... In that Empire, the Art of Cartography attained such Perfection that the map of a single Province occupied the entirety of a City, and the map of the Empire, the entirety of a Province. In time, those Unconscionable Maps no longer satisfied, and the Cartographers Guilds struck a Map of the Empire whose size was that of the Empire, and which coincided point for point with it. The following Generations, who were not so fond of the Study of Cartography as their Forebears had been, saw that that vast map was Useless, and not without some Pitilessness was it, that they delivered it up to the Inclemencies of Sun and Winters. In the Deserts of the West, still today, there are Tattered Ruins of that Map, inhabited by Animals and Beggars; in all the Land there is no other Relic of the Disciplines of Geography.

—Jorge Luis Borges, On Exactitude in Science
introduction

Landscape Cartography

The Map is Fiction / The Map is Real

Cartography is Drawing
In his seminal 1983 essay Le Territoire Comme Palimpseste, André Corboz compares the territory to a layered parchment with inscriptions and erasures attributed to both intentional and accidental, natural and human, factors. Tracing a narrative out of the ways in which we have represented the territory, he identifies a historical opposition between the map – the God’s eye view, ubiquitous, abstract and descriptive – and the landscape – the human perspective that projects an état d’âme onto a scenery. The map renders the territory as an object, while the landscape acknowledges it subjectively. The former has the pretense of exactitude, while the latter is relative to each viewer’s conscience. Corbóz proposes a challenge to this opposition by stating that with the advent of satellite imagery and high speed transport, multilocation appears to have become a human condition and the subject position has become more complex. The network configurations of contemporary territories have introduced an overlaying of different speeds and spatio-temporal perceptions. These layers of movement have overlapped with layers of archaeology and geology, traces of past territorial inscriptions of both deliberate and fortuitous, human and natural, causes. In reaction to this, he proposes the “palimpsest” as a metaphor for reading the territory in its depth: as a miscegenation of environments that are overlapped in strata. The palimpsest challenges the notion of the territory as surface and its affiliated emphasis on perimeter and propensity for tabula-rasa appropriations. Instead, the territory as palimpsest requires a close reading of its traces and fragments, aimed at interventions that work in a spirit of recycling.

This course aims to teach what could be described as Landscape Cartography — a combination of the map and the landscape, between a technical drawing and subjective painting, in a way that is always open, incomplete, contextual and project-driven. Its goal is to provide the students with territorial literacy by giving them a language with which to read and write about the territory, following a method based on the layering of territorial systems evoked by Corbóz’ palimpsest.

One need only look at the layers of the city that archaeologists show us: they appear as a primordial and eternal fabric of life, an immutable pattern. . . . Destruction and demolition, expropriation and rapid changes in use and and as a result of speculation and obsolescence, are the most recognizable signs of urban dynamics.

—Aldo Rossi, The Architecture of the City, 1975
Where, if not from the Impressionists, do we get those wonderful brown fogs that come creeping down our streets, blurring the gas-lamps and changing the houses into monstrous shadows? To whom, if not to them and their master [Tuner], do we owe the lovely silver mists that brood over our river, and turn to faint forms of fading grace curved bridge and swaying barge? The extraordinary change that has taken place in the climate of London during the last ten years is entirely due to a particular school of Art.

—Oscar Wilde, The Decay of Lying, 1909

For a landscape to be, it is necessary that a fragment of reality be gathered under an idea, a coalescing form, an aesthetic concept. This unifying process is what Alan Roger called “ Artealization”. Quoting Oscar Wilde in his 1997 essay Court Traité Du Paysage, Roger argues that it is through art that the pays (the land as neutral and inert substance) is elevated to paysage (the landscape as cultural object). Artealization is the process of transforming the world into an artefact (a landscape) and cartography is precisely this act of artificializing the land, of humanizing the territory through the projection of fictions and affective narratives onto reality. Landscape is thus fabricated as a result of cultural appropriation, and the characteristics of that which a map represents are always relative to the subjectivity of a human observer. The territory is not strictly human, but landscapes and maps are always anthropocentric narratives. But despite this apparent empiricism, cartographic drawing reveals hidden structures, spatial scales and points of view that are not immediate to human experience. In ascribing an image (representation) to the territory, maps convey a perceptive feeling to realities unavailable to the human senses. Cartography is never neutral or passive, and its reading the world always blurs with an inevitable degree of fabrication (the most meticulous mimesis will never vouch for absolute truth) but at the same time, cartography has the ability to foreground the unconscious layers of the territory and reveal an archaeology of hidden (perhaps even non-human) truths.
Cartography is an artistic medium for reading, representing and constructing the real. As such, cartography translates the territory, which in its totality is chaotic and complex, into “domesticated” fragments, selected and composed under the aegis of an aesthetic unity.

What kind of law . . . determines this selection and composition? Whatever it is that we can take in through just one glance or from within our momentary field of vision is not landscape but, at most, the raw material towards it. In the same way a row of books placed next to each other does not by itself add up to ‘a library’ – until and unless, and without a single book being added or removed, a certain unifying concept comes to encompass and give a form to them. . . . The route towards gaining an approximate idea at least, seems to me to lead through landscape as an art-form . . . An artist delineates one part within the chaotic stream and infiniteness of the immediately given world, and conceives of and forms it as a unitary phenomenon. This now derives its meaning from within itself, having severed all threads connecting it to the world around it and having re-tiled them into its own centre.

—Georg Simmel, The Philosophy of Landscape, 1913

In its totality, reality is chaotic and complex. In order to guide subjects in this inconceivable space, maps encode the peculiarities of the physical world into abstract symbols, made up of particular marks (dots, lines, blots, voids, colour) that help suggest spatial correlations, such as direction, distance, movement and structure. Map are graphical codes and cartography is a language, that is, a system of communication made up of meanings [contents] and signs [forms].

... information is translated through the complex semiotic systems of cartographic representation, which uniquely combine geometry (projection, measure, scale, gridding and plotting) and graphic images (mimetic and conventional signs, colour coding and calligraphy) with numerical and alphabetic inscriptions and texts.

—Denis Cosgrove, Mappings, 1999

Drawing is complementary to thought: it substantiates vague intuitions into transmissible shapes, it sharpens visual perception, and it converts information into knowledge in a intuitive, pre-rational way. Drawing is a machine of vision, measurement and assimilation.
method

Site
Frame
Selection
System
Reference
Language
1) identify a **site** and territorial condition

SITE: COACHELLA VALLEY, CA, USA
TERRITORIAL CONDITION: ABSTRACT LANDSCAPE IN ASYMMETRICAL VALLEY

2) **frame** it as an aerial view at an adequate scale
3) **select** layers and draw each with distinct graphic identities

4) **combine those layers into a system**
5) chose a reference map ...

6) redraw map in a borrowed and appropriated language
assignments

Drawings
Tracing
Map
Experimental Map
1) drawings

The course will start with hand sketching classes whose goal is to introduce the students to some basic drawing’s main challenges: hierarchy of weights, relational composition between elements, the presence and shape of voids, the problem of stereotypes, the unconscious tendency for symmetry, fear of complexity, etc. The drawing assignments will be short and the goal is to produce quick and abstract sketches — one should capture the "spirit" of the forms and allude to them by synthesizing their character. The first drawing session will be made from photographs projected on the wall in the classroom, and the second one will focus on real-life objects in an outdoor location to be announced.

The selection of projected photographs will tend greatly towards abstraction, with reduced perspective and repetitive patterns. Students will be asked to identify systems that might work as “graphical families” because they share visual similarities and thus can relate to each other as an independent layer. Once identified, each layer should be attributed a distinct and appropriate code (lines, dots, blots, voids, colour) and it should be drawn in a corresponding technique, for example: paintbrush for large strokes that are meandering and continuous; pen for thin lines that are dense and chaotic; sponge and water for complex blots, etc. In the end, elements belonging to the same layer are in dialogue with each other, while different layers relate by juxtaposition. This juxtaposition of layers will result in a drawing of a system of graphical structures.

Each student will receive a sketch book to be used outside class hours as a personal visual journal. It will need to be handed in for evaluation at the end of the semester. The goal of this journal is to promote and sustain the experimental and inquiring attitude instilled in the first exercises above mentioned. The student should train him/herself to see layers and systems everywhere, be it in photographs or in reality itself, and carry out an aesthetic investigation that points towards a personal graphical language. The journal is meant to be a space of freedom, risk and intimacy, but also of reflexive thought and criticism.

BÁRBARA MAÇÃES COSTA, ABSTRACT LANDSCAPES, 2012
2) tracing

Producing a map demands imagination, empathy and a sense of spaciousness, because it requires the ability to perceive a place vicariously. As such, the author must work from position of openness and flexibility, embracing a certain degree of play and risk. One starts from an intuition which is then rationalized, which then instigates new questions, hence restarting the process of fluctuation between doubt and conviction, intuition and intention.

Producing a map demands choice and hierarchy. The information which is contained in a map must be organized in a coherent way (as in a text which narrates a story) and for that one chose an order of relevance and resist the temptation for a certain kind of detail fetishism. Maps are reductive — through erasure, they reveal a part of an immeasurable whole.

This exercise is an intermediate step that bridges between the hand drawings and the map. As before, students will be shown a pool of abstract photos that depict landscape patterns. Each student will pick one and draw it, this time through precise digital tracing. This is still a largely conceptual exercise, placed somewhere between an abstract composition and a meaningful map, but the goals established in the previous exercise remain valid: to identify layers, ascribe them distinct graphic identities, and overlap them into a palimpsestuous system.
3) map

This will be the first cartographic exercise, *stricto sensu*, where the previous conceptual strategies will finally be put into practice. An aerial photo will be main tool from which the map will be produced, drawn digitally (AI, PS, Acad) but possibly also incorporating hand-made techniques. The choice of site depicted in the aerial photo is up to the student but it should reflect a conscious framing of a specific territorial condition. The choice of scale of this framing will be crucial. The map will be assessed as much for its graphical quality as for the understanding it might reveal of the circumstance that it illustrates (qualities which are, in fact, absolutely entangled: there are no beautiful maps without a clear content communication).

The aerial photo might serve as main tracing basis but it will not answer all issues and serve all purposes. Therefore, the drawing of the map will demand the gathering of complimentary information about the chosen site, such as texts, photographs, other maps, etc. However, this research will not be part of the final delivery, which will consist solely of the map and the aerial photo, both juxtaposed with the same framing.

During the execution of this map, all issues raised in the previous exercises still hold valid, and the overlapping of this specific assignment with the visual journal will be fundamental in the search for a coherent language. Students may chose to add zooms to their maps, or include in their presentation a break-down of the layers that make up their system-map. This exercise should reflect the course method explained in points 1—4 of the previous chapter of this booklet: site, frame, selection, system.
4) experimental map

This will be the final assignment, where one hopes that the students demonstrate a synthesis of the course’s overall content, while articulating acquired knowledge with the aesthetic interpretation of an existing reference map chosen by the student. The process of construction of this map will now depend on the reference chosen, but the site and frame will remain the same. The graphical language of the experimental map will be influenced, in a critical but evident way, by the aesthetic concept of the reference map. This exercise should reflect the course method explained in points 5—6 of the previous chapter of this booklet: reference, language.

While the previous exercise had the main didactic function of passing on territorial knowledge — the capacity to read and frame the addressed urban morphologies and structures — the present assignment is more demanding in terms of the map’s graphic ambition. While the previous exercise [map] had the goal of providing the student with a somewhat pre-established language, this exercise [experimental map] gives students the opportunity to work closer towards inventing a language of their own. The student will be able to adjust the difficulty of this assignment to his own capacity and motivation by choosing an adequate reference, since the most imperative goal of the exercise is to ensure a visual and conceptual affinity between reference and final product. Nevertheless, an experimental attitude and disposition for risk will be rewarded. In addition, it is also important that the chosen reference be appropriate for the territorial condition that is being depicted and the narrative that comes with it.

In the final assessment, this final project will be confronted with the overall growth of the student [especially evident in the visual journal] which will be appreciated and commented on with special interest whether it be linear or irregular. In the final review, all semester work must be presented: drawings [visual journal], tracing, map, and experimental map.
info
Orta White Hitchcock, *Sectional View of the Crust of the Earth*, c. 1828-1840

Ortelius, *Island of Utopia*, c. 1595
distinguished cartographers:

BEATUS OF LIÉBANA  
(c.701–798, Principality of Asturias)

PIRI REIS  
(c.1470–1553, Ottoman Empire)

GABRIEL DE VALLSECA  
(c.1408–1467, Principality of Catalonia)

PEDRO REINEL  
(c.1462–c.1542, Portugal)

FRA MAURO  
(?–1468, Republic of Venice)

SEBASTIAN MÜNSTER  
(1488–1552, Germany)

OLAUS MAGNUS  
(1490–1557, Scandinavia)

GERARDUS MERCATOR  
(1512–1594, Flanders)

ABRAHAM ORTELIUS  
(1527 –1598, Flanders)

FERNÃO VAZ DOURADO  
(c.1520–c.1580, Goa, Portuguese India)

ATHANASIUS KIRCHER  
(1602–1680, Germany)

GIAMBATTISTA NOLLI  
(1701–1756, Italy)

JOSEPH DE FERRARIS  
(1726–1814, Austria)

TOMÁS LOPEZ  
(1730–1802, Madrid)

EDUARD IMHOF  
(1895–1986, Switzerland)

text references:


further reading:


