

IMAGE AND IMAGINATION

A RESEARCH PATH BETWEEN CROSS-SECTIONS AND ETCHINGS

Andrea Oldani

Politecnico di Milano

Department of Architecture and Urban Studies

andrea.oldani@polimi.it

ESSAY 37/02

CROSS-SECTION

ETCHING

GROUND

IMAGINARY LANDSCAPES

Since the second half of the 19th century, the evolution of culture produced an increasing fragmentation and specialization of knowledge that had essential effects also on architecture. As well as other effects, the birth of several specialisms led to a more strong necessity of distinction between the 'artistic' ways of drawing and a more technical and scientific approach, proper of the architecture discipline. More, in general, this process was simultaneous to the separation between the Academies and the newborn Schools of Architecture. A phenomenon that has subsequently distanced architects from the knowledge of a world of materials and techniques become increasingly distant from the universe of architectural representation. This lack of cultural contamination between forms, techniques and languages produced

a reduction of the ways to express imagination, limiting the means to amplify the narrative space of the drawing. As a consequence, in the more recent panorama of architectural design, the opportunities for some impartial, hybrid and highly critical narrations become extraordinarily rarefied, as the individual expression of few outstanding protagonists. Starting from this analysis, the research assumes as experimental field one iconographic model: the cross-section, and one technical space: the etching. These two components become themes for building a theoretical framework and realize practical experience. The result is a going on work consisting of a series of etchings reassuming the desire to describe, in a way suspended between reality and fiction, the complex interaction between humanity, soil and environment.

INTRODUCTION

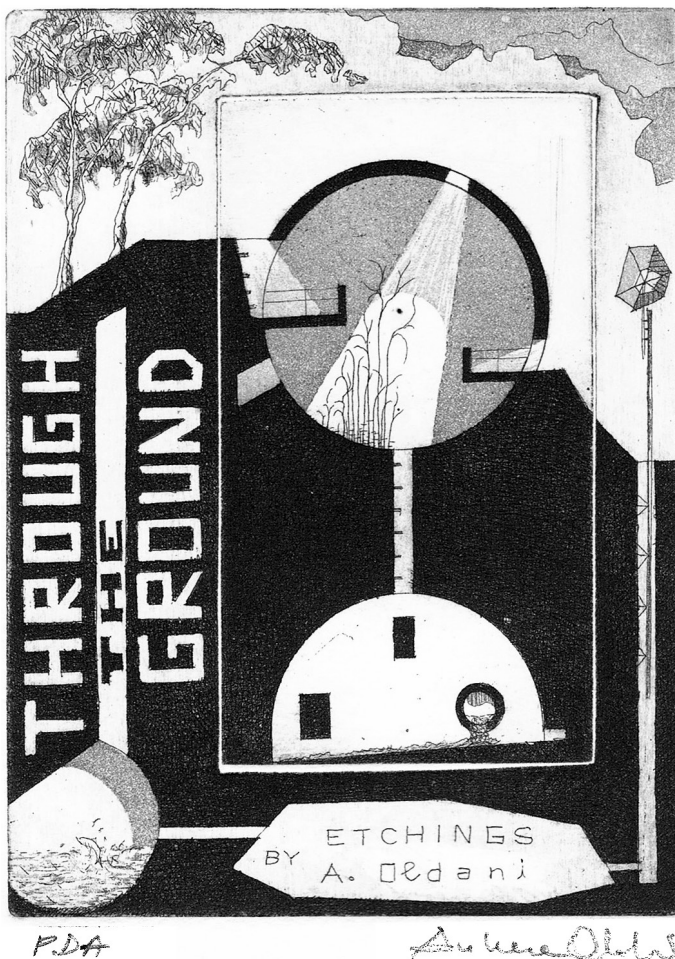
The year 1959 was marked by the publication of “the two cultures and the scientific revolution” by Charles Percy Snow, a brief and vibrant pamphlet, that opened an intense debate on the already evident irreconcilability between scientific and humanistic culture. Without entering the book’s merits and defects, as well as its effect on the cultural debate, it is interesting underlining how the text established a significant threshold in a complex cultural transition, whose effects are extremely relevant also compared to the discipline of architecture.

As a matter of fact in the art of designing and building it can be underlined a progressive and incremental separation between humanities and hard sciences to which corresponded changes in teaching methods, the invention of new professional figures, and the emergence of specialised actors in the variety of fields of a more and more sectorised knowledge.

This process was quite slow and assumed an established problematic identity right at the moment when Snow has revealed the impossibility of conciliation and the profound different attitude of the two forms of culture in dealing with the reality.

In architecture, it can be identified at least one crucial moment of fragmentation that started highlighting the conflict between the humanistic and the scientific side of the discipline. Thinking the traditional unity of painting, sculpture and architecture, whose communion has characterised several centuries of artistic experience, it cannot forget another form of relationship between architecture, technology and science. Since Vitruvius, the knowledge of the architects passed through expert training in construction, hydrology, geology and other fields of expertise. For this reason, until the end of the 18th century, it did not exist a precise distinction between disciplines, whose independence consolidated with the invention of modern engineering and the birth of polytechnic culture and polytechnic universities (Picon, 2006). As a result, after this moment, architecture also felt the need to progressively

Fig. 1 Andrea Oldani,
Through the ground, 2019.
Composite frontespice,
two plates, cm. 8,85 x 11,9.
Etching/Acquatint.



detach itself from the broader field of liberal arts, founding a new institute for building a new generation of architects, whose goal was offering a balanced blend of art and science. For this reason, the traditional way of training architects has started to change rapidly in all of the more developed countries (Gabetti, 1986), meeting at least two genuinely significant thresholds of change in Italy. The first occurred in the first decades of the twentieth century, the second coinciding with the Seventies.

One of the most compelling evidence of this mutation is related to architectural drawing. The rethinking of an architect's

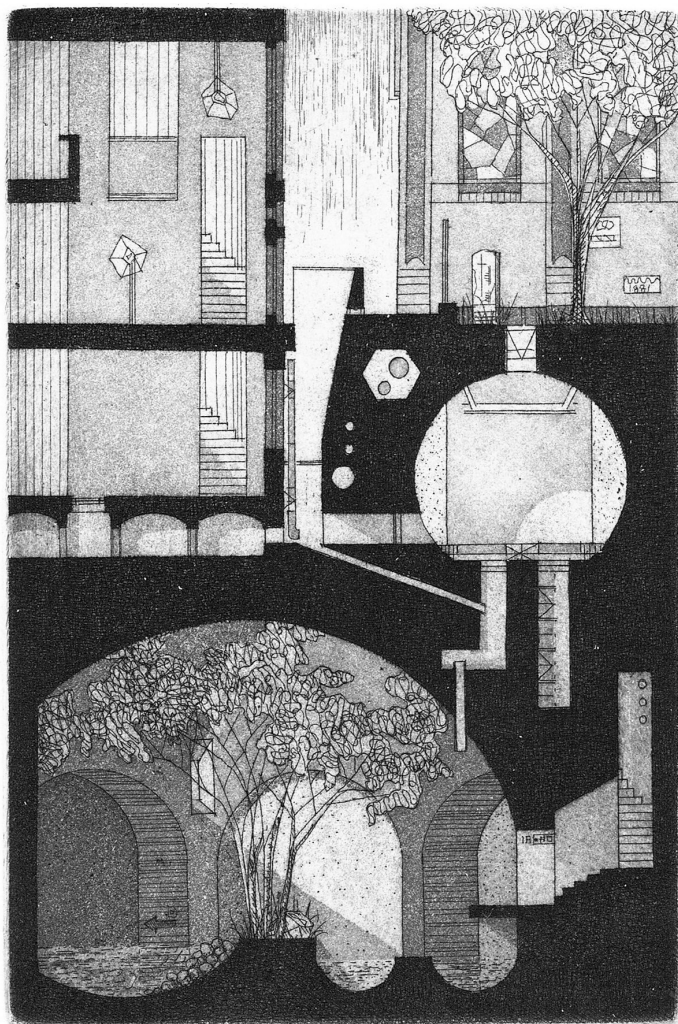
ability to respond to the reality of construction has produced a remarkable mutation of the methods, the form and the idea of representation, starting from the training, less directed to challenge individuality and talent, conversely focusing on transmitting the need for clarity, uniformity and precision in the technical description.

One demonstration of the first phase of this process is summed up by the comparison between the training, the ability and the use of the drawing by some masters of Italian architecture. One study, based on the confrontation between the experience of Portaluppi, Michelucci and Ridolfi, highlights the degree of skills acquired during higher education, the type of teaching received at university and the ways of using drawing in the profession. It emerges how, after the institution of the *Scuole Superiori di Architettura*, the university training had tended to homologue individual talents and standardise knowledge patterns, with disinterest for classical training in drawing expertise; aspect considered as the prerogative of few virtuosos, not necessary in the statute of the new architect (Conforti & Dulio, 2005, p. 82). This separation intensified again after the university protests of 1968 with the abandonment of the traditional way of teaching life drawing, whose mastery started being considered “by critics and innovators as useless and superfluous calligraphy” (Portaluppi, 1962, p. 5). Of course, those two passages included the abandonment and the ignorance of a set of techniques (like etching and printmaking) fundamental in the artistic discourse, but secondary or insignificant in the new field of architectural drawing.

With this in mind, it is possible understanding the progressive consolidation of a distinction between artistic and technical, architectural, or engineering drawing; where the different adjectives seem always separating more and more irreconcilable messages and domains.

Also, for this reason, moving towards a technical statute of representation has progressively obfuscated another world whose scope can be understood through two or more oppositional couples like reason and feeling; rationality and

Fig. 2 Andrea Oldani,
Il greto nascosto, 2019.
Plate: cm. 9,8 x 14,8.
Etching/Acquatint.
This work is combined
with a text published by
Edizioni dell'Angelo in
the series of plaquettes
Architettura Incisa.



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irrationality; reality or fiction. Despite this, some fragments of this space for “invention” still exist in the perennial, continuous oscillation of the architectural drawing between two attitudes, one “mimetic” and one “poietical”; where the second one, related to a designing projection, implies separation in terms of space and time with the present reality (Ugo, 1994, p. 13) and opens to something unexpected. This feature also justifies why “drawing can take an autonomous value in architecture” presenting itself as a reaction to various conditions among which Vittorio Gregotti (2014, p. 16) underlines

five primary examples. In the first the drawing is configured as “an affirmation of divergence of principles concerning current professional activities”; in the second it appears as “willingness to propose something authentically autonomous: personal expression, a fragment of dream, memory, illusions or truth”; in the third case it can be intended “as a manifesto of one’s position about the artistic practice of architecture”, or as forth, the “representation of an idea of social utopia”; and finally, “more simply as a project not realised with high ideal content, a sublime image of a foundation that remains unknown for its realisation”. In this limited, autonomous field of action they remain the traces of a past in which techniques, gestures and signs became the expression of a way of understanding architecture that has increasingly vanished within a tight codification and a desire to emancipate a pure technical use from the variety of forms of drawing.

On the other hand it is evident how a genuinely unrestricted approach to drawing has somehow been a problem for many architects, especially during training. Aldo Rossi, for example, was harshly criticised during his studies for his approach to drawing (Rossi, 1981, p. 39), although this way of drawing later became one of the most authentic expressions of his way of thinking. However, despite an extreme coherence in his work, it is an evident separation between the poetry that shines through in his ‘artistic’ drawings and the rationality that distinguishes the technical drawings, up to find in the printmaking techniques an ideal “reflexive medium, rather disconnected from everyday affairs” (Quik, 2015, p. 42).

These windows of freedom and expressive use of drawing also led to a remarkable season based on the centrality of drawing. Both in Italy, as ‘drawn architecture’, and in Russia, as ‘paper architecture’, simple architectural drawings, far from the hypothesis of construction, become an attempt to answer to a critical condition for architecture, starting being a reflexive tool and discursive space for the elaboration of theories. This attitude found later a new obstacle. In fact, towards the end of the last century, the progress and the diffusion of personal computers, brought to a new hegemony of digital drawing, with a constant loss of manual and

graphic expression skills, especially in the architects of the last generations.

Also, for this reason, today, it is necessary “focus once again on the great tradition of imaginary and analytical drawings, in which the sensibility of the execution, and the feelings inspired in the draughtsman by the subject-matter, imbue these drawings with matchless expressivity and in some cases particularly noteworthy levels of artistic excellence—even if they cannot always be defined as works of art” (Docci, 2014, p. 5).

In other words, this is an invitation to reconsider the value of some artistic techniques in comparison to more lawful use of architectural drawing in order to explore the limits of the narrative possibilities of representation, introducing the opportunity of a renewed reflection on its potential in the field of imagination and images production.

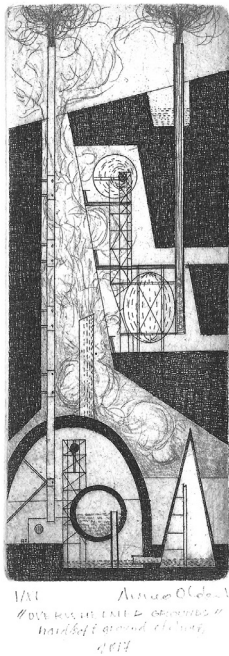
MATERIALS, METHODS AND RESULTS

What shown above supported the intention to develop research interpreting the threshold and exploring the limit existing between the modes of artistic representation and those of technical drawing. This aim consisted of identifying a theoretical and technical space, for some experiments to verify the possibilities of reconciliation between two conflicting instances. Activity that consists of exploring fields where representing some fragments of imagination, albeit within a reflection that adheres to precise a disciplinary discourse on architecture.

Given these points, the reflection assumed as central points of experimentation one iconographic model: the cross-section and one technique: the etching. The first, it is inscribed and limited to the technical sphere of drawing. The second, it is representative of a field of invention and interdisciplinary dialogue that has always been significant in the imaginary of artists and architects.

Behind the conceptual simplicity of the cross-section representation, which consists of the two-dimensional

Fig. 3 Andrea Oldani, *Overwhelmed Grounds*, 2017. Plate: cm. 5 x 13. Etching/Soft Ground. This work has been realized for *Printcard Wrocław*, exhibition topic: *Beyond Control*.



visualisation of the intersection of an object in three-dimensional space with a plane, lies an intriguing form of drawing that allows exploring the invisible.

The cross-section, as a mode of the orthogonal projection, is a scientific way to operate a descriptive “detachment” from the idea of “view” through the exclusive choice of one form of analytical multiplication of the image. It operates restitution of data that are “invisible” even if “explicit”, offering a limited possibility of “indulging in figurative mimesis”, although guaranteeing a high possibility of “structural mimesis” (Ugo, 1994, pp. 100-104). These characteristics make the cross-section capable of “particularising” instead of “generalising”, allowing to stress “synthetically and synchronously” the “relationship between the ground, the interior of buildings and the atmospheric cavities” (Purini, 1992, p. 78). Even so, such possibilities, that make this valuable tool support in architecture, for description, interpretation and design, do not find critical responses outside the mere field of technical representation. The power of the vertical cross-section as a narrative medium should be discussed at least with respect to one limit and one potential. The first depends on the limited availability of descriptive space that is offered between the cutting plane and the background; where it is necessary refining the contents in order to avoid overlaps and confusion. This critical distance is, however, compensated by an extending possibility, which consists in the use of the combination between the section and other forms of representation such as axonometric projections and perspective. The second lies in the unique ability of the section to penetrate the reality, showing the unexpected. The “cut” reveals what the eyes cannot see. In this property resides an underestimated narrative value.

However, despite these arguments that make the cross-section a somewhat narrative space, there are very few and contradictory traces of the use of this mode of representation outside the field of technical drawing. Signs of fiction and narrative fantasy can be found, for example, in the cross-sections drawn by the visionary architect Jean-Jacques Lequeu, whose experience in geometry was joined to a deep

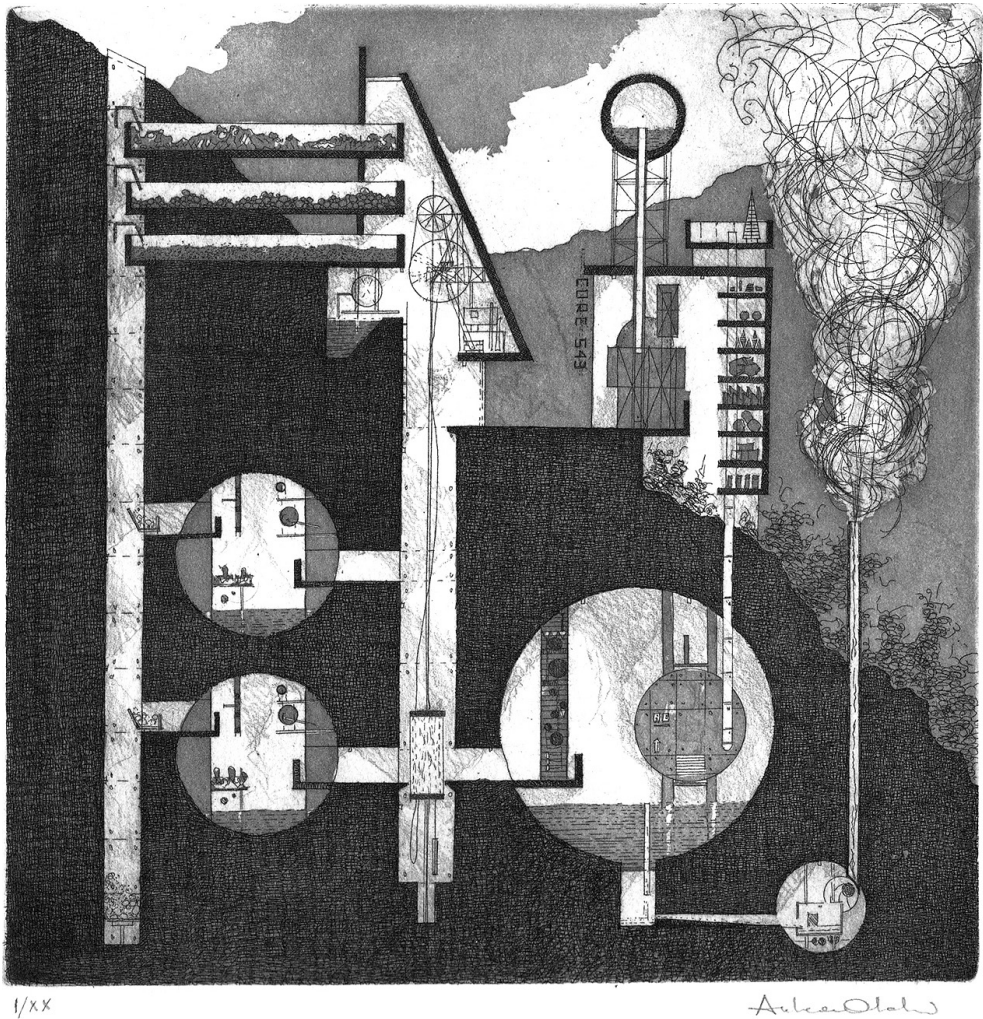


Fig. 4 Andrea Oldani,
«Core 543» an hypothetical
groundscape, 2017.
Plate: cm. 17,5 x 17,7.
Etching/Soft Ground/
Acquatint.

curiosity, that led him to a parallel research path, marked by a purely artistic nature (Baridon et al., 2019; Boeri, 2019). Spatial and typological inventions not far from that of the *éléphant triumphal* by Charles-François Ribart, world-famous *architecture singulière* whose celebrity is undoubtedly due to the cross-section's ability to reveal the inner nature of a giant sculpture or habitable architecture (Martin, 2019).

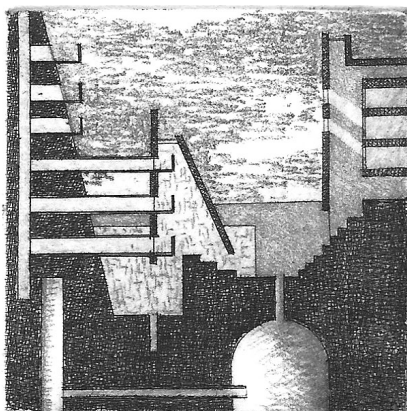
Undoubtedly such kind of experiences, coming from a visionary generation of French architects, deep influenced a later group of critical thinkers who used the vertical cross-section as a way to explore utopia. One example can be the

atomic underground city presented in 1969 on the pages of *Esquire* by the architect, city planner and professor Oscar Newman (Harmon, 2016, p. 57). The science-fiction concept originates as a design response to the real effects of an atomic test that produced “a perfect hollow sphere, a half-mile in diameter, five hundred feet below the surface of the earth” (Newman, 1969, p. 186). It is a radical vision represented through a cross-section, the only possible way to scrutinise the dark dimension of the subsoil, emphasised by the use of colours tending to blue and brownish-red.

In the same way, it is impressive exploring the work of Alexander Brodsky and Ilya Utkin, whose composite plates commenting “on the discrepancy between political propaganda’s false promise of social utopia and the hard facts of a disappointing reality” (Nesbitt, 2015, p. 19) use all forms of architectural representation, including the cross-section, as a way to communicate the discomfort of an unsustainable political condition. Intent shared with a vast community of “paper architecture’s” builders (Klotz, 1988) who contributed to move the use of architectural drawing towards the maximum expression of its narrative potential.

The work of Brodsky and Utkin establish a fundamental connection in our research. Their work is based on the use of etching as the principal means of expression, production and reproduction of their visionary architectures. This is only one of many compelling evidences of how the etching constitutes a privileged field of invention, capable of fostering the transition between the two similar but separate universes mentioned at the beginning of this paper.

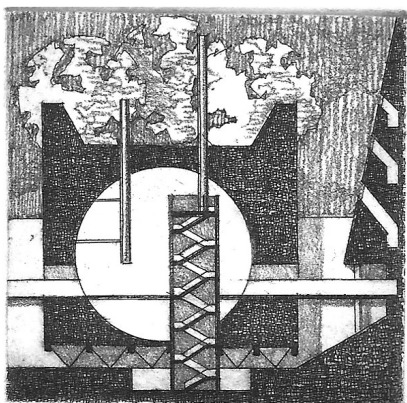
The universe of printmaking, in which etching is predominant, constitutes a heterogeneous field of experimentation; in which the art of drawing is blended with alchemy; the languages of drawing with the pictorial ones, and those of graphics. This process demonstrates, better than other fields, how the “artistic practices have an extraordinary relationship with techniques as materials able to define the intentions as well as working as design tools” (Gregotti, 2002, p. 77). For this reason, the process of etching, first of all, corresponds to a “rigorous mental project”, where lies



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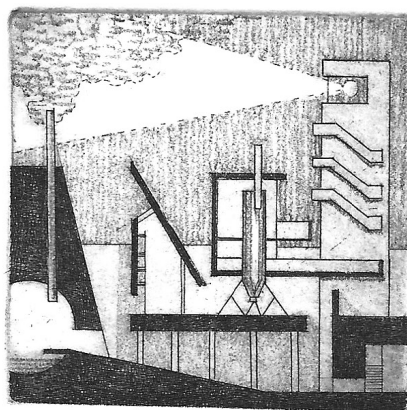
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Fig. 5 Andrea Oldani, *All through the ground*, 2017. Three plates: inch. 2 x 2. Etching/Soft Ground. These works has been selected for the 11th Biennial International Miniature Print Exhibition 2017 - Center for Contemporary Printmaking, Norwalk, CT, U.S.A.



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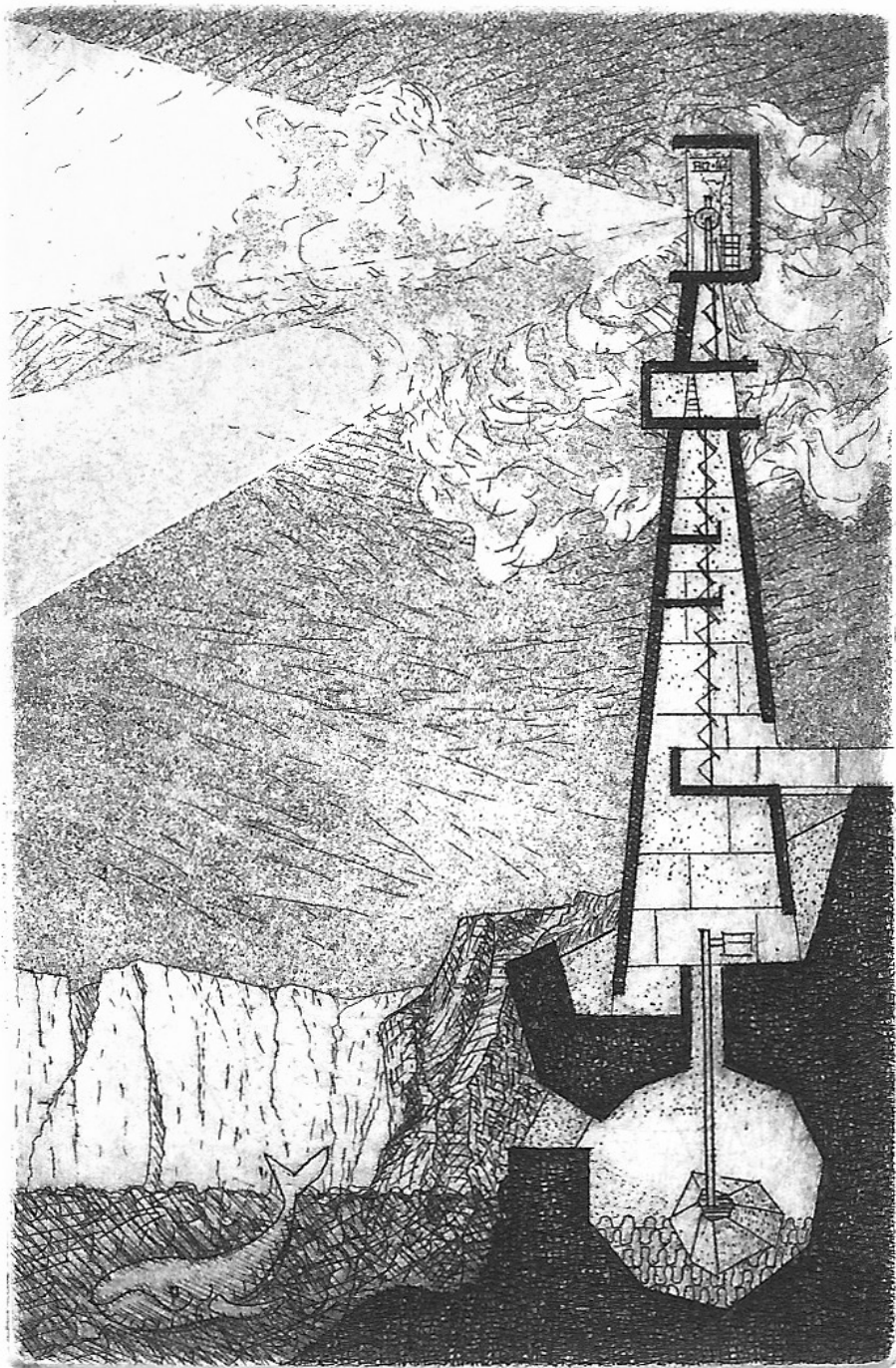
two aims: a “design intentionality”, and the “elements of a plot and a story” (Moschini, 2009, p. 26). There is, therefore, a form of “anachronism” in the etching that enriches it with “paradoxical modernity”. This is overall “expressed in a slow temporality of thought and gesture that, for an architect, is a countermeasure of undoubted effectiveness to the frenetic rhythm that today consumes the language and the exercise of building” (Purini, 2009, p. 20). Etchings highlight how “anything we can express, it is already included in the gesture and the sign deriving from it”. It makes those expressions visible, as “necessary results of our way of being, suspended between rationality and irrationality” (Strazza, 1979, p. 13).

As a matter of fact, since history, etching has always been a space of retreat for some architects trained, or supported, in dealing with its language and technique. Without involving Piranesi, whose role in etching is extraordinary and far from standard practice, there are many significant examples even close to us of architects committed in printmaking. Designers and scholars who have built a complementary or parallel narration to works produced in the more conventional disciplinary areas.

Going back to the first generation whose architectural training was emancipated from art schools, in the Milanese context, they can be distinguished figures like Paolo Mezzanotte (Bellini, 1992, p. 118) or Giovanni Greppi (Calzini, 1932, p. XIX). They were both famous architects, who dedicated themselves to the art of etching with intensity, taking part in prestigious competitions and artistic events. Equally important it is the experience of another generation, not driven towards the printmaking techniques by the influence of the traditional academic culture, but by the research of an alternative space for the construction of architectural theories. It is the case of Aldo Rossi (Celant et Huijts, 2015), who, introduced to the potentialities of the etching by another protagonist of printmaking, Arduino Cantàfora, started experimenting by himself this powerful media, fascinated by “a world, perhaps lost of technique, that beyond acquisition, becomes protest” (Rossi, 1988, p. 7).

Under those circumstances, it becomes possible agreeing that “etchings are not done to imitate and reproduce qualities

Fig. 6 Andrea Oldani, *The Giant and the Whale*, 2018. Two colours plates: cm. 5,8 x 8,8 . Etching/Acquatint
These works has been exhibited at the *I Mini Print Biennial, the Sea and the Lighthouses* at Faro Cabo Mayor Art Center, Santander, Spain.



AP I/III

Accident

of other techniques, but to obtain something new and express particular ways of creativity. The severe limitation of means, together with the need to measure oneself, consciously, with matter and time, are the basis of their analytical and synthetic character” (Strazza, 1979, p. 75). For this reason, several generations of architects found in this technique space for analysis, synthesis, narration, fiction and elaboration of self-knowledge.

A discreet knowledge and practice of the etching technique, together with interest in the critical topics previously addressed, as well as the availability of a project, were the reasons that lead undertaking personal research based on the use of this media.

A consolidated interest in the ground intended as space, infrastructure, support and discursive place in the history of the modification of our planet (Secchi, 1986), as well as the risk of definitively compromising this delicate environmental infrastructure (Pavia, 2019) has led to the assumption of this subject as a theme of exploration.

The use of etching offered the critical space for a narrative exploration, aimed at the exasperation of a plausible plot, suspending the discourse between reality and fiction, without renouncing to denounce the most destructive attitudes operated by the contemporaneity. As a result, the vertical-cross section has become the indispensable tool for the exploration of the invisible reality that lies beneath our feet. These three elements become the themes around which has been carried out a going-on work, which is testing the narrative capacity of an exquisitely technical form of representation, the critical space of etching and the desire to explore invisible landscapes.

DISCUSSION AND CONCLUSIONS

What emerges is a series of etchings showing a sublimated reality of the world that hides below the line between earth and sky. The desire to exasperate the modes of the most violent interaction between humanity, earth's surface and subsoil is emphasised by the possibilities allowed by this

technical mean. The contrast between the deepest black and the lightest white symbolises the deepness of the earth and the mysteries of its cavities. The landscape is dominated by silence, broken by the buzzing of mysterious machines and the movement of dense fumes. Water dominates the underground dimension like an ancestral fluid that humanity has not yet adequately controlled.

The collection returns vast imaginative possibilities despite the limited narrative space offered by the section.

Since this is personal research, I do not think that the intention should be to find some conclusions, instead I think it is correct to offer these theoretical, critical and imaginative materials as topics for a constructive debate. The aim is also recovering a form of a dialogue between a technical dimension of drawing and the expressive possibilities that derive from the knowledge of artistic techniques, a preferential field for the exploration of the subjects of image and imagination.

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Article available at

DOI: 10.6092/issn.2724-2463/11121

How to cite

as article

Oldani, A. (2020). Image and Imagination. A research path between cross-sections and etchings. *img journal*, 1(2), 200-217.

as contribution in book

Oldani, A. (2020). Image and Imagination. A research path between cross-sections and etchings. In A. Luigini, C. Panciroli (Eds.) *img journal 02/2020 Graphics*, 200-217. ISBN 9788899586119



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