introduction

The term cartography is based on Latin charta, meaning ‘paper’ or ‘map’, and -graphia, meaning ‘description’, which derives from graphin, meaning ‘to write’ or ‘to draw’. Swiss historian André Corboz defines description as something between the act of reading (analysis) and writing (designing). He claims that there can be no description of a territory without a fiction of the territory, a positioning that contains a speculative and ethical critique. This is reminiscent of a sketch by Le Corbusier that defines a certain type of ‘architectural gaze’ as the smooth transition from the act of ‘looking’ to that of ‘creating’, stating: “la clef c’est regarder... regarder, observer, voir, imaginer, inventer, créer”.

The map-as-description is situated at the heart of this process that turns observation into action. Maps have the power to actually make the territories they represent because description, -graphia, is already a project.

In its totality, the territory 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. Maps are drawings and cartography is a language, a system of communication made up of meanings (contents) and signs (forms). Drawing is complementary to thought, it is a machine of vision, measurement and assimilation.
the map is fiction / the map is real

Maps are visual tools for thinking about the world at many scales. They shape scientific hypotheses, organize political and military power, limit the boundaries of private property, and reflect cultural ideas about nature and the landscape. They are at the juncture of performance and artefact, of the visual and the aural, of the static and the dynamic, and they serve deeply ingrained and universal human needs such as spatial orientation and feeling ‘in place’. To the extent that our worldviews inform our perceptions and positions in the world, maps have the power to actually make the territories they represent, and construct the subjects that gaze upon them. Maps reveal 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 but at the same time, cartography has the ability to foreground the unconscious layers of the territory and reveal an archaeology of hidden truths.
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 challenges this opposition by stating that with the advent of satellite imagery and high-speed transport, the objective and subjective gaze have merged. In reaction to this, he proposes the ‘palimpsest’ as a metaphor for reading the territory in its depth, both historical and geological. 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.
The word ‘environment’ comes from the French *environ*, meaning ‘to surround, enclose, encircle’. The word object comes from the Latin *objectum*, meaning ‘thing lying before, opposite’ (the mind or sight), from *obiciere*, ‘to present, oppose’. The environment envelops the spectator; it is infinite but its perceptual limit is the horizon. It is real but immaterial, ethereal. It is the *milieu*, the ‘mid-place’, the medium in-between. The object, on the other hand, is finite. It confronts the environment by creating a limit, a form. It is objective, meaning it has intentions, it occupies a position. In its delineation, it encloses an inside and excludes an outside. In doing so, it creates a subject, a point of view and a sense of belonging in familiarity set against the strange otherness of the outside.

To think of architecture as an environmental object means to question this very opposition by analyzing some of the inherent dichotomies of separation here at play — figure and ground, inside and outside, autonomy and analogy. To map environmental objects means to look at these oppositions and reveal the aesthetics of confrontation between architecture and landscape, the building and its immediate and territorial contexts.

**mapping environmental objects**

Per Hultcrantz, *Map of Tucson, USA, UE U 2015*
1. identify **site** and territorial condition

Example 1: Gilda Gysin, UE U 2015
Site: Coachella Valley, CA, USA
Environment: Abstract Landscape in an Asymmetrical Valley

2. **frame site**
3. trace layers separately

Layer 1: Topography  
Layer 2: Infrastructure  
Layer 3: Hydrography  
Layer 4: Vegetation

4. combine layers into a system
Example 2: Claudia Zanella & Marta Lorenzi, UE U 2016
Site: Valais, CH
Environment: Metropolitan Corridor, No-stop Valley

1. identify site and territorial condition

2. frame site
3) trace layers separately

Layer 1: Hydrography
Layer 2: Infrastructure
Layer 3: Topography: valley plain
Layer 4: Settlement

4) combine layers into a system
The course will start with hand sketching classes. The goal is to address a few basic challenges of drawing: composition, hierarchies of weight, shapes of voids, the problem of unconscious stereotypes, etc. The assignments will be short and the goal is to produce quick sketches, capturing the “structure” of forms through selection and synthesis.

The first drawing session will be made from landscape photographs projected in the classroom. The second one will focus on real-life objects in an outdoor location. The projected photographs will be very abstract, with reduced perspective and repetitive organic patterns. Students will be asked to identify systems that might work as ‘graphical families’ because they share visual similarities and thus can be read as a ‘layer’. Each layer should be represented in a different and contrasting 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 contrast. This overlaying will result in a system of graphical structures. The same method should be applied to the outdoor class.

Each student will receive a journal to be used for daily sketching and graphical research. It will need to be handed in for evaluation at the end of the semester. An experimental and inquiring body of research will be valued. It is meant to be a space of freedom, risk and intimacy, but also of reflexive thought and criticism.
tracing

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 intuitive composition and an informative 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. By looking closely at natural textures and drawing them carefully one becomes increasingly aware of natural structures. One is then able to develop a graphical vocabulary that is complimentary to the cannons of architecture, a language of landscape.
This is the first truly cartographic exercise where the previous graphic experiments can be put to use. An aerial photo serves as basis from which the map is drawn, using digital tools (AI, PS, Acad) and/or analogue techniques. The choice of site will be selected by the student from a pool of suggested environmental objects, for example, the swimming pool in Leça da Palmeira by Álvaro Siza (further information on this will be given in class). The framing of the site should describe a specific environment in which the object is inserted. Complimentary information about the site will be needed for research, such as texts, photographs, historical maps, etc. 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. The map will be assessed as much for graphical clarity as for territorial understanding, two qualities that are, in fact, absolutely entangled. The overlapping of this assignment with the visual journal will be fundamental in the search for a coherent a personal visual language. This exercise should reflect the course method explained in points 1 to 4 of the previous chapter: site, frame, trace, system.
This is the final assignment. Students are expected to demonstrate a synthesis of the course’s overall content articulated with the aesthetic interpretation of an architectural object existing within the environment previously mapped. The graphical language employed in this map must therefore be influenced by the architectural concept of the object. For example, if the object is partially underground, a section might be useful. The pool of environmental objects addressed are all buildings that have a strong, contextualist relationship to landscape, not only urbanist but also architectural. The goal of this exercise is to go beyond canonic representations of architecture that often focus excessively on the built form. We want to invent a site-specific language that describes the relationship — be it negation or assimilation — between the building and its environment at different scales.

While the previous exercise had the main didactic function of revealing territorial structures (layers overlaid as systems), the present assignment combines that with the representation of architectural intentions. It is therefore more demanding in terms of graphical ambition. The two maps should nevertheless be in dialogue. In the final review, all assignments must be presented: journal, tracing, map-environment, and map-object.
This is the course blog where you will find all previous student work and a pool of cartographic references that will prove useful to your work.

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