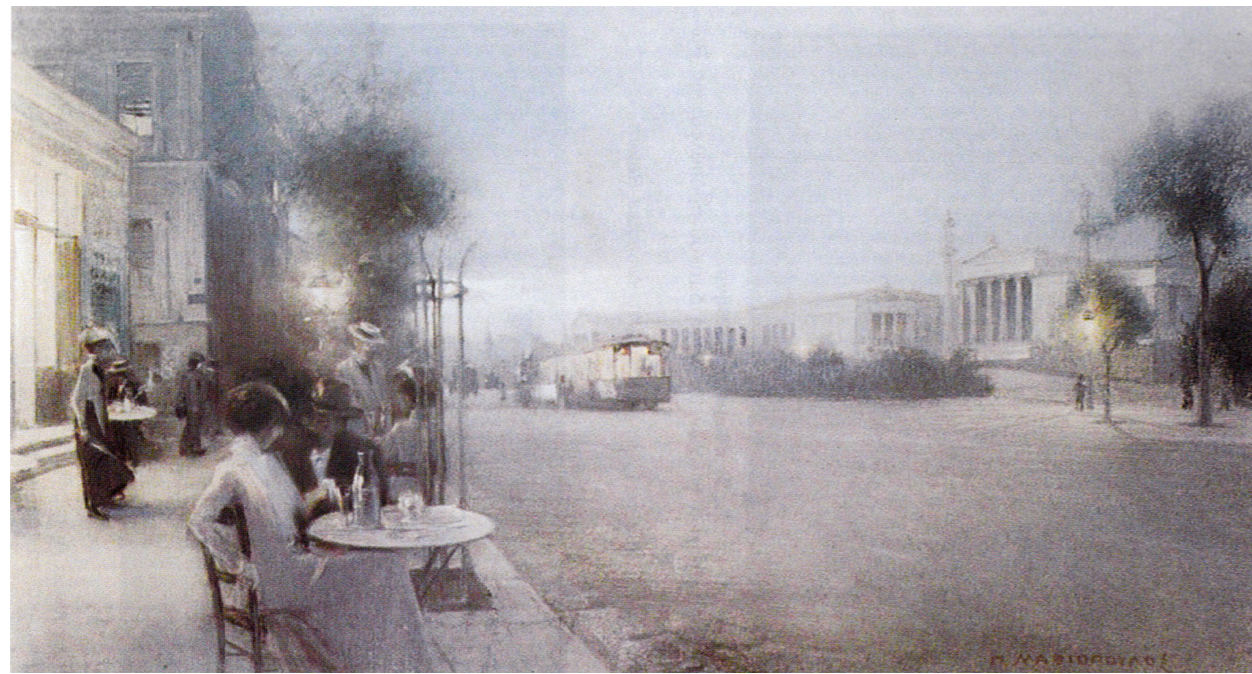


17 — *Steinbruch zu Pentele (Pentelicon quarry)*, Ludwig Lange, 1836
 18 — *Steinbruch zu Pentele (Pentelicon quarry)*, Ludwig Lange, 1836

The emergence of the quarries on Mount Pentelicon (or Vrtilis, as it was referred to in classical literature) after the Greco-Persian wars (449 B.C.) marked a perceptible change in that Attic landscape.³⁵ Those first quarrying operations altered the physical slopes of a ridge of the mountain that runs from northeast to southwest, corresponding to the belt of metamorphic rocks that lies underneath.³⁶ At least thirty ancient quarries, each with a different irregular shape, are registered along that ridge. According to stratigraphic studies, which were mainly conducted for archaeological purposes, the oldest and deepest quarry of this ancient complex —known as *Spelia* (cave) quarry— provided the 20,000 tons of marble required for the Parthenon; the Parthenon is the first recorded instance where Pentelic marble was used for the entire structure of an architectural scheme.³⁷ In the broader Attic landscape, two other types of white marble were also exploited to support the proposed Periclean building program that included works on the Acropolis: the marble of Mount Hymettus and the marble of Agrileza.³⁸ Under the collapse of the second Athenian Empire (378-355) the political centre of the Athenian state faced financial ruin. Writing around that time, Xenophon in *Ways and Means: A Pamphlet of Revenues* records the abundance and perfect physical qualities of the white Pentelic marble, and praises the natural resources of Attica.³⁹ The demand for Attic marbles grows in the Hellenistic, and even more so in the Roman era, as the Greek geographer Pausanias notes in his *Periegesis* (description) of *Greece* (2nd century AD). Combining mythical imagery and local narratives through descriptions of marble sculptures, architectural monuments and epigraphic tablets, Pausanias offers a *topio*(place)-graphic rather than chronological portrayal of all those ‘marble places’; this is the first time, to my knowledge, the mountain is referred to as Pentelicon.⁴⁰

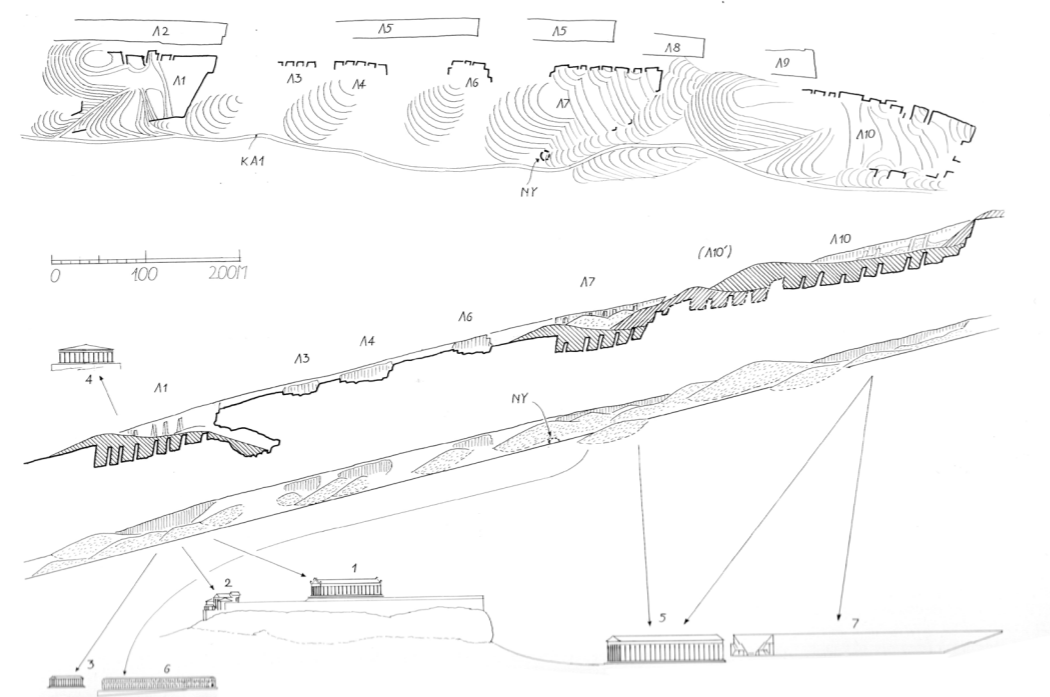
For many centuries Mount Pentelicon retained its ancient marks. While the quarries remain inactive until 1836, from the mid-seventeenth century the mountain is, in a different manner, still in operation. *Spelia* quarry in conjunction with the Parthenon became the places most visited in Attica by Western travellers: artists, intellectuals and Grand Tourists. Numerous pictorial and verbal representations of the mountain, and especially of *Spelia* quarry, are found in travel journals, paintings and archaeological essays, depicting the quarried landscape either in relation to Athens and Piraeus or in relation to Marathon, and the names of some of those early travellers are still carved on the stones of the mountain.⁴¹ By this point, then, the ancient quarried landscape of Mount Pentelicon had become a cultural symbol of the classical ideals as much as the metropolis’ monuments. Yet apart from the historical importance the mountain had acquired, *Spelia* quarry had also transformed into a sacred place where asceticism flourished and, in a strange sense of neo-classical re-appropriation of a significant site, a Christian church had been erected in the sixteenth century. In the mid-nineteenth century, modern quarrying began in *Spelia* quarry and extended along the entire ridge on which the ancient operations developed in order to provide the white marble for the embellishment of the Royal Palace (the current Hellenic Parliament as discussed in Part A). Stamatis Kleanthis, the architect who was commissioned by King Otto to propose the first master plan for the modern Athenian metropolis, established the first marble company that would systematically extract the material from the mountain.

During the end of the nineteenth century, the first official topographic depiction of the quarried landscape of Mount Pentelicon (referred to as *Aspra Marmara* (White Marbles)) is also realised. This representation is part of a broader mapping entitled *Karten von Attica* (1903), conducted by the German geographer Johannes A. Kaupert and archaeologist Ernst Curtius. Curtius had already started surveying Athens, focusing on registering the city’s marble ruination through research that had begun in 1875 and that was subsequently published as *Atlas von Athens* in 1894. Although Curtius’ mapping was originally conceived as a historical and archaeological project, it developed into a national mapping that was of primary importance at that time, offering the basis for several re-drawings of modern Athens. Based on the measurement of a base along the Athens-Piraeus railway, Curtius’ *Atlas* expands, covering a much larger territory and, under the guidance of Kaupert, develops into a series of thirty-two scaled maps of Attica.⁴² Following the scientific principles of cartography of the time, *Karten von Attica*



19 — Panepistimiou Street, Παύλος Μαθιόπουλος, c. 1900

20 — Sources of Pentelic marble for the metropolitan monuments, Manolis Korres, 1995



includes rich information regarding Attica's natural elements (geophysical relief, forests and vegetation) as well as manmade elements (settlements, roads, ports, quarries, and ancient monuments).⁴³ Around the same time, detailed descriptions of the physical and mechanical properties of Greek marbles are published in a form of a catalogue entitled *Griechische Marmorstudien*.⁴⁴ This modern research was carried out by the German geologist Richard Lepsius and conducted in parallel with a geomorphological study of Attica, entitled *Geologie von Attika* (1893), which further reinforced the construction of the *Karten von Attika*.⁴⁵ In the *Karten von Attika* the forms of the ancient marble quarries are depicted in the same manner as the ancient marble monuments of the city, both coloured with the maroon ink that indicated all elements of archaeological and historical importance. At this time, then, instead of preserving that marble place of Mount Pentelicon (as was the case with all the marble places of the city itself), the modern quarrying expanded as the imagined, modern 'White City' materialised; the neoclassical trilogy (the National Academy, the National Library, the National University of Athens) on Panepistimiou Street as well as the National Technical University of Athens and the Archaeological Museum, among many others architectural schemes in the city of Athens dating from this period, are dressed with Pentelic marble.

The demand for the particular marble started increasing, and correspondingly an international export trade was fully established by 1897. With a capital of £350,000 (equivalent to approximately £19,971,000 today),⁴⁶ the Anglo-Greek company *Grecian Marbles (or Marmor) Limited* purchased the quarrying rights on Mount Pentelicon, along with the rights of several other quarries, including quarries in Paros, Tinos, Skyros, Naxos and Euboea, and became one of the largest productive units of marble quarrying in Europe.⁴⁷ Pentelic marble was introduced into Great Britain, Europe and the United States as Attica's infrastructure expanded; the Attica railway line, connecting the edge of the quarried landscape of Mount Pentelicon with the port of Piraeus, was constructed to facilitate exports. The company invested in modern technologies for extracting, processing and transporting marble, and also employed a large labour force from the Aegean islands that retained a long tradition in marble craftsmanship. Marble industries appear along the main axis that connects the mountain to the metropolis (on Pentelis Avenue), responding to the growing export trade (see *Photographic Essay 4: Marble Industries in Vol. 2*). In the wake of this rapid expansion, the absence of any proper design strategy for preserving Mount Pentelicon, along with the capitalist relations of production based solely on gain and profit-making, proved immensely destructive of the natural environment of Mount Pentelicon. At least 172 discrete quarries are now identified as existing on the landscape of Mount Pentelicon.⁴⁸ Modern operations kept covering the traces of previous operations until the late 1980s, when quarrying operations were completely banned on that side of the mountain.

With the closure of operations on the southwest side of the mountain, the Greek architect Manolis Korres (who at the time was also the chief architect of the Acropolis Restoration Project) started conducting a survey of all the ancient and modern Pentelic quarries in order to re-draw an earlier imagery of the quarried landscape of Mount Pentelicon. This was published in *From Pentelicon to the Parthenon* in 1995. For his study, Korres employed a 1:5,000 topographic map issued by the Greek military and a series of aerial photographs; as a base he mainly returned to Curtius and Kaupert's nineteenth century mapping, as the image of Mount Pentelicon had dramatically changed in the intervening years. Korres' research produces a new landscape: an architectural map of the quarried landscape of Mount Pentelicon accompanied by an extensive notation system, coupling specific marks on the quarried landscape to specific architectures of the metropolis. Korres' research oscillates between a narration of a 'myth' —the fictitious story regarding the methods of quarrying and transporting a marble column capital— and quasi-scientific, factual research. Following elements from both readings, Korres speculatively maps *lithagogia road*, the road used for the conveyance of stone in antiquity.⁴⁹

The same year Korres' mappings were published, a landscape reclamation scheme began transforming the disused quarried landscape of Mount Pentelicon into a place for recreation. The company DIONYSSOMARBLE S.A.,



21 — Open-air museum of marble quarrying arts in the ancient Pentelicon quarries, Dimitris Kalapodas, 1997
 22 — Temporary X-fighters arena in the Dionysos marble quarry, Redbull, 2015

which is still responsible for the marble extraction from Dionysos quarries, commissioned the Greek landscape architect Aspasia Kouzoupi and landscape sculptor Nella Golanda, and funded the entire project.⁵⁰ Kouzoupi and Golanda re-imagine Mount Pentelicon as they re-image the quarried ground as a landscape where the distinctions between man-made activities and the natural environment become blurred. Five experienced stonemasons from the island of Paros, who were working at the site until its closure, assisted in resynthesizing the huge amount of waste marble that had been left when quarrying finished, organising this scattered matter in such a way as to revive the network of pathways worn into the ground by the constant passage of quarrying activities.⁵¹ A marble lookout point was constructed, offering a staged image over the Attic basin that speaks about the uniqueness of that marble history, while all the *opseis* (surfaces and images) of the quarries, as commodified images, previously buried by debris, were exposed for the ‘tourists’ gaze.⁵²

While touristic excursions and other cultural activities run on the southwest side of the mountain, privatised quarrying operations continue to transform the northeast side of Mount Pentelicon. Today Pentelic marble continues to be exported globally; among many other diverse uses and places Pentelic marble is now to be found in luxurious hotels in Saudi Arabia and temples in India. The financial crisis of 2008 has certainly affected the Greek marble industry as the country’s per capita marble consumption has dropped.⁵³ In the wake of the financial crisis, some new events started taking place at *Dionysos* quarries that build upon that perception of the quarried landscape as a heritage commodity, and thus became bound into the marketplace as a landscape “available only at a price.”⁵⁴ This was the case, for instance, with the freestyle motocross competition that was organised in June 2015. For the specific spectacle, an ‘artificial’ ground —entirely made of marble matter (dust, in particular)— was temporarily constructed in the very ‘place’ of white marble in Attica.⁵⁵

SPACES, PLACES, LANDSCAPES OF MARBLE

Bringing together a multiplicity of epochs (antiquity, modernity and the contemporary era) and scales (corporeal, local, metropolitan, national and global) as well as natural, cultural, social, economic and political images and imagings, the above chronological narration renders Mount Pentelicon as a diverse and trans-disciplinary landscape. I will here revisit four of the re-presentations of Mount Pentelicon mentioned above while unfolding a parallel theoretical reading of the evolving meanings and profuse understandings of landscape that have emerged in the twenty-first century. Put differently, as I unravel the recent discourse on landscape through the renaissance of the disciplines of cultural geography and visual culture I will also further comment on the following depictions described in and key to that chronology outlined in the previous section. These depictions, I will argue, are critical not only in themselves but in how they inform both the reading and making of the marble landscape of Attica. I include: (i) a set of landscape paintings of the ancient quarried mountain that appeared in the eighteenth century [figures 17, 18, 24, 25]; (ii) Johannes A. Kaupert and Ernst Curtius’ cartographic mapping of Attica (*Karten von Attika*) of the nineteenth century [figures 15, 16, 23]; (iii) Manolis Korres’ architectural and archaeological reconstructions of the ancient and modern quarrying activities and of the metropolis’ monuments undertaken in the 1990s [figures 20, 27]; and (iv) Nella Golanda and Aspasia Kouzoupi’s design project for the disused quarried landscape, also undertaken in the 1990s [figures 21, 26].

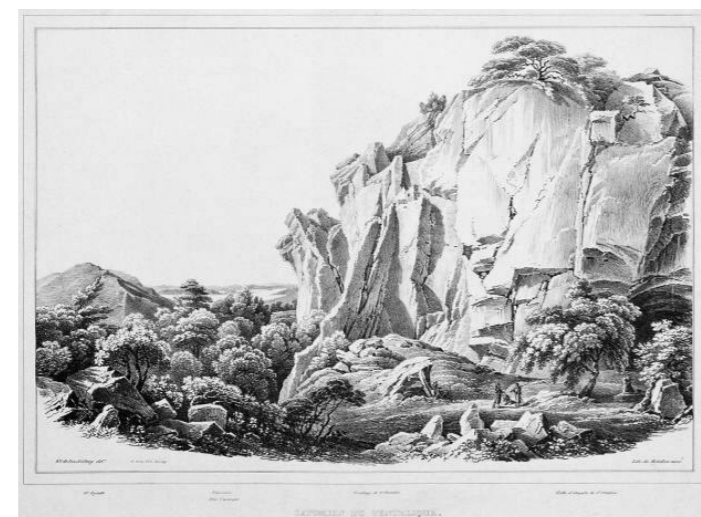
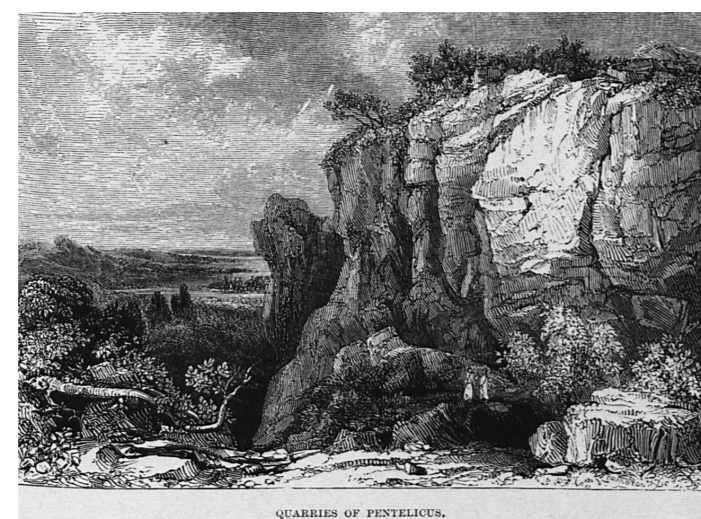
During the past thirty years, the discipline of cultural geography has undergone a conceptual and methodological revival.⁵⁶ As a result, landscape research today is embracing an even-larger set of usages, many of which refer to different philosophical stances (i.e. historical materialism, hermeneutics, structuralism, phenomenological and post- phenomenological, post-structuralist, feminism, etc.) and penetrate into a variety of disciplines

(architecture, ecology, painting, photography, etc.).⁵⁷ Among the growing body of literature that has shed light on these academic reorientations, and focusing on the hybrid nature of landscape, is the collection of essays *Deterritorialisations... Revisioning Landscapes and Politics* (2003), edited by Mark Dorrian and Gillian Rose. The Deleuzian term employed in the title echoes the intention of the authors to “uproot [landscape] from its location within fixed ways of signification,” note Dorrian and Rose, who return to a seminal essay by J. B. Jackson, entitled ‘The Word Itself’ (1984).⁵⁸ Jackson’s essay maps the ambiguities that emerge as one attempts to form a univocal definition of that very word landscape; “the word is simple enough, and it refers to something which we think we understand; and yet to each of us it seems to mean something different,” Jackson writes.⁵⁹ Challenging the straightforward framing attached to the genre of landscape painting (illustrated by the dictionary definition of ‘landscape’ as a neutral image of a naturally idyllic scenery), Jackson puts forward a polyvocal image of landscape while re-tracing the etymological roots of the word.⁶⁰ By exploring the various iterations between the suffix *-skip* of the old English (appearing in 1603) and the Dutch and German equivalents *-schap* and *-schaft* respectively, Jackson resituates the concept of landscape in the polarity between connotations of scenery/vision — “a referral to the eye” — and connotations of practice/construction — “the socio-cultural moulding of the physical environment by collectivities and individuals.”⁶¹ Stressing the polarity between ‘eye’ and ‘land’, evident in Jackson’s quasi-phenomenological understanding of landscape, but adding a series of other persistent pairs that further hold the diversity and fertility of landscape (such as material/subjective matters, inner/outer worlds, representable/non-representable imageries, past-present/present-future considerations), Dorrian and Rose write:

[Landscapes] are often understood as repositories of the past, holding history in their contours and textures. [...] Looking at landscapes as evidence of past processes and events seems a strong temptation, much stronger than seeing landscapes as offering possibilities for the future. But the meanings of landscape, whether historical or for the future, are never simply there, inherent and voluble. [...] the process of practicing landscape [...] always places landscape in a present moment. This presentism is a crucial one and a political one, for it disrupts accounts of landscape which seek to ground certain claims, and identities in a self-evident earth. Landscapes are always perceived in a particular way at a particular time. They are mobilized, and in that mobilization may become productive: productive in relation to a past or to a future, but that relation is always drawn with regard to a present.⁶²

Dorrian and Rose’s suggestion that we *re-vision* (and re-imagine) landscape as an instantiation of process, which is always instrumental and constitutive instead of merely historic or symbolic, is further supported by Denis Cosgrove’s geographical writings, and in particular Cosgrove’s *Social Formation and Symbolic Landscape* (1984), in which a ‘way of seeing’ landscape as that which constructs a spatial and visual organisation of view is portrayed. Influenced by a Marxian tradition, as well as Raymond Williams’ theorisations of a ‘lived culture’, Cosgrove writes: “Landscape is not merely the world we see, it is a construction, a composition of that world. Landscape is a way of seeing the world.”⁶³ Cosgrove’s definition remains cogent as it marks “not only a landscape in front of a viewer, but also the viewer as a subject position,” Rose highlights.⁶⁴ Such definitions of the ‘word/’image’ of landscape in which issues of subjectivity, vision and politics are constantly entangled are further extrapolated in W.J.T Mitchell’s anthology, *Landscape and Power* (1994). Mitchell’s theorisation is equally cogent, and reinforces the understanding of landscape as an ideologically charged and complex ‘process of sight’, while his conceptual triad ‘space/place/landscape’ promotes a way of further deterritorialising fixed ways of perceiving, representing and working the landscape. Cosgrove’s ‘ways of seeing’ and Mitchell’s triad will here become the vehicle for disrupting conventional methods of depicting Mount Pentelicon, and by extension Attica’s marble.

I will start with the second (*ii*) representation of Attica’s marble landscape, Johannes A. Kaupert and Ernst Curtius’ nineteenth-century cartographic mapping of Attica, *Karten von Attika*, which occurred at a time when the discourse on landscape was mainly approached as an objective project. Looking more carefully at the *Karten von*



23 — Karten von Attika (detail from XII. Pentelikon), Ernst Curtius and Johann A. Kaupert, 1895

24 — Quarries of Pentelicus, Christopher Wordsworth, 1882

25 — Latomies du Pentelique, Otto Magnus von Stackelberg, 1854

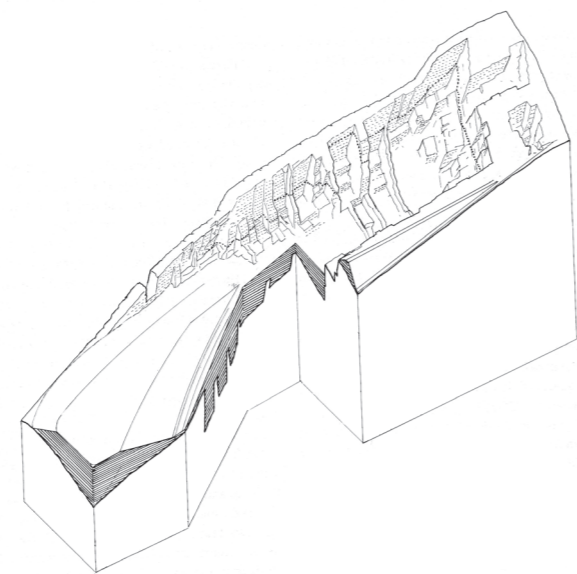
Attika, and especially at the technique of *hachuring* through which the relief of Mount Pentelicon is drawn, Kaupert and Curtius’ cartographic map offers a highly textured representation of that landscape. The different densities of the short, controlled lines (*hachures*) are detailed and accurate, and give the impression of the depth and height of the mountain; the ‘hachures’ are “drawn in the direction of the steepest gradient, that is, in the direction of water flow down a slope,” Edward Casey explains by describing a similar representation (the *Atlas of Switzerland*, drawn by the cartographer G.H. Dufour in 1863) in *Representing Place* (2002).⁶⁵ Used primarily for military purposes and connected with the establishment of national states, such realistic and factual representations force a view of the landscape from above; the technique of *hachuring* is later replaced with the technique of the contour line, and today’s digital mapping (in all cases, factual precision drives these depictions). In contrast to the measured and mathematical concerns and the proprietorial view that Kaupert and Curtius’ cartographic map brings to the surface, the earlier pictorial representations of Mount Pentelicon — a series of paintings and copperplate engravings (often accompanied by literary recourses) such as the *Pentelic Quarries* (1819) by Dowell Edward, the *Latomies du Pentelique* (1854) by Otto Magnus von Stackelberg, and *The quarries of Mount Pentelikon* (1882) by Christopher Wordsworth, among many others— illustrate a meditative understanding of the landscape. The first (i) representation of the quarried marble landscape, the eighteenth-century landscape paintings, promote, then, a romantic adulation of antiquity, in a similar manner to the familiar appreciation of the marble ruins of Athens; both advance an idealistic and harmonious unity between nature, life and art.⁶⁶ In the introduction of *Landscape and Power*, Mitchell notes that such ‘painterly’ representations attempt “to narrativize history [of landscape] as a progressive movement toward purification of the visual field.”⁶⁷ This modern approach is a ‘contemplative’ one, since “its aim is the [...] presentation of an image designed for transcendental consciousness,” Mitchell adds.⁶⁸ In other words, the cultural, social, economic and political constructions of Mount Pentelicon — the ‘dark sides’ of this quarried landscape— have been negated and presented as if its features were merely formed by geological forces or mythical operations rather than human operations.⁶⁹ Up to the nineteenth century, through representations (i) and (ii) the landscape of Mount Pentelicon, and by extension marble itself, was therefore seen as either a passive, scientific project or a pastoral, seductively beautiful, project.

In the essay ‘Liminal geometry and elemental landscape’ (1999) Cosgrove discusses how these two directions span from the fifteenth to the early twentieth century as he draws on the geometric principles employed for representing the landscape to the viewing subject. Reading *The Geography* (2nd century AD) written by the Alexandrine geographer and mapmaker Claudius Ptolemy, Cosgrove unfolds a visual hierarchy that consists of three discourses that for Cosgrove have influenced the evolution of modern spatial theory and practice. These are *cosmography*, *geography* and *chorography*. All three, as their common ending (*-graphie*) suggests, are attached to constructions of image as ‘writings’ that address “the logic and authority of the eye.”⁷⁰ Where cosmographical representations locate the individual at the centre of the cosmos (a geocentric and heliocentric universe), geography places the individual at a certain distance from the earth and with a specific static point of view. Geographical representations force a view of the patterns (features such as seas and mountain ranges, cities, divisions of continents and nations, climates and seasons) found on the surface of the globe. The absolute datum of the globe, on one hand, and the accurate connections between specific locations and the globe realized as measured metric coordinates on the other, denote scientific characteristics to such depictions. It is in this context that the (ii) second visual representation of Attica’s marble landscape was carried out. In contrast chorography, Cosgrove continues, offers representations of small parts of the earth (*locales*) that disregard their accurate placement in relation to a broader geographical frame; it is the character of the place — “the personality of a surface stretching away to the horizon” — that becomes of primary importance.⁷¹ The skills of the mathematician or the astronomer, which are required for the construction of geographical maps (as well as cosmographical diagrams), are now juxtaposed with the skills of a painter/writer (*disegno* and *colore*). In addition to *colore* and *disegno*, Cosgrove adds, the gestures of surveying and levelling are also evident in chorographies, and it is through



26 — Panoramas of the open-air museum of marble quarrying arts in the ancient Pentelicon quarries, 1997

27 — Measured trimetric section of an ancient quarry (A 10) on Mount Pentelicon, Manolis Korres, 1995



the latter set of skills that one engages with the elemental world, practicing landscape. Chorographies, thus, place the individual on the earth's surface as they stress the imaginative role of the viewer to practice landscape, Cosgrove notes. Such a 'way of seeing' does not hold an art-historical perspective but is closer to an artistic-creative tradition. Bird's eye representations, for example, depend on the sophisticated technical knowledge of perspectival geometry that emerged in the Renaissance, through which "the observer gains a visual impression of distance and topography, as if looking through a picture or window frame at landscape scenery," Cosgrove writes.⁷² The vantage point becomes subjective while the represented landscape relative. Kouzoupi and Golanda's photographic collages of their completed landscape architectural proposition—the fourth (*iv*) representation of Mount Pentelicon re-examined here— could be rethought in this sense. By combining different viewpoints, 'as if looking through a picture or window frame', these resultant collages of the quarried marble landscape are closer to the logic of chorographies. These recent depictions therefore construct an imaginary Mount Pentelicon that is activated by the viewer's disengagement with the larger geographical scale, as they make it possible for the viewer to exercise his imaginative power and re-construct the landscape.

I will now revisit Manolis Korres' drawings, the third (*iii*) representation of Attica's marble landscape, via a consideration of Mitchell's introduction to *Landscape and Power*. As noted above, Mitchell places a first perceptual shift of our understanding of landscape within the modern practice of landscape painting. He recognises a second, postmodern shift as that which "decentre[s] the role of painting and pure formal visibility in favor of a semiotic and hermeneutic approach."⁷³ Landscape is now seen as the medium itself, a set of symbols that carry the message while opening up the world to speculation and poetic interpretation. Put simply, compared to the contemplative nature of the first shift, this second shift has an interpretive character. In Korres' extensive notation system, "a body of determinate signs" is surfaced.⁷⁴ Korres' intricate hand-drawn illustrations, I would argue, act as textual fields that are deciphered as mythical symbols and allegories. Assimilating the two shifts into a more inclusive system, Mitchell presents a third shift according to which "what landscape is or means" becomes now less significant than "what [landscape] does and how it works as cultural practice."⁷⁵ Through this last shift, Mitchell attempts to re-theorise landscape as an ideological instrument of cultural force that focuses on "how these 'doings' are enacted in the media of representations we call 'landscape.'"⁷⁶ Attached to poststructuralist thinking, this third shift demonstrates a more general shift away from the prevailing nineteenth- and early twentieth century scientific theories, structural explanations, and grand narratives to more culturally and socially mediated constructions, privileging issues of specificity, identity and event.

At the end of the twentieth century, similar paradigmatic shifts were occurring in the social sciences and humanities, widely known as the 'cultural/spatial turn' and 'pictorial/iconic turn' (as discussed in Part A).⁷⁷ Cosgrove notes:

A widely acknowledged 'spatial turn' across arts and sciences corresponds to post-structuralist agnosticism about both naturalistic and universal explanations and about single-voiced historical narratives, and to the concomitant recognition that position and context are centrally and inescapably implicated in all constructions of knowledge.⁷⁸

The American geographer Edward Soja further advances a theoretical discussion on the 'spatial turn' in the mid-1990s, as he comments on the Marxian social-spatial dialectic—and in particular Marx's privileging of the social over the spatial— through a close engagement with the seminal works of Henri Lefebvre and Michel Foucault. Following Lefebvre's critical method of the 'triple dialectic', on one hand, and Foucault's 'otherness', on the other, Soja proposes a rethinking of space in *Thirdspace* (1996). He argues that although the writings of Lefebvre and Foucault around the 1970s proposed strong critiques of the objective Cartesian models and traditional binary ways of thinking about space, the discussion on space (in similar way to time) was still centred on a modernist

approach that either recognised space as concrete and quantifiably measurable (what Soja calls ‘Firstspace’) or as the ideational representation of those concrete forms (what Soja calls ‘Secondspace’). These two ‘spaces’, as Soja acknowledges, have their basis in Lefebvre’s *Production of Space* (1971). Lefebvre had characterized these two modes as ‘perceived’ and ‘conceived’ spaces (or ‘spatial practice’ and ‘representations of space’, respectively) within his triadic framework that not only rejected the separation of ideal/real space but also included a third representational (or ‘lived’) space. Lefebvre’s third notion designates a space mediated through “images and symbols [...]. This is the dominated —and hence passively experienced— space which the imagination seeks to change and appropriate.”⁷⁹ Starting from this premise that unities physical, mental, and social aspects of space, Soja proposes his “trialectics of spatiality.” Soja elaborates:

Thirdspace includes both material and mental spaces, the real and the imagined, what I described as Firstspace [corresponding to Lefebvre’s perceived space] and Secondspace [corresponding to Lefebvre’s conceived space]; but also [...] something else that we can begin to understand only by widening the scope of our geographical imagination.⁸⁰

Soja, thus, reasserting the equal privileging of the spatial, historical, and social (instead of that Marxian perspective whereby the spatial is subordinated to the social), offers the means for opening up multiple ways of seeing space.

In addition to this Lefebvrian framework, and as an extension to Lefebvre’s thinking, Soja goes on to introduce Michel Foucault’s notion of heterotopologies —those “significantly different” spaces.⁸¹ However here, rather than elaborating on Soja directly I propose to examine how Soja has been interpreted by W.J.T Mitchell in the context of landscape. In the preface to the second edition of Mitchell’s *Landscape and Power* (1994) Soja’s ‘thirding-as-othering’ takes another form. Mitchell begins with a similar triangulation, although orientated more towards the advancement of the discourse on landscape. Mitchell promotes the usefulness of thinking about landscape vis-à-vis space and place; he even admits that the title, *Space, Place, and Landscape*, would probably have framed more successfully the potentialities of landscape than that of power which was initially chosen. For Mitchell, David Harvey’s *Justice, Nature, and the Geography of Difference* (1996) was a critical for re-inserting the importance of space and place into spatial scholarship, as Harvey, Mitchell argues, engaged with two quite different trajectories: one that Mitchell summarises as a Marxian tradition expressed through Henri Lefebvre (but with influences from Michel Foucault and Michel de Certeau) and another framed around a historical materialist, phenomenological tradition (as articulated by Gaston Bachelard and Martin Heidegger).⁸² For Mitchell, however, even Harvey takes up the dyadic approach between place as “associated with ‘stability,’ ‘the law of the proper,’ and the specific, definite location” and space as ‘a practiced place’ (“a place constituted by a system of signs”) as presented in Michel de Certeau’s *The Practice of Everyday Life* (1984).⁸³ Harvey’s *Justice, Nature, and the Geography of Difference* insists, then, on that same logic of oppositions between space and place, in which landscape still remains underdeveloped. Similar to Soja’s analysis, Mitchell sees in Lefebvre’s triadic conceptual structure the capacity for the emergence of a differentiated theoretical spatial field but proposes a correspondence between Lefebvre’s perceived/conceived/lived space and his *space/place/landscape*.

Mitchell conditions this theorization with a further dynamic. His intention is not to make a direct linkage, substitution or superimposition between Lefebvre’s triad and his own. What is more critical to comprehend is the dissolution of any binary tendencies between ‘space’ and ‘place’ that ultimately overlook that ‘landscape’ is part of a recurrently oscillating and shifting equation between them.⁸⁴ In order to supplement a thinking of space, place, and landscape together as a unity, Mitchell also draws parallels to a re-reading of the Lacanian triad: Mitchell juxtaposes Lacan’s ‘Symbolic’ with the notion of Lefebvre’s conceived space; relates Lacan’s Real with the notion of place as “the site of trauma or the historical event;” and infuses the concept of landscape with Lacan’s ‘Imaginary’.⁸⁵ Once again, Mitchell encourages the reader to focus on the mobility of this abstract triad,

which instead of reducing spatial theory and analysis to mere re-theorizations of space and place, incorporate the richness and implications of landscape. He writes:

One might think, then, of space, place, and landscape as a dialectical triad, a conceptual structure that may be activated from several different angles. If a place is a specific location, a space is a “practiced space,” a site activated by movements, actions, narratives, and signs, and a landscape is that site encountered as image or “sight” [...] No one of these terms is logically or chronologically prior to the others: one could speak of spatial activities as producing or modifying a place, or of the properties of a place making possible some spatial activities and preventing others (thus, place may be seen as having a kind of agency, despite de Certeau’s notion that space is the active and dynamic term.) Landscape could be seen as the first cognitive encounter with a place, and an apprehension of its spatial vectors (thus, an appreciation of landscape may well include a reading—or an inability to read— its narrative tracks or symbolic features).⁸⁶

Mitchell visualizes his triangulation in his description of Central Park in New York. Paraphrasing those observations, in the above passages I have similarly attempted to reconstruct a plurivocal ‘way of seeing’ the quarried marble landscape of Mount Pentelicon, and by extension marble, as I “deposit[ed] layers of cultural representation” through the four spatial and visual representations (i, ii, iii and iv), and also placed them in what I imagine to be a continuous series with the recent 3D techniques of visualization, examined in *Chapter i* of Part B.⁸⁷ Therefore, before opening a further dimension to this elaboration of Attica’s marble materiality and in further development of an enriched image-opsis of Athens, I will offer the following summary of the main points of this section.

Athens’ marble is located in a specific ‘place,’ Mount Pentelicon. Mount Pentelicon as ‘practiced space’ was activated by ancient quarrying operations. In the eighteenth century, a series of picturesque landscape paintings, that derived from an earlier European tradition, have consumed and idealised the materiality of the landscape of Mount Pentelicon, while the aerial regimes evident in the modern cartographic approaches mobilized the surface-image of this landscape as an effective instrument of power. The re-drawings of this ‘practiced space’ in the twentieth century elucidate a reading of the mountain’s symbolic character, which, especially as a disused place, was further ‘designed’ to be encountered as a scenographic and imaginary ‘sight’. Today’s underground quarrying keeps modifying the place of Mount Pentelicon, and at the same time producing space, allowing for ‘some spatial activities to take place while preventing others’. At the same time the emergence of the new modes of observation and data gathering (associated with what many refer to as a ‘digital’ turn) continues to reanimate that polyvalent reading of the image of this landscape—and certainly broadening our field of vision for Athens’ marble materiality. In the following section, I will seek to enrich this developing image of Athens’ marble further by introducing an ecological dimension to discussions of marble and the Attic landscape.

‘GEOLOGICAL AND GEOGRAPHIC (AND ECOLOGICAL) LANDSCAPISM’⁸⁸

The rise of the discourse on landscape in the broader cultural and geographic field, along with increasing interest in the projective possibilities of cartography, has greatly influenced architecture theory and practice since the mid-1990s. Concluding Part B and *Vol. 1*, I return to a discussion of the role of architectural design as seen through two recent design approaches, namely *Landscape Urbanism* and *Ecological Urbanism* advanced by the writings of James Corner and further extrapolated by the architects Charles Waldheim, Stan Allen and Mohsen Mostafavi. Central to the ‘turn’ from landscape to ecology (which the development from Landscape Urbanism to Ecological Urbanism echoes) I will outline here is Felix Guattari’s transversal philosophies. I will examine Guattari’s ecological considerations as conveyed through his ‘ecosophic principles,’ considered as a basis of a

new cartography,’ as means of putting forward a politicized ‘philosophy of subjectivity’ that, when considered in architectural mappings and design practice, can affect the making of radical policies that challenge the social, political and imaginative dimensions of architecture (see *Drawings: Atlas of Attica’s Marble* and *Drawings: Ecosophic Cartographies; The Asperity of Marble’s Alterity* in Vol. 2).

Based on James Corner’s writings of the mid-1990s, in which Corner voices understanding of landscape as an agent of an innovative re-‘ordering’ of urbanism, the architect Charles Waldheim coined the term ‘Landscape Urbanism’ in 1996.⁸⁹ Bringing together the two loaded discourses (landscape and urbanism), Waldheim’s neologism became the basis of a conference and exhibition at the Graham Foundation in Chicago in 1997, where Waldheim reiterated Corner’s earlier argument as he noted: “landscape has become the model and medium [...] through which the contemporary city is represented and the material from which it is constructed.”⁹⁰ In correspondence with the theoretical observations raised by cultural geographers according to which landscape does not simply stand for scenographic and pastoral representations of gardens, Waldheim claims that ‘Landscape as Urbanism’ provides an opportunity to expand the narrow agenda of landscape architecture by transgressing the discipline’s traditional mind-sets that promote “a rear-guard defense of a supposedly autonomous ‘nature’ conceived to exist *a priori*, outside of human agency or cultural construction.”⁹¹ Rejecting, also, the formalism of modernist schemes and the sentimental and nostalgic neo-traditional aesthetization of New Urbanism, Waldheim recalls Charles Jencks’ and David Harvey’s postmodern critiques of the failure of spatial practices to challenge the dynamic multiplicity of urban processes. Waldheim therefore presents his ‘Landscape Urbanism’ as a synthetic conflation created out of the interaction of prior institutionally defined disciplines. Corner supplements: “The promise of landscape urbanism is the development of a space-time ecology that treats all forces and agents working in the urban field and considers them as continuous networks of inter-relationships.”⁹² Such a promising field-orientated methodology was nevertheless directed only at marginal urban zones and abandoned, undeveloped post-industrial landscapes, or *terrain vagues*,⁹³ which until then were explored less by designers and more by artists (such as Robert Smithson’s land art and Andrea Tarkovsky’s films).⁹⁴ As for examples of design projects that advocated ‘landscape as urbanism’, both Corner and Waldheim returned to the international competition for Paris’ Parc de la Villette (1982) to claim that Bernard Tschumi’s scheme, along with Rem Koolhaas’ unbuilt proposal, “signaled landscape’s emergent role as a primary conceptual medium of postmodern urbanism.”⁹⁵ Instead of promoting predetermined synoptic master plans both Tschumi and Koolhaas’ propositions, Waldheim argues, blur the disciplinary boundaries between architecture, urban planning and landscape architecture as they present a series of speculative ‘field conditions’ that prioritize issues of program, event, process and change that, for Waldheim and Corner, are central to the development of ‘Landscape Urbanism.’⁹⁶

Corner’s essay, ‘The Agency of Mapping’ (1997), calls further attention to those hybrid and layered strategic acts as it unfolds Deleuze and Guattari’s rhizomatic and diagrammatic thinking and, more specifically, the distinction the two philosophers make between ‘maps’ and ‘tracings.’⁹⁷ Corner writes:

Mapping unfolds potential; it remakes territory over and over again, each time with new and diverse consequences. Not all maps accomplish this, however; some simply reproduce what is already known. These are more ‘tracings’ than maps, delineating patters but revealing nothing new. In describing and advocating more open-ended forms of creativity, philosophers Gilles Deleuze and Felix Guattari declare: ‘Make a map not a tracing!’⁹⁸

In architectural terms, then, for Corner the creative art of mapping can enrich the intricacy and contradiction that is already embedded in contemporary urban/landscape situations allowing designers to re-work the potentiality of such representation; tracings merely expose redundancies that ‘always come back to “the same,”’ that is, conventional hierarchical systems of spatial order.⁹⁹ In this constructive and imaginative tradition of mapping

three operations are embedded, Corner notes: these are *(i)* the creation of ‘fields’ that is in fact the creation of an analogous surface and system which includes information regarding the scale, orientation, unit measurements, etc.; *(ii)* the isolation and ‘de-territorialisation’ of ‘extracts’ (strata) from that ‘field of action,’ which can be objects (material) as well as forces and flows (immaterial); and *(iii)*, the ‘re-territorialisation’ or ‘plottings’ of the strata. The last operation, Corner argues, is attached to the drawing out of new lines of possibilities for alternative design practices, since “to plot is to track, to trace, to set-in-relation, to find and to found [...] plotting produces a ‘re-territorialization’ of sites.”¹⁰⁰ Simultaneously analogous and abstract, mapping in architecture maps cultural interventions that embrace complexity and fluidity as they oscillate between procedures of “accumulation, disassembly and reassembly.”¹⁰¹ Corner further delineates four thematic ways in which such creative mappings have emerged in architectural practice: these are, ‘drift’ (as seen through the Situationists); ‘layering’ (such as Bernard Tshumi and Rem Koolhaas’ proposals for the Parc de la Villette or Peter Eisenman’s ‘artificial excavations’); ‘game-board’ (exemplified in Raoul Bunschoten’s ‘proto-urban-conditions’); and ‘rhizome’ (i.e. James’s Corner *Windmill Topography*). In a similar tone, Corner’s later essay, ‘Terra Fluxus,’ included in the edited collection *Landscape Urbanism Reader* (2006), re-articulates the art of mapping by focusing on the figural and processual relationships it creates as it takes into account the contingency and malleability of urban processes. Corner also includes in his landscape-focused notion of mapping a new emphasis on the means our digital era (though techniques such as scaling, indexing, coding, etc.) offers in representing such fluidity.

Debated in academic conferences and advanced through a plethora of theoretical texts, ‘Landscape Urbanism’ has become popular among several architectural schools in North America and Europe in the 2000s. However, most of the projects that were attached to the discourse remained within the boundaries of classical notions of landscape architecture, that is, the design of parks (the Fresh Kills Park and the High Line Park in New York City are two of the most celebrated examples of ‘Landscape Urbanism’), and many of the promises of Landscape Urbanism appear unfulfilled. In his essay ‘Between hermeneutics and datascares’ (2000) examining the work of James Corner, the Australian landscape architect Richard Weller argues: “Corner’s gorgeous graphic designs do overtly bring maps to art and art to maps,” however, “just as [Ian] McHarg’s method could be rote learnt and practiced badly by everyone, Corner’s representation elegance and attendant theoretical sophistication seems destined to remain detached and voyeuristic.”¹⁰² The flexible and open-ended design methods and techniques that were beautifully described in Corner’s essays often, as Weller suggests, resulted in an all too familiar representational conventionalism, just as occurred in (and was perhaps advocated by) the procedures of the earlier landscape architect Ian McHarg during the 1960s. In *Design with Nature* (1969) Ian McHarg ‘scientifically’ maps the flows and forces of nature as a fundamental aspect for measuring desired outcomes in regional design processes; McHarg’s depictions carry similarities to those early nineteenth century maps produced by epidemiologists who were tracing the places of contagions in cities.¹⁰³ These early ‘datascares’ seem to penetrate the practice of ‘Landscape Urbanism’, as exemplified in the visualizations described as ‘Machinic Landscapes’ that are produced under the graduate educational programme ‘Landscape Urbanism’ at the Architectural Association. Rather than offering creative openings towards plurality and diversity, such mappings of the complex urban/landscape conditions seem to present static representations of images-surfaces generated when a complex parametric form is simply frozen at a certain point of enquiry.¹⁰⁴ In his essay ‘From Biological to Ecological’ (2011), Stan Allen recognises the limitations of such material organizations, along with the dubiety of ‘Landscape Urbanism’ on the whole, as he suggests that it is time to look for alternatives that can further supplement the potentials of ‘landscape as urbanism.’¹⁰⁵

A recasting of those theorizations did indeed appear, as another adjectivally modified neologism advocated by Mohsen Mostafavi in 2007. ‘Ecological Urbanism’ becomes a critique and a continuation of ‘Landscape Urbanism’,

directing that “dated discourse more specific to ecological, economic, political, and social conditions of the contemporary city,” Waldheim writes.¹⁰⁶ In the introduction of *Ecological Urbanism* (2010), Mostafavi explains:

[T]he problems confronting our cities and regions [...] become opportunities to define a new approach. Imagining an urbanism that is other than the status quo requires a new sensibility—one that has the capacity to incorporate and accommodate the inherent conflictual conditions between ecology and urbanism. This is the territory of ecological urbanism.¹⁰⁷

Mostafavi incorporates a broader philosophical and political grounding in the articulation of his ‘new approach’ (through an abundance of references to writings of Michel Foucault, Jacques Rancière, Giorgio Agamben, Chantal Mouffe, Slavoj Žižek and Henri Lefebvre, among others) while returning to the speculative design methodologies and intellectual commitments of the visionary Italian theorist, architect and co-founder of the group *Archizoom*, Andrea Branzi. Branzi’s radical ‘diffuse and enzymatic urbanism’ expressed through his concept of a ‘Weak Metropolis’, promotes a social, political critique on the managerial ways of representing the city through automatic articulations and static architectural objects. For Branzi any approach to the city should “be reversible, evolving, and provisory,” depicted through continuous and non-figurative systems that can map and simultaneously adapt the relational urban flows and forces, Mostafavi notes.¹⁰⁸ However, although Branzi’s quasi autonomistic trajectory radicalises both concepts of landscape and urbanism, the key ‘ethico-political-aesthetic’ reference in Mostafavi’s thinking is Félix Guattari’s transversal hypothesis of an ‘autopoietic becoming’ that defines new forms of human existence. Guattari’s *The Three Ecologies* (1989) is a ‘value-system revolution’ that for Mostafavi holds the capacity to revitalize “the very methods of thinking that we apply to the development” of spatial practices, generating a more comprehensive ecological paradigm regarding the production of architecture.¹⁰⁹

I here briefly elaborate on Guattari’s ‘eco-logical praxis’ —or *ecosophy*— as formulated in *The Three Ecologies*. Moving away from Ernst Haeckel’s modern definition, which was presented in his *Generelle Morphologie* (1866) as an economy of nature that continues the Darwinian model of natural selection, Guattari clarifies that he does not regard ecology as “being associated with the image of a small nature-loving minority or with qualified specialists;” to the contrary, ecology for Guattari, “questions the whole of subjectivity and capitalist power formations.”¹¹⁰ Drawing upon Gregory Bateson’s cybernetic writings, Guattari opens *The Three Ecologies* with an extract from Bateson’s *Steps to an Ecology of Mind* (1972),¹¹¹ which highlights the “epistemological pathologies” that have wrongly focused on those ancient dualities separating environment from man, mind from body, etc., in order to suggest that what comes under the “ethico-aesthetic aegis of an ecosophy” activates society: individual and collective human praxes as well as environment.¹¹² Guattari argues that ‘integrated world capitalism’ (Guattari’s term for global capitalism) has resulted in diminutions to three fundamental ecological networks: the erosion of social relations (the first or ‘social ecology’); the disequilibrium of the natural world (the second or ‘mental ecology’); and their invisible penetration into people’s perceptions (the third or ‘environmental ecology’). The result is such that all forms of production, axes of value and ways of living are flattened out to the extent that alterity [*l’altérité*] “tends to lose all its asperity.”¹¹³ In order to avoid such homogenization, Guattari focuses on the importance of the production of subjectivity while he analyses its re-appropriation through his concept of the ‘the ecosophic object’.¹¹⁴ Initially presented in *Chaosmosis* (1992), ‘the ecosophic object’ is a schizoanalytic metamodel which seeks to respond to redundant schemes that control the production of subjectivity by encouraging “assemblages of enunciation capable of capturing the points of singularity of a situation.”¹¹⁵ Four ontological factors constitute such a metamodel, namely: *(i)* “material, energetic and semiotic Fluxes;” *(ii)* “concrete and abstract machinic Phylums;” *(iii)* “virtual Universes of value;” and *(iv)* “finite existential Territories.”¹¹⁶ Guattari’s quadrants of subjectification map the complex interactions between actualised domains (‘Fluxes’ and ‘Phylums’) and virtual domains (incorporeal ‘Universes’ of reference and existential ‘Territories’) of action that can lead to a

process of ‘ontological heterogenesis’ mobilizing the sensibilities for different ways of seeing, reading and making the world.¹¹⁷ Concluding his chapter on ‘the ecosophic object’ Guattari writes,

Psychoanalysis, institutional analysis, film, literature, poetry, innovative pedagogies, town planning and architecture — all the disciplines will have to combine their creativity to ward off the ordeals of barbarism, the mental implosion and chaotic spasms looming on the horizon, and transform them into riches and unforeseen pleasures, the promises of which, for all that, are all too tangible.¹¹⁸

Janel Watson reflects on Guattari’s ‘ecosophic cartography’, arguing that Guattari’s reformulation of the ‘subject’ through strategies for “analyzing, creating, producing, recreating, and reproducing [...] subjectivity” constructively enrich uncertainty while preserving singularity, and thus creatively expanding all referential fields.¹¹⁹ Returning to that complex relationship between landscape and the city, and more specifically to the reciprocal relationship between the landscape of Mount Pentelicon and the city of Athens through the agency of marble that has been the focus of the second chapter of this part, I will now open up marble’s matter to a transversalist discourse in order to undertake such an enrichment.¹²⁰ Following Mostafavi, Guattari’s ‘ecosophic cartography’ can offer another way of seeing, reading and re-constituting marble’s particularities and diversities in Attica. Scientific, technological, bureaucratic and economic ‘Flows’ and ‘Phylums’, which on their own cannot eschew the reductive depictions of marble’s multiplicity and forces, today solely regulate marble’s geological matter. Adopting Guattari’s four-dimensional conceptual assemblage however, these actualised domains operate in conjunction with the virtual ‘Universes’ of value embodied in existential ‘Territories’, of which material architectural design is a part. Such material and projective practice could then ensure that our spatial strategies challenge compositional, nostalgic or typological approaches while positively asserting potential means for its matter to develop and embody political and social propositions in Athens as integrated with its Attic (metropolitan) landscape —it is in this sense that Dorian Wiszniewski calls us to see the “the city as integrated with its [*loving*] metropolitan landscape.”¹²¹

As noted above, and as Corner explores in his enunciation of ‘landscape as urbanism’, representation is implicated in how we occupy, construct, imagine and image landscape. What a re-casting of an ecosophic cartography of transversalist subjectivities requires, therefore, is an appropriate means of representation. The drawings and design projects presented in both *Vol. 2* and *Vol. 3* represent an inquiry into how we might present, map, imagine and image the Attic (metropolitan) marble landscape. These re-presentations are not intended as either conclusive or exemplary, but rather are presented as an inquiry. Put differently, these drawings and projects are not intended as a conclusion to this theorisation, but rather as a prompt for and simultaneously an extension to this theorisation. The relationship between this specific material landscape and this specific metropolis is critical, as suggested throughout *Vol. 1*. Questions of image-surface, be it the image-surface of the quarried landscape, the image-surface of the material extracted from that quarried landscape, or the image-surface of the buildings and spaces constructed of that material in the city, challenge and enrich the reciprocal relationship between matter and metropolis in the context of Attica. While the ‘ecosophic cartographies’ advanced provide a new image-surface that ‘thickens’ our understanding of landscape and ecology, matter and materiality, and the city. They present a new *opsis* of landscape and of marble (with all the associated implications of *opsis* outlined in Part A). In so doing, the drawings and projects are actively implicated in both the re-constitution of an image-surface (image-*opsis*) for Athens and for ‘recreating and reproducing subjectivity’ in the Attic landscape.

NOTES

FRONT MATTER

- 1 DeLillo, D. (1987). *The Names*. London: Picador. 1
- 2 DeLillo, D. (1987). *The Names*. 1

Writing to his friend Romain Rolland, Sigmund Freud records his encounter with the Acropolis in 1904: “So all this really does exist, just as we learnt at school!”
Freud, S. (1936). A Disturbance of Memory on the Acropolis. In *The Standard Edition of the Complete Psychological Works of Sigmund Freud*. Trans. Strachey, J., Freud, A. London: The Hogarth Press. Vol. 22. 238-249 (238)

- 3 DeLillo, D. (1987). *The Names*. 329-330
- 4 Rossi, A. (1984). *Architecture of the City*. Cambridge, MA and London: MIT Press. 57-61
- 5 Rossi, A. (1984). *Architecture of the City*. 134

INTRODUCTION

- 1 As the city of Athens is famous for its white marble, so Edinburgh is famous for its locally quarried sandstone, London for its yellow clay brick and Paris for its cream-grey stone.
- 2 Julien David Le Roy’s *Les Ruines des plus beaux Monuments de la Grèce considérées du côté de l’histoire et du côté de l’architecture* (1758) or James Stuart’s and Nicholas Revett’s *The Antiquities of Athens* (1762) are exemplary in this sense.
- 3 However, it is important to remember that this perception is relatively recent. As the architectural historian Panayotis Tournikiotis reminds us, although the ancient Athenian metropolis was central to an European imagination of antiquity Athens was rather isolated before the seventeenth century. See Tournikiotis, P. (1994). The place of the Parthenon in the History and Theory of Modern Architecture. In Tournikiotis, P. (ed). *The Parthenon and its Impact on Modern Times*. Athens: Melissa Publishing House. 202
- 4 Plantzos, D. (2011). Behold the raking Geison: the new Acropolis Museum and its context-free archaeologies. *ANTIQUITY*. No. 85. 613-630 (613)
- 5 Harvey, D. (2009). *Cosmopolitanism and the Geographies of Freedom*. New York: Columbia University Press. 183

For a further analysis on the contested meanings of the marble monuments see also: Loukaki, A. (2008). *Living Ruins, Value Conflicts*. Aldershot, UK and Burlington, VT: Ashgate Publishing Limited

- 6 Presented in Wiszniewski’s articulation of a ‘loving metropolitan landscape’ as that which invokes “a dishomogeneity at the heart of our urban apparatus.” Wiszniewski, D. (2014). The [*Loving*] Metropolitan Landscape and the Public-Private Borderland: Re-figuring the Field for Architecture, Landscape and Urban Design. In Serreli, S. (ed.). *City Project and Public Space*. Dordrecht, Heidelberg, New York, and London: Springer. 65-82 (66)
- 7 Agamben, G. (2006). Defining Metropolis. Lecture delivered at Nomad University, Padova. Trans. (from audio files) Bove, A. (Online). Available at: <<http://www.generation-online.org/p/fpagamben4.htm>> (Accessed 5 December 2015)
- 8 Agamben, G. (2006). Defining Metropolis.

9 Agamben, G. (2006). Defining Metropolis.

10 Agamben, G. (2009). *What is an Apparatus?* Trans. Kishik, D. and Pedatella, S. Stanford, CA: Stanford University Press. 14

11 Agamben, G. (2006). Defining Metropolis.

This is a process of subjectivation that is twofold, Wiszniewski, following Agamben, highlights —it is “attached to an individuality and singularity” as much as a “subjugation to an external power.” Wiszniewski, D. (2014). The [**Loving**] Metropolitan Landscape and the Public-Private Borderland. 66

12 *Hylomorphism* is composed by the words *hyle* (ὕλη in Greek, which is translated as matter and from which the world wood also originates in Greek) and *morphe* (μορφή in Greek which is translated as form).

13 Böhme, G. (1995). Staged Materiality. *Daidalos*. No. 56. 36-43. Reprinted as Böhme, G. (2013). Staged Materiality. *Interstices*. Vol. 14 (Immaterial Materialities). 94-99 (96). The citations here refer to *Interstices*.

In a similar manner, Gerhard Auer notes, in the journal issue *Magic of Materials* (1995), “[Materials] were supposed to be the servants of forms, allies of the structure, and only in exceptional cases could they as spoliation or rarities become bearers of meaning. This remains true for the prominent exposition of precious materials on representative facades: here, too, it is generally the ornament, and seldom the material itself, which speaks!” Auer, G. (1995). Building Materials Are Artificial by Nature. *Daidalos*. No 56. 19-35 (19)

14 Thomas, K. L. (2007). *Material Matters: Architecture and Material Practice*. London and New York: Routledge. 2

15 Lloyd Thomas, K. (2007). *Material Matters*. 2

16 Lloyd Thomas, K. (2007). *Material Matters*. 2

17 Flusser, V. (1999). Form and Material. In *The Shape of Things: A philosophy of Design*. London: Reaktion Books. 22

18 Flusser, V. (1999). Form and Material. 18

19 See Protevi, J. (1994). *Time and Exteriority: Aristotle, Heidegger, Derrida*. Cranbury, London and Mississauga: Associated University Presses. 47-49

20 Heidegger, M. (1977). *The Question Concerning Technology, and Other Essays*. Trans. Lovitt, W. New York and London: Garland Publishing, Inc. 9

21 Heidegger, M. (1977). *The Question Concerning Technology*. 9

22 Massumi, B. with de Boever, A. Murray, A. and Roffe, J. (2009). “Technical Mentality” Revisited: Brian Massumi on Gilbert Simondon. *Parhesia*. No. 7. 36-45 (37)

23 Ingold, T. (2012). Toward an Ecology of Materials. *The Annual Review of Anthropology*. Vol. 41. 427-442 (433)

24 Massumi, B. with de Boever, A. Murray, A. and Roffe, J. (2009). “Technical Mentality” Revisited: Brian Massumi on Gilbert Simondon. 43

25 Deleuze, G. and Guattari, F. (1988). *A Thousand Plateaus: Capitalism and Schizophrenia*. Trans. Massumi, B. London and New York: Continuum. 408

26 de Landa, M. (2004). Material Complexity. In Leach, N., Turnbull, D. and Williams, C. (eds). *Digital Tectonics*. London: Wiley. 14-21 (21)

27 Deleuze, G. and Guattari, F. (1988). *A Thousand Plateaus*. 451, 454

28 Massumi, B. (1992). *A user’s guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari*. Cambridge, MA and London: MIT Press. 10

29 Massumi, B. (1992). *A user’s guide to Capitalism and Schizophrenia*. 11

30 Bennet, J. (2010). *Vibrant Matter: a political ecology of things*. Durham, NC and London: Duke University Press. xiii.

31 Bennet, J. (2010). *Vibrant Matter*. vii

32 Lloyd Thomas, K. (2007). *Material Matters*. 5

33 Allen, S. (2000). Introduction: Proactive vs. Project. In *Practice: Architecture, Technique, and Representation*. London and New York: Routledge. xviii

34 Somol, R., Whiting, S. (2002). Notes around the Doppler Effect and Other Moods of Modernism. *Pespecta*. Vol. 33 (Mining Autonomy). 72-77 (75)

35 Somol, R., Whiting, S. (2002). Notes around the Doppler Effect and Other Moods of Modernism. 77

36 McAnulty, R. (2005). What’s the Matter with Material? 88

37 McAnulty, R. (2005). What’s the Matter with Material? 92

38 Bateson, G. (1979). *Mind and Nature: A Necessary Unity*. New York: E.P. Dutton. 134

39 Bateson, G. (1979). *Mind and Nature*. 228

40 Bateson, G. (1979). *Mind and Nature*. 87

41 Frampton, K. (1989). For Dimitris Pikionis. In Frampton, K., et al. *Dimitris Pikionis, Architect, 1997-1968: A Sentimental Topography*. London: Architectural Association. 6

42 Antonakakis, D. (1989). Dimitris Pikionis: Elaboration and Improvisation. In Frampton, K., et al. Dimitris Pikionis, Architect, 1997-1968: A Sentimental Topography. London: Architectural Association. 10-15 (15)

Antonakakis is responding to Peter Smithson’s musings as to why Pikionis “scour[s] the demolition sites of Neo-Classical Athens for old marble sinks and portable washstands and splash-backs to pave a pathway up to the Acropolis.” Smithson, A. and Smithson, P. (1989). Dimitris Pikionis. In Frampton, K., et al. *Dimitris Pikionis, Architect, 1997-1968: A Sentimental Topography*. London: Architectural Association. 65-68 (66)

43 Καρδαμίτση-Αδάμη, Μ. et. al (eds). (2009). *Το κτήριο της Βουλής των Ελλήνων*. Αθήνα: Βουλή των Ελλήνων

PART A

- 1 Inspired by Venetian scenographic art, Giovanni Battista Piranesi names a plate of the Campo Marzio of Rome *Scenographia Campi Martii* (1762); the title given to *Photograph 01* echoes that title. In describing the theatrical imagery of the specific plate, Stan Allen notes: “The point of view is from above; the horizon is excluded. The ruined fragments, covered with hieroglyphics, occupy the frontal plane and establish a barrier to the view of the site itself [...] the equivalence established between the piled-up fragments in the foreground and the ruins on the site seems to undercut the importance of topography and precise location. [...] The *Scenographia* signals the procedure of doubt to which Piranesi subjects the raw data. [It] is a violent act of distancing the project from the real historical continuity of Rome in order to reinvent that history.” Allen, S. and Piranesi, G. B. (1989). Piranesi’s ‘Campo Marzio’: An experimental Design. *Assemblage*. No. 10. The MIT Press. 70-109 (75, 76)
- 2 A series of short documentaries entitled *The People vs. Memorandum*, shot and directed by Zafeiris Haitidis, and edited by Thanassis Totsikas, documents the anti-government protest that took place on the 12th February 2012 in Syntagma Square. Footage from this documentation was included in several Greek and international news programs. Haitidis, Z. (2012). The People vs. Memorandum (Athens, Greece) 12 February 2012. [Online] Available at: <<https://vimeo.com/45642462>>, <<https://vimeo.com/45675135>>, <<https://vimeo.com/46018173>> (Accessed 17 November 2013)
- 3 This can also extend to the edit of the photograph, where only the pink paint retains its original colour.
- 4 I am hinting at Jean Baudrillard’s nihilistic apprehension of imaging, according to which the relation of image to subject is reversed. On that banalisation of the image that has replaced reality, meaning and value with empty signs, see for example: Baudrillard, J. (1994). *Simulacra and Simulation*. Trans. Glaser, S. Michigan: The University of Michigan Press
- 5 Some examples of that media coverage include: Valvi, A. (2012). Urban Athens shows signs of austerity cuts. *DEMOTIX*. (Online) Available at: <<http://www.demotix.com/news/1045631/urban-athens-shows-signs-austerity-cuts#media-1072276>> (Accessed 25 April 2013)
- 6 See Andreas Huyssen’s reflection on the ongoing fascination with an aesthetics of decay in relation to the twenty-first century’s imaginary of ruin “as part of a discourse about memory and trauma.” Huyssen, A. (2006). Nostalgia for Ruins. *Grey Room*. No. 23. The MIT Press. 6-21 (7, 12)
- 7 The celebrated white marble Periclean political, architectural and urban program.
- 8 Ρηγόπουλος, Δ. (2012). Πλατεία Συντάγματος, μια διαρκής ντροπή. *Η ΚΑΘΗΜΕΡΙΝΗ*. (Online) Available at: <<http://www.kathimerini.gr/465334/article/politismos/arxeio-politismoy/plateia-syntagmatos-mia-diarkhs-ntroph>> (Accessed 20 August 2013)
- 9 In defining tragedy, Aristotle appeals to the psychological notions of *pity* and *fear*, while *katharsis* is the *telos* of the dramatic work, through which the audience’s tragic emotions are replaced by a state of renewal. See Aristotle’s *Poetics* VI 1449b. 12-34
- 10 The Greek anthropologist Dimitris Dalakoglou characterizes the square’s deterioration of 2012 as a “post-apocalyptic urban desert;” while further reflecting on the changing meanings of Syntagma Square in the twenty-first century —from the square’s redevelopments of the 1990s and 2000s to the recent crisis. Dalakoglou, D. (2013). The Crisis before the “The Crisis’: Violence and Urban Neoliberalisation in Athens. *Social Justice*. Vol. 39. No.1. 24-42 (28, 29)
- 11 Repeatedly, street art in the Athenian context has been researched as a visual marker of the current crisis. See, for example: Leventis, P. (2013). Walls of Crisis: Street Art and Urban Fabric in Central Athens, 2000-2012. *Architectural Histories*. Vol. 1. No. 1. 1-10
- 12 The author of the specific graffiti still remains unknown to me. As for the fieldwork mentioned here, this was the second in a series of fieldworks during my doctoral studies (a fieldwork in the

- productive quarried Mount Pentelicon preceded the one in Syntagma Square). Thus, a different way of seeing marble had already emerged in the context of that landscape as I will discuss in detail in Part B. This different way of seeing influenced the way I saw marble in the context of the city.
- 13 Derrida, J. (1994). *Spectres of Marx: The State of the Debt, the Work of Mourning, and the New International*. Trans. by Kamuf, P. London and New York: Routledge. 11
- 14 I'm paraphrasing here Derrida's famous invocation of the opening line to Marx and Engels' *Manifesto of the Communist Party*: "A specter is haunting Europe—the specter of communism." Derrida, J. (1994). *Specters of Marx*. 2
- It is not the first time that a notion of marble absence becomes a profound political matter in Athens. In 2001, Bernard Tschumi's winning design scheme for the New Acropolis Museum designated the marble absence of the 'Elgin Marbles' as a fertile design methodology that led to the design of an empty exhibition space. The *Back Matter* in Vol. 3 will comment on this notion of material absence.
- 15 *White City* is the title of Giannis Hristodoulou's (also known as John Christian) documentary (1968), commissioned by the Greek National Tourism Organisation that emphasizes the presence/absence of white marble as a way to rebrand the Greek capital as a 'bright' city. Alifragkis, S. (2012). Branding the "White City": touristic films and the portrayal of modern Athens in the 1950s and 1960s. Conference of the International Forum of Urbanism. "6th Conference of the International Forum on Urbanism (IFoU): TOURBANISM, Barcelona, 25-27 gener." Barcelona: IFoU. 1-10
- 16 Derrida, J. (1994). *Spectres of Marx*. 10, 63
- 17 Benjamin, A. (2010). Trauma Within the Walls: Notes Towards a Philosophy of the City. *Architectural Design*. Post-Traumatic Urbanism. Vol. 80. Is. 5. 24-31 (27)
- 18 This is the third part of Aeschylus trilogy *Oresteia*.
- 19 Benjamin, A. (2010). Trauma Within the Walls. 27
- 20 Benjamin, A. (2010). Trauma Within the Walls. 28
- 21 Benjamin, W. (1979). A Small History for Photography. In *One-Way Street and Other Writings*. Trans. Jephcott, E. and Shorter, K. London: Verso. 240-57 (238, 239)
- 22 Krauss, R. E. (1999). Reinventing the Medium. *Critical Inquiry*. Vol. 25. No. 2 ("Angelus Novus": Perspectives on Walter Benjamin). 289-305 (290)
- 23 Iversen, M. (2007). *Beyond Pleasure: Freud, Lacan, Barthes*. University Park, Pennsylvania: Pennsylvania State University Press. 142
- 24 Iversen, M. (2007). *Beyond Pleasure*. 6, 15
- 25 Rancière, J. (2009) Do Pictures Really Want to Live? *Culture, Theory and Critique*. Vol. 50. Nos. 2-3. 123-132 (125)
- 26 Rancière, J. (2007). *The Future of the Image*. Trans. Elliott, G. London and New York: Verso. 11
- 27 Rancière, J. (2007). *The Future of the Image*. 10, 11
- 28 Barthes, R. (1977). The Photographic Message. In Barthes, R. *Image-Music-Text*. Trans. Heath, S. London: Fontana Press. 30-31
- 29 Barthes, R. (1977). *The Photographic Message*. 30
- 30 Barthes, R. (1977). The Third Meaning: Research notes on some Eisenstein stills. In Barthes, R. *Image-Music-Text*. Trans. Heath, S. London: Fontana Press. 52
- 31 Barthes, R. (1977). The Third Meaning. 52
- 32 Barthes, R. (1977). The Third Meaning. 52
- 33 Barthes, R. (1977). The Third Meaning. 54
- 34 Barthes, R. (1977). The Third Meaning. 53
- 35 Barthes, R. (1975). *The Pleasure of the Text*. Trans. Miller, R. New York: Hill and Wang. 61, 65 Also, see Stephen Heath's introduction to Barthes' *Image-Music-Text* (1977) for a further interpretation of the term signifiante.
- 36 Oxman, E. (2010). Sensing the Image: Roland Barthes and the Affect of the Visual. *Substance*. Vol. 39. No. 2. Is. 122. 71-90 (76)
- 37 Barthes, R. (1977). The Third Meaning. 54
- 38 Barthes, R. (1982). *Camera Lucida: Reflections on Photography*. Trans. Howard, R. New York: Hill and Wand. 27
- 39 Barthes, R. (1977). The Third Meaning. 54
- 40 Iversen, M. (1994). What is a photograph? *Art History*. Vol. 17. No. 3. 450-464 (456)
- 41 Iversen, M. (2007). *Beyond Pleasure*. 11
- 42 Barthes, R. (1982). *Camera Lucida*. 4
- 43 Krauss, R. E. (1994). *Optical Unconscious*. Cambridge, MA: MIT Press. 87
- 44 Iversen, M. (1994). What is a photograph? 457
- 45 Iversen, M. (1994). What is a photograph? 457 (Iversen quotes from Lacan's *The Four Fundamental Concepts of Psycho-Analysis* (1973))
- 46 Iversen, M. (1994). What is a photograph? 452
- 47 Barthes quotes here the French philosopher Jean-Paul Satre from *The Psychology of Imagination* (1940): "Newspaper photographs can very well 'say nothing to me'. [...] I look at them without assuming a posture of existence. [...] Moreover, cases occur where the photograph leaves me so indifferent that I do not even bother to see it 'as an image.'" Barthes, R. (1982). *Camera Lucida*. 19
- 48 Rancière's notion of 'aesthetic image' encourages a mode of articulation between "what is visible and audible as well as what can be said, thought, made, or done;" that mode that Rancière calls "the distribution of the sensible." Rancière, J. (2007). *The Future of the Image*. 15
- 49 W.J.T. Mitchell argues: "even something as broad as the image does not exhaust the field of visibility; [...] visual studies are not the same thing as image studies [...] the study of the visual image is just one component of the larger field [visual culture]." Mitchell further distinguishes between visual studies and visual culture, where the first implies the field of study where the second is the object of study as a specific domain of research. Mitchell prefers visual culture to stand for both, because it is less neutral compared to visual studies and moreover continues
- the hypotheses that need to be further tested, "that vision is (as we say) a cultural construction, that is learned and cultivated, not simply given by nature; that therefore it might have a history related in some yet to be determined way to the history of arts, technologies, media, and social practices of display and spectatorship; and (finally) that it is deeply involved with human societies, with the ethics and politics, aesthetics and epistemology of seeing and being seen." Mitchell, W.J.T (2002). Showing Seeing: A Critique of Visual Culture. *Journal of Visual Culture*. Vol. 1. No. 2. 165-181(179, 166)
- 50 Mitchell's use of trope echoes Michel Foucault's understanding of 'paradigm' or 'figure of knowledge'. See Boehm, G. and Mitchell, W.J.T. (2009). Pictorial versus Iconic Turn: Two Letters. *Culture, Theory and Critique*. Vol. 50. Nos. 2-3. 103-121 (115)
- 51 Without knowing each other's work, both W.J.T Mitchell and Gottfried Boehm theorized a 'turn' around the 1980s employing as the driving force for such a turn their understandings of 'image' and 'bild' (in German) respectively. In 2006 they exchanged a series of letters discussing the intellectual paths that each one followed revealing their common backgrounds and divergences. Boehm, G. & Mitchell, W.J.T. (2009). Pictorial versus Iconic Turn: Two Letters. *Culture, Theory and Critique*. 50:2-3. 103-121 As for a definition of Richard Rorty's 'linguistic turn' see Rorty, R. (1972). Epistemology and Philosophy of Language. In *Philosophy and the Mirror of Nature*. Princeton, NJ: Princeton University Press. 263
- 52 Mitchell, W.J.T (1995). The Pictorial Turn. In *Picture Theory: Essays on Verbal and Visual Representation*. Chicago: University of Chicago Press. 12
- 53 Mitchell, W.J.T (2002). Beyond Comparison: Picture, Text and Method. In *Picture Theory: Essays on Verbal and Visual Representation*. Chicago: University of Chicago Press. 83
- 54 Rancière, J. (2007). *The Future of the Image*. 12
- 55 Ingarden, R. (1961). A marginal commentary on Aristotle's Poetics. *The Journal of Aesthetics and Art Criticism*. Vol. 20. No. 2. 163-173 (169)
- 56 On the contrary, the triad *opsis*, *melopoiia*, and *lexis* (through their modern equivalents as *image*, *music*

- and *text*) have been explored by many contemporary authors; the most celebrated example of which is Roland Barthes' *Image-Music-Text* (1977).
- 57 See Aristotle, *Poetics* (6.1450b16-17, 1453a36-1453b19)
- 58 My translation from ancient Greek, influenced by Stephen Halliwell's translations. Aristotle (1995). *The Loeb Classical Library: Poetics*. Trans. Halliwell, S. Cambridge, MA: Harvard University Press. 73-74
- 59 In contemporary theatre *opsis* has been replaced by the term *mise-en-scène*. Of course, the contemporary understanding of *opsis* as the visual 'telling' of a play (or even a film) is not as limited as the ancient one, since the *mise-en-scène* encompasses not only a representation of the material space as the arrangement of scenery but it is also connected with the ways that visual setting can affect the reading of the play (*myth*). See: Alexandre Astruc's definition in Astruc, A. (1985). What is *Mise-en-scène*? In Hillier, J. (ed.) *Cahiers du Cinéma: The 1950s: Neo-Realism, Hollywood, New Wave*. Cambridge, MA: Harvard University Press. 266-268
- 60 Sutherland, M. (2010). About Opsis. *World Picture*. Vol. 4. 1-22
- 61 Rancière, J. (2004). *The Politics of Aesthetics: The Distribution of the Sensible*. London and New York: Continuum International Publishing Group. 21
- 62 Mitchell argues, "Aristotle's repudiation of *opsis* is so thorough that he is even willing to jettison performance itself, in favor of a narrative presentation of the action." Mitchell, W.J.T (2002). Beyond Comparison. 90
- 63 Rancière, J. (2004). *The Politics of Aesthetics*. 22
- 64 Mitchell, W.J.T (2002). Beyond Comparison. 99
- 65 Mitchell, W.J.T (1995). The Pictorial Turn. 16
- 66 The quote reads: "There is no link that could move from the visible to the statement, or from the statement to the visible. But there is a continual rethinking which takes place over the irrational break or crack."
- Deleuze, G. (1988). *Foucault*. Minneapolis: University of Minnesota Press. 60
- 67 Amihay, O. and Walsh, L. (eds.) (2012). *The future of the Text and Image: Collected Essays on Literary and Visual Conjunctions*. Newcastle upon Tyne: Cambridge Scholars Publishing. vii
- 68 Mitchell, W.J.T (2002). Beyond Comparison. 91
- 69 Mitchell, W.J.T (2012). The Future of the Image: Rancière's Road Not Taken. *Culture, Theory and Critique*. Vol. 50. Nos 2-3. 133-144 (134)
- 70 Rancière, J. (2007). Sentence, Image, History. In *The Future of the Image*. 46
- 71 Rancière, J. (2004). *The Politics of Aesthetics*. 22
- 72 Rancière notes that his notion of aesthetics distances him from Walter Benjamin's writings of an aesthetic of politics attached to the 'era of the masses' and it is closer, firstly, to the Kantian idea of 'a priori forms of sensibility' (re-articulated through Foucault as that which determines "what presents itself to sense experience") and secondly to a Shillerian idea of the aesthetic state that for Rancière "proved to be much closer to the social experience of emancipation." In a similar manner, Mitchell names "ratio of senses and signs" that which provides eruptions of singular points of view. Rancière, J. (2005). From Politics to Aesthetics? *Paragraph*. Vol. 28. Is. 1. 13-25 (13, 15) and Mitchell, W.J.T (2012). The Future of the Image: Rancière's Road Not Taken. 134
- 73 Rancière, J. (2007). *The Future of the Image*. 45-46
- 74 Rancière, J. (2007). *The Future of the Image*. 7
- 75 Rancière, J. (2007). *The Future of the Image*. 31
- 76 Rancière, J. (2007). *The Future of the Image*. 6
- 77 See for example: David Leatherbarrow and Mohsen Mostafavi's *Surface Architecture* (2002), Ellen Lupton's *Skin: Surface, substance + design* (2002), Mark Taylor's *Surface Consciousness* (2003); Picon's *Ornament: The Politics of Architecture and Subjectivity* (2013), among others.
- 78 Benjamin, A. (2006). Surface Effects: Borromini, Semper, Loos. *The Journal of Architecture*. Vol. 11. No. 1. 1-35 (12)
- 79 Deleuze, G. (2001). *Logic of Sense*. Trans. Lester, M. London and New York: Continuum. 214
- 80 Benjamin, A. (2006). Surface Effects. 1
- 81 The historiography of such a return will be analysed further in the chapter that follows.
- 82 Benjamin, A. (2006). Surface Effects. 16. (Benjamin quotes here from Ruskin's *The Seven Lamps of Architecture* (1880))
- 83 Benjamin, A. (2006). Surface Effects. 16
- 84 Wigley, M. (1995). *White Walls, Designer Dresses: The Fashioning of Modern Architecture*. Cambridge, MA: MIT Press. 11
- 85 Wigley, M. (1995). *White Walls, Designer Dresses*. 11
- 86 By 1843 the debate had concluded with a verdict: "The temples that were built of a noble material, especially of beautiful pentelic marble, appeared on the whole and in their essential parts as white. To be sure, colour was applied to individual smaller parts, but never out of mere propensity for variegation, always for the definite reason for allowing the architectural form or its plastic expression to stand out," as Mallgrave quotes the art historian Carl Schnasse. Mallgrave, H.F. and Herman, W. (1989). *Gottfried Semper, The Four Elements of Architecture and Other Writings*. Cambridge, UK: Cambridge University Press. 16
- 87 Mallgrave, H.F. and Herman, W. (1989). *Gottfried Semper, The Four Elements of Architecture and Other Writings*. 4
- 88 Mallgrave explains, "Semper's use of the concepts 'structural-technical' and 'structural-symbolic' derive from the architectural investigations of Karl Bötticher [...] in his book *Die Tektonik der Hellenen* (1844-52), [Bötticher] coined the expressions *Kernform* (core-form) and *Kunstform* (art-form) as analytical tools to interpret Greek architecture. The core-form referred to the material and static function of an architectural element. [...] The art-form designated how this static function becomes
- apparent, that is, how the Greek rendered the supporting role of a column in a way that was both artistic and expressive of its function." Mallgrave, H.F. and Herman, W. (1989). *Gottfried Semper, The Four Elements of Architecture and Other Writings*. 37-39
- 89 Wigley, M. (1995). *White Walls, Designer Dresses*. 14 (Wigley cites here from Henry Francis Mallgrave's introduction in *Gottfried Semper, The Four Elements of Architecture and Other Writings*)
- 90 Wigley, M. (1995). *White Walls, Designer Dresses*. 14
- 91 Benjamin, A. (2006). Surface Effects. 18
- 92 Benjamin, A. (2006). Surface Effects. 20
- 93 "Hanging carpets remained the true walls, the visible boundaries of space. The often solid walls behind them were necessary for reasons that had nothing to do with the creation of space; they were needed for security, for supporting a load, for their permanence and so on. Wherever the need for these secondary functions did not arise, the carpets remained the original means of separating space. Even where building solid walls became necessary, the latter were only the inner, invisible structure hidden behind the true and legitimate representatives of the wall, the colourful woven carpets." Mallgrave, H.F. and Herman, W. (1989). *Gottfried Semper, The Four Elements of Architecture and Other Writings*. 104
- 94 Wigley writes: "Only through a detailed understanding of the construction can it [materiality] be effaced —reduced to an invisible prop. The most sophisticated technical control is required in order that the technical world can give way to the weave of ornament." Wigley, M. (1995). *White Walls, Designer Dresses*. 13
- 95 Benjamin, A. (2006). Surface Effects. 22
- 96 Mallgrave, H.F. and Herman, W. (1989). *Gottfried Semper, The Four Elements of Architecture and Other Writings*. 42
- 97 Wigley, M. (1995). *White Walls, Designer Dresses*. 9
- 98 Loos, A. (1908). Ornament and Crime. In Miller, B. and Ward, M. (2002). *Crime and Ornament: The Arts*

- and Popular Culture in the Shadow of Adolf Loos.* Toronto: XYZ Books. 30, 33
- 99 See for instance Anthony Vidler’s essay ‘Losing Face’ for a further discussion on Colin Rowe’s comments regarding the lack of frontality in modern architecture. Vidler, A. (1992). Losing Face. In *The Architectural Uncanny*. Cambridge, MA and London: MIT Press. 85-101
- 100 Rowe, C. (1984). James Stirling: A Highly Personal and Very Disjointed Memoir. In Arnell, P. and Bickford, T. (eds). *James Stirling: Buildings and Projects*. London: London Architectural Press. 10-27 (22)
- 101 Benjamin, A. (2006). Surface Effects. 4
- 102 Wigley, M. (1995). *White Walls, Designer Dresses*. 15
- 103 Loos, A. and Opel, D. (2002). *On Architecture*. Riverside, CA: Ariadne Press. 84
- 104 Loos, A. (1987). The Principle of Cladding. In *Spoken into the Void: Collected Essays, 1897-1900*. Trans. Newman, J.O. and Smith, J.H. Cambridge, MA: MIT Press. 66
- 105 Benjamin, A. (2006). Surface Effects. 29
- 106 Hays, M. K. (1984). Critical Architecture: Between Culture and Form. *Perspecta*. Vol. 21. 14-29 (24)
- 107 Benjamin, A. (2006). Surface Effects. 29
- 108 The phrase “to lose one’s marbles” is understood as “to lose one’s common sense.” (Oxford English Dictionary)
- 109 Officially, the debt crisis began in Greece in May 2010 when the Greek government signed the ‘memorandum of agreement’ with its creditors. An extensive timeline of the crisis, starting on the 6th December 2008, can be found in the collective research project *The City at a Time of Crisis*. See: Brekke, J. Athens and the Crisis. (Online) Available at: <<http://www.crisis-scape.net/resources/general-timeline>> (Accessed 20 August 2013)
- 110 On the 6th December 2008, the assassination of a fifteen-year-old boy by two policemen triggered a series of demonstrations in the city centre of Athens that lasted for almost a month, heavily damaging the marble of Athens. See: Stavrides, S. (2010). The December 2008 Youth Uprising in Athens: Spatial Justice in an Emergent “City of Thresholds.” *Spatial Justice*. No. 2. 1-10
- 111 Ten days after the events of 12-02-12 Alain Badiou, along with Jean-Christophe Baily, Étienne Balibar, Claire Denis, Jean-Luc Nancy, Jacques Rancière and Avital Ronell, offers an analysis of the socio-politico-economic situation in Greece that underlined how the debt has become a tool of social control for ruling elites. In response they collectively propose “the formation of a European community of intellectuals and artists in solidarity with the Greek people in resistance,” stressing the importance of a re-configuration of a democratic ‘common’. Badiou, A. et al. (2012). Save the Greeks from their Saviors! Trans. Golemi, A. and Burk, S. (Online) Available at: <<http://www.egs.edu/faculty/alain-badiou/articles/save-the-greeks-from-their-saviors/>> (Accessed 20 August 2013)
- 112 Of course, the violent attacks in the city during those demonstrations were not only the result of the actions of the protesters. The aggression of the riot police was equally great; they, too, were picking up the marble from the streets and hurling it back at the protesters.
- 113 All nine buildings, examples of Athens’ neoclassical architecture, were designed and constructed between 1870-1934 by architects such as Ernest Ziller, Alexandros Nikoloudis, Emmanuel Lazaridis, Andreas Kriezis, and Anastasios Metaxas, and in 2012 they housed the General National Accounting Office, several bank branches and two cinemas. For a detailed description of each see: Μπελιμπσάκης, Κ. (2012). Τα όμορφα κτίρια όμορφα καίγονται...*Τεχνογράφημα*. Τεχνικό Επιμελητήριο Ελλάδας / Τμήμα Κεντρικής Μακεδονίας. Vol. 436. (Online) Available at: <http://portal.tee.gr/portal/page/portal/teetkm/GRAFEIO_TYPOY/TEXNOGRAFHMA_2012/TEXNOGRAFHMA_436/436%2010_11.pdf> (Accessed 15 June 2014)
- 114 Bensousson, M., Stoukas, T. (2012). Athens Protesters Hurl Marble as Greeks Belie Global Perception. *Bloomberg*. (Online) Available at: <<http://www.bloomberg.com/news/articles/2011-08-02/athens-protesters-hurl-marble-as-most-greeks-recoil-over-global-perception>> (Accessed 15 June 2014)
- Βογιατζάκης, Σ. (2011). Ο Μαρμαράς του Συντάγματος. *Έθνος*. (Online) Available at: <<http://www.ethnos.gr/article.asp?catid=22768&subid=2&pubid=63587596>> (Accessed 15 June 2014)
- 115 Tzirtzilakis, Y. (2012). The flight of the stone: in search of the political field and the subject of action. In Kotionis, Z. and Tzirtzilakis, Y. (ed.). *Multidomes: Multitude, Commons and Architecture*. Volos, Athens: University of Thessaly Press. 252-262 (260)
- 116 he myth of Deucalion is equivalent to the narrative of Noah. Ovid (1916). *Metamorphoses*. Trans. Miller, F. Massachusetts: The Loeb Classical Library Cambridge, Harvard University Press. 25-27
- 117 The word *Hellas* translates as shining stone, echoing the semantics of the word marble, although the etymological roots of the two words are different.
- 118 Rancière, J. (1999). *Dis-agreement: Politics and Philisophy*. Trans. Rose, J. Minneapolis and London: University of Minnesota Press. x
- 119 Rancière, J. and Panagia, D. (2000). Dissenting Words: A Conversation with Jacques Rancière. *Diacritics*. Vol. 30. No. 2. 113-126 (123)
- 120 As cited in May, T. (2008). *The Political Thought of Jacques Rancière: Creating Equality*. University Park, Pennsylvania: The Pennsylvania State University Press. 164
- 121 Hardt, M. and Negri, A. (2004). *Multitude: War and Democracy in the Age in Empire*. New York: The Penguin Press. p. xiii
- 122 Hardt, M. and Negri, A. (2004). *Multitude*. xiv
- 123 Hardt, M. and Negri, A. (2004). *Multitude*. 99
- 124 Using the term advanced by Michel Foucault, biopolitics is for Hardt and Negri the production of a form of life that “engages social life in its entirety,” providing no distinction between the political, social, economic or cultural facets of life. Hardt, M. and Negri, A. (2004). *Multitude*. 94, 192
- 125 We can also add here Giorgio Agamben’s concept of ‘whatever singularity’ as an alternative form of Being that rejects the logic of sovereignty. See: Agamben, G. (1993). *The Coming Community*. Trans. Hardt, M. Minneapolis: University of Minnesota Press
- 126 “We live in an era when merely mentioning these place names [i.e. Tahrir Square, Puerta del Sol Square, Syntagma Square, etc.] can serve as an argument about the existence of an important political capacity” that emerges from “forms of action, resistance, creativity and dissent.” Vradis, A., Madden, D. (2012). From Athens to Occupy and Back. *City*. Vol. 16. Nos. 1-2. 235-236 (235)
- 127 Stavrides, S. (2012). Squares in Movement. *The South Atlantic Quarterly*. Vol. 111. No. 3. 585-596 (589)
- 128 Stavrides, S. (2012). Squares in Movement. 591
- 129 As Cornelius Castoriadis puts it, *agora* in classical Athens was a complex and mixed sphere —between the private or individual sphere of the *oikos* (household) and the public or state sphere of the *ecclesia* (the place of politics). Direct Democracy (2014). Cornelius Castoriadis – Interview on Autonomy and Democracy. (Online) Available at: <<https://www.youtube.com/watch?v=hs9ZsKj-o1k>> (Accessed 6 April 2015)
- 130 Kaika, M. (2012). The Economic Crisis seen from the Everyday. *City: analysis of urban trends, culture, theory, policy, action*. Vol. 16. No. 4. 422-430 (422)
- 131 For a further elaboration on Castoriadis’ concept regarding the ‘radical imaginary of society’ see: Castoriadis, C. (1998). *The Imaginary institution of society*. Trans Blamey, K. Cambridge, MA: MIT Press.
- 132 Crisis-Scape. (2014). David Harvey at Crisis-scapes: Athens and Beyond. (Online) Available at: <<https://www.youtube.com/watch?v=7fXE3jdp34Q>> (Accessed 6 April 2012)
- 133 Among such actions are the throwing of soap in the marble fountain during a rally in 2014 and the political suicide-protest of the retired pharmacist Dimitris Christoulas next to that marble fountain in 2012. Smith, H. (2012). Greece suicide: Tributes for retired pharmacist. *The Guardian*. (Online) Available at: <<http://www.theguardian.com/world/2012/apr/05/greece-suicide-tributes-retired-pharmacist>> (Accessed 6 April 2012)

134 See, for instance: *Debt crisis: riot police fire tear gas at stone-throwing youths in Athens, Greece*. (Online) Available at: <<http://www.telegraph.co.uk/news/picturegalleries/worldnews/8808909/Debt-crisis-riot-police-fire-tear-gas-at-stone-throwing-youths-in-Athens-Greece.html>> (Accessed 11 June 2013)

135 Today, the daily practice of the guards' parade that takes place in front of the Parliament, further invoking the 'theatrical value' of that public space.

136 The Asia Minor Disaster of 1922 is a watershed moment in the history of Hellenism. Following the Balkan Wars and the First World War, the Greek army and its Western allies decided on an expedition to Asia Minor in order to occupy the territory ceded to it by the Treaty of Sèvres (1920). However, the Greeks were defeated by the Turkish nationalist forces under the leadership of Mustapha Kemal (Atatürk). Peace talks started in Lausanne immediately after, while a Treaty was signed in 1923 according to which the exchange of populations was agreed. The arrival of thousands of Greek refugees in Athens resulted in a vast increase of the city's population that later led to the city's informal urban expansion. Vaiou, D. (2002). Milestones in the Urban History of Athens. *Treballs de la Societat Catalana de Geografia*. Vols. 53-54. 209-226

137 The winning scheme proposed an urban void where, by means of a perspectival illusion materialised through the strategic placement of white marble bands on the ground of the plateau, the viewer's gaze was directed towards the centre, where both the monument and the building sit. The militaristic projections of the scheme generated intense criticism from the socialist party at the time, who suggested that the chosen location was not 'politically correct'. Βοζάνη, Α. (2009). Το Μνημείο του Αγνώστου Στρατιώτη: από την Προκύρση του σχετικού διαγωνισμού στην υλοποίηση. In Καραπάνου, Α. et. al (eds). *Στης Βουλής τα Πέριξ. Το μνημείο του Αγνώστου Στρατιώτη και ο Εθνικός Κήπος*. Αθήνα: Ίδρυμα της Βουλής των Ελλήνων. 22-35

138 The negotiations during the Convention of London of 1832 between the three Great Powers (Great Britain, France and Russia) resulted in the establishment of the Kingdom of Greece under the Bavarian Prince Frederick Otto, who reigned until his deposition in 1862.

139 Prior to Kriezis' modifications a series of drastic changes to the interior had already occurred as a result of Otto's expulsion and two damaging fires in 1884 and 1909.

140 Gartner's proposition, the drawings of which can be found in the Architectural Museum of Munich's Technical University, put an end to a long debate regarding the siting of the palace. Among other proposals were: a scheme by Leo von Klenze situating the building in the area of Kerameikos; Ludwig Lange's proposition suggesting the placement of the palace on Lycabettus hill; Karl Friedrich Schinkel's provocative proposal placing the Palace next to the Parthenon (clearly exposing his own conceptual relationship with Athens' past); and Stamatis Kleanthis' and Eduard Schaubert's scheme, according to which the building was situated in Omonoia Square. Μπίρης, Κ. (1999). *ΑΙ ΑΘΗΝΑ: Από του 19ου εις τον 20ον Αιώνα*. Αθήνα: Μέλισσα

141 Johan Joachim Winckelmann's *History of the Art of Antiquity* (1764) greatly influenced the spread of neoclassical architecture into Europe and America throughout the nineteenth century, and neoclassicism was adopted as a reputable aesthetic language in the majority of public art academies, universities, libraries, museums (i.e. Karl Friedrich Schinkel's Altes Museum in Berlin, 1830).

142 Plantzos, D. (2011). Behold the raking Geison: the new Acropolis Museum and its context-free archaeologies. *ANTIQUITY*. No. 85. 613-630 (613)

143 By 1858, Kleanthis had founded an official company on Mount Pentelicon, systematically extracting and exploiting the famous white marble (as well as the white marble of the island of Paros). Kleanthis died in a serious accident in Athens in these quarries in 1862. Bastea, E. (2000). *The Creation of Modern Athens: Planning the Myth*. Cambridge, UK: Cambridge University Press. 123

144 At the end of the war of Independence (Greek Revolution) Athens and the Parthenon itself were lying in ruins. In 1834, the German archaeologist Ludwig Ross (instigated by Kleanthis, Schaubert and Leo von Klenze) became responsible for the clearance of the Acropolis hill along with the restoration of the temples of the Parthenon and

Nike. The suggestions regarding the use of the 'authentic' marble for the façades of the Royal Palace emerged during that archaeological clearance. Bastea, E. (2000). *The Creation of Modern Athens*. 101-102

145 While stone from Mount Hymettus is used in all the façades of the building. Παπαγεωργίου-Βενετάς, Α. and Καρδαμίτση-Αδάμη, Μ. (2009). Η οικοδόμηση των Ανακτόρων της Αθήνας. In *Το κτήριο της Βουλής των Ελλήνων*. Αθήνα: Βουλή των Ελλήνων. 41

146 Παπαγεωργίου-Βενετάς, Α. and Καρδαμίτση-Αδάμη, Μ. (2009). *Η οικοδόμηση των Ανακτόρων της Αθήνας*.

147 Bastea, E. (2000). *The Creation of Modern Athens*. 154

148 Giedion, S. (1958). *Architecture, You and Me: The Diary of a Development*. Cambridge, MA: Harvard University Press. 25

149 Giedion, S. (1958). *Architecture, You and Me: The Diary of a Development*. 25

150 A marble landmark with the inscription 'Boundary of the Garden of the Muses' confirms the existence of the garden which Theophrastus (a pupil of Aristotle) owned in the early third century; the stone still stands in Syntagma Square today. Travlos, J. (1971). *Pictorial Dictionary of Ancient Athens*. New York: Praeger. 345

151 In December 1944, twenty-eight protesters were killed and hundreds were injured by the British army in Syntagma square. For further information, see: Vulliamy, E. and Smith, H. (2014). Athens 1944: Britain's dirty secret. *The Guardian*. (Online) Available at: <<http://www.theguardian.com/world/2014/nov/30/athens-1944-britains-dirty-secret>> (Accessed 18 May 2014)

152 In 1983, the first complete institutional framework for urban planning in the metropolitan territory of Attica is introduced (Regulatory Master Plan of 1985); this includes a series of public, green spaces, including the remodelling of Syntagma Square.

153 During the late 1990s and 2000s, Athens and Attica were transformed into a huge construction site. This large redevelopment was initiated by the Olympic

Games and included projects such as several Olympic facilities and an Olympic Village (most of which are abandoned today), while it was also associated with broader urban, architectural and landscapes schemes, such as the constructions of a new airport, the Metro, the tram, the New Acropolis Museum and the re-remodeling of Syntagma Square.

154 1st Prize was awarded to the architectural team of Dimitris Manikas, Leonidas Georgiadis and Theodora Papadimitriou. Unification of Archaeological Sites of Athens S.A. (1999). Remodeling of Syntagma Square. (Online) Available at: <<http://www.astynet.gr/projects.php?c=15&p=28>> (Accessed 18 May 2014)

On the contrary, Aristides Antonas' proposal, in collaboration with the architects Phoebe Giannisi and Zissis Kotionis and the artist Zafos Xagoraris, challenges the brief of the competition. They suggest the symbolic emptying of the square so that "political subjects can gather," deconstructing all the listed edifices found in the square (the marble staircase 'moves' to the opposite side of the square) and covering the ground of the square with soil again. See: *Syntagma Square*. (Online) Available at: <<http://www.aristideantonas.com/tag/cities/project/syntagma-square>> (Accessed 18 May 2014)

155 See: Μυρίλλα, Δ. (2011). Μια ιστορική Τριλογία. *ΕΛΕΥΘΕΡΟΤΥΠΙΑ*. (Online) Available at: <<http://www.enet.gr/?i=news.el.article&id=287123>> (Accessed 11 June 2013)

156 The site of Syntagma Square was originally outside the ancient fortified city. It became part of the city during the reign of the emperor Hadrian in the 3rd century A.D., when ancient Athens was extended towards today's National Gardens. Theocharaki, A. (2011). The Ancient Circuit Wall of Athens: its Changing Course and the Phases of Construction. *Hesperia: The Journal of the American School of Classical Studies at Athens*. Vol. 80. No. 1. 71-156

157 Rigopoulos, D. (2012). More than a year since Athens riot, Syntagma's wounds are still gaping. *EKATHIMERINI*. (Online) Available at: <http://www.ekathimerini.com/4dcgi/_w_articles_wsite4_1_20/08/2012_457528> (Accessed 25 August 2014)

- 158 Rigopoulos, D. (2012). More than a year since Athens riot, Syntagma's wounds are still gaping.
- 159 “Who will pay for the marble?” is a common saying in Greek that refers to the person who pays a debt. The expression emerged in the 1950s when people bought their coffees on credit and the bill was written in pencil on marble table tops, when the debt was paid the marble was cleaned.
- 160 The architectural brief for the competition can be found here: *ReThink Athens*. (Online) Available at: <<http://www.rethinkathens.org/eng/home>> (Accessed 18 May 2014)
- 161 On the broader axis of Panepistimiou Street, marble has been lavishly used to dress several post-war *polykatoikies*; at the same time it has been employed for more modest, everyday uses, such as in the construction of pavements and curbs.
- 162 Leontidou, L. (2012). Athens in the Mediterranean ‘Movement of the Piazzas’: Spontaneity in Material and Virtual Public Spaces. *City: Analysis of Urban Trends, Culture, Theory, Policy, Action*. Vol. 16. Is. 3. 299-312 (301)
- 163 For the architects’ descriptions see: Furuto, A. (2013). Re-Think Athens Winning Proposal / OKRA. *Arch Daily*. (Online) Available at: <<http://www.archdaily.com/338001/re-think-athens-winning-proposal-okra/>> (Accessed 21 May 2014)
- 164 Χεκίμογλου, Α. (2014). Το επόμενο βήμα μετά την απένταξη της Πεζοδρόμησης της Πανεπιστημίου και της Ανάπλασης του Φαληρικού Όρμου. *TO ΒΗΜΑ*. (Online) Available at: <<http://www.tovima.gr/society/article/?aid=653188>> (Accessed 21 May 2014)
- 165 Καραμανώλη, Ε. and Λιάλιος, Γ. (2015). Οριστικό «όχι» ΣτΕ στην ανάπλαση της Πανεπιστημίου. *Η ΚΑΘΗΜΕΡΙΝΗ*. (Online) Available at: <<http://www.kathimerini.gr/818146/article/epikairotha/ellada/oristiko-oxi-ste-sthn-anaplash--ths-panepisthmiou>> (Accessed 21 May 2014)
- 166 During the implementation of the urban transformations for the 2014 Olympic Games in Athens, the 1985 Regulatory Master Plan was rapidly bypassed, even though many of those projects were contradicting the terms of that Master Plan.
- Skayanis, P. (2013). The (Master) Plans of Athens and the Challenges of its Re-planning in the Context of Crisis. *International Journal of Architectural Research*. Vol. 7. No. 2. 192-205
- 167 Χουρμούζη, Α. (2014). Πλατεία Συντάγματος: Το lifting της πλατείας. *ATHENS VOICE*. (Online) Available at: <<http://www.athensvoice.gr/the-paper/article/481/πλατεία-συντάγματος>> (Accessed 15 February 2015)
- 168 The stone honeycomb tiles are composite panels that are composed of an incredibly thin natural stone veneer reinforced with an aluminium honeycomb (polypropylene or fiberglass honeycombs are also used as an alternative to aluminium). On the whole, the thickness of the panel is the same as a common stone veneer, however, the stone honeycomb panel is much lighter while its bending and shearing strength is significantly higher.
- 169 Harvey, D. (2008). The Right to the City. *New Left Review*. Vol. 53. 23-40 (31)
- 170 Baudrillard argues that technique operates today as a pseudo-culture, producing “‘OBJECTS’ that are fixed and idealised as avant-garde SIGNS; populating an unreal everydayness.” Baudrillard, J. (2001). The Ideology of Technique. In Proto, F. (ed). (2006). *MASS. IDENTITY. ARCHITECTURE: Architectural Writings of Jean Baudrillard*. Chichester: Wiley-Academy. 123-150 (125, 129)

PART B

- The complex of these quarries, named as the adjacent low-density residential suburb of Dionysos, got its present name after the excavations of 1888, under the guidance of archaeologist Carl D. Buck, uncovered ruins of a sanctuary dedicated to the ancient Olympian God Dionysos, including a large marble statue of Dionysos and fragments of marble thrones.
- The coded ‘graffiti’ inscribed on the exposed marble surfaces of the quarry, as well as on the extracted marble blocks, hold information regarding the exact geographic location (specific local coordinates, etc.), from which each unit originated, along with an archiving system of the loose marble blocks.
- The documentary *Il Capo* (2010), directed by Yuri Ancarani and Pietro Savorelli, poetically captures the removal of such a unit in the Carrara quarries (in Northwest Italy); it focuses on that non-verbal language of gestures and signs employed by the quarrymen. For an excerpt of the film, see: NOWNESS (2014). “*Il Capo*” (Excerpt) by Yuri Ancarani. (Online) Available at: <<https://vimeo.com/108898457>> (Accessed 10 July 2015)
- I follow the terminology adopted by the Hellenic natural stone industry, which relies on the glossary advanced by the marble institute of America. [Online] Available from: Glossary of Stone Industry Terms (2001). (Online) Available at: <<http://www.marble-institute.com/default/assets/File/consumers/glossary.pdf>> (Accessed 10 August 2013)
- The three terms reveal a strong connection between marble and wood, since the glossary used to describe the surfaces of a piece of wood is quite similar.
- Glossary of Stone Industry Terms (2001).
- In the chapter ‘Geophilia, or The Love of Stone’ (2015), Jeffrey Jerome Cohen writes “Stone holds a dense agency [...] [that] figures the real, and figuring is an active process.” Cohen, J. (2015). Geophilia, or the Love of Stone. *Continent*. Is. 4.2. 8-18 (12)
- Today, further classifications acknowledge the mineralogical compositions and the textural relationships within the structures of the stones, while one of the earliest attempts in classifying and grouping a great variety of Greek rocks and precious minerals comes from Theophrastus’ ancient treatise *On Stones* (*Περί λίθων*). Continuing the research of Aristotle in the field of natural history and emphasizing empiricism, Theophrastus’ *On Stones* greatly influenced Pliny the Elder’s *Naturalis Historia* (77AD) and the emergence of mineralogy as geology’s founding science. This ancient treatise was used until the Renaissance.
- In geological handbooks, only metamorphic rocks that chiefly consist of fine-to medium-grained recrystallized calcite and/or dolomite are classified as marble. However, from a commercial standpoint any crystallised carbonate rock capable of taking a polish and used as ornamental stone is understood as marble. In other words, rocks that are not necessarily metamorphic in origin, such as limestone (sedimentary rock), travertine and granite (igneous rocks) are marbles in that industrial sense. This definition is, in fact, closer to the etymology of the ancient Greek word marble (*μάρμαρος*), according to which every stone that glistens in the sunlight was given the name marble. Neundorf, K.E., Mehl, J. and Jackson, J. (2005). *Glossary of Geology*. Berlin: Springer. 394
- Marinos, G.P. (1984). Notes on the structures of Greek Marbles. *American Journal of Science*. Vol. 246. 386-389 (387)
- In Greece, for example, there are around a hundred different types of marble grouped according to their colour tone; fifteen of them are classified as white. Although the commercial value of white marble is usually higher than that of the coloured ones, studies on the mechanical and physical properties show that the coloured marbles are superior to those predominantly composed of calcite. Koroneos, E.G., Tassojanopoulos, A.I. and Diamantopoulou, A. (1980). On the mechanical and physical properties of ten Hellenic Marbles. *Engineering Geology*. Vol. 16. 263-290 (284)
- The colours are a result of the existence of a small amount of muscovite (green) and chlorite (grey). In addition, as a result of the presence of iron, the marble’s surface will acquire a rich golden-brown patina after prolonged exposure to weather (as evident on the Acropolis today). Koroneos, E.G., Tassojanopoulos, A.I. and Diamantopoulou, A. (1980). On the mechanical and physical properties of ten Hellenic Marbles. 266

- 13 The Austrian poet Rainer Maria Rilke lyrically writes about Auguste Rodin's use of white marble: "The stone preserves, even in the midst of the day, that mysterious shimmer which white things exhale in the twilight. This radiance is not the result of the vibrant quality of the points of contact alone, but is due in part to the flat ribbands of stone that lie between the figures like small bridges which connect one form with the other over the deepest clefts in the modeling. These ribband fillings are not incidental, but are placed there to prevent too sharp an outline. They preserve in the forms that otherwise would appear too clear cut an effect of roundness; they gather the light like vases that gently and continuously overflow. When Rodin seeks to condense the atmosphere about the surfaces of his works, the stone appears to almost dissolve in the air; the marble is the compact, fruitful kernel, and its last softest contour the vibrating air. The light touching the marble loses its will, it does not penetrate into the stone, but nestles close, lingers, dwells in the stone." Rilke, R. M. (1919). *Auguste Rodin*. Trans. Lemont, J. and Crausil, G. New York: Sunwise Turn. 77-78
- 14 Korres, M. (1995). *From Pentelicon to the Parthenon: The Ancient Quarries and the Story of a Half-Worked Column Capital of the First Marble Parthenon*. Athens: Melissa Publishing House. 110
- 15 DIONYSSOMARBLE S.A. Archives (2011)
- 16 Vanneschi, C. et al. (2014). Geological 3D Modeling for excavation activity in an underground marble quarry in the Apuan Alps (Italy). *Computers and Geosciences*. No. 69. 41-54 (41)
- 17 Vanneschi, C. et al. (2014). Geological 3D Modeling for excavation activity in an underground marble quarry in the Apuan Alps (Italy). 47-48
- 18 This reading of the contemporary methodology of marble quarrying became of particular interest in this design-led thesis. I further experimented with this as part of a drawing methodology that tested the 'making' of a series of speculative design propositions as a reflection on the architectural possibilities and limitations of digital drawing techniques. See *Movements 3: Surface (Im) materialities* in Vol. 3.
- 19 Camillo Trevisan offers a simple explanation for the *trait* as he quotes Philippe de Hire's *Traité de la coupe des pierres* (1596): "The workers call the the science of the trait, when cutting the stone, the science that teaches how to cut and separately construct more than one ashlar of stone so that, when they are put together (at the right moment), they create a piece of handwork that can be considered as a single object." Trevisan, C. (1999). The hidden proportions in the *trait* of the *trompe* of Anet. *Disegnare idee e immagini*. No. 16. 1
- 20 For a more complete discussion see Evans, R. (1995). Drawn Stone. In *The Projective Cast: Architecture and Its Three Geometries*. Cambridge, MA and London: MIT Press 184-186
- 21 Evans, R. (1995). Drawn Stone. 209
- 22 Other theorist-practicioners of *traits* are the French architect François Derand (1590-1644) and the Italian architect Guarino Guarriani (1624-1683).
- 23 Mallgrave, H. (ed.) (2006). *Architectural Theory*. Volume I: An Anthology from Vitruvius to 1870. Malden, Oxford and Victoria: Blackwell Publishing. 60
- 24 Allen, S. (2009). *Practice: Architecture, Technique and Representation*. New York: Routledge. 32
- 25 Evans explains that "The distinction between composition and projection in architecture has its counterpart in mathematical geometry. First came a geometry whose idealities were well abated to the measuring of things. This was organised into a consistent body of propositions by the Greeks and obtained its classic exposition in Euclid's Elements. Euclidean geometry was concerned with the ratios and equalities of lines, areas, and angles. Later came a geometry no longer concerned with measuring the intrinsic properties of objects: projective geometry [developed by the French mathematician Girard Desargues]." Evans, R. (1995). *The Projective Cast: Architecture and Its Three Geometries*. xxxii
- 26 Evans, R. (1995). Drawn Stone. 184-186
- 27 This phase carries similarities to Michelangelo's *modani*. "Drawn as paper templates, *modani* were 1:1 profile drawings of building cornices, architraves, and column bases, subsequently cut with scissors along their profile and passed from the drawing board to the stone masons on the building site. Once there, they would be traced directly onto a rigid support medium, such as wood or metal, after which they would act as 1:1 tracing devices for carving stone details." Foote, J. (2015). Extracting Desire: Michelangelo and the forza di levare as an Architectural Premise. In Mindrup, M. (ed.). *The Material Imagination: Reveries on Architecture and Matter*. Surrey: Ashgate. 29-47 (30)
- 28 Evans, R. (1995). Drawn Stone. 208
- 29 Cosgrove, D. and della Dora, V. (eds.) (2009). *High Places: Cultural Geographies of Mountains, Ice and Science*. London and New York: Tauris. 7
- 30 It has been, and still is, used for similar purposes in many other cities as well.
- 31 Looking at English landscapes (dating from prehistory to the Industrial Revolution) at the beginning of the twentieth century, the historian William George Hoskins examines the traces left in those landscape as the product of man's activities. Each generation registers on the landscape its own story while simultaneously erasing remnants of earlier economic, political and social forces. As a result, "to those who know how to read it aright, [the landscape] is the richest historical document we possess," Hoskins notes. Hoskins, W.G. (1955). *The Making of the English Landscape*. London: Hodder and Stoughton. 14
- 32 Melville's poem reads as a kind of traveller's advisory:
- Tourist, spare the avid glance
That greedy roves the sight to see:
Little here of "Old Romance,"
Or Picturesque of Tivoli
- No flushful tint the sense to warm—
Pure outline pale, a linear charm.
The clear-cut hills carved temples face,
Respond, and share their sculptural grace.
- 'Tis Art and Nature lodged together,
Sister by sister, cheek to cheek;
Such Art, such Nature, and such weather
The All-in-All seems here a Greek.
- 33 See for instance: H. C. Andersen (1988). *A Poet's Bazaar: Journey to Greece, Turkey, and Up the Danube*. Trans. Thornton, G. New York: Michael Kesend Publishing
- 34 For a broader historical analysis of the natural ecosystems and human impact on the Attic landscape see: Economidou, Eva. (1993). The Attic landscape throughout the centuries and its human degradation. *Landscape and Urban Planning*. Vol. 24. 33-37
- 35 The Athenians defeated the Persians in the field of Marathon, 42 kilometres north of Athens, in 449 BC. The modern marathon race reproduces the distance travelled by the messenger (Pheidippides) who brought news of the victory to Athens. The myth was revived with the inauguration of the modern Olympic Games in 1896. The ancient Panathenaic Stadium, originally constructed of wood, was reconstructed for the games, but built entirely from Pentelic marble; the contemporary name for the stadium, *Kallimarmaro*, translates as 'beautifully marbled'.
- 36 A complex of Aegean islands (Paros, Naxos, Tinos, Anafi, etc.) lie on that same Attico-Cycladic geotectonic fault line. See: Belavilas, N. and Papastefanaki, L. (eds) (2007). *Mining in the Aegean*. Athens: Melissa
- 37 As highlighted in Wycherley, R. E. (1974). The Stones of Athens. *Greece & Rome*. Vol. 21. 54-67. The use of marble in the Mediterranean began around the third millennium B.C., yet it was primarily associated with sculpture; i.e. the early Cycladic female figurines that were sculpted from Naxian and Parian white marble. Any marble used in Athens prior to that Golden Age of the city was extracted from the underground-tunnelled quarries of Paros and Naxos and imported to the classical metropolis.
- 38 Agrileza's hill provided the material for the creation of the two marble temples in Sounio, one dedicated to Poseidon and the other to Athena, the two Olympian gods who, according to the myth, fought over the patronage of the city of Athens.

- 39 Thomson, A. H. (1980). Stone, Tile and Timber, Commerce in Building Materials in Classical Athens. *Expedition*. Vol. 22. 12-16
- 40 Thomson, A. H. (1980). Stone, Tile and Timber, Commerce in Building Materials in Classical Athens. 12-16
- 41 For examples of these depictions see the following paintings: Lange, L. (1836) *Steinbruch zu Pentele*; Ross, L. (1836) *Das Pentelikon bei Athen und seine Marmorbrüche*, among others.
- 42 Livieratos, E. et al. (2013). Karten von Attica: A Major German Contribution to Greek Cartographic Heritage and its Digital Approach. In Buchroithne, M. (ed.). *Proceedings of the 26th International Cartographic Conference* (Dresden, 25-30th August 2013)
- 43 Curtius, E. and Kaupert, J. (1878). *Atlas von Athens*. (Online) Available at: < <http://digi.ub.uni-heidelberg.de/diglit/curtius1878>> (Accessed 10 August 2013); and (1895-1903). *Karten von Attika: Karten*. (Online) Available at: <<http://digi.ub.uni-heidelberg.de/diglit/curtius1895a>> (Accessed 10 August 2013)
- 44 In *Griechische Marmorstudien*, Lepsius categorized almost four hundred marble samples according to their colour, smell, grain size, etc. In addition to these subjective macroscopic criteria, the German geologist also used a newly developed technique for the determination of the samples' properties. Petrographic (or polarized light) microscopes had become very popular in the field of geology at that time; they provided accurate tracings of the complicated geophysical processes, the provenance and evolution of stones and minerals. Lepsius' study became so influential that the names he assigned to those Greek samples were also used to describe marbles from other countries that shared similar characteristics. Lepsius, R. G. (1890). *Griechische Marmorstudien*. Berlin: Konigliche Academie für Wissenschaften. 11-30
- 45 Moltesen, M., Herz, N. and Moon, J. (1992). The Lepsius Marbles. In Waelkens, M., Herz, N. and Moens, L. (eds). *Ancient Stones: Quarrying, Trade and Provenance*. Belgium: Leuven University Press. 277-281
- 46 Calculated using the 'Old money to new' currency converter developed by the British National Archives: (Online) Available at: <<https://www.nationalarchives.gov.uk/currency/default0.asp>> (accessed 30 December 2015)
- 47 The first instance of the use of the Pentelic marble in London was the doorway to the premises of Messr. Mappin & Webb (1898), on Oxford Street, followed by the buildings of St. James' Street and Piccadilly. Renwick, W. G. (1909). *Marble and Marble Working. A handbook for architects, sculptors, marble quarry owners and workers, and all engaged in the building and decorative industries*. New York: D. Van Nostrand Company. 52-53
- 48 According to the scientific topographic depiction of the quarried landscape by the American geologist Scott Pike. Pike, S. (1995). Preliminary Results of a Systematic Characterization Study of Mount Pentelikon, Attica, Greece. In Schwoerer, M. (ed.). *Archeomateriaux*. Bordeaux: CRPAA-PUB. 165-170
- 49 For an animated sequence of these speculative hand-drawn drawings produced by Manolis Korres, see: Antidot Design Studio (2012). *Acropolis Museum inauguration* (Online). Available at: <<https://www.youtube.com/watch?v=uxF70UljK7Y>> (Accessed 15 April 2014)
- 50 The landscape sculptor Nella Golanda has also materialised a marble sculpture-wall for the central building of the Agricultural Bank of Greece on Syntagma Square, which was destroyed during the riots of February 2012.
- 51 Golanda, N. and Kouzoupi, A. (2001). The old Quarries of Dionysos, Attica, Greece. *Topos*. No. 36. 24
- 52 For a further analysis of the implications of the construction of an 'authentic' tourist experience for social relations see the elaboration of the term 'tourist gaze' by the British sociologist John Urry. Urry, J. (1990). *The Tourist Gaze*. London and New Delhi: SAGE Publications Ltd
- 53 According to the statistics of Greek exports-imports of ornamental marble, provided by the Hellenic natural stone industry: *Greek exports – imports of Ornamental Stones* (Online) Available at: <http://www.marmaronet.com/mrmnet_en_pdf/1110_exp_imp.htm> (Accessed 10 October 2015)
- 54 Corner, J. (1999). Eidetic Operations and New Landscapes. In Corner, J. (ed.). *Recovering landscape: Essays in contemporary landscape architecture*. Princeton, NJ: Princeton Architectural Press.
- 55 A record of that event can be found here: *Athens – Red Bull X-Fighters 2015*. (Online) Available at: <http://www.redbullfighters.com/en_GR/event/athens-2015> (Accessed 10 October 2015)
- 56 In the history of Anglo-American studies, cultural geography is traced back to Sauer's formulation of 'cultural landscape' around the 1920s; "Culture is the agent, the natural area is the medium, the cultural landscape the result." As cited in Wylie, J. (2007). *Landscape*. New York: Routledge. 20
- 57 For documentation of the flourishing theoretical debates on landscape see, for instance: Daniels, S., DeLyser, D., Entrikin, N. and Richardson, D. (2011) *Envisioning Landscapes, Making Worlds*. New York: Routledge, and Deriu, D., Kamvasinou, K. and Shinkle, E. (eds.). (2014). *Emerging Landscapes: Between Production and Representation*. Surrey: Ashgate, among others.
- 58 Dorrian, M. and Rose, G. (eds) (2003). *Deterritorialisations... Revisioning Landscapes and Politics*. London: Black Dog. 13
- 59 Jackson, J.B. (1984). The Word Itself. In *Discovering the Vernacular Landscape*. New Haven, CT and London: Yale University Press. 3-8
- 60 John Stilgoe undertakes a similar etymological exploration. He writes: "Landscape is a slippery word. It means more than scenery painting, a pleasant rural vista, or ornamental planting around a country house. It means shaped land, land modified for permanent human occupation, for dwelling, agriculture, manufacturing, government, worship, and for pleasure. A landscape happens not by chance but by contrivance, by premeditation, by design; a forest or swamp or prairie no more constitutes a landscape than does a chain of mountains." Stilgoe, J. (1982). *Common Landscape of America, 1580 to 1845*. New Haven, CT: Yale University Press. 3
- 61 Dorrian, M. and Rose, G. (eds) (2003). *Deterritorialisations...Revisioning Landscapes and Politics*. 13
- 62 Dorrian, M. and Rose, G. (eds) (2003). *Deterritorialisations...Revisioning Landscapes and Politics*. 16
- 63 Cosgrove, D. (1984). *Social Formation and Symbolic Landscape*. New Jersey: Barnes and Noble Books. 11
- 64 Merriman, P., Revill, G., Cresswell, T., Lorimer, H., Matless, D., Rose, G., Wylie, J. (2008). Landscape, mobility, practice. *Social & Cultural Geography*. Vol. 9. No. 2. 191-212 (200)
- 65 Casey, E. (2002). *Representing Place: Landscape Painting and Maps*. Minneapolis, MN and London: University of Minnesota Press. 144-145
- 66 This approach was exemplified in Kenneth Clark's *Landscape into Art* (1949 (1976)): "Landscape painting marks the stages in our conception of nature. Its rise and development since the middle ages is part of a cycle in which the human spirit attempted once more to create a harmony with its environment." Clark, K. (1976). *Landscape into Art*. New York: Icon Editions. 1
- 67 Mitchell, W. J. T. (2002). *Landscape and Power*. Chicago: University of Chicago Press. 1
- 68 Mitchell, W. J. T. (2002). *Landscape and Power*. 1

- 69 Barrell, J. (1980). *The Dark Side of the Landscape: The Rural Poor in English Painting 1730-1840*. Cambridge, UK: Cambridge University Press
- 70 Cosgrove, D. (2008). *Geography and Vision: Seeing and Representing the World*. London and New York: I.B. Tauris. 17
- 71 Cosgrove, D. (1999). Liminal geometry and elemental landscape: construction and representation. In Corner, J. (ed.). *Recovering landscape: Essays in contemporary landscape architecture*. New York: Princeton Architectural Press. 103-119 (107)
- 72 Cosgrove, D. (2004). Landscape and Landschaft (Lecture delivered at the ‘Spatial Turn in History’ Symposium German Historical Institute, February 19, 2014). *GHI BULLETIN*. No. 35. 57-71 (59)
- 73 Mitchell, W.J.T. (2002). *Landscape and Power*. 1
- 74 Mitchell, W.J.T. (2002). *Landscape and Power*. 1
- 75 Mitchell, W.J.T. (2002). *Landscape and Power*. 2
- 76 Mitchell, W.J.T. (2002). *Landscape and Power*. 2
- 77 For a further elaboration on the ‘cultural turn’ see: Warf, B. and Arias, S. (eds). (2009). *The Spatial Turn: Interdisciplinary Perspectives*. London and New York: Routledge
- 78 Cosgrove, D. (ed). (1999). *Mappings*. London: Reaktion Books. 7
- 79 Lefebvre, H. (1991). *The Production of Space*. Trans. Nicholson-Smith, D. Oxford: Blackwell. 39
- 80 Borch, C. (2011). Interview with Edward W. Soja: Thirdspace, Postmetropolis, and Social Theory. *Distinktion: Scandinavian Journal of Social Theory*. Vol. 3. No. 1. 113-120 (114)
- 81 Borch, C. (2011). Interview with Edward W. Soja: Thirdspace, Postmetropolis, and Social Theory. 113
- 82 See the introduction to Mitchell, W.J.T. (2002). *Landscape and Power*.
- 83 de Certeau, M. (1984). *The Practice of Everyday Life* c.f. Mitchell, W.J.T. (2002). *Landscape and Power*. viii
- 84 For a different triangulation that reads ‘country/ peasant/ landscape’ see Jean-Luc Nancy’s discussion in the essay ‘Uncanny Landscape’, where Nancy writes, “*Pays, paysan, paysage* (country, peasant, landscape): this is like the declension of a word or, rather, of a semanteme that would not be any of these three words, each of which would be one of its cases. There would thus be the case of location (*pays*), the case of occupation (*paysan*), and the case of representation (*paysage*). The location, occupation, and representation of a single entity.” Nancy, J. (2005). Uncanny Landscape. In *The Ground of the Image*. Trans. Fort, J. New York: Fordham University Press. 51-63 (51)
- 85 Mitchell, W.J.T. (2002). *Landscape and Power*. x
- 86 Mitchell, W.J.T. (2002). *Landscape and Power*. x
- 87 Cosgrove, D. and Daniels, St. (eds.). (1988). *The Iconography of Landscape: Essays on the Symbolic Representation, Design and Use of Past Environments*. Cambridge, UK: Cambridge University Press. 1
- 88 The title is taken from the note that Marcel Duchamp wrote in 1934:

a geographic ‘landscapism’ —‘in the manner’ of geographic maps
—but
The landscapist from the height of an aeroplane — Then the field trip (400km) ... The geographic landscape (with perspective, or without perspective, seen from above like maps) could record all kinds of things, have a caption, take on a statistical look. —
There is also ‘geological landscapism’: Different formations, different —A mine of information!

Sanouillet, M. and Peterson, E. (eds). (1973). A l’Infinif. In *The Writings of Marcel Duchamp*. New York: Da Capo Press. 78-79

Duchamp’s note is linked to his famous *The Large Glass (The Bride Stripped Bare by Her Bachelors, Even)*, produced between 1915-23, and more specifically to the upper half of the artwork that by 1934 Duchamp had abandoned as ‘definitely incomplete’ until, as James Housefield notes, Duchamp’s interest in representations of landscape through the eyes of cartographers and cultural geographers re-activated it.
Housefield, J. (2005). The case of Marcel Duchamp: the artist as traveller and geographer. In Brooker, P.
- and Thacker, A. (eds). *Geographies of Modernism*. New York: Routledge. 99-111
- 89 See for instance: Corner, J. (1997). Ecology and Landscape as Agents of Creativity. In Thomson, G. and Steiner, F. (eds). *Ecological Design and Planning*. New York: John Wiley & Sons. 81-108
- 90 Waldheim, C. (2001). Landscape Urbanism: A Genealogy. *PRAXIS*. Is. 4. 10-17 (10)
- 91 Waldheim, C. (2006). *The Landscape Urbanism Reader*. New York: Princeton Architectural Press. 38
- 92 Corner, J. (2006). Terra Fluxus. In Waldheim, C. (ed.). (2006). *The Landscape Urbanism Reader*. New York: Princeton Architectural Press. 23-33 (30)
- 93 According to Ignasi Se Solà-Morales *terrain vagues* are “places that are foreign to the urban system, mentally exterior in the physical interior of the city, appearing as its negative image as much in the sense of criticism as in that of a possible alternative.” de Solà-Morales Rubio, I. (1995). Terrain Vague. In Davidson, C. (ed.). *Anyplace*. Cambridge, MA: MIT Press. 118-124 (123)
- 94 Shane, G. (2003). The emergence of “Landscape Urbanism,” Reflections on Stalking Detroit. *Harvard Design Magazine*. No. 19. 1-8
- 95 Waldheim, C. (2001). *Landscape Urbanism*. 14
- 96 Allen defines this ‘field condition’ as “any formal or spatial matrix capable of unifying diverse elements while respecting the identity of each. Field configurations are ‘loosely bound aggregates characterized by porosity and local interconnectivity. [...] Form matters, but not so much the forms of things as the forms *between* things.” Allen, S. (1999). Field Conditions. In *Points + Lines: Diagrams and Projects for the City*. New York: Princeton Architectural Press. 2
- 97 Deleuze argues that the rhizomatic diagram “is no longer an auditory or visual archive but a map, a cartography that is coextensive with the whole social field. It is an abstract machine. [...] a diagram is a map, or rather several superimposed maps. And from one diagram to the next, new maps are drawn. Thus, there is no diagram that does not also include, besides the points which it connects up, certain relatively free or unbound points, points of creativity,
- change and resistance, and it is perhaps with these that we ought to begin in order to understand the whole picture.”
Deleuze, G. (1999). *Foucault*. 30, 37
- 98 Corner continues as he quotes from Deleuze’s and Guattari’s *A Thousand Plateaus: Capitalism and Schizophrenia* (1980): “The rhizome is altogether different, *a map and not a tracing*. Make a map, not a tracing. [...] What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real. The map does not reproduce an unconscious closed in upon itself; it constructs the unconscious. It fosters connections between fields, the removal of blockages on bodies without organs, the maximum opening of bodies without organs onto a plane of consistency [...] The map has to do with performance, whereas the tracing always involves an ‘alleged competence.’” Corner, J. (1999). The Agency of Mapping: Speculation, Critique and Invention. In Cosgrove, D. (ed.). *Mappings*. London: Reaktion Books. 213-252 (214)
- Even earlier, Bateson had argued, “Let us go back to the original statement for which Korzybski is most famous —the statement that *the map is not the territory*. [...] We know the territory does not get onto the map. [...] What gets onto the map, in fact, is difference, be it a difference in altitude, a difference in vegetation, a difference in population structure, difference in surface, or what-ever. Differences are the things that get onto a map.” Bateson, G. (2000). Form, Substance, and Difference. In *Steps to an Ecology of Mind*. Chicago: University of Chicago Press. 318-320
- 99 Corner, J. (1999). The Agency of Mapping. 244
- 100 Corner, J. (1999). The Agency of Mapping. 230
- 101 Corner, J. (1999). The Agency of Mapping. 231
- 102 Weller, R. (2001). Between hermeneutics and datascares: a critical appreciation of emergent landscape design theory and praxis through the writings of James Corner 1990-2000). *Landscape Review*. Vol. 7. No. 1. 3-43 (18)
- 103 “The map-overlay method was key to McHarg’s ecological model. [...] [It] involved layers of transparent film over a base map. [...] All of the mapped layers were then superimposed to create

- a composite map that in McHarg's words looked something like a 'complex X-ray photograph with dark and light tones'. For McHarg, the composite map was where the truth was revealed." Herrington, S. (2010). The Nature of Ian McHarg's science. *Landscape Journal*. Vol. 29. 1-10 (5)
- 104 See for instance: Spencer, D. (2010). Landscape Urbanism at the Architectural Association. In *Topos*. Vol. 71. 64-67
- 105 Allen, S. (2011). From the Biological to the Geological. In Allen, S. and McQuade, M. (eds). *Landform Building: Architecture's New Terrain*. Baden, Switzerland and Princeton, NJ: Lars Müller Publishers, Princeton University School of Architecture. 20-42 (27)
- 106 Waldheim, C. (2010). Weak Work: Andrea Branzi's 'Weak Metropolis' and the Projective Potential of an 'Ecological Urbanism.' In Mostafavi, M., and Doherty, G. (eds). *Ecological Urbanism*. Baden, Switzerland and Cambridge, MA: Lars Müller and Harvard University Graduate School of Design. 114-121 (114)
- 107 Mostafavi, M. (2010). Why Ecological Urbanism? Why now? In Mostafavi, M., and Doherty, G. (eds). *Ecological Urbanism*. Baden, Switzerland and Cambridge, MA: Lars Müller and Harvard University Graduate School of Design. 12-51 (17)
- 108 Mostafavi, M. (2010). Why Ecological Urbanism? Why now? 28
- 109 Mostafavi, M. (2010). Why Ecological Urbanism? Why now? 24
- 110 Guattari, F. (2000). *The three ecologies*. Trans. Pindar, I and Sutton, P. London and New Brunswick: The Athlone Press. 52
- 111 The epigraph reads, "There is an ecology of bad ideas, just as there is an ecology of weeds and it is characteristic of the system that basic error propagates itself. It branches out like a rooted parasite through the tissues of life, and everything gets into a rather peculiar mess." While Bateson articulates ecology in the following way: "Formerly we thought of a hierarchy of taxa —individual, family line, subspecies, species, etc. — as units of survival. We now see a different hierarchy of units —gene-in-organism, organism-in-environment, ecosystem, etc. Ecology, in the widest sense, turns out to be the study of the interaction and survival of ideas and programs (i.e., differences, complexes of differences, etc.) in circuits." Bateson, G. (2000). Pathologies of Epistemology. In *Steps to an Ecology of Mind*. Chicago: University of Chicago Press. 340
- 112 Guattari, F. (2000). *The three ecologies*. 41
- 113 Guattari, F. (2000). *The three ecologies*. 27
- 114 The term *ecosophy* first appeared in the texts of Norwegian philosopher Arne Naess, where Naess' defines it as "a philosophy of ecological harmony or equilibrium. A philosophy as a kind of *sofia* (or) wisdom, is openly normative, it contains norms, rules, postulates, value priority announcements and hypotheses concerning the states of affairs in our universe. Wisdom is policy wisdom, prescription, not only scientific description and prediction. The details of an ecosophy will show many variations due to significant differences concerning not only the "facts" of pollution, resources, population, etc., but also value priorities." Cited in Drenson, A. and Devall, B. (2010). The Deep Ecology Movement: Origins, Development & Future Prospects. *The Trumpeter*. Vol. 26. No 2. 48-69 (55)
- Obviously, Naess' definition is rather different to Guattari's as John Tinnel notes, "Naess calls for an expansion of the self via identification ('Self-realisation'), whereas Guattari valorizes autopoietic processes that perform a dissolution of the self via disjunction ('becoming-other')." Tinnel, J. (2011). Transversalising the Ecological Turn: Four Components of Félix Guattari's Ecosophic Perspective. *The fibreculture Journal*. Is. 18. 35-64 (36)
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PART A

Chapter ii

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