

# **WATER PROMENADES**

by Manzanares and the city

Written by  
Dinu Hoinarescu



## RESEARCH QUESTIONS

### 1. WHAT ARE CINEMATIC GEOGRAPHIES

What does the Madrid geographic imaginary look like?  
Which subtype of factors (e.g. movie genres, locations, atmospheres, cinematic techniques) converge and collage the new geographies?

### 2. WHAT IS A PROMENADE IN THE 21ST CENTURY

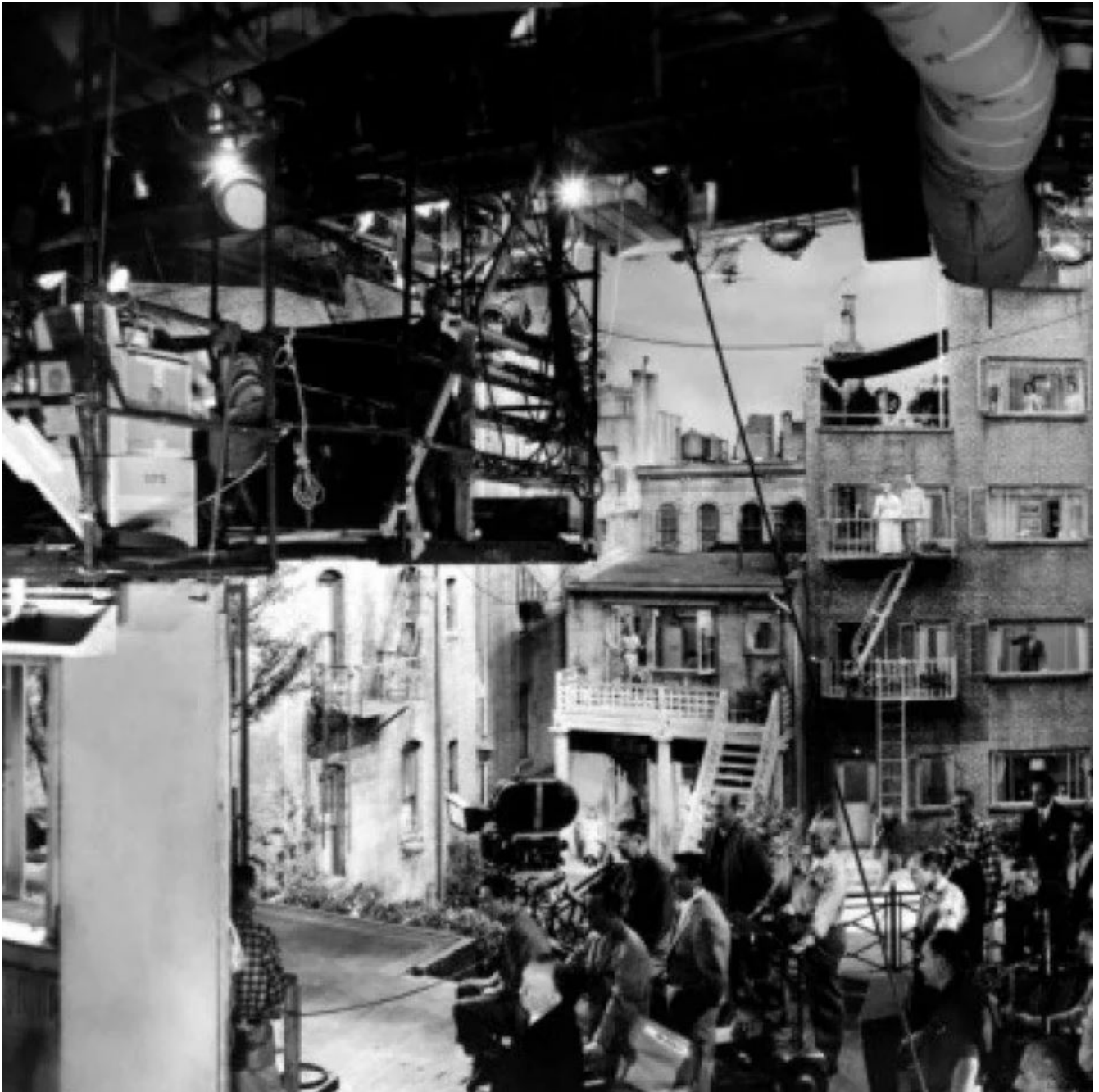
Where does it start? How? Where does it end?  
What are the linked networks affecting these?  
What qualities lie in the skeletal backbone of the old waterways of Madrid? Which ones can translate to a different area, such as Manzanares?

### 3. WHERE DO THEY INTERVENE AND MATERIALIZE

Where can the Manzanares perforate the social urban fabric of Madrid?  
Which actors are lacking from the artificial atmosphere of the Madrid RIO project?

## KEYWORDS

*montage & assemblage, cinema & the moving image, city & the moving body, cinematic & filmic, kinaesthetic & haptic, habitable narratives, mise-en-scene & mise-en cadre*



**Above**

*Fig.1 Alfred Hitchcock's Rear Window set*

## FASCINATION

by CINEMA & ARCHITECTURE - DISCIPLINES

**Filmmakers** have engaged with the city of Madrid more than just using it as scenery, a backdrop, or a stage, but also as a character, a narrative framework, a catalyst, a historical anchor point, a platform for expression and a source of inspiration.

As the consumption of the **moving image** and **cinema** have translated into a dynamic “space-independent” act, the city has unfolded a new way, a more developed way of perceiving it. Rather than treating cinema and architecture as intersecting, converging disciplines, the concept of the frame pertaining to virtual cinematic spaces should be taken into consideration as a major diverging point between them. However, this difference opens up the potential of reciprocal sites of **deterritorialization**, **reterritorialization**, potentiating, using and desiring each other.

*“To desire is to construct an assemblage” (Deleuze).*

Изображение: КАДРЫ

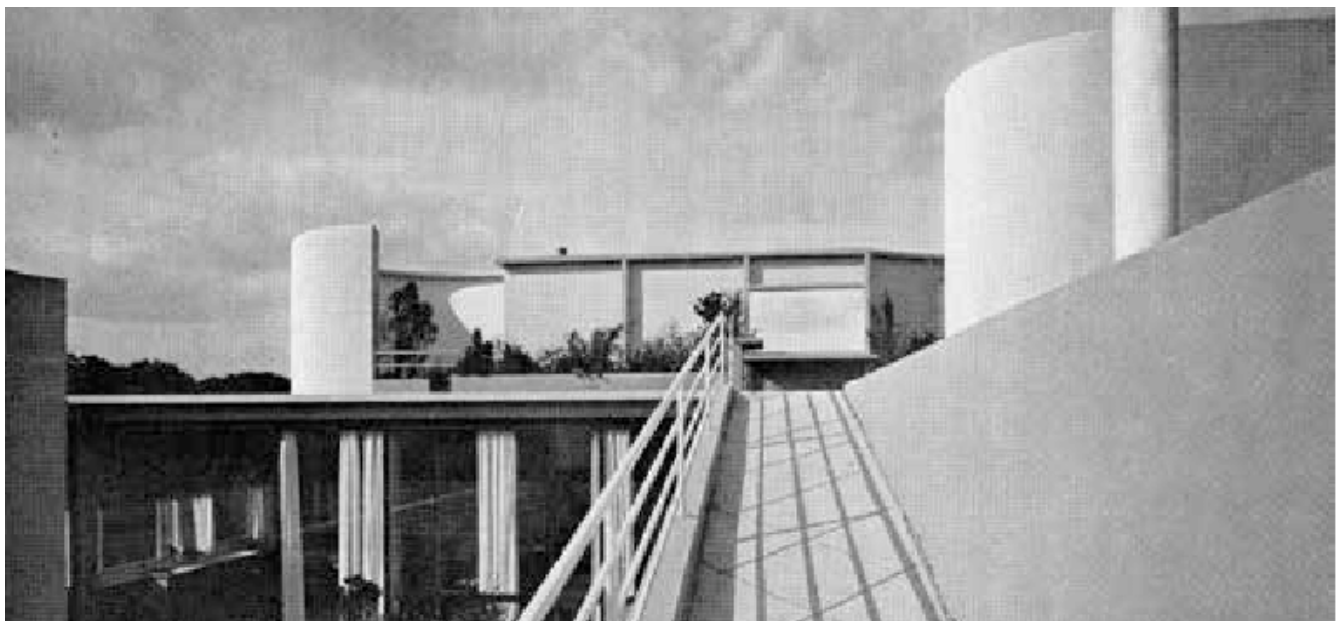
Муз. образы и м. тактов

Музыка

Адagio J. 48

Длительность

Схема изображения / композиция



## BACKGROUND

by CINEMA & ARCHITECTURE

Corbusier resurfaced the concept and coined the term of the **promenade architecturale**, the succession of spatial experience of an architectural ensemble. He started his work on Villa Savoye in 1928 and the project was finalized by 1931. During the modernist period, another discipline evolved in parallel to architecture as its estranged and long lost sibling, cinematography. Buster Keaton had already realised *One week* by 1920 and Charlie Chaplin would release *Modern Times* in 1936. Both managed to utilise movement of the human body in relation to its surrounding and its building environment and translating that into spatial comedy, while satirizing and utilizing the new tools of their time. Their very precise choreographed movements and set design infrastructures and illusions, reminding of the painted, distorted corridors in the German Expressionist movie *The Cabinet of Dr Caligari* (1920), shaped architectural promenades of **mise-en-cadre** spaces. Cinematographic techniques have also evolved and started to link to architecture in a more **haptic** way than just being the main protagonist of early cinematography and specifically photography, by trying to move the camera along tracks and therefore stepping into a new dimension of transitioning from **filmic** to **cinematic**.

Cinematic approaches have breached the field of cinematography in the 21st century through the development of technology. Drones have unlocked the absolute (within specific parameters such as altitude, wind speed, etc.) liberty of the three dimensions which merged with technologies such as LIDAR or even post processes using camera footage have been used in cartography, military, even animal husbandry, tracking migration paths of reindeers. The **accessibility** of these tools has now reached the public market: drones, VR headsets, AR on smartphones, and programs on personal computers. The navigation of most of the 3D software, or even compiled satellite images and 3D viewers, like Google Maps and Earth, has become a cinematic experience on its own that is often overlooked and disregarded. The interaction with the virtual and surrounding built environment, and urban landscapes has become exponentially more cinematic as the amount of data has increased and technology advanced and become more accessible. The potential of the **kinema** in static cartographic depictions has enabled new representation of previously too complex systems involving movement, time and coordination. Digital mappings such as the New York Metro system interactive map (map.mta.info) story directed by Gary Hustwit in his short documentary *The Map*, have proven the unexplored potential of cinematic tools in cross-disciplinary research projects.

### Top

Fig.2 Sergei Eisenstein's Alexander Nevsky notation system

### Middle

Fig.3 Le Corbusier's Villa Savoye as a promenade architecturale

### Bottom

Fig.4 Bernard Tschumi's Le Fresnoy Art Centre





## PROBLEM STATEMENT

by THE TRANSECT & URBAN ATMOSPHERES

While approaching the city of Madrid through the lenses of a filmmaker, a few relationships are established between the user and the city depicting key factors: the **actors**, the narratives, the frame, the space and mise-en-scene, the **moving body** and the **flows**. Natural promenades architecturale occur within the city, visible and invisible **systems** of successive moving images constantly transmitting data on all sensorial fields.

One of the most obvious yet unexplored and historically overlooked promenades is the **Manzanares** river in Madrid, a city building catalyst, a classical fortification method that would

represent a barrier. While the city has evolved over the centuries, the nucleus remained constant, tangent to the Manzanares, yet it has expanded eccentrically away from it. Planar analysis would result in an uncontested connection between the two, however a simple perpendicular, sectional shift would depict the spectacular 70m height difference. The topographical discrepancy has been at the core of the lack of social engagement and connection to the city of Madrid. From the early establishment of the capital to the city of Madrid until the 19th the riverbank was mainly used as a laundry due to its location and low flow.

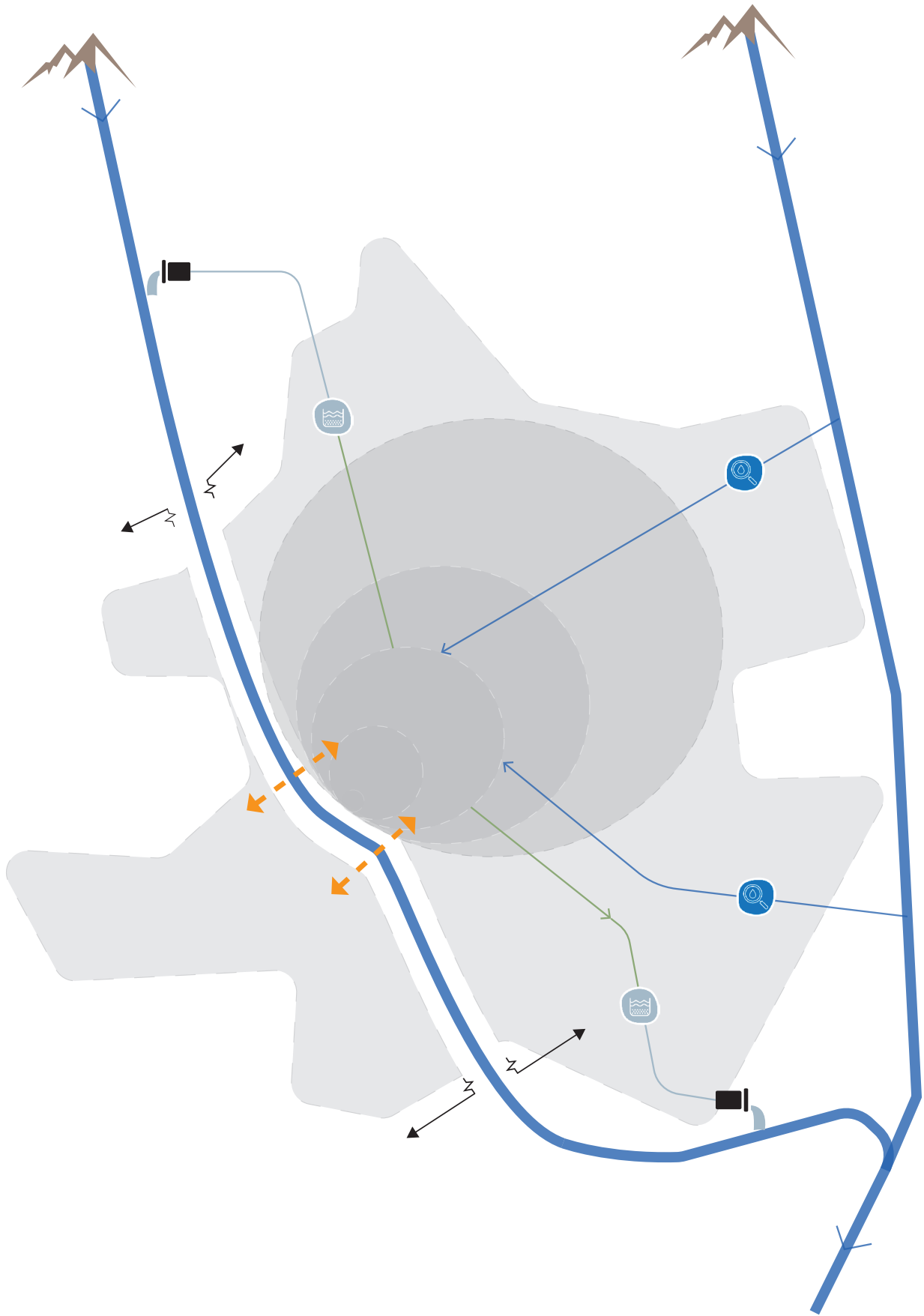
**Left**

*Fig.5 LIDAR scan of the Manzanares river*

**Bottom**

*Fig.6 Alfonso Sánchez García's photograph of the Manzanares laundry in 1910*







The main water source for the city until 1858, when the Isabel II Canal (water cycle system diagram on the opposite page) was inaugurated, were the *Viajes de Agua* (Water journeys). The old Arab vertical water mine system called qanat was distributing the water through underground galleries from the Lozoya as the Manzanares low altitude water was not suitable for consumption. The underground, invisible network of endless water corridors, approximately 70km around the city, was unravelling each of their own narrative and illustrating the issue of urban **commons**. A good example of the political issue of water in the 17th century is the Amaniël water trip that connected directly to the Royal house and had no public wells. The waterway, comparable to a **narrative thread**, would furcate into thinner threads leading to noble houses. This led to a lack of water at the end of the journey, namely the Royal Palace which led to the development of the waterway. This branch only diverted 12% of its water to the public as opposed to the Abroñigal Alto which allocated 55%.

These narratives are contained within the fabric of the remnant threads of the city, an invisible promenade. Resurfacing and digging them out, besides literally, which is done for touristic and educational purposes, through means of dissecting the city would uncover both previously unlinked systems and the essence and **atmosphere** of each district in the 21st century. These paths, resembling cinematic paths, provide a strong skeleton and vector for a **transect**, extracting the intangible atmospheres of Madrid and possibly translating them onto the artificial atmospheres of the newly developed riverbank of Manzanares.

*“Atmosphere emphasises a sustained being in a situation, rather than a singular moment of perception; atmosphere is always a continuum” (Pallasmaa, 2014)*

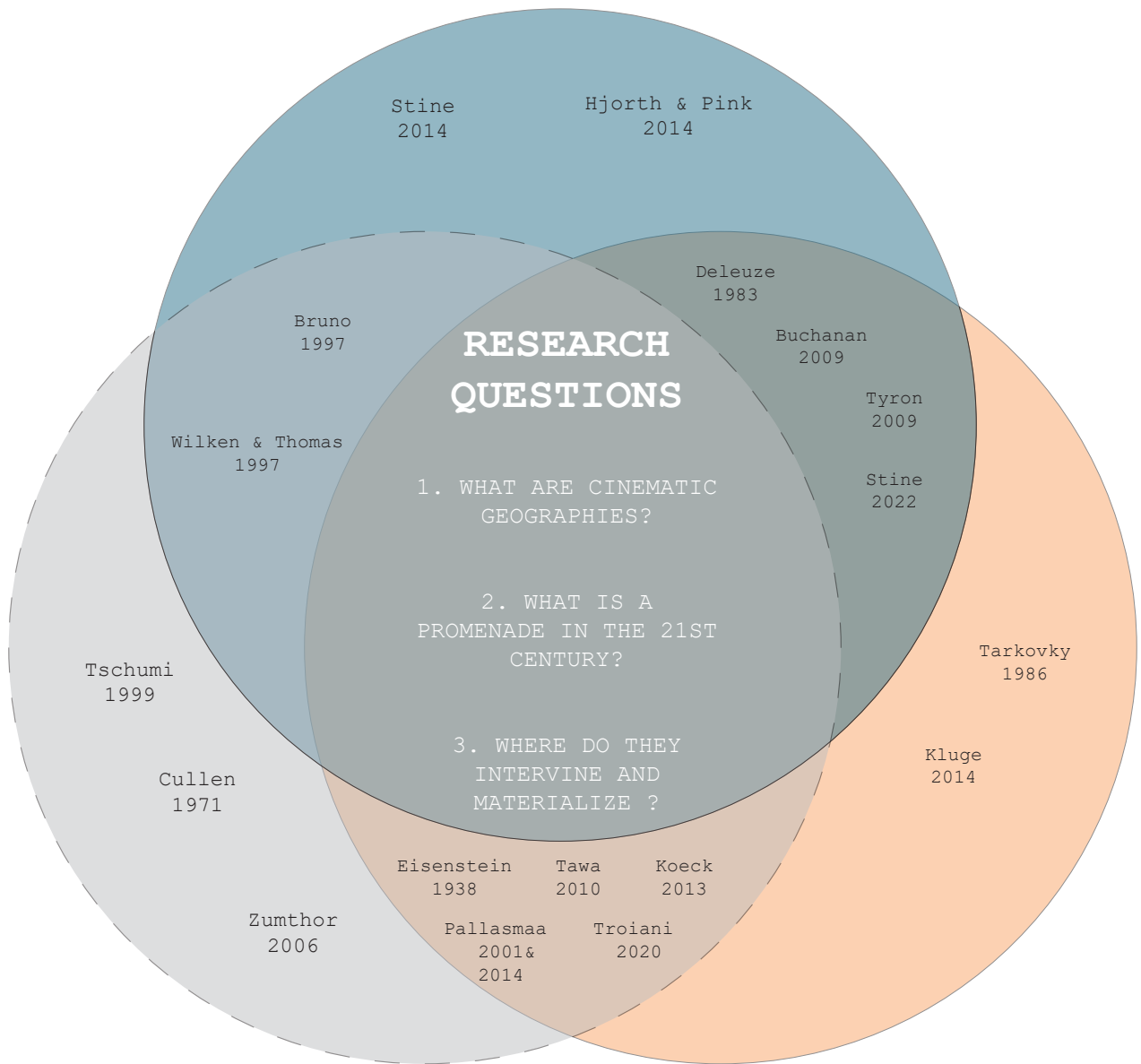
#### Left

Fig.7 Water cycle and river connections to Madrid's city centre expansion

#### Top

Fig.8 Anonymous painting from c.1670 of the exaggerated topographical difference between the Royal Alcázar of Madrid and the Manzanares river

**DATA**  
& MOBILITY



**ARCHITECTURE**  
& ATMOSPHERES

**CINEMATOGRAPHY**  
& ATMOSPHERES

## THEORETICAL FRAMEWORK

by Sites of (DE/RE)TERRITORILAZIATION

The ontological foundations for the research paper would consist of three main branches of literary sources and their subtitles regarding cinematography and the moving image, architecture and atmosphere, data and mobility. Due to the **detritorialization** of these topics, a new set of fundamentals needs to be established in the area between them. The diagram depicts the cross-referencing and ontological framework. While the canonical texts on these topics such as Eisenstein and Deleuze set the basis for the practical and philosophical intersection of the main topics, newer published sources such as Tawa and Troiani bring into discussion the new tools and new era of the **digital**. Moreover, filmmakers such as Kluge add a critical inside view in the field of cinematography in the 21st century. The methodological and theoretical frameworks intersect multiple times along the way, firstly in the analytical dissection of the Manzanares river under the form of the transect and secondly in the involvement of the ANT (Actor-Network Theory) approach to further determine and uncover the involved **networks** and actors along the systems of water and flows in Madrid.

Starting from one of the earliest writings concerning the field of cinematography and architecture, Eisenstein's essay "**Montage** and Architecture" sets the pedestal for

analysing an architectural ensemble as a path, a sequence of shots, from a filmmaker's point of view. This opened up a **trans-disciplinary** approach that was to be seen across the modernist period, later in the post-modernist, until now in the 21st century of digitalisation and instant access to media.

The discussion about cinematography cannot ignore the overbearing importance of the digital era and its media. The computational power of nowadays machines has translated the cinema into a new challenge questioning the film's actuality as a medium. (Kluge, 2019). This process of doubting started along with television and further translated into the Internet and its corresponding mediums of entertainment and communication. While television's early time included gaps and lapses such as stations turning off for the night, the smartphone surpassed these issues and accelerated the consumption of on-demand media and the perception of time, morphing it into a new dimension of digital time. (Stine, Volmar, 2021).

*'Digital cinema raises the question of a cinema without people....it reveals that cinematics proceed without us, interfacing with kinematics as much as they ever interfaced with crowds of human spectators.'*  
(Stine, 2014)

The **transect** takes the literal form of one of Deleuze's three lines of populating a plane, namely the cutting segment, reflecting the hard boundaries, sedentary definition and demarcation.

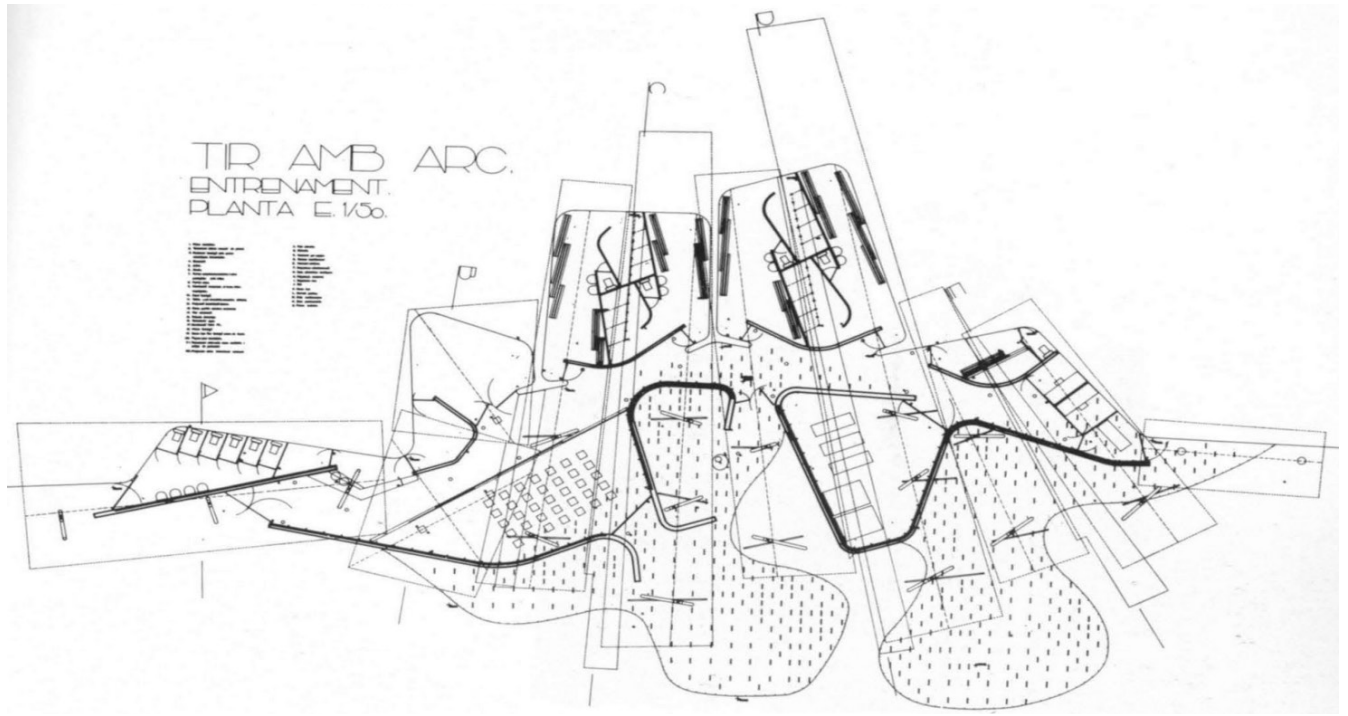
*"knows relationships of movement and rest, speed and slowness, between unformed elements, relatively unformed, molecules or particle carried by fluxions"* (Deleuze, 1987)

The second one, the 'supply line' of migration is defined by traces of **flows**, modifications and detours, translated in transect as the furcation and sectional axis of the underground water system.

Finally, the semi-prophetic and particular line is the rupture, the crack that breaks and deterritorializes the plane under the form of nomadism, clearly differentiated from the migration line as a counter-argument to the binary state of the lines in case of the lack of the third one. The extension of the transect through the third line proposes Manzanares as a site of **reterritorialization** in Madrid's historical and social planes.

Left

Fig.9 Theoretical framework diagram



## METHODOLOGICAL FRAMEWORK

by METHODS & INSTRUMENTS

Nowadays there is more input from social media visual data in one day than the entirety of the cinematographic archive of IMDb (Internet Movie Database). However new media forms such as photogrammetry, LIDAR scanning, virtual reality and augmented reality have started to gain momentum in social studies, geomeia studies, new cartographic projects and debates about digitalization, automation and platformization. (Wilken & Thomas, 2022)

*“Before digital computers and graphical user interfaces, film was the most readily available means of storing image, sound, text, and data and coordinating between them.”* (Stine, 2019)

Film could potentially after a new wave of **digitalization** also store cartographic and spatial data. Stine also evidenced the importance of the film in the history of computing and its influence on the advancement of electronics. By analogy, so could the film of the late 20th and 21st century be regarded as a catalyst for the advancements in the field of digital media, the making of virtual space and further ramifications.

The methodological framework would be divided into three parts: a data filtering part, a taxonomical part and a generative and speculative

one. The first stage would consist of historical analysis, data gathering, and tracing of the water systems of Madrid throughout its history. Cartographic representations and diagrams of these systems would barely scratch their complexity. The format of the **transect** and the layered analysis format of Eisenstein’s experimentally **synaesthetic**, but rather more aesthetic notation system for the movie *Alexander Nevsky*, later translated into an architectural research project by Bernard Tschumi in his *Manhattan Transcripts* were limited to the technology of their time. The need for a **deeper mapping** would require the implementation of the developing cinematic tools to discover the parameter of time and relationships between the old, *Viajes de Agua* and new water networks, Canal Isabel II. Complementing the 2D imagery of the maps with a 3D video transect would help understand both the **multiplicity** of the involved **layers** in these **systems** and the dimension of **time**.

Secondly, the site visit would require both digital and analogue recordings of the surroundings in order to complement empirical hand drawings of the experienced spaces and elements of the analysed transect in the first stage. I aim to use footage from the filming locations selected in the first part to extract **photogrammetry** data and create

### Top

Fig.10 Enric Miralles’ Olympic archery range plan drawing

### Middle and bottom

Fig.11 & Fig.12 Forensic architecture’s catalogue and site reconstruction in the investigation investigation of the Namibia genocide in 1904-1908

3D point clouds and 3D fragments of the landmarks along the route. The process of translating film into three-dimensional data would represent a form of **redigitalisation** and **archiving**.

*“Photogrammetry lies at the heart of contemporary digital place making... it locates us, and other, in real and imaginary world” (Wilken & Thomas, 2022).*

Recently, in July 2023, a new research paper openly shared a new rendering method the 3D Gaussian Splatting, or G-Splats, which translates video footage into 3D data, translated into 3D Gaussian points that project real 3D spaces. Furthermore, 3D artists have started applying it in translating movie scenes into 3D spaces, basically extracting data from older movies, such as *The Shining* (1980) and **inhabiting**, navigating, and populating the **digital sets** of the recreated cinematic space. Experimenting with new technologies such as 3D Gaussian Splattering is however limited by the same diverging issue separating cinematography from architecture, namely the frame. However, by controlling the initial stage of the moving camera I attempt to deframe and decodify the river valleys of Madrid and translate it back into 3D data.

Lastly, the final stage consists of a speculative and imaginative process, trying to form an **assemblage** from geographical imaginaries and intangible qualities extracted from the site visit analysis and collaging the analogue and digital imagery into a **montage** of criteria determining perforation points and possible **sites of inhabitable mediation territories** of Manzanares and the urban fabric of Madrid.



## POTENTIAL & RELEVANCE

by SELF-REFLECTION

The course of the research is **dichotomous**, but the intention is **entwined**.

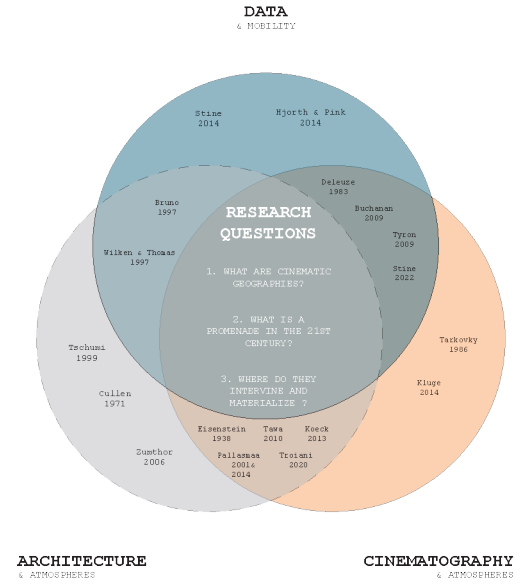
On the one hand, the exploration between a city and its penetrating rivers is a topic relevant to most capitals around the world. 148 out of 195 capitals of the world are situated along a river. Even in Europe the type of relationship between a city and its river varies from: London's barricaded Thames to Rome's semi-open Tiber and Paris' inhabited Seine. But as opposed to the highly trafficked Thames, due to its industrial usage in the 19th and 20th century, the Manzanares has been ostracized from its city's expansion, having the role of a barrier rather than a **flow** in the city. The research's intentions is not only to try and understand why attempts such as the Madrid RIO project have failed to **connect to the city** but also reflect whether it is possible or beneficial such an approach without stepping into artificial atmospheres, unfeasible renderings and unironically kitschified green spaces. Such project, their financing and usage depict the intention of the municipality and its inhabitants to proceed with breaking the **historical barrier** between the two actors.

On the other hand, the research is also aimed to set the foundations of a **design agenda** based on the interaction between the field of architecture and cinematography. This dialogue has started alongside the development of modernism in both realms. While many professionals try implementing, translating and converging one into another, through projects such as Bernard Tschumi's Le Fresnoy Art Centre or Alfred Hitchcock's *Rear Window*, technological advancements have shrunk the gap and blurred the line between them. Considering the ontological foundation laid in the 20th century on this topic, the research attempts to further reflect by looking forward into the **posthuman** and try to uncover the new potentials of the 2020s, such as 3D Gaussian Splatters, film as 3D data. These two agendas attempt to form a **feedback loop** enabling the **decodification** of the two valleys in Madrid through cinematic tools forming criteria that could unravel **new potential sites of negotiation** between the promenade of the Manzanares and the atmospheres of Madrid.

Theoretical framework

TOPIC

Literature review



Methodological framework

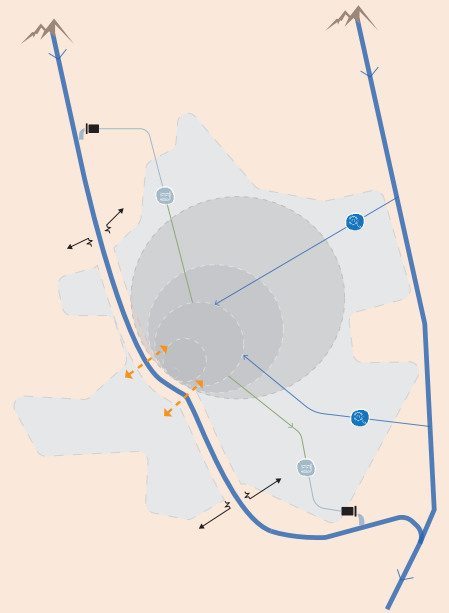
History

Text

Image

ANT

water  
city  
user  
ownership



Methodological framework

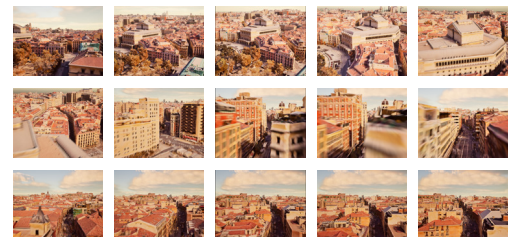
MEDIA

Image

Static  
Moving

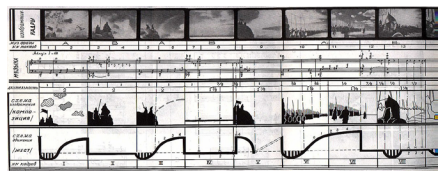
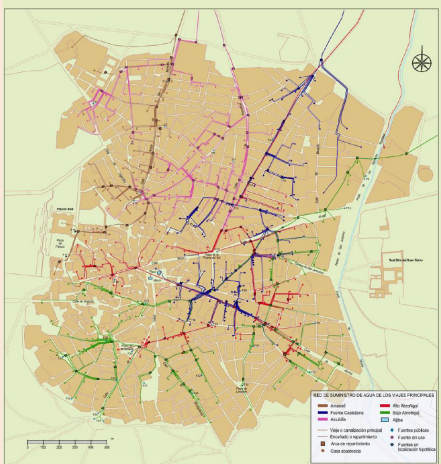
Data

Digital  
reDigital





Map 12. Madrid's water voyages between 1750 and 1759



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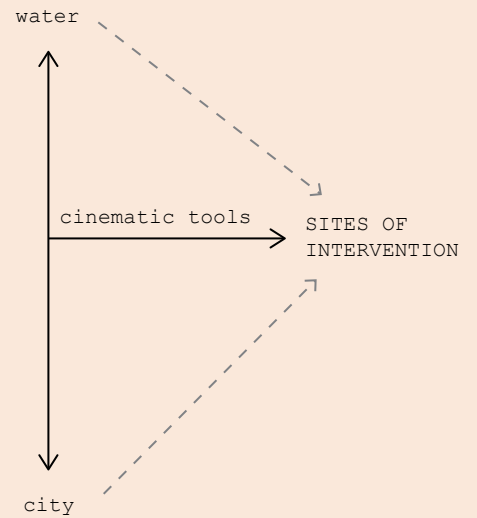
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AND MATERIALIZE

Where can the Manzanares perforate the social urban fabric of Madrid?

Which actors are lacking from the artificial atmosphere of the Madrid RIO project?

POTENTIAL

SITES OF  
INVESTIGATION



Above

Fig.13 Research diagram

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by ALPHABETICAL ORDER

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