

SEDUCTIVE SPACES

/ A STUDY OF CINEMATIC EFFECTS APPLIED TO SPACE

Charlotte L. DAGAND

SPACES REDUCTIVE

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In a script you have to link various episodes together, you have to generate suspense and you have to assemble things – through editing, for example. It's exactly the same in Architecture. Architects also put together spatial episodes to make sequences.ⁱ

Rem Koolhaas



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INTRODUCTION

Many questions frequently arise within the architectural debates. Among them, two have drawn my attention for long: the question of the so-called vernacular, the common, or more generally Architecture made without architects; and the question of truth, the search for honesty in the conception and construction of space.

Film directors as well as most people working for the film industry deal with architecture on a daily basis. Le Corbusier wrote : “*L’architecture est le jeu savant, correct et magnifique des formes sous la lumière.*” ¹, a definition that would as well suit Cinema. Was his *promenade architecturale* a direct spatial interpretation of a travelling shot or did the Villa Savoye’s ramp inspire film directors into a new kind of camera motion? This tension introduces the notion of directors appearing as film-architects who sculpt space, light, forms, colour, textures but unlike architects themselves, modify and arrange them via the narrative eye of fiction. Thus space is for them just a tool: as non-architects, they see, show and change space in their own way in order to answer their own specific needs. For architects, space is both the mean and the end, a tool to work with and a goal to achieve. For directors, space is just the mean, the tool to host a narrative. Therefore, I believe that apprehending space in the manner of a filmmaker or at least understanding their attitude towards space can allow us to reconsider Architecture, it can apply new means and thus help us reach new ends in the discipline, bringing back legitimacy to often neglected elements but also new processes and methodologies. In other words, I choose to open a dialogue between spaces and their image in Cinema and as it has already been proven helpful, I propose to take a step back and change our medium of reflection on space, from sketching to watching.

This analysis wishes to focus on space as it is shown and perceived in the 7th Art, suggesting the tension between fiction and reality, between representation and construction, beyond the concept of honesty in Architecture with the help

of cinematic operations. Architecture has a specific way to apprehend space, with its own methods and language, Cinema has its own way too. In addition, as it will be examined further in this argument, space in Cinema is not necessarily meant to be true but to create and share feelings or messages. Beyond the notion of space, the construction of a narrative follows a set of structural rules precisely established that permit to build an Architecture of ideas and emotions for the user to become both the character and the actor of space. This aspect questions the very nature of spectatorship: as we tend to be completely static in a cinema, watching films allows us to be nowhere and everywhere at the same time, carefully guided through the filmic space, conforming to a director's intentions. The emotion conveyed to the audience is of crucial importance and tends to be suppressed in buildings once completed. The point of this study is not to invent or re-invent space but to question and acknowledge it. As Georges Perec suggested in 1974 in *Espèces d'espaces*:

*ce que nous appelons quotidienneté n'est pas évidence mais opacité: une forme de cécité, une manière d'anesthésie. C'est à partir de ces constatations élémentaires que s'est développé ce livre, journal d'un usager de l'espace.*²

This book indeed wishes to become a diary of a user of space and of moving images, at a time when Cinema is consumed everywhere: planes, homes, bus stops and actual cinemas included. If films are journeys then viewers, such as myself, are tourists, and we both inhabit a space and are exposed to images of spaces in our everyday life and environment. In such aspects, films emerge as some of the richest tools of the XXIst century to understand and become more aware of the spaces and places we live in. The question that I will be trying to answer across this whole exercise is simple: *why should architects watch films?*

The first SCENE of this study will concentrate on Cinema, its essence and origin, and the natural interest that this medium historically developed towards space. In a second time, given the variety of relations between Cinema and space, a small set of historical examples will allow us to browse a sample of some of the mutual influences from one on the other.

Reacting to this first part, the second SCENE will start from the postulate that films are a crucial aspect of our knowledge of everyday spaces. We will therefore try to understand why and how do directors manipulate space. Considering the inner essence of films themselves and the set of rules that was institutionalised over the years, I will try and enumerate some of the key elements that directors frequently play with which have an impact on our perceptions, of space but also of time, motion and emotions.

The third and final SCENE will propose small experimental illustrations based on filmic references, applying some of the operations enunciated in the second SCENE to an interior architectural case study, hoping to link our experience of filmic spaces to our reading of architectural spaces.

SCENE / ONE

SCENE \ ONE

Between Cinema and Architecture, bridges are built, roads and passageways exist: both disciplines start from the consciousness of a void and the desire to fill it, to provide it with consistency through an act of the mind and inhabit it. The architectural and cinematic projects, first established on paper and then built, require a precise and most of the time institutionalised protocol. More than a simple conceptual or methodological resemblance, both share at least three crucial features at the basis of their respective disciplines: space, time and motion, making it possible to imagine interactions and mutual gains.

This first SCENE will attempt to go back to the origins of the 7th art and its relation to space. In a first part, I will relate to some of the various meanings of the word Cinema and deduce a natural tendency to interact with space. Then, I will propose to take a better look at some possible relations of Cinema and space through three historical examples: one in Cinema, one in Architecture and one at the crossroads.

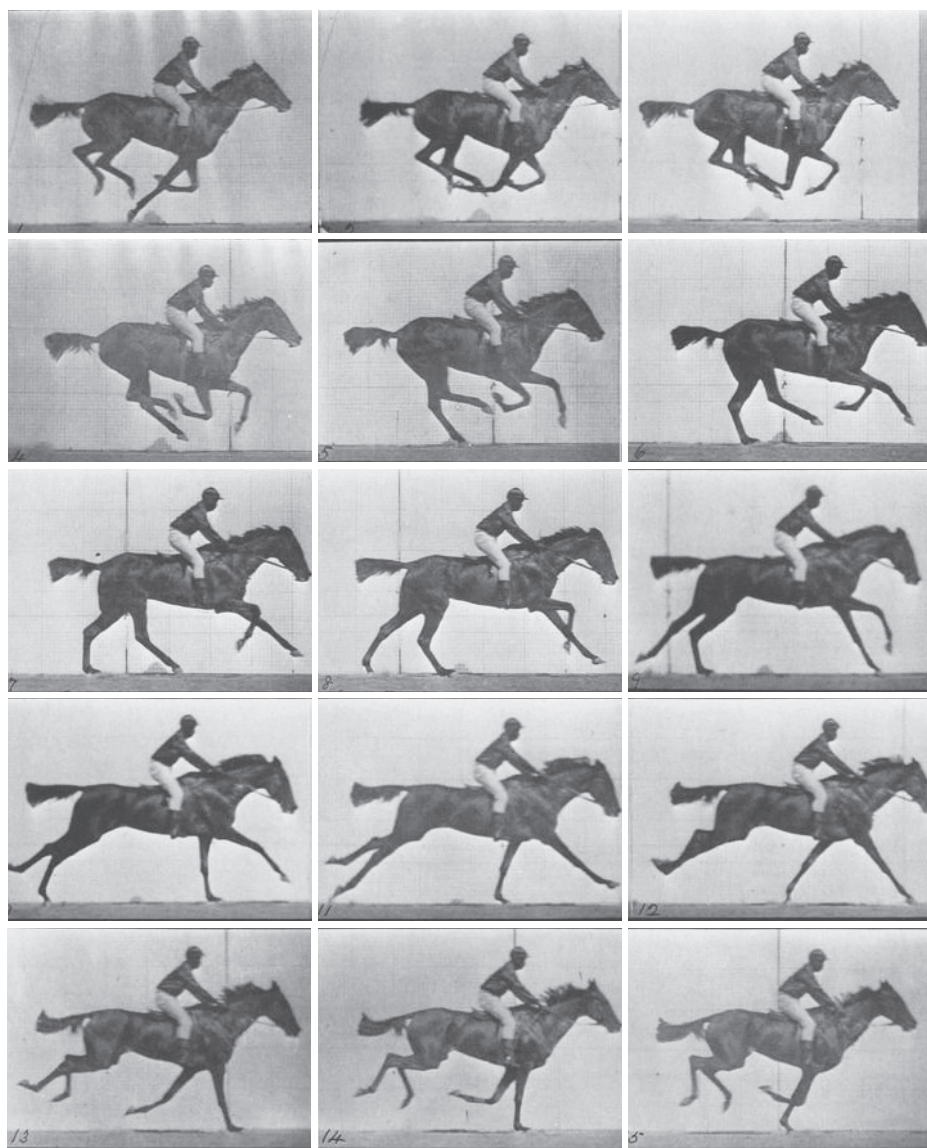


A NATURAL INTEREST

1. In the beginning was the Cinematograph

*Etymology and
plurality of
meanings*

Let us start from the beginning: the word “cinema” is the abbreviation of the word “cinematograph”, i.e. the apparatus invented to capture motion-picture films, basically the record-machine in itself which dates back to a french patent dating from 1892. The word finds its origins in the ancient Greek roots κινειν or *kinein* which means “to move”, and γράφειν or *graphein*, “to write”. Thus, the term “cinematograph”, bringing back to the etymological meaning of the “art of writing (with) movement”, relates to the art of the moving image, or what we nowadays quite literally call the “motion-picture”. A film is then defined as a collection of events recorded by a camera as a set of moving images. Historically, cinema was partly invented by the research on speed and motion conducted by Eadweard Muybridge who, between 1872 and 1885, as he was trying to divide the movement of a running horse in smaller units to grasp the exact moment when the horse would be suspended in the air, indirectly invented the record process of the motion-pictures (FIG. 1). In practice, films were actual photograms, which is to say fixed images, moved quickly enough to make the audience believe in a moving image – approximately 24 images per second at the minimum today, opposed to an average of 16 per second in the early 1910's and 1920's. This result is due to what is called the the Phi Phenomenon: an apparent motion born from the quick alternation of fixed images, as can easily be demonstrated while playing with a flipbook. By extension, the term “cinema” now gathers several meanings, from the art of making films, which is of our concern in this study, to the room or entire building in which films are projected, or even referring to the entire industry of filmmaking. Even if we limit ourselves to the study of the art of filming and let aside the other possible meanings of the word, there remains a tremendous amount of different techniques to make films and probably as many different visions on how to make films.



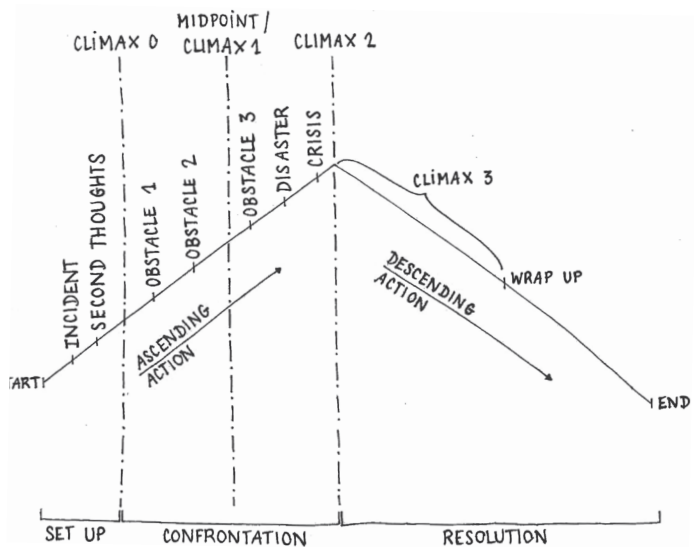
Photographic study of motion, E.Muybridge, 1878 / FIG. 1

*Two visions on
Cinema: space as a
collateral damage*

At the dawn of Cinema, two schools were already differentiating themselves: the first one, represented by the Lumière brothers, was close to what we today consider as “documentary” films, i.e. the accurate recording of events and people in natural locations; the second one, represented by Georges Méliès, a former magician, used the cinematograph as a tool to create deception, a device to generate the so-called *trickality*. From the beginning, Cinema was not particularly narrative: its spectacular nature was the main reason people attended the projections and was first and foremost provided by the device itself, and the multiple and overwhelming possibilities it offered. The story was of little importance during the first period of Cinema and most of the time quite inexistent, either in the Lumière’s documentaries or in Méliès’ burlesque demonstrations. Between 1910 and 1914, today remembered as the Transitional Cinema era, films started to develop a narrative dimension due to an institutionalisation of the industry: images were recorded on a whole single film reel, making films last longer and therefore requiring something else than the purely spectacular aspect of the apparatus and its now not-so-new potentialities. Little by little, rules were established, until 1914 when the film industry reached the set of rules which were to be used in the Classical Cinema era pretty much until today. This first very binary opposition between documentary and “fiction” film, though technically only relating to the question of truth applied to Cinema, induces another fairly binary opposition: if in the Lumière’s tradition films were shot in existing locations, already at Méliès’ time appeared a need for a controlled environment, where lights, shadows and dimensions, mostly through depth and left-out black areas, were chosen according to the effect that was to be produced. In his case, film sets and processes were very similar to theatre stages and processes: lateral motion of the actors from the backstage, painted décors on canvas as a background, wide global frame for the camera to look like the viewpoint of a theatre spectator... In addition to this, Méliès developed the concept of *trickality*, through his particular use of editing and his knowledge and mastery of the cinematograph as a complex machine. Although the films appear really simple to today’s observer because of their unique

and static frame, shots almost always imply editing, copy-pasting processes and superimposition. With him, the Cinema of the First Times is remembered as the Cinema of Attractions, a term used by Tom Gunning in his book *The Cinema of Attractions, Early films, Its Spectator and the Avant-Garde* (1986) which already triggers the tension between the film and the audience. The term “attraction” originally means “to be pulled towards”, but little by little, the term shifted to its current meaning, linking the feeling of physical pulling force to the notion of spectacular display and its emotional response. The narrative was a pretext, the spectacular a priority: scenario was of little importance and used to frame tricks and deceptions in a controlled décor. In such, this opposition present in the nature of films themselves lead to an opposition between a real and a fictional space. Beyond films shot in actual location and those shot in built studio sets, stronger interactions exist between Architecture and Cinema, two disciplines nurturing each other on several levels. Then gradually, given the increasing length of the films, narration was introduced through the ambivalent figures of suspense, thrills and climax, halfway between narration and spectacular attraction. The spectator, who was beforehand considered as such in an Exhibitionist Cinema, started to be absorbed into the cinematographic world into a Voyeurist Cinema, erasing, at least mentally, the threshold between the projection room and the screen. Finally, the first conventions on narration and scenario emerged (FIG. 2).

Today, as the opposition tends to soften between documentaries and narrative films, especially with the recent development in the fields of Virtual Reality and CGI (Computer Generated Imagery), we find ourselves confronted with films blurring the limits between fiction and reality both in their overall filmic structure and in their relation to space, making it even more confusing and harder and harder to differentiate. The first binary opposition of the Lumière Brothers and Méliès between documentary and fiction, leading to a second between a real- and a fake- space, although still relevant today, needs to be specified and illustrated.



/ FIG. 2

2. Mutual influences of Architecture & Cinema

Given that Cinema seems to have cared about space from a very early time, I believe of utility to take a closer look at some of the various kinds of relationship that Architecture and Cinema can share, with the example of three main historical references and their related contexts.

*Taking Lumière's
Side: the
Documentary
of Architecture
- the example of
Modernism*

Films, as a figurative medium, can sometimes be used to provide a different understanding of built architectural projects to (non-)professionals in meetings, exhibitions or advertisement. Nowadays, as the power of images grows stronger in our consumption of Architecture amongst other disciplines and with technologies invading every aspect of our daily life and environment, the category of the documentary tends to absorb the type of the advertisement and stills slowly turn into moving images: even architectural representations tend to shift, as the over-realistic images obtained through rendering begin to incorporate motion in a subtle way, increasing their depth. This is demonstrated for instance by companies like Zuend Zürich,

who provides still images with additional layers of moving leaves in the trees, glowing computer screen behind the windows of the buildings they are trying to render... Films also become a tool of expression in their representative capacity: architects like Bassi Carella Marelllo Architectes are one example of architectural practice using videos to convey an image of the completed projects, not focusing on the actual erection of the building in all of its material aspects but on atmospheres and uses. On the side of the graphic agencies, 9Sekunden and Arts Factory Lab are examples of independent filmmaking company exclusively working on architectural projects for the same purposes, playing with sounds and motion to convey emotions and atmospheres. Sources are plenty, as video and films as representative tools are a really intuitive medium of communication and can easily be adapted to commercial purposes.

I would like to elaborate on the example of the trilogy of films directed by Pierre Chenal, and particularly *Architectures d'aujourd'hui* (1930), made in collaboration with Le Corbusier who was at the time a member of the CIAM (Congrès International d'Architecture Moderne). On the occasion of two "meetings" (one in Paris, the other in Frankfurt) two films were created establishing filmic interpretation of famous buildings: Haefeli and Steiger in the Swiss collaboration called *Die Neue Wohnung* and directed by Hans Richter, Le Corbusier and Pierre Jeanneret in the French one. The aim of this project was to investigate the possibilities of films to not only represent existing buildings and sites but interpret them.³ In the latest film, "both the chronology and the relation of spaces remain untouched, referring to the real world according to the perspectival centring of the viewing subject on which filmic spaces are usually constructed"⁴, in the way documentaries are commonly envisioned, focusing not on the object itself but rather the *promenade architecturale* of the Villa Savoye, using filmic light as well as natural architectural light. On the contrary, most buildings shown in *Die Neue Wohnung* cannot truly be identified, as the spatial sequences of the entire house are not present in the editing of the film, therefore erasing its villa-character – an intended editing choice, yet a revealing one. The camera focuses not on the whole but on parts, editing

types as objects and categories: *the room, the window, the table...* Both strategies are valuable, depending on the intended target, but this example shows the ability of the camera and editing process to change the perception of a space and allow the sequence, either destroyed or enhanced, to become a mere illusion. In both cases, films seemed to be the best medium to represent properly the new features of Architecture and make them intelligible, for instance demonstrating the dynamic aspects of the house playing with the motion of the camera and windows.

*Il revient à Siegfried Giedion d'avoir formul[é] le lien de l'architecture moderne et du cinétisme par la démultiplication des points de vue et le déplacement. A propos des maisons ouvrières du quartier Pessac réalisées par Le Corbusier en 1925, il écrit: "Des vues fixes ne permettent pas de s'en faire une idée claire. Il faudrait pouvoir accompagner le regard dans ses déplacements: seule la caméra peut rendre justice à la nouvelle architecture! Et encore, seulement sous un certain cadrage: peut-on croire un instant que le mur de droite, plat comme un écran de cinéma et totalement dépouillé de corporéité, se trouve là par hasard, sans relation à l'ouverture et à la surface des éléments bruns qui le jouxtent?"*⁵

As expressed by Giedion, by their very nature films were the ideal medium to convey the principles of Modernist Architecture, because of their complexity but also because of their will to dialogue with the new functionalities offered by the modern technologies and machines of the time. According to Clotilde Simond, "*La fenêtre verticale, conçue à l'instar de l'homme debout, s'inscrivait dans la tradition du portrait. Avec la fenêtre en longueur, l'horizontalité et le déplacement priment. L'architecture moderne installe le panoramique, voire le travelling, dans la maison.*"⁶ Thus if in *Die Neue Wohnung* the filmic medium allows Hans Richter to show the dynamics at stakes in the new modern house, cinematic techniques start to invade the new Architecture. This shows that the relation between Cinema and Architecture in

the case of the modernist application made by Le Corbusier goes beyond the simple documentary and interacts quite directly with the design process probably due to the fact that Le Corbusier had various interests in other practices such as photography, sculpture and cinema and tried to integrate them into his architecture. The relation between the *promenade architecturale* and the travelling shot is clear, but I could also mention his work on framing and horizon lines in the apartment of Charles Beistegui in Paris, built in 1929 and today demolished or in the Villa Le Lac in Corseaux (FIG. 3 & 4). It is known that Le Corbusier and Eisenstein, respectively an architect curious about Cinema and its techniques and a filmmaker with an architectural background, had a mutual interest for each other's work and engaged in correspondances. As Architecture was looking for a new paradigm, Cinema, still young and experimental, appeared to be an accurate tool to test the possibilities of Modernist Architecture as well as Architecture provided the perfect canvas to test the limits of Cinema. The case of *Le Mystère du Château de Dé*, directed by Man Ray in 1929 and shot in Robert Mallet-Stevens's Villa Noailles, demonstrates the intertwined relationship of both disciplines and the difficulty we sometimes come across when trying to extract the contributions of each to the other, as Mallet-Stevens was himself a production designer for *L'Inhumaine* by Marcel L'Herbier (1924).

In fiction films, existing spaces are commonly used to provide a décor for the film. This is for instance particularly the case when filming city and street scenes, from *City Lights* (Charlie Chaplin, 1931) to more recent films like most of Martin Scorsese's or Woody Allen's filmographies, even if most outdoor scenes supposedly taking place in New York in both cases weren't actually shot in the City. Interior spaces and among them domestic spaces are often less neutral and also easier to manage than an entire city décor, therefore even if seemingly ordinary or natural, shots and views of the inside of dwellings are rarely so. One director who played a lot with this tension of the domestic scale is Alfred Hitchcock. In his work, homes though realistic and apparently common, are far from neutral: more than sets, he builds labyrinths in which everyone

Taking Méliès's Side: The Décor in Cinema, the example of German Expressionism



Charles de Beistegui's Apartment, Paris, Le Corbusier, 1929 /
FIG. 3



Villa Le Lac, Corseaux, Le Corbusier, 1923 / FIG. 4

gets lost, characters, actors and spectators included, playing with our emotions and our spatial referentials. To him, presence is more importance than narration itself: in his search for a “pure cinema”, he defended the predominance of the visual. His œuvre shows indeed recurrent themes, such as voyeurism, or spatial features such as stairs, windows, etc. highly connected to the narrative structure. But this need for an over-controlled space required both filming in existing places and creating whole new places, with the striking example of *Rear Window* (Alfred Hitchcock, 1954) (FIG. 18). What existing places can provide is authenticity and the feeling of everydayness but as most things, they can easily be replicated into fake sceneries. Quickly, films went from being filmed outside to being filmed in giant glass warehouses to ensure a maximum lighting, and finally, to being filmed in “black studios”, where lights were no longer natural and incidental but managed with projectors and intentional. In Europe, this period follows the First World War and is marked by the development of German Expressionism, a movement to which it is very hard to give a precise and correct definition. Two words although seem to be given a special attention: the *Weltanschauung*, literally the “vision of the world”, and the *Stimmung*, a notion between mood, atmosphere and feel. The first concept referred to the definition of art itself, which is the direct translation of the inner visions of the artist into the outside world: in a way, the German Expressionism is not a style or movement but a vision of the world. The other concept relates to a spirit applied to spaces, objects as well as people, a strange atmosphere born in a context of political crisis.

In the film *The Cabinet of Dr. Caligari* (Robert Wiene, 1920), one of the most remembered examples of the genre, the set never exceeded the dimensions of 6×5.5 meters with a depth of 6 meters. The three production-designers of *Caligari* used anamorphosis and depravation to create a dissonant universe where light and shadow are opposed, where lines are broken, where standard geometry and perspective are fully annihilated. They already seemed to understand that this kind of images — inclined walls, salient angles, steep floors and stairs far from the academic architectural dogmas - create a completely different psychological and even physiological reaction in the spectator's



The Cabinet of Dr. Caligari, R.Wiene, 1920 / FIG. 5



The Cabinet of Dr. Caligari, R.Wiene, 1920 / FIG. 6

mind and body, opposed to a harmonious and organised space. This architecture, on the contrary, is meant to frighten and scare, to thrill: feelings of oppression are increased. When it was first projected, the war and its harm were still close and the critics were heterogeneous. Many film directors, including Cocteau, disapproved the eccentric sets banally shot, opposed to the visual richness of effects which can be realised using cameras and editing instead of décor. Later, with *L'Aurore* (Murnau, 1927) for the first time we can speak of framing. One of the most surprising aspect of German Expressionism is probably the small number of films that were actually made, barely 10 over a 5 year period, compared to the impact the movement had, and still has, in the history of Cinema and Architecture. *Caligari* opened a window towards a new relationship between director and production-designer, which made possible the shooting, a few years later, of a masterpiece such as *Metropolis* (Fritz Lang, 1927). In the end, over a small period of time, German Expressionism managed to radically change the relation of cinema with space, and mostly with what is at stake when building and sets are filmed. As well as in the first example of Modernist Architecture, German Expressionism took place at the beginning of the XXth century, a time of war but also a time of technological innovation and a time for experimentation on all scales and levels: it is in this spirit that experiments on space and décor were conducted, getting rid of the traditionally figurative nature of cinema sets, in order to create a particular *Stimmung*.

Au regard de l'histoire, l'un des principaux mérites de Caligari a consisté en la création d'un nouveau rapport entre le cinéma et les arts graphiques, entre l'acteur et le décor, entre l'image et le récit, entre l'image animée et l'architecture, entre le cinéaste et le filmarchitecte. ⁷

To build sets and space for Cinema appear to be much more than simply building a décor; it is an actual architectural project with its own needs and constraints. According to Paul Leni:

*Un architecte de cinéma ne doit pas construire de beau décors, il doit toucher au cœur des choses au-delà de leur surface [...]. Il doit créer de la Stimmung, c'est cela qui fait de lui un artiste, ou alors il suffit de prendre un simple apprenti charpentier.*⁸

Reacting to this, links between Cinema and Architecture aren't simply analytical and historical, but seen in practice since the creation of Cinema. If giving such an importance to space was not the first objective of Cinema, it seems clear now that it is very hard to make either a documentary or, even more, a fiction film and remain neutral in terms of décor. Many directors actually studied architecture before turning to Cinema, the most famous one probably being Fritz Lang and his masterpiece *Metropolis* (1927) where architectural forms seem to play a crucial part in the narrative. More generally, the whole German Expressionist period in cinema is widely influenced by space and architecture: Robert Wiene's *The Cabinet of Dr. Caligari* (1920) is another example showing the massive contribution of the *Filmarchitekten* - or today's production-designers - in a period when knowing how to build a house was necessary in order to build a studio set.

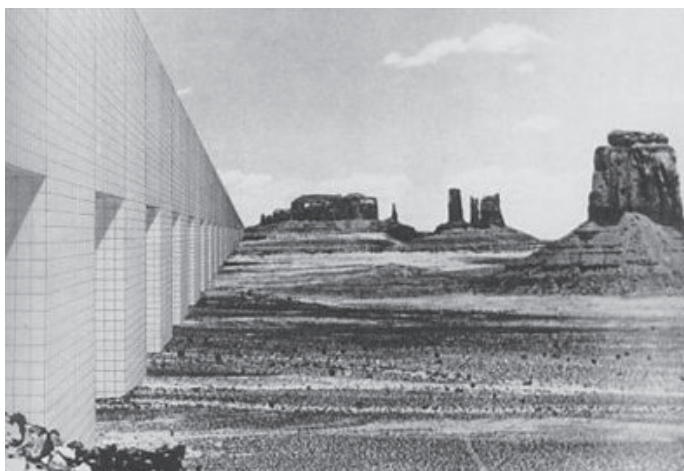
*Making
Architecture like a
Film: the example
of Superstudio*

A third aspect that I believe to be worth analysing, though slightly different from the two categories developed in the previous parts, is the relation between the group Superstudio and Cinema in the making and representing of Architecture. The example of Superstudio and the logics they developed throughout their career manifests a more complex yet also richer relation between Architecture and Cinema when thought together as one unique strategy.

More than an architectural practice, the group Superstudio gathers members from various professional origins into a questioning of the evolution of Modernism and the International Style. Their search for a necessary change to outdo the failure of the modern city and architecture wished to provide people with a socially and culturally improved environment. Formed in the second part of the 1960's, a period of global social tensions throughout Europe, the group develops the story of the



Discorsi Per Immagini, Superstudio, 1969 / FIG. 7



Discorsi Per Immagini, Domus n° 481, Superstudio, 1969 / FIG. 8

Continuous Monument as a project for the Graz Triennale 1969 entitled *Architecture & Freedom*. The first scheme reconsidered the nature of a wall, a colossal geometry in the middle of a desert. In addition, other small schemes and a perspective helped narrating the bursting of the world's metropolises, a total programmatic destruction fighting against the overcrowded densification of the Earth. The story goes on, with the dust from this explosion precipitating into a new unique structure, crossing the perimeter of the planet, freeing most of the ground surface from Architecture until it finally allows the establishment a renewed cosmic order. Throughout their career, the story evolved, from urban zoning attempts to colourful collages until the birth of the Supersurface, the liquefaction of the Monument into a grid hosting the essence of the city. The aim was to end in an actual film as a series of vignettes, beginning from the cult of a geometry, reaching the desert, the highways, the monuments of Antiquity, the Modulor, the Crystal Palace, Boullée's Mausoleum, Walter De Maria's Art... This example demonstrates the ability of Architecture to be represented with the medium of Cinema but also to be thought with a narrative as well as with filmic strategies and influences in mind. With this example, the filmic medium demonstrates its ability to become something more than a purely representative device: a device to think and make Architecture differently.

These three examples - Modernist Architecture, German Expressionism and Superstudio - clearly illustrate the great variety of relations that can unite Cinema and Space and the panel of shapes that these relations can take: from a technical experimental work between representation and interpretation in the case of Modernist Architecture captured on film ; to conceptual and formal experiment, highlighting the need for a controlled environment and developing a taste for effects in the case of German Expressionism, thereby establishing a new internal organisation in the profession ; to a wider artistic vision, fusing Cinema and Architecture into one thinking, using the qualities of both to offer new social and artistic perspectives in the case of Superstudio.



In the first half of this chapter, Cinema was introduced as a versatile term related to motion and dynamics. Its historical roots, lying either in the brothers Lumière's lineage or in the early Cinema of Attractions, gave emphasis to the technical aspect of a device without strong content, a scientific experiment turned into a spectacular performance which sometimes required the use of tricks, illusions and effects in a controlled environment to allure spectators. Later, the cinematograph was used to specifically look at Architecture or cities, host narratives or even become a tool of representation.

This opening SCENE hence provides us with a historical context necessary to understand the complexity of Cinema, its origins and its relation towards space, hopefully in a clearer manner. Transcribing space and its qualities may not have been Cinema's main intention from the beginning, but its own essence seems to have led it to develop a natural interest for spatial features. After browsing various meanings of the concept, we were able to list some of the possibilities offered by the interaction of the two media in a creative and representative process. As it was expressed in SCENE/ONE, the tension between both arts is complex but no matter what shape it may take, it is crucial to us to be aware that with respect to the number of meeting points between both disciplines, this dialogue opens new doors toward a new reading of space.

SCENE / TWO

SCENE \ TWO

This second axis will concentrate on the functioning of Cinema in the hope to develop a better understanding of its various relations with space and their technical implications. To this end, after bringing to the fore the decisive role of montage in Cinema in the establishment of a filmic space, editing theories will need to be looked further into. In a second time, within the frame of one possible reading given to filmic structures and analyses, I will develop on some of the features that characterise filmmaking and provoke an effect on us, as spectators and users of space, illustrated by examples.



SPACE ON SCREEN

1. The Reel Space

Truth being told, we most probably have seen more places and spaces on screen than we have experimented in reality. Due to our current way of living, we consume a greater number of spaces in films than in our actual life. I personally may have lived in two dwellings in my whole life, one house and one flat, but I have lived in far more through films, just as I have also had the opportunity to experience living on spaceships, in underwater cities, in medieval times castles and many more. Most of our everyday architectural culture is discovered through images, moving or not: photographs in magazines or publications, advertisements in the street or on TV... Cinema is indeed a very popular medium of consumption, making us aware of the great variety of existing spaces beyond what we can afford to experience in our life and offers a incredible catalogue of spatial representations. If “representation” is usually understood as a rather documentary approach, interested in relating a realistic vision of spaces, if not *real* spaces in an explanatory manner, I believe that Cinema has the power to go beyond this conventional representative aspect and change our understanding of spaces by allowing us to generate mentally projected spaces that free themselves from realism and reality. Because of the traditional Hollywood Transparency Regime, though we perceive images on a daily basis we aren't really familiar with the ways in which they are conceived and manufactured. For this reason, I believe it is time for a small technical introduction regarding the concepts of editing and prevailing film theories.

*The Illusion of
Space*

As demonstrated in two of his short films, *Imagine* (1987), and *Kafka* (1992) and explained in his article “Looking to the Future – Imagining the Truth”, the polish director Zbig Rybczynski shows a meticulous attention to space in the making of a film and in particular the question of reality and how cinematographic operations, using décor but also camera

motion and cuts, can be used in order to mentally build a space beyond the reality of the built film set.

*The set built consisted of one room, with two blue walls, stage left and stage right. I made the piece “live”, pushing my camera by hand, recording the same room over and over again, matching the far edge (stage left) to the new near edge (stage right) of the frame in sequence, starting each take in the middle at the last exposure. Thus the two live-action characters in the film appear to walk continuously through time as well as space. [...] At the same time, the illusion of all of this happening in “real” time is created by the panorama of buildings seen through the windows in the back-wall of the room.*⁹
about *Imagine* (1986)

*Observing the screen, the viewer is convinced that the camera really makes the movement the eye accepts it as making – revolving completely through 360 degrees, whilst travelling within the cathedral. In actual fact, the camera was fixed while recording the actors. The program calculated a few very tiny motions [...] which create the illusion of the movement. [...] and yet all the parts of the building appear to be solidly connected.*¹⁰
about *Kafka* (1992)

We have seen in the previous pages of this argument that Cinema is influenced by Architecture given two main yet opposed strategies: in the first case, documentaries on Architecture are obviously dependent on the space they are filming for space is what they try to capture; in the second as well, décor is of great importance in the making of films and can even provide them with an additional reading layer. But with the example of Zbig Rybczynski's two short films, we can observe that Cinema's influence on the perception of space is not limited to space itself, either as a real architectural space or a made-up décor/film-set, but extends to the various cinematic operations it implies. In

the extreme case of *Imagine*, where narration is reduced to the minimum and visual contents brought to a paroxysm, the set, camera motion and editing collaborate to generate a fake continuous sequence, which in Architecture could resemble some sort of three-dimensional collage. Through it, the director manages to make us believe in the continuity of a sequence of spaces thanks to a sequence shot. More generally, an “*enfilade*” of rooms as can be demonstrated in the filmic space, whose continuity is the result of editing, can in reality be composed of various rooms that are physically disconnected, some of them true, some of them staged etc... But most of all, if we tried, as an exercise, to reconnect those rooms, we would probably obtain a multitude of spatial contradictions and inconsistencies.

[...] je pourrai montrer un film de James Bond, Moonraker, où notre héros est sur la place Saint-Marc, rentre dans une boutique d'objets en verre, passe une porte, et se trouve à Murano, dans la verrerie où l'on fabrique ces objets. Donc comment arriver, avec un point de montage, à faire coexister deux espaces distants. Le cinéma est rempli de ces collages qui font coexister des espaces distants. ¹¹

This idea echoes what François Penz highlights about Jacques Rivette's *Le pont du Nord* (1981), calling it a Debord-like *dérive* in Paris, where the geography of the city is transformed into a fake topography ¹². What can be done on an urban level can also be applied to the domestic scale, making spatial jumps from one room to another disconnected one plausible, creating a collage between places that are chosen for a particular reason - their essence, their intensity, their evocative dimension etc. In popular culture, this ability of the filmic space to play with the continuity or other physical laws of the real space has been demonstrated in various examples, from the corridor in *The Matrix Reloaded* (Wachowskis, 2003) where each door seems to lead to a different place, to the animated film *Monsters, Inc.* (Pete Docter, 2001). In these two examples, doors materialise the editing process in itself, becoming passageways from one room to another as well as from one scene to another. Many more

examples exist, demonstrating that beyond the notion of *décor*, Cinema likes to play with the materiality of space, transforming it, bending it without breaking the limit of *vraisemblance* or plausibility: in our case, it is not a matter of special effect or magical deception but real spaces distorted by the cinematic techniques, sometimes beyond the laws of physics. These techniques can take the form of operations extracted from editing and montage.

While I don't want to sound provocative, I must nonetheless acknowledge that places and spaces are in fact of little importance in films: most of the time, Cinema focuses on narration, and Architecture turns into a mere scenery. Basically, it doesn't matter where we are but what is done there: action prevails over state. Only few features of space are enhanced to show particular characteristics, express something and therefore totally transform our perception of space. One famous example is the omnipresence of an object, enhanced by light, camera zoom or sound editing, anticipating the entrance of another character, most probably a murderer. We know that Architecture is experienced in three dimensions and five senses through the deliberate and controlled physical exploration of our body. On the other hand when it comes to films, we are bound to follow the way the director decided for us. This transforms the perception of space and in our minds, it has the power to transform space itself: we don't see the actual shooting stage or location but something else, it is somewhere else, a fantasised space which can only exist within the frame of Cinema. This space could in theory be re-injected in the constructive reality and could either look pretty much like the original location with a few variations which can allow us to feel the emotions allowed by the cinematographic space, or be radically unrecognisable, exactly for the same reasons, as Cinema becomes a simple step in the projectual process. This idea is something that I myself experimented while watching *Charade* (Stanley Donen, 1963), where Audrey Hepburn's character is being chased in a surreal colonnade in the middle of the night. Though the film is explicitly happening in Paris and this precise scene mentions the Palais Royal, it took me quite a while to

Diegetic Space



Palais Royal chase scene, *Charade*, S.Donen, 1963 / FIG. 9

actually recognise the Palais Royal, due to the strong work on contrasts, with light and shadows hiding or emphasising chosen architectural elements, as well as the position, speed and motion of the camera and editing work. In the end, the Palais Royal is here used as a studio set but it is of little importance that it actually is the Palais Royal: the emotions that are shared with the spectator and the effects allowing them through the scene are the real goal. There is indeed a space exclusive to Cinema, a tool for the representation of spatial, emotional and affective experiences of characters. Beyond this space re-built and represented on screen, everything that belongs to the space of the film and which will further be referred to as **diegesis** or **diegetic space**, born from image and sound editing, opens to multiple spatialities. These fantasised spaces mostly belong to the cinematographic frame for they aren't always feasible in the constructive reality, being the result of tricks and aiming at our emotions. This is a crucial realisation to us: each element constituting this diegetic space plays a part in the creation of this "fake" space, beyond reality and rationality. In the end, the opposition Lumière-Méliès between a real- and a fake- space cannot remain so simple and must be enriched by the idea of a third spatial quality, neither real nor fake but imagined and mentally projected. In other words, the space itself remains unchanged but the effects and cinematic processes applied to it change the reading and perception we have of this space.

The examples developed in the former paragraph *The Illusion of Space*, on top of which Zbig Rybczynski's films, help us demonstrate the complexity of interactions between Cinema and Architecture on screen. Another interesting example can be observed in Roman Polanski's *Rosemary's Baby* (1968), where cuts and editing in general is used to confuse the spectator whose ability to understand the space during the visit of the apartment is upset. Voluntarily denying some key institutionalised rules of filmmaking regarding space and time, Polanski for instance breaks the so-called "30° rule" and plays with ellipses and time connections between shots to generate a discrepancy between what the spectators perceive and what the characters perceive. This might at first look very

The Limits of the Screen

innocent, but few films actually set the spectator apart from the character's experiences, and this goal is attained by a thorough effort granted to editing and the composition of the structure of the film. Yet, this ability of Cinema to make us believe in the unbelievable, jumping from one place to another without connection using cuts for instance, is clearly the result of the flattening of space from three to two dimensions operated by the recording devices and the projection on a screen. It is true that both disciplines share many points in common : they share tools and terminologies such as the use of perspective, of viewpoint, of editing and collage, of sequence or *enfilade*, of narration, of movement, of rhythm etc... but above all, both disciplines use space as their basic material. However, we sometimes forget that a crucial difference dwells in the most pragmatic opposition between both media: Architecture is experienced in three dimensions whereas Cinema, although showing us three-dimensional objects, is experienced in two dimensions. I believe necessary to introduce a better overlook of the impact of these similarities and differences between both fields, not in reaction to their techniques or qualities, but in their perceptive nature. The adjacent table shows what I consider to be at the very core of the difference between Architecture and Cinema in the experimentation of space by the audience.

ARCHITECTURE	CINEMA
3D space	2D space
sight	sight
hearing	hearing
touch	-
(smell)	(smell)
(taste)	-
physical experimentation	mental experimentation

This tension is also raised in *Cinema & Architecture: Méliès, Mallet-Stevens, Multimedia*, written after a symposium on Cinema and Architecture in Cambridge (UK) in April 1995:

Until recently, in the main, Architecture created its visions in 2D and then projected the 2D rendering into 3D reality; while Cinema captured 3D reality and transformed it through the medium of film to a projection of moving images on the 2D screen. ¹³

Because fewer of our senses are active while watching a film compared to when we experiment a space, we lack reference points and this is what directors use to make the sequence plausible. Thus, the imbalance between the number of senses allocated to our experimentation of space in our daily life and the number that is devoted to the same purposes in our filmic experiences is due to the technical necessities of the medium itself. Even in a minor attempt to propose a realistic space to spectators - and by “realistic” I consider spaces that remain plausible in comparison to those we come across in our everyday environment - directors are then obliged to fall back on tricks and effects to properly render the three-dimensional qualities of a space on a two-dimensional screen. As we are daily users of spaces, we may be tempted to believe that we wouldn’t be fooled by the tricks at play in Cinema, yet it is rarely so. The table shows that the cinematographic experience is, in a way, flawed and incomplete : in terms of internal process, Cinema tends to take an element from our environment and reduce it in order to translate it in an “easier” language, allegedly from three to two dimensions. Compared to Architecture, it seems weak, but this very weakness allows - if not compels - Cinema to deceive us, since our understanding of space is limited. Cinema must thus overcome itself in order to restore balance and make the comprehension and emotions complete. It is then necessary for films to maintain a different relationship to space, closer to the fake and fantasised, beyond space itself.

Using the flattening of space on screen as a strength rather than an unproductive constraint, directors frequently use several devices and operations to build the filmic space beyond the conception of the set itself. Thus, rooms are no longer limited to walls and openings, but other features begin to appear as a material to work with, light and editing amongst them. The aim is to enhance particular spatial qualities to compensate

for the lack of depth and consistency of the represented space. Such effects tend to lead the path toward dramatic or exaggerated spaces as if the passivity of some of our senses was replaced by the addition of the emotional factor. Directors are then able to use space, transformed by cinematic effects, to seduce us, manipulating our emotions and guide us into a specific understanding of space to support a message. Taking a very generic example, this is usually why we may shed a tear or two seeing a character's house being destroyed even if we have never lived in the house and probably not known about it for long, projecting some of our own memories, identifying ourselves as the characters and making the space our own encouraged by cinematic operations.

*Technical Roots:
Eisenstein and
Kuleshov on
Montage*

Going back to the idea of fake continuity that constitutes a key demonstration of our manipulated perception of space in films, I would like to make a small digression on the editing process, also referred to as montage, which was theorised by Sergueï Eisenstein. Born at the end of the XIXth century, Sergueï Eisenstein is a Russian director and theorist, also known as the father of theories on editing alongside D.W.Griffith and Abel Gance. Son of an architect, he himself started studying architecture and engineering which left a strong impression on him. In the 1920's, Europe was hosting the Avant-Garde's influence: Futurism in Italy, Expressionism in Germany, and Impressionist, Dadaist and Surrealist schools in France just to mention a few. After the 1917 revolution in the Soviet Union, figures like Kuleshov, Eisenstein, Vertov or Pudovkin created the Soviet school, moved by the communist enthusiasm. As the political regime was still unstable, directors were free to experiment. While the regime grew stronger, films started to show their potential as propaganda and film-directors used their recently discovered theories to support the regime's ideology. As it appears, the Soviet School relied on the importance of the effect on the spectator, the capacity of cinema to emotionally influence the audience as a mass against bourgeois individualism. Editing was thus used to generate meaning, wake up the masses, unlike Hollywood entertainment. In the strict sense of the term, montage is defined as the action of putting together

several shots to create a sequence which in the end leads to the composition of a whole film. Basically, at the beginning of the century, the typical Hollywood director's intention was to make the spectator forget he was watching a film: this concept is generally referred to as Hollywood Transparency or Voyeurist Cinema. In contrast, this is impossible to forget while watching a soviet film, recognised as an Exhibitionist Cinema. The aim is to create a shock, an articulated discourse, exposing conflicts through the narrative and underpinned by the techniques used. Eisenstein thus defined four main forms of editing:

/ **Metric**, only based on the duration of shots, that is to say the length of the reel, which can be calculated: $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$...

/ **Rhythmic**, taking the content of the shots into account in addition to their length, i.e. the internal movements, global structure of the shot and its "felt" duration, which cannot be calculated but is rather an effect on the spectator.

/ **(Over)Tonal**, based on a dominant characteristic of the sequence, for instance exposure or light, that is, based on the content.

/ **Harmonic**, in between rhythmic and tonal, joining the harmony of each shot to the harmony of shots one with the other, in other words rather a theoretic goal than an actual editing form.

For Eisenstein, there is a gradation between these four strategies, ideally leading to an intellectual editing which would no longer be emotional, a synthesis between the cinematographic art and the militant spirit. In this quote from *Montage & Architecture*, written between 1937 and 1940, he defends this idea of space built as a film, merging montage and experimentation of space, in a relationship that started long before the invention of the Cinematograph.

The Greeks have left us with the most perfect example of shot design, change of shot, and shot length (that is, the duration of a particular impression) [...]. The Acropolis of Athens has an equal right to be called the perfect example of one of the most ancient films



Sequence of the Odessa stairs scene, *Battleship Potemkin*, S.Eisenstein, 1925 / FIG. 10

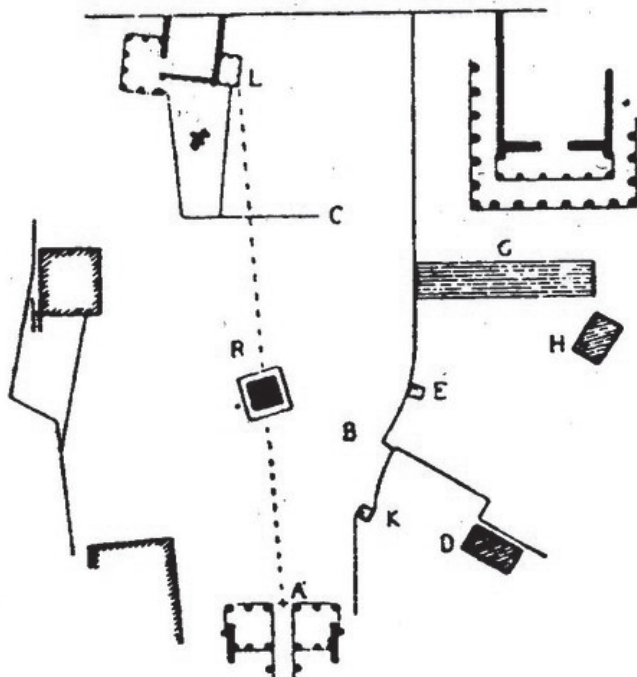
[...]. [...] It is hard to imagine a montage sequence more subtly composed, shot by shot, than the one that our legs create by walking among the buildings of the Acropolis. ¹⁴

It was Auguste Choisy who first acknowledged this particular aspect of the Acropolis. As Clotilde Simond mentions, this interpretation leads to the conceptions that motion is a feature of both the body and the eye:

Giedion voit dans l'architecture de fer un nouveau type d'espace en ce qu'elle permet une mobilité du regard à travers la grille de la structure. A parler de mobilité, l'ouvrage Histoire de l'architecture (1899) d'Auguste Choisy va se révéler fondamental pour les architectes du XX^{ème} siècle. Choisy y propose une interprétation complètement nouvelle de l'Acropole d'Athènes conçue comme un enchaînement de tableaux, une succession de stations, de points de vue pris dans une alternance de profondeurs de champ différentes. L'Acropole invite à une promenade pittoresque qui est un dépliement du premier tableau dans le parcours du site. ¹⁵

In such, the cinematic operations mentioned in these two quotes, typically experimented by the motion of our eye, appear to have a potential impact beyond the flatness of the projection screen into the reality of our everyday environment, that is to say in the discovery of space we conduct with our bodies in motion when we experiment buildings .

As editing appears to be one of the characteristic features of filmmaking, it has been the subject of many theories over the years. If Eisenstein is remembered as the great master of editing, many theorists and filmmakers were interested in such questions. Around the time of Eisenstein, the Kuleshov Effect was theorised by the soviet director Lev Kuleshov at the beginning of the XXth century based on short-term memory features applied to film editing. According to this theory, the spectator understands a shot according to the one before and



Observations on the Acropolis of Athens, *Histoire de l'Architecture*, A.Choisy, 1899 / FIG. 11

the one after differently than when this same shot is isolated. In practice, Hitchcock demonstrated this aspect in a brief but clear experiment. The two adjacent columns (FIG. 12) prove that this effect also works the other way around: depending on what shot is inserted between two other unchanging shots, these two can be interpreted differently. On the left, we can see Hitchcock smiling at the view of a mother and her child and looking like a sweet old man getting emotional. On the right, the same facial expression on Hitchcock's face, this time reacting to the sight of a young woman sunbathing, is perceived as much more sinister. According to Kuleshov, this is purely the effect of our short-term memory reacting to what was just observed and this very principle can also be applied to Architecture. The Kuleshov Effect proves that in spite of the first and last shots remaining exactly the same, the middle shot influences us into believing something has indeed changed in the final shot as an effect of the context. Architecture holds the same inner tension on several levels: first, as a space can be seen as the sequence or *enfilade* of several parts, composition becomes vital to ensure a certain interpretation or use of space: in the end, a different juxtaposition leads to a different Architecture. This is a basic application of the concept of composition in space. On the other hand, architectures dialogue with their context and their meanings can evolve in relation to it: depending on the surroundings or the period, a building's use and identity can change, just as old religious or institutional buildings that are no longer in use tend to be transformed into museums or other cultural programmes in reaction to their spatial and temporal contexts, or as old manors or funfairs can both either look welcoming or gloomy. The example of Kuleshov's experiments illustrates a typical example of a theory meant solely for Cinema and its application to consecutive shot editing which finds relevant logics when confronted to space and Architecture.

Concretely, editing is a technique used in Cinema like any other effect: it usually resides in an artistic choice to express an idea, thus complex - or on the contrary very simple - forms of montage are rarely innocent. For instance, the accelerating rhythm of the cuts at the end of the first third of *Die Neue Wohnung* (Hans Richter, 1930) make us expect that something



Sweet Alfred

Creepy Alfred

Demonstration of the Kuleshov Effect, A.Hitchcock, 1964 /
FIG. 12

dramatic is bound to happen. And without mistake, Sunday's breakfast collapses as the multiple statuettes and decorations fall from their respective shelves and cabinets. The situation in itself would not have been able to make us predict such end but here editing is used as an explicit medium of suggestion, letting the spectator in on the secret. The notion of editing used as a cinematic device to generate effects and manipulate our emotions will be developed further in the paragraph *Time in films : a paradigm of motion, speed and rhythm* and particularly in the first part regarding motion specifically.

2. Cinematographic operations

Now that we have defined the term Cinema and its possible relations to space and that we have begun to understand some of its technical aspects, it is necessary to review a certain number of features, techniques and tools commonly executed in films that may be able to impact our reading of space.

The previous paragraph introduced us to the idea that cinematic operations are made for a reason. As it is generally acknowledged that a "well-functioning" architectural project tends to disappear, we also seem to forget while watching a film that we are indeed watching a film. If this has not always been true in film history with the example of Eisenstein on top of the list, but was globalised with the hegemony of Hollywood Cinema where films put the spectator either in the position of the main characters themselves, or in that of a voyeur or omniscient mind. Once we realise that films are complex devices and are not limited to stories, we can understand that most of the directors' work consists in deciding what operation to make and actually making them. No decision is ever innocent and images are never thrown at the spectator without having being carefully designed. How events are related on screen and how spaces are described is meant to affect what we perceive and how we interpret it. As such, cinematic operations can change our perception of space and then start to appear as interesting questions to be asked during its conception. In terms of process, designing, constructing and analysing films and

*Structure of the
cinematographic
project*

buildings is pretty much alike. In Cinema, I would like to refer to a theory established by André Gaudreault based on researches made by Tom Gunning and Etienne Souriau, distinguishing three different yet interdependent levels: the ***mise-en-scène*** refers to what is called the “profilmic”, i.e. everything that concerns what is in front of the camera; the ***mise-en-cadre*** gathers the actual shooting on set and the work made on shots in its whole; finally, the ***mise-en-chaîne*** is the work done to the images after they have been shot, as editing or post-production. As much as Architecture is concerned, *mise-en-scène* is close to imagining the first sketches of the project, *mise-en-cadre* like drawing the actual plans and sections, and *mise-en-chaîne* like building. There are of course many ways to decompose Cinema and the work it represents but this theory is one I consider clear and full of potential, therefore every time the word *mise-en-scène* will be written it won't be in its conventional theatrical meaning but according to Gaudreault's theory, as will his other concepts of *mise-en-cadre* and *mise-en-chaîne*.

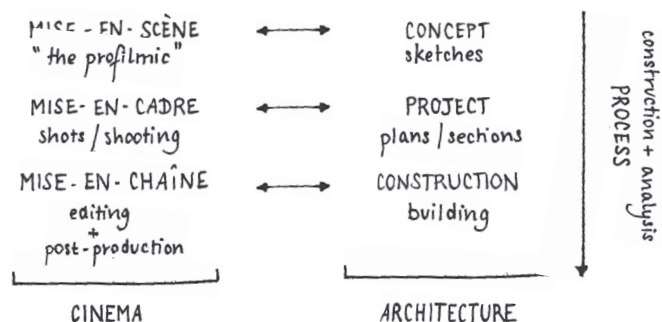


FIG. 13

The filmic structure thus divided, it becomes easier for us to study the elements at stake at various moments in the making of a film.

Operations commonly used in films are many, but some are crucial in their influence and relation to space. Cinema, because it is perceived by a spectator on a screen which itself shows the camera's decisions of a director, is forced to see space and the scene within it in a particular way, he is forced to

T.Gunning	T.Gunning	E.Souriau	A.Gaudreault	A.Gaudreault
1	“profilmic”	<i>profilmique</i>	<i>dispositif profilmique</i>	<i>mise-en-scène</i>
2	“camera determined”	<i>“filmographique” / tournage</i>	<i>dispositif de prises de vues</i>	<i>mise-en-cadre</i>
3	“process of editing and printing”	<i>“filmographique” / montage</i>	<i>dispositif de traitement des images déjà tournées</i>	<i>mise-en-chaîne</i>

Operations of the filmic discursivisation process, A.Gaudreault, *Du littéraire au filmique* / FIG. 14

apprehend space in the way that the director chose to impose on him: in a particular order, with or without particular angles, at a certain speed, edited in a sequence or with a precise cut, following a given dynamic etc. This is the feeling we get while watching *Russian Ark* (2002) by Alexander Sokurov : as the whole film is made in one shot, the spectator is put in the position, quite literally, of the camera, which here also appears to be the narrator, closely following a somber-looking character thus guiding us, deciding for our directions and speed in the way a director would. In contrast, Architecture, because it can be physically experienced by the “spectator”, has little control over the perception of space. The following pages are going to look closer into some of these determining operations in the conception of a film which show a potential in the manipulation of the spectator’s perception of the filmic space.

*Framing or the
tension of the
Inside & Outside*

We distinguish two spaces: the built set, somehow located in the “real” space, and the diegetic environment, virtually projected in our minds to ensure the coherence of the scenario. This difference is crucial in terms of **framing**: everything happening outside the frame yet on set is called ***hors-cadre*** and is basically where all the tool used to record the films are located ; whereas everything outside the frame in the cinematic environment, or diegesis, is referred to as ***hors-champ*** and gathers everything and everyone present in the world of the film but invisible to us through the eye of the camera. In terms of sound editing, this same difference also implies a nuance between voice-off, the voice of a person unseen on screen but heard on set, and the voice-over, the voice of a person unseen on screen but heard in the filmic space. Thus the typical example of the voice-off is the voice of a narrator explaining to the spectator something the character cannot hear, and the typical voice-over is the internal monologue of a character, speaking to himself in his mind and therefore only heard by the spectators.

Back to these notion of *hors-champ* and *hors-cadre*, this distinction constitutes the basis of the framing complexity. Everything is included or excluded for a reason and this bias of the director is rarely neutral. This decision can become a tool for sharing

emotions, like doubt, tension or surprise. The typical incursion of framing into the cinematic space can take the shape of door or a window, which by contrast with the rest of the room or by a game on shadows provides a literal frame, or **over-framing**. Some of the films that show this aspect particularly well are *Rear Window* (Alfred Hitchcock, 1954) (FIG. 16 & 17), *Playtime* (Jacques Tati, 1967), and more recently *Dans la maison* (François Ozon, 2012) or *Mother!* (Darren Aronofsky, 2017). Initially, framing, apart for creating effect, was introduced to respond to the censorship obligations, hiding some unwanted scenes from the spectator yet suggesting it and making the continuity of the scenario plausible. In *The Village* (Night Shyamalan, 2004), though the film wasn't constrained by such restrictions, the director used framing in the murder scene to hide the scene of murder itself but not its victim, with a very close shot on the dying man's face : in doing so, he creates an interesting effect of surprise as the spectator is unaware of the dagger in the man's chest but witnesses the changes of expressions on his face suggesting the presence of such a dagger, linking the spectator's slow understanding of the scene to the character's slow death. This sequence shows that little by little, as most artistic constraints turn into sources of creativity, framing became a more complex device, using the frame of the camera but also real-life natural frames as windows, trying to generate effects and meaning. Of course, windows in films are not only used for their symbolic qualities and evocative ability: they are used to make space bigger, to integrate external elements to the set, to open on a new world, reflect on Cinema itself... As in Cinema a frame holds the tension between *hors-champ* and *dans-le-champ*, in Architecture a window usually implies a tension between an inside and an outside. But when it comes to windows, this simple statement becomes more complex in Cinema, once again with the famous example of *Rear Window* (Alfred Hitchcock, 1954). In this case, what we call "inside" refers to the domestic space of the main character's apartment and mostly the view we perceive from the outside of the open window, looking inside. What we call "outside" refers to the courtyard, namely a banal outside space, yet in this particular case a 1:1 model of an outside space built inside of a Hollywood



Postponed death in *The Village*, N.Shyamalan, 2004 / FIG. 15



Over-framing from the outside looking inside in *Rear Window*, A.Hitchcock, 1954 / FIG. 16



Over-framing from the inside looking outside in *Rear Window*, A.Hitchcock, 1954 / FIG. 17

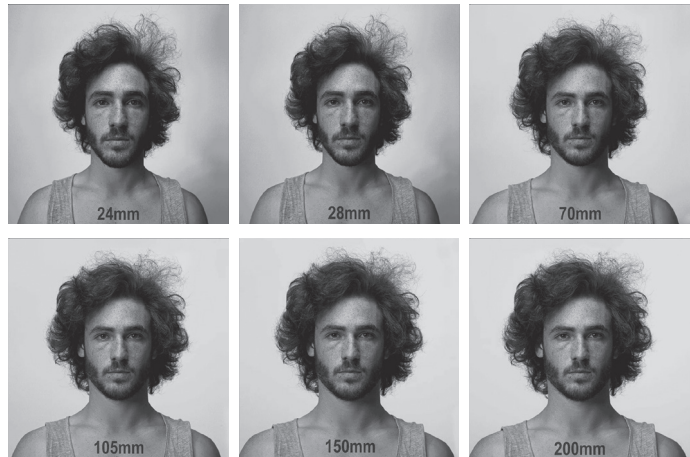


Photograph from the set of *Rear Window*, A.Hitchcock, 1954 /
FIG. 18

studio. Hence, we are “inside” of the courtyard and “outside” should refer to the street further away. Even if this translates into an easy-to-grasp reality, this demonstrates that such general spatial concepts can lose much of their meaning when applied to Cinema, thus requiring new ways of expression. A window built on a film-set doesn’t act as a physical threshold between inside and outside but rather a mental one, between the familiar and the uncanny, the known and the unknown, the private and comfortable versus the public and dangerously exposed. Going or looking through a window is full of symbolic references, mainly expressing transitions in the narrative or in the character’s personality or opinion. Doors are also generally used to place the cuts and change the camera position. In the end, it appears that framing is an act full of meaning because it is a decision to include or exclude chosen elements to what we see and therefore to what we understand, as an exercise of selection.

Focus

I would like to discuss one tool that may be of our concern in the rest of this study: the **focus**, implying the concept of **profondeur de champ** or **focal length**. This concept is closely related to our perception: as efficiently as the frame can elude an object or a space to be perceived by the spectator, the focus can decide to blur or highlight chosen elements and thus completely change what we see and what we remember from a scene. If the frame works on the x and y axes on the surface of the screen and decides what we do or don’t see, the focus plays with the third dimension or z axis and decides how far and how well we can see. Historically, such operation was used in combination with framing to obstruct the spectator’s vision and therefore understanding, at first for censorship reasons, hiding murder- and sex- scenes, later willingly adopted to manage suspense and surprise. Both are usually associated, with suspense developing through time using tension - the idea being to provide us with information little by little - until the great dramatical effect of surprise bursting out, sometimes quite literally. In Architecture of course, such concepts are not excluded, especially in the discovery of space. More generally, focus can be changed “naturally”, increasing the distance



Focal length deformation demonstrated on a close up / FIG. 19



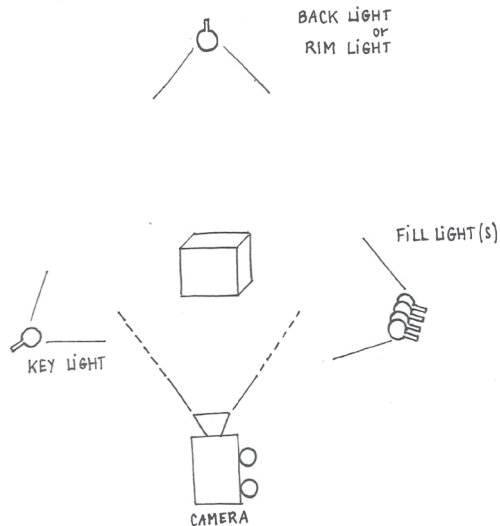
Combination of framing and focus works in *Citizen Kane*,
O.Welles, 1941 / FIG. 20

separating us from a point to hide or blur, or rather artificially, with the addition of material filters for instance, such as opaque or highly reflective glass or other various screen types. One classic demonstration was made in *Citizen Kane* (Orson Welles, 1941), combining *profondeur de champ* and framing to increase the interpretation of the character as the victim of other people's decisions. But in addition to this idea of sharpness and buffers, the word "focus" also implies the **focal angle of view** of the camera or how strongly a system converges or diverges light. In practice, different focal angles of view generate different small deformations of the images: the centre of the composition or focal point remains geometrically coherent but as we move away from it, straight lines seem to bend following a concentric pattern. In the famous *Vertigo* (Alfred Hitchcock, 1958), this is what creates the impression of unbalance in the combined travelling shot/zoom effect, named "dolly zoom", creating a subtle deformation of the proportion of the objects projected on screen in relation to one another. This combination of physical and mechanical lens zoom adjusts the angle of view to preserve the size of objects but not their relative position due to a perspective distortion.

Due to the very nature of Cinema itself, **shadows**, and in contrast, **light**, are one of the decisions made during the filmmaking process that are of crucial importance to our perception of space. Shadows are born from the lack of light and are defined as "partials of complete darkness, especially as produced by a body coming between rays of light and a surface" according to the Oxford Dictionary. Photography literally means "light writing", and photograms, which are the ancestors of film reels, are in this sense "measures of light". Of course light is generally acknowledged as an essential architectural feature but the use of light and shadows in films goes beyond the simple need to provide lighting. Lights generate atmospheres, colours play with moods among other aspects and shadows can decide to show or hide objects. With regards to this last statement and like we will see further with mirrors, shadows can allow objects which can't be seen on screen to enter the frame, playing with suggestion rather than actually showing the object

Light & Shadow

itself: thus the shadow of a person or on the contrary, the light of the sun drawing the shape of a window on the floor can suggest the presence of an opening outside of the camera's vision. The next page demonstrates both situations with shots taken from the film *Suspicion* (Alfred Hitchcock, 1941) where in the first case light is used to imply the presence of a window opposite the stairs and help us understand the spatiality of the scene beyond what we can actually observe and in the second shadow introduces us to the presence and upcoming entrance of a character before actually seeing him directly. Even when using natural or architectural light, Cinema never limits itself to it and for one good reason: even in today's age with the use of digital technologies, the filmstrip isn't precise enough to capture light as our eye sees it on set or in everyday life. What is usually considered "natural" is actually the consequence of a multiplicity of projectors, from a minimum of three – key-light, fill-light, back-light – to a tremendous amount in some early age films. Everything is organised to provide a feeling of realism but even natural light needs to be controlled and corrected to ensure a minimum lighting, a clear differentiation of the characters from the background and a volumetric lecture of the scene (FIG. 21).



/ FIG. 21



Work on contrasts in *Suspicion*: projected shadow of the unframed window, anonymous character and highlighted (poisoned?) drink, A.Hitchcock, 1941 / FIG. 22



Work on shadows in *Suspicion*: anticipated entrance of a character, A.Hitchcock, 1941 / FIG. 23

Artificial lighting in Cinema is as crucial as natural light in Architecture:

Going out of the studio, Mallet-Stevens noticed immediately that artificial light does not suit a real building because then the shadows are improbable.¹⁶

For this reason, shadows and their antithesis light, have always been a major concern in Cinema, dating from the first use of the moving shadows in the traditional Noh theatre in Japan. Essentially, shadows transform three-dimensional objects into bidimensional images – a very cinematic process indeed. In Architecture, light is merely a tool to enhance an object, a medium to show something, whereas in Cinema it has the power to become an object in itself, a material to work with and to be shown instead of showing something else. This characteristic of light is of the utmost importance in black & white films, and may have lost a bit of its supremacy with the development of colour films because of the ability of colour to create contrast on another level. Yet it is an aspect that may generally not be neglected. In the matter, the experts of light and shadows are the German Expressionists and the Films Noirs they later inspired, which also led Hitchcock in his British period to develop a particular relation to light and shadow, as demonstrated in the following illustrations.

Les Allemands ont très tôt compris l'importance de la lumière et ont construit non seulement des boîtes opaques gigantesques pouvant abriter plusieurs studios, y incorporant des décors de très grande dimension mais également des systèmes d'éclairage très évolués. Ils étaient à l'avant-garde de la technique cinématographique incontestablement grâce à un certain nombre de techniciens et opérateurs de toute première valeur, et ils ont été les premiers à utiliser des éclairages modernes et sophistiqués, d'abord des lampes à arc traditionnelles à l'époque, puis des lampes à incandescence, mais surtout ce que l'on a appelé des lampes à vapeur de mercure,



Work on shadows in *Nosferatu*, Murnau, 1922 / FIG. 24



Nod and tribute to *Nosferatu* and contrast in German Expressionism in *Vincent*, T.Burton, 1982 / FIG. 25

espèce de néon extrêmement puissant qui était d'ailleurs redouté par les acteurs car ils sortaient les yeux littéralement brûlés. Mais ces trois systèmes d'éclairage ont permis aux Allemands d'imposer un style de jeu d'ombre et de lumière [...].¹⁷

Colour

Very close to the topic of light and shadows, colour indeed has an important impact on our reading of a space, providing contrasts and various possible atmospheres. If black & white film undoubtedly needed to generate depth through contrasts, playing with a range of colours varying between whites, greys and blacks, the invention of colour films allowed a new dimension in filmic expressivity. Colours, though echoing different connotations around the world, generally have a global physiological impact on our perceptions in addition to our emotional responses. In this way depending on the context, red can appear as a stressful or sensual colour, green as a natural or uncanny one, etc. Colour can be used metaphorically, as the example of *Vertigo* (Alfred Hitchcock, 1958) will demonstrate, or sometimes literally, as demonstrated in the computer-animated comedy *Inside Out* (Pete Docter, 2015), where Anger is for instance embodied in a small red character and Joy a yellow one. In Alfred Hitchcock's masterpiece *Vertigo*, colour is of crucial importance and goes beyond the although very impressive chromatic sequence of the main character's nightmare, as characters are surrounded with colour during the whole film in a dual opposition: Scottie/Madeleine, Green/Red. But more than fixed colours relating to characters, these colours are sometimes used to evoke either Scottie or the actress playing Madeleine and some other times to offer a subtle understanding of character developments and of the themes of the film, among which the obsession - red -, the ghostly and the escape from reality - green. Even the opening credits introduce us to the possibility of colour to provide us with an additional reading layer for the film. Plenty of examples exist, and less sophisticated prove that colours tend to stay on our mind and leave us with an overall atmosphere influencing our memory of a whole film.

The aftereffect of the shift from black & white to colour

generates a whole imagery where black & white tends to be connotated, usually either in a sensual and glamorous Film Noir nod or in reference to the past. The first category can be observed in the series of films *Sin City*, directed by Roberto Rodriguez and Frank Miller in 2005 and 2014, where colour is only adopted to highlight particular details in yellow, used to make repugnant elements even more repulsive and in red, a colour choice which isn't innocent: this colour certainly offers a lot of contrast and enhanced chosen elements very efficiently but is also generally connotated to the genre of the Film Noir, evoking red lipstick and blood, sensuality and crime. The second category is more frequent. I could for instance refer to Tati's *Playtime* (1967) once again, where the images are systematically desaturated to give more emphasis to smaller scale elements by the introduction of ponctual touches of vivid colour. Another example can be found in Christopher Nolan's *Memento* (2000) where a very complicated time-line construction is supported and made intellegible to the viewer's attention by using two different formal languages: events taking place in the present are displayed in colour whereas events from the past are distinguished thanks to the use of black & white. Finally, one recent and clear example is the film *The Artist* (Michel Hazanavicius, 2011), entirely shot in black & white taking place during the transition between silent and talking films and seizing the classic stylistic features of such films as a homage.

As mentioned above, as light and shadows allow elements external to the frame to enter the perception and understanding of the spectator, **mirrors** and more generally reflections tend to fulfil this role too. On a conceptual level, mirrors are to Cinema what Cinema is to Architecture: a space which is visible yet impossible to experience physically, a medium to project three-dimensional objects onto bidimensional surfaces. In films, mirrors have the ability to carry multiple significations, from the most pragmatic to the most symbolic and metaphorical. On a very down-to-earth level, mirrors in Cinema are physical tools to increase the depth of a scene or set and/or have a character who is essentially off-screen appear on-screen or in other words make the space and everything within it bigger than the actual

*The multiple roles
of Mirrors*



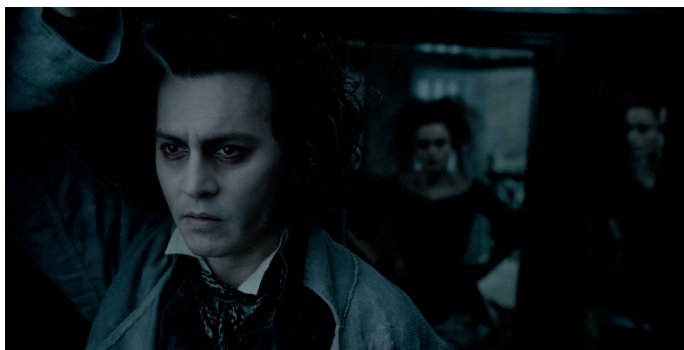
Vertigo, A.Hitchcock, 1958 / FIG. 26



Sin City, R.Rodriguez & F.Miller, 2005 / FIG. 27



The Artist, M.Hazanavicius, 2011 / FIG. 28



Reflected reflections in *Sweeney Todd, The Demon Barber of Fleet Street*, T.Burton, 2007 / FIG. 29



Infinite reflections in *Citizen Kane*, O.Welles, 1941 / FIG. 30



Divided action in *Enter the Dragon*, R.Clouse, 1973 / FIG. 31

set. In the example of Tim Burton's *Sweeney Todd, The Demon Barber of Fleet Street* (2007) this time, the character of Mrs Lovett seems to be talking to Mr Todd but after a closer look, we realise that she isn't actually on-screen: she is in the same room as the barber but is seen by the spectator only through a sophisticated game of mirrors. This time, if space isn't literally increased by the use of a mirror developing the reflected space under our eyes, it is increased by suggesting that the room is bigger in the direction of the audience or opens towards what is more generally known as the Fourth Wall otherwise the character of Mrs Lovett would not have enough room to stand in. This composition of the scene, more than allowing us, as spectators, to understand the space in which the action is taking place, is also absorbing us into that space and into the action, as if Mrs Lovett was actually next to us and that we could have been appearing in the mirror. Reflection devices in Cinema are also commonly used for their properties of disorientation and illusion, creating doubt as to what is the real object and what is the reflection. Numerous films have shown labyrinthine visions of a man reflected ad infinitum in a series of opposing mirrors: Orson Welles as Charles Foster Kane in the end of *Citizen Kane* (Orson Welles, 1941), Roger Moore as James Bond in *The Man with the Golden Gun* (Guy Hamilton, 1974), Bruce Lee in *Enter the Dragon* (Robert Clouse, 1973) etc. Starting with the classic pantomime of two people standing on both sides of a glass and replicating each other's moves in order to make us believe in a mirror, the Cinema has used mirrors to deceive our sense of reality and question us: what is or isn't real, what is a glass and what is a mirror, what is Cinema and what is reality?

*[...] Ces paroles pourraient être une description idéale des illusions de la perspective géométrique qui prétend restituer la vision naturelle et se dérobe pourtant toujours, insaisissable. Ce que Resnais désigne, dénonce peut-être, c'est le cinéma "miroir de la réalité", comme on a coutume de l'appeler, alors qu'il est, selon lui, l'art d'une machine à tromper l'œil.*¹⁸

*Ce miroir, remplaçant ce que le spectateur avait cru être une ouverture dans un mur, programme l'irrésolution, le doute sur ce que l'on regarde tout au long du film. [...] Où gît le réel?*¹⁹ on Indian Song from Marguerite Duras (1975)

Mirrors also tend to appear as metaphors for the narration and Cinema itself. More than a mere extension of space or creations of labyrinths, mirrors in films are used in a metaphorical way, playing with the tension between object and reflection, between reality and illusion and in a way, between Real Life and Cinema. The role of mirrors as illusions developed in the previous paragraph becomes a tool to be used outside of the diegetic world: in other words, mirrors in films reflect objects in films, but they also reflect objects outside of them. Dominique Païni explains:

*[...] je veux insister sur une double fonction du miroir en cinéma: commencer le film et ouvrir la fiction en réunissant dans un même cadre les personnages; mais aussi réfléchir sur la vocation spéculaire et mystificatrice du cinéma, c'est-à-dire sur sa puissance de redoublement, de duplication du monde pour l'embellir ou l'analyser. Le cinéma peut alors se définir comme un art de la reproduction qui réfléchit le réel pour le penser.*²⁰

The term “reflection” is here used in its full sense, both as an image reflected on a surface and as a thought process, an analytical dimension which is often forgotten when studying representative and visual languages such as Cinema. With the help of mirrors, Cinema offers not only a reflection on facts or events but also on itself. The ultimate example is the film *Citizen Kane*, directed by Orson Welles in 1941 (FIG. 30). In this film, mirrors become a *mise-en-abyme* of the structure of the film itself and its narrative, describing Kane and his multiple traits of character through the various perspectives and viewpoints of those who met him. Mirrors can thus discuss films or discuss

Cinema in itself. On this point, Dominique Païni makes another comment based on the work of the French director Alain Resnais:

Comment ouvrir l'espace à l'infini? Comment se jouer de la fatale surface de l'écran frappé par le faisceau lumineux qui s'élargit et s'inverse, prolonge l'espace illusoirement, tel que le fait un miroir? Et au-delà, comment approfondir l'espace pour que s'y insinue le regard du spectateur, ce regard avide d'événements stupéfiants, cet œil exorbité et cannibale affamé de rêves? N'est-ce pas ce qu'on appelle la promesse onirique du cinéma? La perspective illusionniste de l'image cinématographique est la condition première de cet onirisme, indépendamment de toutes les échappées fantastiques du récit. C'est le principe même du cinéma qui naît de la possibilité optique et mentale, pour le spectateur, de pénétrer l'espace alors qu'il est prisonnier de son siège et qu'il ne contemple qu'une opaque toile blanche. Il rêve pourtant – c'est ce qui préoccupe tant Alain Resnais. Aussi le cinéaste force-t-il les yeux du spectateur dans le labyrinthe de corridors baroques, comme s'il traversait au moyen de ses longs travellings avant les miroirs et l'écran habilement superposés par la mise en scène.²¹

Other reflective devices: glass, windows and doors

Apart from mirrors, another element that contains this tension of **reflections** both in Architecture and Cinema is the **glass** material and mostly glass **doors** and **windows**. Doors, as mentioned earlier, generate the possibility to distort space and open to new possibilities, connecting spaces together in a new way. They also stand as commonly used framing devices. But as openings, they also possess a symbolic meaning of threshold, of passageway from one place to another. As we can observe in films directed by Jean Cocteau, the symbolic meaning of the door sometimes meets the symbolic value of mirrors, becoming a threshold from one world to another.

Pour passer d'un univers à l'autre, Cocteau fait emprunter à ses personnages le chemin de miroirs, devenus objets extraordinaires malgré leur familière apparence. C'est le sens de la phrase célèbre qui reproche aux miroirs de ne pas réfléchir assez et d'être insuffisamment responsables de leurs effets, de leurs reflets. Pour franchir la frontière entre le monde réel et le monde imaginaire au sein duquel errent les corps dénués de vie, Cocteau fait s'enfoncer Orphée dans la labilité des miroirs, préfiguration des formes engendrées par les technologies numériques employées plus tard par James Cameron pour ses abysses. Cocteau donne délibérément aux miroirs l'apparence de portes. ²²

Sometimes, as gloriously yet subtly shown in *Playtime* (Jacques Tati, 1967) reflections on glass windows become a way to indirectly visit Paris and allow the great monuments and icons of the historical city to impose themselves and sneak in the cold modernist environment of the office building in all of its spatial ambiguities – which glass also contributes to symbolise. Glass is almost too clean, too transparent so to say. Boarders are visually erased but remain physically, generating tensions re-injected into comic situations. The theme of transparency brings other questions: at the end of the film, as the situation seems to go a little out of hand in the restaurant, despite the destruction of the glass door ensuring the threshold with the outside world of the street, the doorknob and butler remain. With this simple doorknob, moved by the butler as if nothing had happened, the door keeps existing, not as an object, not as a memory but as a place relating to a ritual. And it appears that nobody sees the difference, expressing a critique against Modern Architecture on the one hand, yet proving the importance of details and that places and spaces are not defined purely by their physical limits or materialisation on the other. Concretely in this film and according to Jacques Kermabon's article *Architecture, Décor Et Cinéma : Tati architecte: la transparence, le reflet et l'éphémère*, depending on the scene, glass is either used:



Reflected Eiffel Tower in *Playtime*, J.Tati, 1967 / FIG. 32



Domestic pantomime in *Playtime*, J.Tati, 1967 / FIG. 33

/ to create reflections showing something **off-screen** and thus thickening our perception space as well as giving it a 360° likelihood (FIG. 32),

/ as a window into someone's home, as a 20th century **black & white silent film** where pantomime is absorbed in everyday habits and the noise of the modern city becomes the music (FIG. 33),

/ as a technical architectural **sectional perspective** within a building, where characters and furniture, as in architectural drawings, are used to render a sense of scale (FIG. 33).

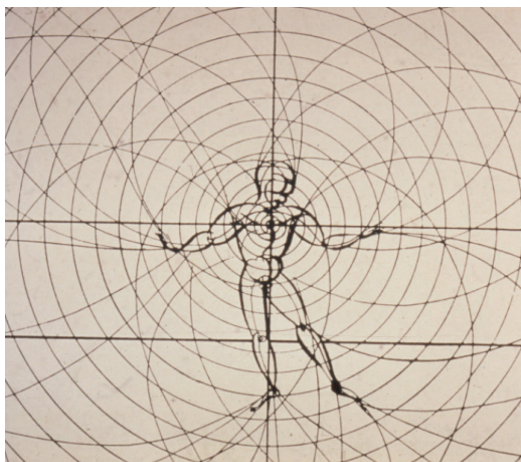
Finally, beyond the actual representation or incursion of a mirror, door or window in a film-set, the décor in itself can become a mirror of the narrative. This is mostly observed within domestic spaces represented on screen, where architecture is often used as a mirror of the inhabitants' mind itself, a direct expression of one's main features. Objects, furniture and other constitutive elements of an apartment play a key role in our perception of space: quoting De Certeau,

a place inhabited by the same person for a certain duration draws a portrait that resembles this person based on objects (present and absent) and the habits that they imply. The game of exclusions and preferences, the arrangement of the furniture, the choice of materials, the range of forms and colors, the light sources, the reflection of a mirror, an open book, a newspaper lying around, a racquet, ashtrays, order and disorder, visible and invisible, harmony and discord, austerity or elegance, care or negligence, the reign of convention, a few exotic touches, and even more so the manner of organizing the available space, however cramped it may be, and distributing throughout the different daily functions (meals, dressing, receiving guests, cleaning, study, leisure, rest) - all of this already composes a "life narrative" before the master of the house has said the slightest word.²³

This aspect can for instance be observed in *Copycat* (1995) directed by Jon Amiel, where the agoraphobic and introverted temperament of the main character, Helen Hudson, can directly be identified looking at the conception of her apartment, with the central arrangement of her office and the proportion of shading keeping it in the dark, evolving in relation to the evolution of the narrative.

*Time in films: a
paradigm of motion,
speed and rhythm*

Architecture is never neutral and completely autonomous: to apprehend the content of the following pages, it is crucial to acknowledge in this case that Architecture is not only about space but also about events, about what happens within those spaces. We have seen that the notion of space reveals itself through the motion of the human body. Cinema is indeed another way to experiment the architectural space, to move through it and discover its characteristics, this time not with our body and sensations but with our eyes, our mind and emotions. Architecture is not only about space - it's about programme and users, and in the end, it is about what happens within its walls. Architecture is read and understood through events and movements, through motion developing itself across time. Take a room, fill it with a crowd, and then empty it: same space, different place. Architecture is too often reduced to a static element, immutable and unalterable. The truth is, Architecture is variable in many aspects: context, occupancy, movement etc. In other words: Architecture is an environment, a frame for events to happen, in the same way a theatre stage or a cinema set can be. Many have tried to express these movements and circulations of crowds and beings within architectural spaces, like Oskar Schlemmer on dancing, architects looking for the ideal and optimised kitchen echoing the advertisement of the "Frankfurter Küche" in *Die Neue Wohnung* (Hans Richter, 1930) or today observed in the Neufert²⁴, or demonstrated with irony in Bent Hamer's *Kitchen Stories* (2004), where the character of the architects observes and transcribes the movement of the single man perched on a high chair. Even Bernard Tschumi tried to find a connection between space and speed in his project for the Parc de La Villette in Paris. Actions of the users, to a certain limit, are unpredictable and shouldn't possibly be too



Man as a Dancer, Oskar Schlemmer, 1921 / FIG. 34



Kitchen Stories, Bent Hamer, 2004 / FIG. 35

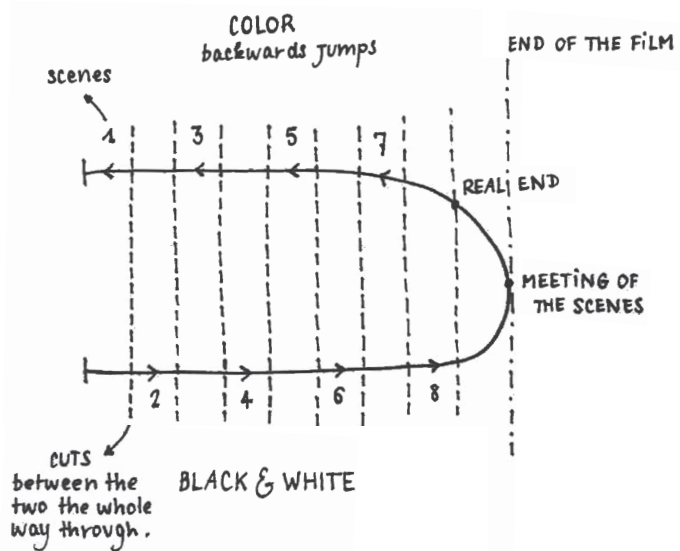
constrained. The discovery of space through the **movement** and **speed** of the body is crucial and has been played with over and over again in films, from slow-motions to accelerated scenes, to the surrealist acrobatic demonstrations of Neo in *The Matrix* (Machowski, 1999) and the complete filmography of John Woo or Hongkongese Cinema as a whole. In the latter case, editing is rendered extremely visible and stylized: the final fight scene from *Enter the Dragon* (Robert Clouse, 1973) and the whole work on *Hard Boiled* (John Woo, 1992) offer a catalogue of stylistic devices including slow-motions, temporal overlaps of the same action shown consequently from different angles, continuous succession between shots, freeze frames etc. showing the richness of effects that the camera and editing process can provide to play with motion and speed. Cinema seems to leave little freedom to this aspect of Architecture that allows the human body to discover space more or less free-willingly because it is a vision: the vision of a space through a camera which is basically the mechanical extension of the eye of a director wishing to share his vision to the spectator, who himself happens to be watching the film. **Motion** of the camera is already a statement and a meaningful choice to express a message or voluntarily stay silent. In such, if editing can be defined as the art of deciding how and why to put the shots in a film in relation to one another, the typical one-shot sequence is a conscious choice of non-editing: if it implies no cuts and no collages, it has really big consequences in terms of choreography and team synchronisation and is never done innocently. Though such examples are plenty in film history, one-shots have lately become the typical figure of series and video-clips and are now so popular that they even led to the creation of dedicated film festivals. A pretty accurate example of such a talented work on motion can be observed in the series *Kidding* (Season 1 Episode 3, Michel Gondry, 2018). Thus, as demonstrated in a making-off video of this episode, deciding to shoot a full long take has decisive implication on the camera's motion as well as the actor's. This idea echoes what James Stewart, playing one of the leading roles in *Rope* (Alfred Hitchcock, 1948) confided about the filming, explaining the perfectly synchronised choreography - which can be observed as the kitchen door closes and opens

corresponding perfectly to what Hitchcock wanted us to see for instance - but also the movable walls which allowed a greater flexibility in the camera's motion especially considering the size of such devices at the time and the necessity to shoot everything at once. In the end, such scenes require to shoot, move the décor and act in the same time, and as James Stewart suggested, actors would better trust the chair will indeed be found below them when their part asks for them to sit down.

At the intersection of the concept of time and motion, because Cinema plays with editing, it can easily modify the speed and **rhythm** of events. Just like it plays with motion, speed and rhythm of the camera, Cinema plays with the speed of **time** itself, which a director has the power to impose on us. In Architecture, because it is obviously rooted in the reality of physical laws, time goes in one direction, at one speed. Cinema has the power to distort this time: flashback, flash-forward, slow motion, fast-forward, time-loop, time dilation, ellipse, time compression etc. The examples are plenty, and time structure can become really complicated, with many films trying to articulate this tension, from the popular example of Quentin Tarantino's *Pulp Fiction* (1994) to the less famous but perfectly scripted and directed *Memento* (Christopher Nolan, 2000) (FIG. 36).

In a more conventional manner, as it is easy to understand the distinction between diegetic and real space, we tend to forget that the same distinction exists for time. A pretty explicit demonstration is found in Guillermo del Toro's *Pan's Labyrinth* (2006) (FIG. 37). Read horizontally from top left to bottom right, these vignettes show the actual edited sequence from a scene, each time opposing close shots on the same body parts of both characters: girl's head/monster's head, girl's feet/monster's feet, girl's hand/monster's hand. When read vertically as two columns, the action can be seen from the perspective of each character: the time sequence from the little girl on the left, the time sequence from the monster on the right. Coming back to the first reading, in the right order, we realise that every horizontal line is actually the same moment shown from two different perspectives, making time twice as long and making

the action dramatically slow down and increasing our tension as spectators. This example demonstrates a typical trick used in Cinema to play on time and our emotions.



Scenario structure and narrative time line, *Memento*, C.Nolan, 2000 / FIG. 36

In addition to the increasing suspense or dramatic effects due to time manipulations, we experiment daily changes in our perception of time according to our emotions: when having a good time, we usually feel like time is going too fast and the contrary is also true, as time seems to slow down when we are bored, scared or hurt. Thus Cinema, playing with the length of time, also brings us back to common experiences of our lives and in doing so, would probably make us relate to a slow action as something boring and a fast one as something exciting. There are many ways to achieve this kind of time manipulation but three are worth noticing: first on a technical level, the camera as a device has the ability to move faster or slower; in the case of a travelling shot for instance, and zoom in or out at a certain



Double chase in *Pan's Labyrinth*, G.del Toro, 2006 / FIG. 37

speed. Then, these effects can be combined as the travelling shot and the zoom more or less provide the same results with different methods, one physical and one mechanical, and those operations merged together can increase or decrease the speed of the scene. Finally, speed can result from editing itself, as it was shortly demonstrated. As we mentioned earlier, a second in a film is composed of 24 images, yet if we were to film more but show 24, the result will end in a slow motion: the more images recorded per second, the slower the action seems, for each movement would be recorded with more constitutive parts. In terms of editing, playing with the speed of the action and our perception of time is often achieved using the principle of the cut and the ellipse, suppressing an element which needn't be shown on screen for several reasons and therefore creating an effect of acceleration for example. This process is the kernel of film editing for this is the most important element to work on when a possibly several-year-long story needs to fit in a 90-minute-long film. In this case, transition spaces are of crucial interest, for we rarely see a character go all the way up stairs, escalators or even a lift, except maybe for dramatical or humoristic effects. Some parts are shown to us and what is hidden is "agreed on", it is assumed that as daily users of similar spaces our minds will manage to fill in the blanks. Thereby as long as the director doesn't intend for the spectator to be lost, the latter is always given an accurate-enough understanding of space. Time appears as a decisive feature of Cinema which changes our perception of spaces' proportions, allows us to grasp more or less details from a space, can include or exclude several places from our perception or dialogue with our emotions.

Sound

In films, unlike what is usually considered, emotions are mainly shared through **sounds** and not views: sounds cause jumps, shivers, tensions etc... As an exercise, I strongly recommend to re-watch a scene that made you jump but in two different manners, one after the other: once with the image but no sound, and once with the sound on but no image. Emotion, in this way, is more a perception, a concrete physiological reaction than a feeling. A possible example can again be seen in *Pan's*

Labyrinth (Guillermo del Toro, 2006), at the awakening of the monster: it is not the moving fingers in themselves that scare us, but the tremendous percussion hit in total synchronisation with the image. Still in this sequence, if we listen carefully, we can distinguish a strange noise in the background which is hard to determine at first: the décor, evoking the inside of a monster's stomach, is reinforced with sounds of grunting and tough breathing. Sound can thus also be used to strengthen a space itself designed to unconsciously support a narrative or a message, providing it with depth and consistency. In Tati's *Playtime* (1967), sound is used ironically to suggest the ridicule of the situation or the wilderness of the modern urban environment: crowd noises, circulation noises, honks opposed to cheap faux leather squeaking and never-ending footsteps on a hard stone floor pavement. In this last aspect, sounds are also able to communicate the material nature of space: no wonder that walking alone in an empty cathedral at night would probably be dramatised in Cinema to make us almost feel like walking on the hard cold stone ; and in contrast, when sounds are erased from battlefield scenes, the atrocity of war and the pain become shockingly deafening. In another of Tati's films, *Mon Oncle*, sounds can also remind us of some charming features of the historic city, like the humming of birds encouraged by the sun's reflection on a window. This example shows that sounds too have an evocative power, unconsciously bringing us back to other moments of our lives and the emotions we felt then. And last but not least, **music** is always regarded as one of the most important details to be perfected in a film, with a great impact on our emotional understanding of a film and its content. A clear example resides in the remastered version of *Metropolis*, originally directed by Fritz Lang in 1927, dubbed with a new wave rock soundtrack by Giorgio Moroder in 1984, turning the darkness of German Expressionism and the wounds of the First World War into a 80's giant disco experience. In between music and sound, the soundtrack from *Psycho's* shower scene (Alfred Hitchcock, 1960) offers an interesting example of music specifically composed to remind us of a woman screaming, which is exactly what the image suggests yet the sound cuts, preferring a replica to amplify the effect.

Generally, I realise that acoustics are frequently more or less overlooked in Architecture: except in the few cases when it responds to programmatic issues - music halls and medical institutions amongst others - noise management is either thought of in the latest steps of design or barely at all. Moreover, acoustics are not only about noise management but also about how to concretely use sound as a device in itself to increase or simply modify the phenomenological experience of a place, play with reverberation, absorption, echo, etc. to generate different comfort situations, different atmospheres and make us relate to the materiality of the place.

Finally, as cinematic effects are plenty, I will not go any further in their enunciation but I will allow myself to share an advice that was given to me vis-à-vis the study of films. We have seen that our understanding of films, in any aspect, is linked to our senses. Because Cinema needs to balance the flatness of the screen, the senses that we allocate to our filmic experience tend to be overwhelmed by effects and film analysis can easily become a drowning experience, leaving room for over-interpretation and missing the obvious. Hence, when trying to grasp a special characteristic of a scene or whole film, the best way to achieve that goal easily and efficiently is basically to reduce the number of senses allocated to the understanding of the excerpt. As surprising as it may seem, this allows the remaining senses to be fully focused into what they are looking for. This is what we came across in *Sound* for instance, shutting our eyes to listen more carefully. If, in a similar approach, we wanted to understand how motion was used in a scene, the best way to do it would be to watch it faster: narration and sounds would be erased and our minds will more easily make the desired observations. If we wanted to understand the rhythm of an edited sequence, then we could simply clap in our hands everytime we noticed a cut, without asking ourselves any further question. This kind of exercise was proven very efficient in the dissection of the aforementioned examples.



We now have a better understanding of what is Cinema and how it functions and interacts with space. In the end, Cinema is a complex organism which appears to be closely related to Architecture. Since the very first times of Cinema with the conception of décor, to the most recent times where sets tend to be reduced to green screens and computer generated imagery (CGI), both arts have developed together, each benefiting from the other on several levels. The art of filming shares a particular relation to space and Architecture, which it doesn't hesitate to transform in order to reinforce its own narration. Sharing common history, terminology and similar processes, they start to appear as two branches of one art of space, time and motion, playing with our perception to change our understanding of the everyday. To this end, in many cases, various techniques are applied at different times in the creation of a film that change our perception of space on screen. We started SCENE / TWO with the realisation that films constitute one of today's most important sources of spatial references. We have seen across this study that Cinema provides us with other kinds of spaces, mentally projected, enhanced and depicted to seduce us and counteract the flatness of the screen. These spaces become the most important source of comparison with the spaces of our everyday and induce us to look at them differently.

Cinema as a content is influenced by Architecture as much as Architecture is influenced by Cinema, but beyond this fundamental observation, Cinema as a form, as a representative medium with its own tools and operations, has the ability to enrich the perception of Architecture, becoming an unconscious catalogue of fantasised spaces in our collective psyche.

SCENE / THREE

SCENE \ THREE

The previous SCENE made us aware of the potential of Cinema to change our perception of space thanks to the use of various effects. The emphasis was put on Cinema and its relations to space. In doing so, principles frequently used in filmmaking to change our perception, guide us through an intended insight of filmic spaces and manipulate our emotions were defined. If the diegetic space behaves as an additional layer overlapping the real space without physically changing it, it nonetheless has the ability to transform it in our minds with the use of tricks. As films now stand as an important catalogue of references to which we most probably yet unconsciously compare our own everyday spaces, I propose to gather in this final SCENE illustrations relating to the conclusions of the first two chapters.

This third and final chapter will propose to dive into a more concrete approach, linking the effects observed in films in SCENE / TWO with an architectural case study. At first, to conduct this exercise, an experimental environment will be introduced, with a quick introduction on the nature of the chosen canvas for the study. Then, after clarifying the goals, boundaries and rules, various demonstrations will be carried out, using cinematic operations.



DIEGETIC ENVIRONMENT

1. The Rules of the Game

Small Scale Studio
Set: the themes,
the model, the rules

There are of course multiple ways to learn from Cinema and open a dialogue with Architecture. Even if we limit ourselves to the diegetic space, set in our minds and forget about the décor, rooted in our reality, there still remains limitless possibilities to enrich our relation to space from the realisation of the potential of cinematographic studies to transform our perception of it. But in my opinion, one aspect that I believe to be of interest and to hold potential for Architecture is, beyond the down-to-earth representation of space in films, the affective, attractive and emotional nature of space that Cinema offers. Though the observations made were legit, regarding the fact that most examples given in the previous section referred to different films from many different historical, cultural and sometimes political contexts, I propose to conduct a small experiment, applying the aforementioned effects to a homogenised and controlled environment. Basically, the strategy is to apprehend space in the way a director would apprehend the *mise-en-scène*, *mise-en-cadre* and the *mise-en-chaine*, playing with camera motion, light and shadow, sound, direction, angle and position of the camera, motion, speed, zooms, cuts, focus, order and duration of the shots, ... As a film-director works from shots and plans and manufactures them in a particular fashion with particular reasons, I intend to apply the same potentialities to a case study, therefore apprehending a space influenced and somehow re-shaped by cinematic themes. More than a study trying to illustrate an idea, I wish to transform this exercise into a game, not to prove anything but to combine some of the elements developed in SCENE / TWO and hopefully trigger intuitions and open new paths towards different ideas of space.

The general idea is to provide the analysis with a case study, in our case an architectural space, on which will successively be applied various typical cinematic effects that were developed in the first part of this argument. A first approach could have been

to oppose spaces seen in films to existing buildings that seem to have been influenced by those films. I personally believe that such demonstration has likely already been undertaken and is, from what I have been able to observe in this kind of direct lineage between Cinema and Architecture, quite subjective. Very few architects explicitly state being inspired by films in their work and when they do, the impact of Cinema is likely to be subtle. Yet I believe that one possible reason for this apparently discreet impact of films in our everyday architectural environment dwells in the unconscious character of this influence. Cinema is indeed a very popular art form which we experiment more than we know. Whether we want it or not, this medium of expression naturally changes the way we see our own environment and most probably the way we conceive it as architects. Thus I won't try to find connections between films and buildings in an almost operative strategy, trying to extrapolate architectonic principles from cinematic effects, but offer a sample of images demonstrating how Cinema can indeed change the way we read a particular space. Depending on the nature of the elements studied, these tests will be documented in films or photographs. But in either cases, as a fully controlled environment is required, a 1:10 model will constitute the canvas to work from. Someone recently made me aware that if I have a real-size studio set, a camera man, light- and wind- managers and the rest of a whole shooting crew at my disposal, that would be ideal. As I don't, I suggested the use of a model of great dimensions to become a small-scale studio set, hopefully offering the same flexibility as a large-scale one but on rather handcrafted level. As I intend to study our transformed reading of space and not relate to a more operative dimension, cinematic effects won't be used to change space itself but our perception of space, making it possible to apply all of them on a unique case study with a generic and standard value.

A set of rules then needs to be decided for in advance to provide the analysis with a more or less fixed frame, to be adapted and rearranged freely according to the needs but guaranteeing a minimum of coherence between the examples and their results. In such, the rules are the following:

The chosen architectural project will be modified **in itself...**

... given strategies and effects extrapolated **from films and film theories...**

... **thematized** regarding the **editing categories** developed in SCENE / TWO.

The aim is not to complete an architectural project or question what was completed in the chosen example but to try to observe new potentialities born from the study of Cinema.

*On homes &
domestic scale in
films*

To carry out this exercise, I need to introduce the particular relation between domestic spaces and Cinema.

Homes have always been a strong source of interest to Cinema for their ability to provide a plurality of interpretations. I am interested in applying the processes that were mentioned and developed in the last chapter to the domestic scale for multiple reasons. Homes are indeed a particularly cinegetic space: on the one hand, they appear as crossing spaces with doors and windows, connecting inside and outside through movement, fluidity, continuity. On the other hand, they appear as closed boxes with an independent geometry, questioning identity²⁵ and interiority. As such, the home has mostly been a major subject of the three genres that are the Film Noir, the Fantasy Film and the Gothic Cinema, but there seems to be very few films in which they don't appear, even subtly, as demonstrated in *Dogville* (Lars von Trier, 2003) where lines drawn on the ground suffice to make us mentally project a full décor. Cinema, as a representation tool, tends to show homes in films in such an important number because they are indeed so present in our everyday life and environment but also because they bear so much importance to us, as places that we all use daily, that we know by heart, that we can associate with memories from our childhood or holiday, that literature has played a lot with too, nurturing us with a romanesque background probably as rich as our own experiences and memories. Because homes are most likely to be the spaces we come across the most in our everyday life, I believe they are of relevance to our analysis. The home is the place of the individual, where we are free to be ourselves,

protected from the threats of the outside world and the society but in such also is a place to hide in. Homes then become a place of tension, between the value of shelter and that of trap, between the familiar and the uncanny, the protected and the hidden. In this three above-mentioned film categories, homes no longer limit themselves to being décors or backgrounds for the actors to evolve in but become actors themselves. From isolated villas to castles, they bear a dramatic dimension, hosting passions, ghosts, memories, murders, solitude etc. The state of mind of characters, the intrigue and the materialisation of space find a way to dialogue together. As human beings, homes guide us in the construction of ourselves: it is the place where all of our emotions, dreams and nightmares, fears and fantasies gather. In their aspects of isolated terms, a shelter from the outside world ²⁶, and a little world in themselves, homes provide the study with an object of relevant scale but which extracted concepts could be later applied to others. Sometimes, homes even become a pretext to combine the structure of a space and the structure of the film. For all of these reasons, the domestic scale tends to be the perfect experimentation scale in terms of dimensions, characteristics and efficiency of the effect. The typology that was chosen to lead this demonstration was chosen given several criteria:

A Individual unit...

- ... part of a **collective** housing typology...
- ... with a **historical** and **functional distance**...
- ... demonstrating the **generic value of a type**.

There are of course multiple types of spaces that could have been relevant to dig deeper in with regards to our area of interest. Yet this concern for the housing type comes from several intentions. First, the type is usually known and understood by more people which makes the exercise easier and quicker to grasp. Furthermore, its generic value provides it with an abstract context and a value of example. In addition, what can be demonstrated on a type can theoretically be applied to every other typology, no matter how specific, yet the opposite is not always true: if successfully interesting, some of the aspects

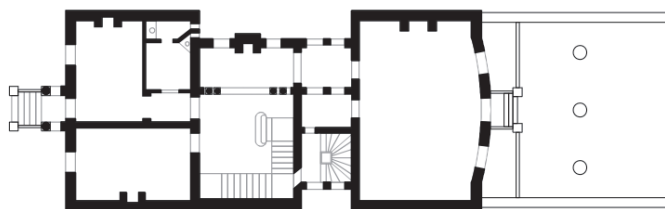
experimented further below will testify a greater impact. Finally, as specific typologies are more often born from the particular relationship between an architect and a client, given constraints of all kinds, the integrity of such a project is more likely to be damaged by our illustration, questioning its very legitimacy. The type, in contrast, is more neutral but also more functional, therefore establishing a healthy basis to start from. I would like to insist on the fact that the precise identity of the example, though very useful, is in itself of little importance: apart from the characteristics that need to be present in its structure and that were enunciated above, any type offering them could have been suitable for the experiment.

I settled for the typology of the Georgian **Terraced House**, a typical Row House typology very popular in the United Kingdom since the 17th century. This type has been built in great quantities over the years, evolving with time and need and proved its relevance in the very core of its structure. It is indeed a functioning type and I don't pretend here to improve it. The very nature of a type is the variation on a theme and this is exactly what the following game will stand for: an initial type as a theme, a set of rules to play with, resulting in a panel of variations - imaginary ones in our specific case. None of them will expect to be better than the theme and its current variations but all of them will try to consider Architecture from another viewpoint, trying to show new ways to look at Architecture and understand it.

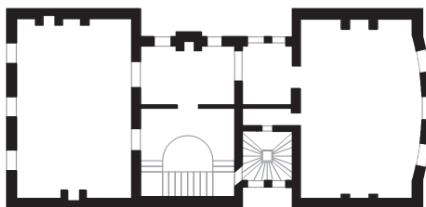
After the Great Fire of London in 1666, bye-laws were established to ensure safer buildings and manage a large-scale reconstruction of the destroyed urban fabric of the city. Housing had to be built quickly, efficiently, guarantee its resistance to fires and floods and remain economically affordable. With the Greek Revival and the Neo-palladianism style hitting the cultural elites of the United Kingdom, this typology became a very desirable property type at the beginning of the 17th century and is defined as row houses sharing a party wall. Large demonstrations of such typologies can be observed in Bath with the example of the Royal Crescent or Edinburgh with the Royal Circus. "The standard type of terrace house, to which the majority of the

*The Initial Scenario:
The Terraced*

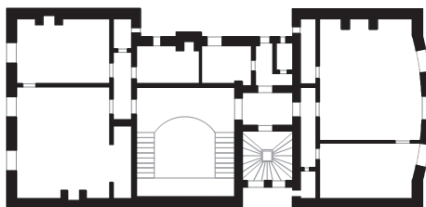
Ground Floor



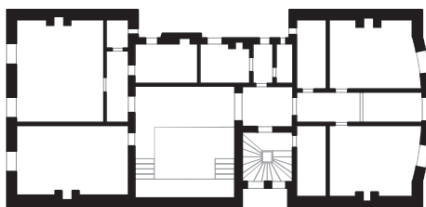
First Floor



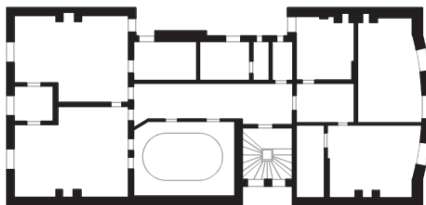
Second Floor



Third Floor



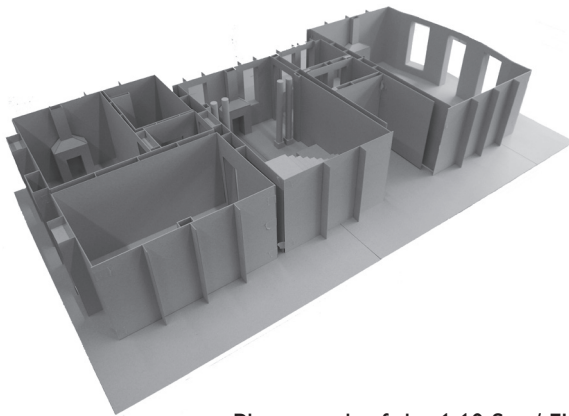
Fourth Floor



Design for a row of London Houses, Mr. Kerr, 1864 / FIG. 41

Bath examples belong, usually has a street frontage [...] with a garden or yard at the rear according to the site conditions.” according to *The Georgian buildings of Bath from 1700 to 1830*²⁷ written in 1948 by Walter Ison. The terraced houses built in the Georgian era are usually characterised by sandstone ashlars, sash-windows and semi-basements and can also present bay-windows or double-arch windows.

As to today, the terraced house typology remains of relevance in the architectural and urban planning, becoming a popular way to provide medium- to high-density housing for various social classes. I chose to work on an example of a London Terraced House built in 1864 with a typical arch-window at the rear (FIG. 31). The whole house is in itself extremely big, including stables and composed of an immense basement and five above-ground levels. The exercise will limit itself to effects applied on the ground floor, for this storey gathers the most interesting articulations in terms of circulation and relationship to the outside, two aspects of interest in our case. This floor contains many transition and serving spaces, from entrance hall to corridor, main staircase, servants staircase, lobbies, closets... and only two functional rooms: the library and the drawing room, which has a direct connection to the backyard outdoor space of the house. A specific aspect of this house worth noticing can be observed in the lateral windows, in the corridor and lobby for instance as well as in the servant staircase.



Photograph of the 1:10 Set / FIG. 42

Though this is indeed a row house, given the important depth of the plan, openings needed to be introduced with the help of special outdoor vertical areas or skylights. As such, despite its row house nature, this house shows many similarities with a detached house and provides the demonstration with an example of wider significance.

2. Cinematic Laboratory

This part records the experiments conducted on the aforementioned typology given criteria that were enunciated in the earlier parts of this argument. Each criterion will be applied to the typology, in different ways when possible and create room for interpretation, echoing situations observed in films. My goal is to examine more concretely, through the model and the material approach, how the effects extracted from films change our perception and understanding of space and our relation towards it.

This first demonstration is focusing on the spaces observed through a window, the frame acting like a selective device between inside and outside.

Both points of view - first in the drawing room, then in the staircase hall - are compared with and without the frame, respectively right and left. If I oppose the control experiment images to the over-framed illustrations, it appears that the second set leaves me with a feeling of **uneasiness**, as if I was compressed by the frame itself. The over-frame puts us in the position of a **voyeur intruding** into someone's privacy - even if no one is to be seen within the composition. Additionally, the blurry sides of the foreground and limitations in the framing provide the seen object with more value by limiting our area of interest and in this way decide for us that everything outside of these boundaries is not worth our attention. This effect also participates to the general feeling of **discomfort**, as we realise that our knowledge and therefore control of this environment is limited to a small section and that basically anything could erupt from behind the frame and **threaten** us.

From top left to
bottom right

FIG. 43 /

un-Framed from
the Drawing
Room window

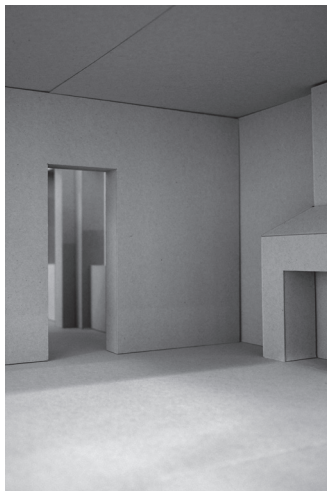


FIG. 44 /

Framed from the
Drawing Room
window

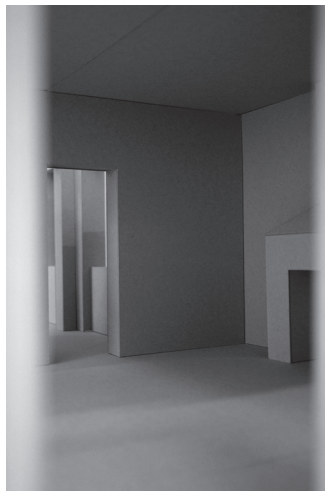


FIG. 45 /

un-Framed from
the staircase's
lateral window
(area for light)



FIG. 46 /

Framed from the
staircase's lateral
window (area for
light)



In this second specimen, we are interested in analysing how door openings can be used as over-frames as suggested earlier, and compare stills where doors are present and more or less opened. Hence, the stills successively demonstrate the extreme case of a door almost closed, a door slightly opened, another one ajar and finally a door fully opened in its frame.

Like observed in the previous case, we have the feeling to be intruding, to be witnessing something we shouldn't or violating someone's intimacy. The more the door is open, the more absorbed in the room we are and consequently the more **welcome** we feel. As demonstrated on multiple occasions in *Mother!* (Darren Aronofsky, 2017), door over-frames place us in the position of a **powerless witness** as we can see what is happening but unable to act. The intended decision of the director to leave us out of the room, making us even more aware of our status of spectator, can make us feel very frustrated. Unlike doors, windows in the last example didn't generate such a feeling of **exclusion** but on the contrary of inclusion, perhaps even intrusion. This nuance is likely to be due to the fact that doors are meant to be physically crossed whereas windows are visual thresholds which essentially limit us to watching without acting, turning **frustration** into **voyeurism**.

From top left to
bottom right

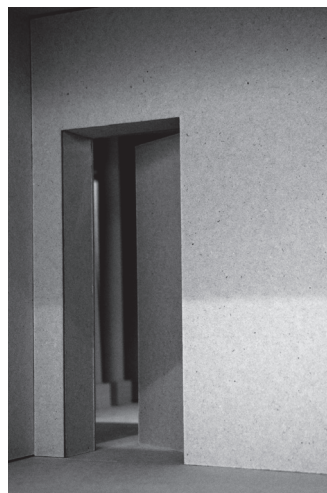
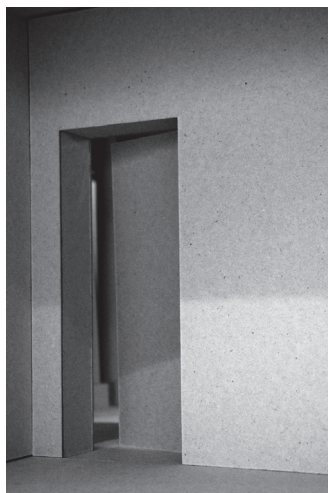
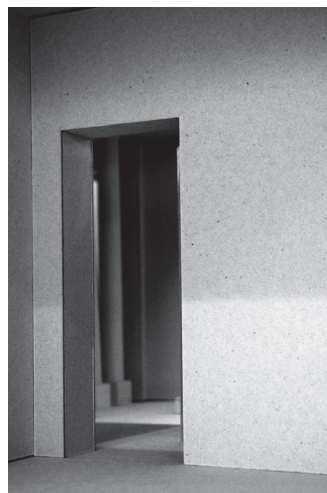
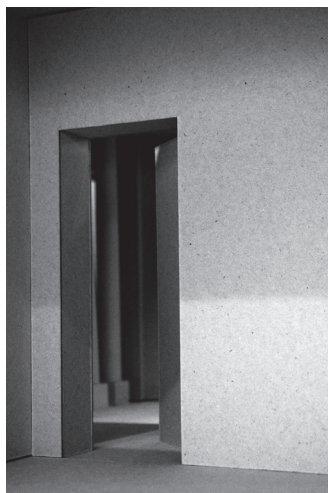


FIG. 47 /
Almost closed
door

FIG. 48 /
Slightly opened
door

FIG. 49 /
Ajar door

FIG. 50 /
Fully opened door



As a tool in films, the focal length has the ability to change our perception of space because it determines a sharp area opposed to a blurred one and can thus limit what we see more accurately than a frame, highlighting the chosen objects with more emphasis by letting us understand the context better than a proper frame which tend to erase completely some areas of the image and leave us quite literally in the dark. Thereby, blurs make us concentrate efficiently on a particular area of interest because our eye immediately catches everything sharp.

This application of the *profondeur-de-champ* can be observed in FIG. 51 and FIG. 52: in the first, emphasis is given to the foreground columns and in the other, to the second further set of columns. In the first image, we are focusing on the foreground and almost feel like integrated in the action, as the focus is made in our proximity, whereas in FIG. 52, we don't feel absorbed by the scene but expect the entrance of someone or something from the door located at the rear. Hence in the first case, we feel **invited** to enter and do something but in the second, we are passively waiting for something to happen and left **expecting**.

FIG. 51 /

Focus on the first
pair of columns,
enhanced
foreground



FIG. 52 /

Focus on the
second pair of
columns, enhanced
background



Compared to the two previous effects, the angle of view is an effect of the camera settings and lens properties generating deformations rather than blurs.

In the top image, using a 17mm lens, we can observe a slight deformation, stronger on the perimeter of the image. This visible distortion is due to the so called “fish eye” effect, or ultra-wide lens - or in our case, a simple wide-angle. In contrast, the bottom image uses a 18mm lens which avoids these distortions. In films, the fish-eye is regularly used to suggest a **subjective viewpoint** and in most case, that of a machine with the famous example of HAL900 in *2001: A Space Odyssey* (Stanley Kubrick, 1968). More common examples are usually demonstrated as a character looks into a door peephole, when one is observed through any kind of technological device or even when one is under the influence of controlled substances. This explains why even a slight deformation on the sides of the first image makes us feel either like an intruder - and to this end I refer to the frame experiments conducted on pages 106 to 109 - looking through a peephole or **observing** the scene from behind a surveillance camera set up, or simply a little **sick**, giving us the impression that our eyes are not functioning correctly or that we are lacking balance.

FIG. 53 /

Lens 18 mm
(narrow angle)

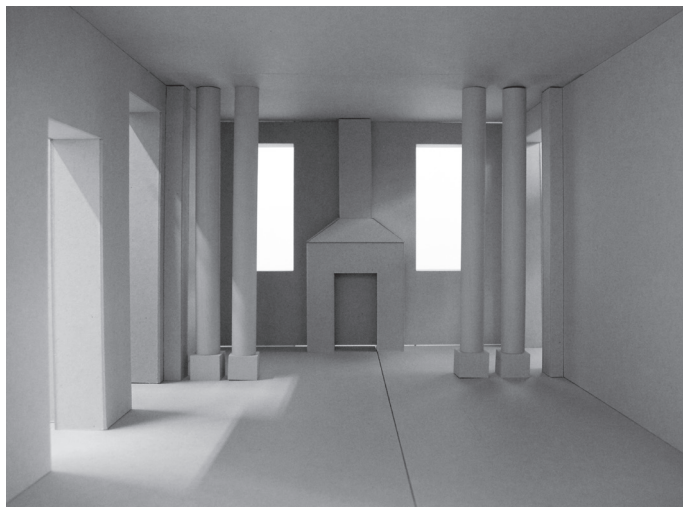
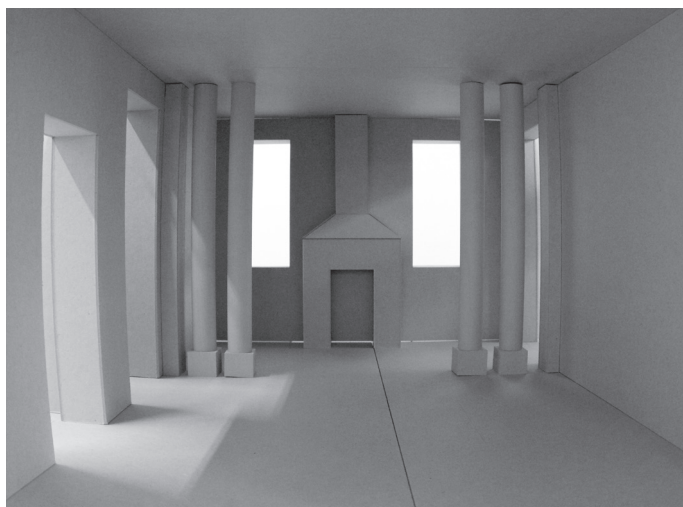


FIG. 54 /

Lens 17 mm
(wide angle)



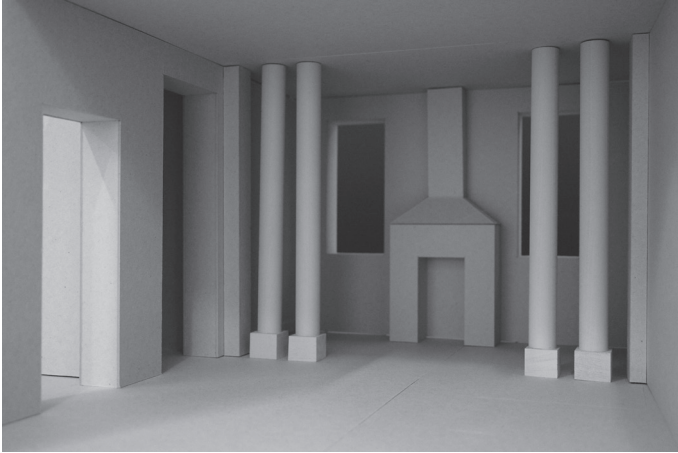


FIG. 55 /

Diffuse &
Welcoming - a
neutral situation
with little rim
light, soft key light
and multiple fill
lights

Very different atmospheres can be generated with different lighting positions and settings: strong light with a lot of contrast, soft and diffuse lighting, defined shadows or overexposed scenes... A sample of possibilities is illustrated on the adjacent page, showing three ways to play with light and change the apparent characteristics of space only varying the intensity of the rim, fill and key lights. In the end, playing with very simple settings, the same space can be perceived as very **welcoming**, **neutral**, **gloomy**, **scary** etc... (FIG. 55 to 58). But more than this, as we mentioned in the previous pages of this argument, light and shadow can become a tool to make us understand the space beyond the frame. As such, it is possible to project shadows **suggesting** the existence of a door without any actual window being seen: the third variation (FIG. 58), playing with contrast, offers an atmosphere inspired by *Suspicion* (Alfred Hitchcock, 1941). The space that we project in our minds is then different than the space we can really observe. Thus, in this example, the door can't be seen within the composition yet the shadow on the floor implies its existence.

FIG. 56 /

Diffuse & Gloomy
- Increased Key
Light

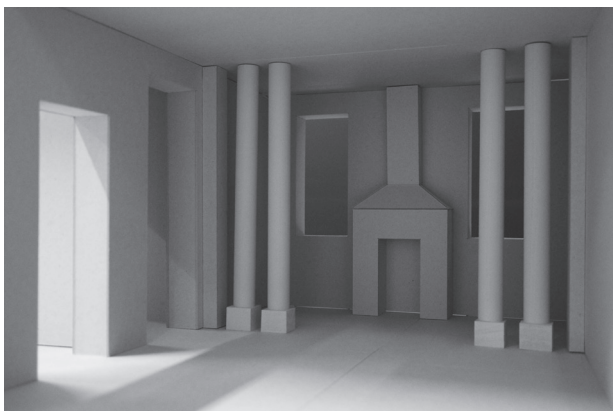


FIG. 57 /

Hard & Invasive -
Increased Fill Light

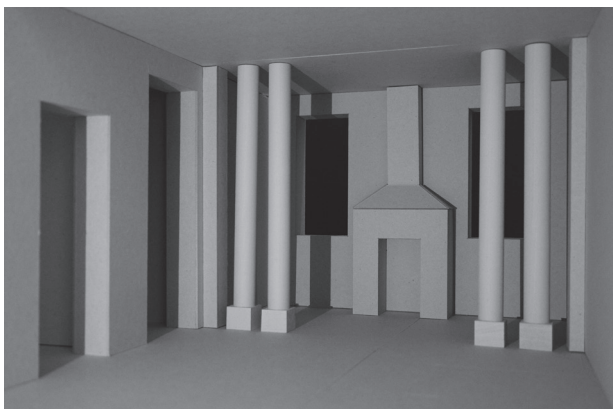
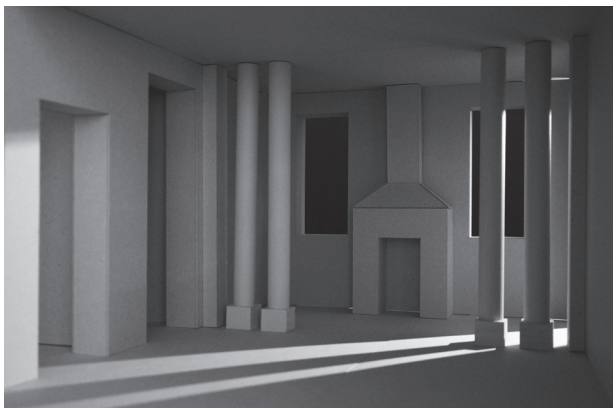


FIG. 58 /

Hard & Scary -
Increased Rim
Light



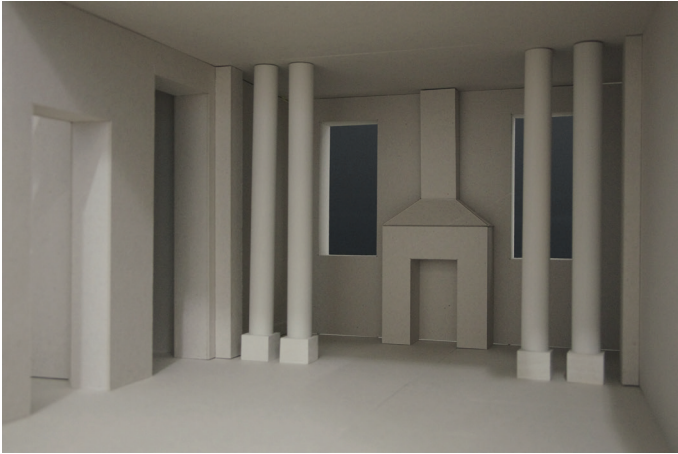


FIG. 59 /

White lighting
- cloudy day or
artificially lit space

Colour is a particular type of light which can also allow different perceptions of the same space, changing its **atmosphere** more directly, but sometimes also relate to our unconscious understanding of a scene. Colours are connotated differently in different parts of the world but they also create **physiological** impacts that go beyond cultural backgrounds. Basically, in a very basic opposition, red is generally considered a stressful or worrisome colour while blue is known to be soothing and comforting. In a more pragmatic interpretation, a sunny day allows yellow light to enter rooms whereas cloudy days or spaces lit with artificial lighting generate a whitish coloured light. Thus colours manage to manipulate both our understanding of a scene - what time is it? what is the weather like? does the room open to the outside or not? - and our emotions, allowing us to feel welcomed or intruding, calm or stressed out, etc. as can be observed on FIG. 59 to 63.

FIG. 60 /

Blue lighting -
soothing, silent,
dawn or dusk
atmosphere



FIG. 61 /

Red lighting -
stressful, alarming,
worrisome
atmosphere,
perhaps an
emergency light?



FIG. 62 /

Green lighting -
uncanny, unsettling
atmosphere



FIG. 63 /

Yellow lighting -
sunny day, familiar
and welcoming



Mirrors have multiple roles. In Architecture, they are able, among other things, to change the visible proportion of a room. Moreover, they also hold an introspective and reflective nature which can be applied to space. Thus in the first aspect, mirrors can trick our rational understanding of a space, pretty much like one of the final shots of *Citizen Kane* (Orson Welles, 1941) (FIG. 30) where what looks like a corridor is actually just an infinite reflection of the same space. This example also demonstrates the introspective nature of mirrors and their possible value of metaphor, which is most probably easier to observe in an occupancy-study than on space itself. Yet, tricking our understanding of space and its **limits**, mirrors are able to **disorient** us and make us feel either lost or **surrounded** (FIG. 65). In the end, these mirrors leave us with a feeling of **uncertainty**.

FIG. 64 /

A neutral situation

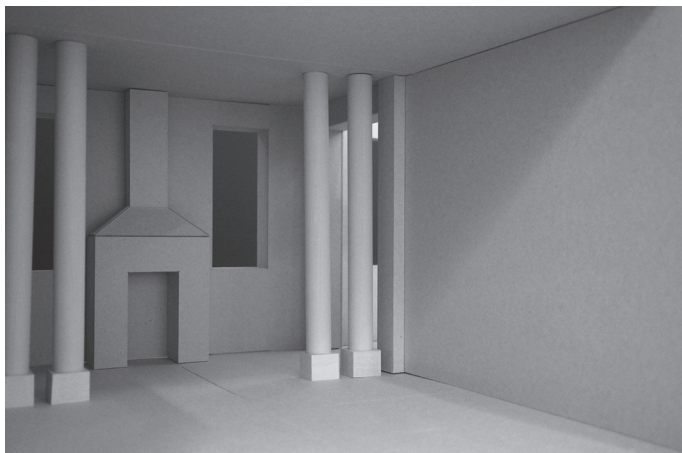
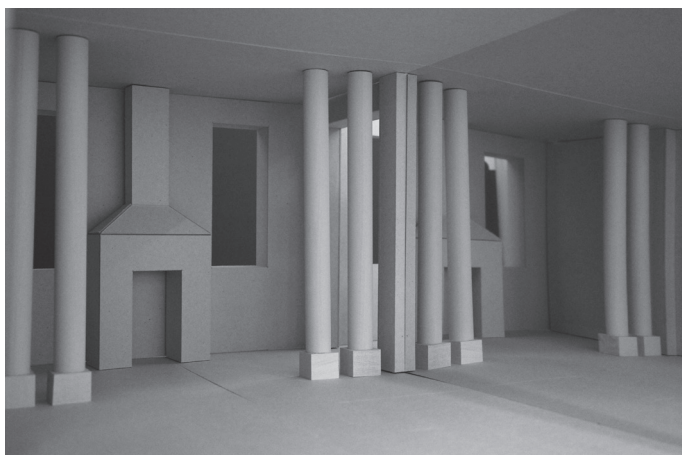


FIG. 65 /

Quantity & quality:
how big is this
room? How far
can I go without
hitting myself? Am
I really in a huge
room, surrounded
by so many
columns?



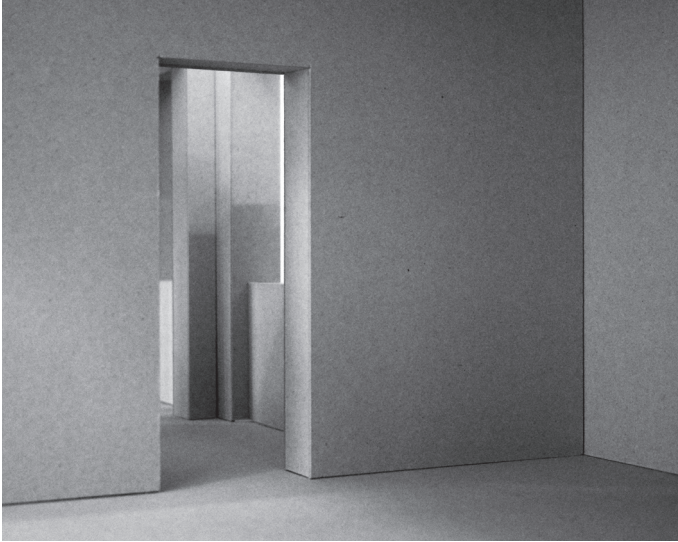


FIG. 66 /

A neutral situation
with a door frame

Unlike mirrors, reflections allow the eye to pass through and act as filters or overlapping layers of images on others. In Architecture, they are commonly found in glass or other reflective elements like polished screeds and varnished parquets among others. Reflections offer a new dimension, **hinting** what is to be found behind their surface for instance, reminding us of the space we are leaving or making us more **aware** of our own embodiment while confronting with the surface. Like mirrors - and this was shown by Jacques Tati in *Playtime* (1967) - reflections can create **confusion** and **disorientation**, not because they extend the visual dimensions of a space this time but because they are able to cut a space in halves, letting the eye go through while blocking the body. The neutral situation (FIG. 66) is modified given two aspects on the next page: the notion of blurred limit, where the space behind can be distinguished, and the aspect of awareness, with a photographed photographer.

FIG. 67 /

Invisible limit :
a space is hinted
behind another
through the
reflective surface
but can't be
reached,
another one is
suggested as
the apparent
window on the
left is actually the
reflection of the
window behind us

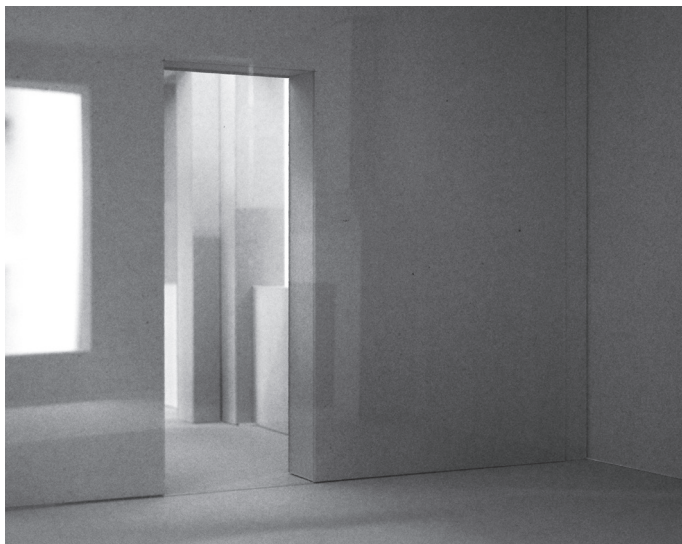


FIG. 68 /

Embodiment
awareness :
reflections allow
us to see both
in front of us
and behind us at
the same time,
making us more
aware of being
in a space and
making it harder
to understand the
space itself.



As obvious as it may seem, I believe relevant to mention speed in a short demonstration. In FILM 1, the same video is shown at two different speeds, the second being accelerated to twice the speed of the first. A slow action introduces us in this case to a comfortable viewing, while the accelerated one, with its increased camera motion, leaves us with a feeling of **urgency** or a general **stress** - are we late for something important? I believe this may be due to the fact that the quicker the scene the less time we actually have to appreciate the context and we therefore naturally shift our focus on the content, making us wonder the reason for this hurry rather than analyse the space we are crossing.

In our memory of the scene, it is also not impossible that a scene at augmented speed may let us think that the space was actually shorter than it really is or that a scene at regular speed was shot in a space richer with details because the time allocated to us to grasp these details was longer. In this aspect, speed can as well be understood as a selective device, this time not in relation to our sight only but in combination with our memory. Using this principle, if the aim were, in Cinema, to make us spend more time in a corridor either to increase the dramatic effect when reaching the space located at the end or to make us see the corridor as a room of its own, tricking us in the understanding of its dimensions, its length and level of detailing in the décor could be adapted in proportion or the path of the camera to lead us from a point A to a point B could be changed into a less direct approach (FILM 2).

FILM 1

Neutral sequence, then at doubled speed: what are we so worried about?

FILM 2

Sequence that start and ends at the same point but goes through multiple détours, taking longer to reach the target: the space looks bigger and we feel more relieved to reach the target

FILM 3

Absence of doors:
we feel free, our
motion is fluid and
unimpeded

Presence of doors:
it takes longer, we
are obstructed,
we are scared at
every opening:
are we going
to intrude and
witness something
we shouldn't? are
we finally going
to get out or
are we stuck in a
immense corridor
of doors?

FILM 4

Falsly infinite space
sequence:
editing makes the
space look like a
circular labyrinth,
starting over
and over again.
We are tricked in
the nature of the
space and we feel
trapped

Doors, already mentioned as framing and reflection devices, hold the potential to separate not only rooms but also scenes from one another. The door is usually the place of the cinematic cut, in space but also in time, making ellipses and jumps more discreet, and therefore tricking our perception of both spatial features and time.

Thus, FILM 3 demonstrates how our sensations can vary depending on the presence or the absence of doors. In the first extract, the motion is fluid, **unimpeded** and we feel almost as if we were **free** to roam whereas in the second example, doors appears as **obstructions**, making us **annoyingly** stop everytime. Additionally, the act of opening a door in a film is not as innocent as in Architecture: are we going to intrude and witness something we shouldn't? Will we discover something of great value? We can usually guess from a shot seemingly insisting too much on a door about to be opened that something embarrassing is located behind. As the opening postpones the understanding of the next space to the last minute, the **dramatic** effect is increased.

In FILM 4, editing demonstrates that doors, hiding the cuts and jumps, allow to modify space to great extents. This sequence is falsly made infinite, changing the apparent groundfloor into a much bigger storey and making us feel trapped within it in a never-ending labyrinth of doors. The cut between doors is here inspired by the classic fade out/fade in used in *Psycho* (Alfred Hitchcock, 1960), where Hitchcock, due to the limited length of the reels at the time but wishing to make a film in a single long-shot sequence, decided to introduce this effect to hide the cut and create soft visual transitions between shots, hence making us believe in the illusion of a single-shot film.

This final set of illustrations wishes to demonstrate what can be achieved in cinema through sound editing.

In FILM 5, various musical soundtracks are dubbed to the same sequence : a classical music, rendering a sense of **majesty** and **self-confidence**, a modern rock dynamic song, giving us **energy** and making the atmosphere of the space sensibly **lighter** and finally a tense string music from *Psycho*'s soundtrack (Alfred Hitchcock, 1960), making us **tense** and **frightened**. FILM 6 demonstrate that the same effect can be achieved synchronising "natural" soundtracks, in our case wind and storm, leading to the belief that the space isn't as airtight as it seems and providing a tense atmosphere. Linking this type of effect to others like lighting or colour can prove to have a quick and efficient impact on the observer's emotions.

In a more architectonic way, sounds usually relate to acoustics, a notion which itself relates to the materiality of space and is the result of our physical confrontation with space: how does our voice resonate? Is the floor marble-hard or carpet-soft? There is probably nothing more upsetting than the door exhibited in *Playtime* (Jacques Tati, 1967) which closes in total silence when slammed with anger, proving that our experimentation of spaces and architectural elements is closely related to expectations and cultural sensibilities. In the FILM 7, the video is synchronised with the sound of steps on a wooden parquet and then steps on a marble floor, resonating and giving a sense of materiality in our fully cardboard-built model.

FILM 5

/ Vivaldi's *Autumn*
/ The Black Keys' *Lonely Boy*
/ *Psycho*'s
soundtrack

FILM 6

Weather and
Nature

FILM 7

Variation on steps
and materiality

These small illustrations were very constructive to conduct and made me more aware of several aspects regarding the primary conditions of the experiment itself. Firstly, if the model is indeed of great value to allow a maximum control in an optimised environment, many aspects are harder to control due to the small dimension of the tool: for instance, light management is a rather achievable feature yet “camera” motion is much more complicated. Also, I now understand a lot better why ceilings were rarely shown in early Cinema: as they constitute the most important area to introduce lights, there often just isn’t any ceiling to be shown on screen and it is simply inconceivable to show a technical void. This problem is one I came across during the exercise, amongst others. These particular features tend to reduce the experiment to its technical dimension but the difficulties encountered when making the illustrations made me more aware of the un-hazardous dimension of filmmaking: more than ever, I understand that every decision is meaningful, carefully and voluntarily decided for, given the complications they usually imply. Secondly, a neutral background may be useful in some aspects but in this way the model lacks the plausibility and richness of real life Architecture, as much as it lacks the specificity of sets conceived in their every detail in the case of Cinema. Thus, an interesting approach would be to bounce back from the observations made in this argument and try and apply them to the 1:1 scale. Generally, even if these illustrations went through an abstraction process, I am convinced that conducting these exercises was extremely important to broaden my understanding of the technical aspects at stake in filmmaking, allowing me to go past theories and numerous examples and envision an experimental approach rather than an analytical one. In the end, I realise that each effect taken individually has an impact but when combined, this strength of the impact is increased as can be demonstrated in the final film, *Combined Effects*, mixing music, speed and contrasts among others.

In SCENE / TWO, many examples among which those of Eisenstein, Kuleshov and more recently Zbig Rybczynski helped us demonstrate the complexity of interactions between Cinema and Architecture, each influencing the other, either consciously or not, each presenting potentialities for the other. It is generally acknowledged that Cinema uses Architecture to create either a context or a character, sometimes shooting in existing places, some others creating its own space to respond to specific demands and sometimes using a hybrid space, between studio sets and reality. In contrast, in most situations, Architecture is inspired directly from Architecture itself. This conception is based on the study of the historical disciplines, that is to say the works of the ancient masters through the history and the theory of Architecture. It is true that both disciplines share many points in common : they share tools and terminologies such as the use of perspective, of viewpoint, of editing and collage, of sequence or enfilade, of narration, of movement, of rhythm etc... but above all, both disciplines use space as their basic material. Written after a symposium on Cinema and Architecture in Cambridge (UK) in April 1995, the book *Cinema & Architecture: Méliès, Mallet-Stevens, Multimedia* quotes Sir David Puttnam, former chairman of the National Film and Television School (NFTS), on the occasion:

*When Architecture, the most public of all art forms,
meets Cinema, the most popular of all art forms,
something exciting is almost bound to happen.* ²⁸

Given the potentialities that editing and other cinematic techniques seem to be able to offer to influence our perception and understanding of space, I propose to see cinema not only as a representation tool to show Architecture differently but as an operative work tool to think and create Architecture differently.

Architecture, seemingly stronger than Cinema in terms of spatial experience, is however trapped between economical, administrative and other constraints. But above all, it endures the laws of physics. At the very least, films can help us, architects, reconsider our relationship to the concrete and abstract, to the

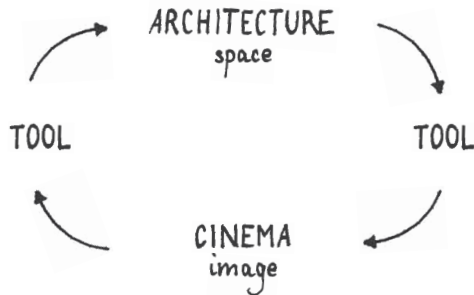
real and fantasised and take a step back from our own practice and what is too soon taken for granted. In a conventional way, Cinema is a representation tool for Architecture, a consequence:



In practice, this scheme translate the idea that we tend to project our memory of spaces and places into films. But this logic can be inverted as we can project our cinematic memories into Architecture to transform filmic references as well as cinematic tools and operations into a tool of conception and experimentation, in the same way models and sketches already are tools for the architectural project:



In the end, if we merge these two processes together, we could finally end up with an enriched relationship:



In the first times of Cinema, the so-called Cinema of

Attractions referred to an art with very little content, which qualities were essentially technical and visual. Films were captivating because what they technically offered was impressive. With the creation of the cinematograph, infinite experimental horizons seemed to appear. The impact of this fascination of the spectators for the device and medium was strong enough to change today's meaning of the word "attraction" itself: once relating to a simple physical force drawing us towards an object, it began to absorb the notion of tricks and effects of spectacular nature which were present in films to reach today's common definition. Now that these tricks and effects of spectacular nature suggest to generate architectural spaces presenting cinematic qualities, a door opens towards numerous experimental opportunities in an Architecture of Attractions, seeking a new fascination with the creation of captivating, appealing and seductive spaces.





This final SCENE provides us with illustrations in an unified and controlled environment. Like in a small laboratory, neutral spaces were confronted to various effects. These necessary operations in Cinema, conceived to balance a natural technical deficit of the media, generate intensified spaces that speak to our emotions and mood, relating to memories and experiences and places us in a new relationship with space. Hence, as Cinema constitutes an important collection of spatial references, we naturally tend to be influenced in our experience of everyday spaces. Reacting to this diagnosis, if we are indeed also likely to be influenced in our conception of spaces as architects, we could imagine a new approach to our methodology. If integrated as a part of the design process, films would allow not only to transform our perception of spaces but also generate new spaces, using the aforementioned effects and methods as materials to work with from the early stages of the project.

Cinema offers a new reading of Architecture, where the rational and functional turn into fantasised and intensified spaces. This awareness allows us to envision a new design process, voluntarily cinematographic and consciously using the cinematic effects to create architectural spaces holding similar qualities, closer to our fantasy and emotions.

*The art of framing characters within diegetic architecture, cinema also creates architecture through the camera. In the process of creating cinematic space, phenomena such as lighting, sound, editing, camera positions, and camera movements can and should be interpreted as architectonic practices.*²⁹



AFTERWORD

SCENE / ONE defined the boundaries of the word Cinema granted in this study and established the existence and nature of particular relations between Cinema and Architecture. SCENE / TWO then introduced the idea of a large catalogue of spatial references contained within our filmic experiences, where space is subject to other considerations compared to existing spaces of our everyday. These particular considerations, gathered under the term “effects”, are used by directors to generate a seducing, appealing space, linked to our emotions and memories. This observation made us reconsider the conventional assumption that space is merely a tool for Cinema in a one-sided relationship, making us aware of the role that our filmic experiences of space have on our architectural reading of space. To illustrate this notion developed in SCENE / TWO, a small illustration was provided in SCENE / THREE, not to deduce anything more than what was already envisioned in the previous chapter, but to understand the study better using architectural tools and a homogenous medium for comparison. In addition to this new reading of space, our filmic experiences can inspire new operative methods to be applied to Architecture.

Cinema is a director's vision and like every vision, is is subject to interpretation. Space in Cinema is not rationally meant to function but is thought to seduce us, guide us into a particular understanding and manipulate our emotions. As we acknowledged in the second part of this study, due to our current way of life, we consume spaces in greater quantity in films than in our daily experience. One way or another, this immense cinematic database enriches our knowledge of existing spaces. Given the particular nature of Cinema, stuck on the two-dimensional screen and flatening space, effects are necessary to compensate and provide us with a strong experience of the missing third dimension. This results in a fantasised space, appealing and attractive, at the root of our collective psyche. This consequent catalogue of examples that

we unconsciously consume in our everyday life changes the way we see space because we tend to see what we want to see, or in other words, we see what we are familiar with and able to distinguish: if some projects may have been planned as direct transcriptions of buildings seen in films, with the example of *Things to Come* (William Cameron Menzies, 1936), and the Marriott Atlanta (John Portman, 1985), an interesting example can be observed on the website *Accidentally Wes Anderson* which demonstrates, through an important library of images from all around the world, a great richness of spaces that seem to have been influenced by the director's relation toward space in their making, but may simply be linked to his work in our minds due to our knowledge of his filmography and taste for symmetry and acid colours, making us project it on other spaces. Thus Cinema's emotional influence on us in our perception of spaces is not about conscious decisions but about unconscious latent cultural backgrounds. Reacting to Sir David Puttnam's quote, Architecture, as a public and social art, is never hermetic to scientifically and culturally rooted notions with such popular implications. As it was already demonstrated in history on several occasions, for instance when new media and techniques like perspective drawing and photography emerged, Architecture tends to echo and reinterpret developments made in other artistic disciplines.

We now acknowledge that beyond the reality of the built space exists another space, fantasised and mentally projected, resulting from our modified perception and produced by cinematic effects. This diegetic space appears as an additional layer overlapping our reality and offers as such new readings of space. As Cinema shows us references that deepen our knowledge of existing spaces and thus our perception of our everyday spaces, it appears to change our experience of everyday Architecture. This research, wishing to reveal the potential of Cinema as a source of inspiration and reference in the perception of Architecture, opens the door to new possibilities of making Architecture, consciously and willingly cinematographic this time. As films change our perception of space thanks to a great quantity of appealing specimen, we can imagine that architects are not completely unresponsive to this

available source of inspiration. One can wonder if indirectly, Frank Gehry's Guggenheim Bilbao wasn't influenced by *The Cabinet of Dr. Caligari*, with its edges and angles, its sharpnesses and tensions. But no matter exactly if and how architects watching films are influenced in their work, in the end, this results in a dual realisation: firstly, beyond the representation of a real space stands the fantasised perception of this same space, and secondly, beyond the latter, we can suppose the birth of new projected spaces as a cinematic repercussion. Finally, we can dream of an architectural, projectual process fully integrating in its methodology several cinematic effects, playing with light and shadow as a common model material for instance, like any other cardboard or styrofoam or with the editing of spaces, architectural plans and sections turning into storyboards and reels for architects to arrange seductive spaces. Why, then, should architects watch films? At the beginning of this study, we acknowledged that films emerge as some of the richest tools of the XXIst century to discover the world we live in and we are now aware of their potential to change the spaces we want to generate. Cinema can help us not only change our medium of reflection on space from sketching to watching but also our medium of expression, introducing a rather operative-oriented investigation line where films begin to appear as tools and materials to plan other spaces.

At the Renaissance, art and science converged, each influencing the other which eventually led to the invention of the central perspective: the world was represented geometrically and rationally through the viewpoint of an imaginary subject. With the invention of photography and cinema less than 150 years ago, space and objects are no longer represented using a single viewpoint but several. Joachim Sauter tackles a major interrogations: "Will the form of representation possibly give rise to a new idiom, a new media language, a new dramatic form?"¹³⁰. These questions relating in his case to the recent implications of Virtual Reality, 3D, 4Dx etc... in our experimentation of films are nonetheless relevant to our study, the question being: how can a representation medium be turned into a new methodology?

To be continued...



[...] lorsque la scène est close, que les lumières de la salle s'allument, nous nous trouvons dans un espace qui n'a pas toutes les qualités que nous pouvions avoir dans un espace cinématographique. Il est moins bien éclairé, moins bien sonorisé et malheureusement, bien que cela soit épisodiquement l'inverse, les dialogues n'ont pas toujours la même intensité. Du fait du cinéma, le réel, moins bien réalisé apparaît mal éclairé, mal sonorisé et... mal scénarisé. ⁱⁱ

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GLOSSARY / by theme

diegesis world or fictional universes proposed by a film which shows only a part of it but suggests the existence of a whole around it and letting the spectator imagine it.

mise-en-abyme reflexive nature of a work of art showing itself and becoming the place of a discourse on itself.

mise-en-scène everything that appears before the camera and its arrangements : décor, actors, lighting and general composition. By extension, gathers the whole story-telling and visual works at stake in the making of a film: storyboarding, direction, stage design, acting abilities...

mise-en-chaîne/editing, cinematic construction of the shots in relation to one another

mise-en-cadre/framing selective process of chosen what to include or exclude from the frame.

frame refers to the limited content visually accessible to the spectator's understanding while watching a film. Originally, the word comes from the aspect of each photogram from the reel which looked like a framed picture.

hors-cadre real space of the shooting excluded from the frame.

over-frame physical frame within the filmic frame.

champ portion of space limited by the frame in the diegesis

hors-champ diegetic space excluded from the frame but in its imaginary continuity.

profondeur-de-champ variable size of the sharp zone of the image in its depth, achieved by settings on the shooting devices. It varies depending on the focal length of the apparatus, the diaphragm opening and the position of the subject on which to focus.

focal length distance between the lens and the focal point (i.e. where the picture is sharp).

focal angle of view degree with which a system converges or diverges light, generating distortions of the image: the centre of the composition or **focal point** remains geometrically coherent but straight lines located on the perimeter tend to bend.

zoom change of focal length and scale of shot (close-up, medium shot...) while keeping the same frame.

dolly zoom synchronised combination of a travelling shot and a zoom in the opposite directions. The object filmed remains of the same size while the background varies in dimensions.

travelling the camera moves on a mobile device. We distinguish lateral, circular, backwards and forwards travellings.

panoramic the camera rotates on its axis, either horizontally or vertically

one-shot/oner/full long shot scene shot in one take

sequence one whole unit of narration composed of several shots. Without ellipse, it proposes a direct continuity of time, place or action. Most of the time, a sequence-shot is a shot which length is longer than average when compared to the whole film, without necessarily being completely independant.

cut editing between two distinct shots. Originally a real cut/splicing in the film reel and can still be observed during the viewing with a frank break from one shot to the other.

ellipse usually confused with a simple **hiatus** (or jump in time). The ellipse is an important jump in time, erasing part of the action from a film. Such a jump is made to be acknowledge by the spectator who understand that such a duration has indeed happened within the diegesis yet wasn't projected on screen. In contrast, the hiatus isn't always understood by the spectator and is rather a technical editing operation than a narrative choice.

split-screen visible division of the screen in two or more

parts. This composition places different shots on the same plan, next to one another, in a particular post-production operation. **continuous succession** overprinting of a series of photograms constituting the end of one shot and the beginning of the other, the first one erasing itself to create a transition with the second. **overprint/superimposition** placement of an image over another so that both remain intelligible.

high-angle view the camera is higher than the object it films.
low-angle view the camera is lower than the object it films.

30° rule basic rule that states that the camera should not move less than 30° relative to the filmed object between successive shots of this particular object otherwise transitions between shots will look like jump cuts.

champ/contre-champ or shot/countershot editing stylistic device playing on the consecutive alternation between shots showing two character's faces interacting. Following the conventions, the camera must remain on the same side of the axis of action to make the spatial relation between characters coherent. This is referred to as the "**180° rule**".

close-up shot close to a character, framing its face.

key light main lighting source coming from the front

fill light one or more supplementary light(s) which does not change the character of the main light, provides general lighting and is used to lighten shadows.

rim light/back light lighting coming from behind the filmed object which allows to detach it from the background and give a sense of depth.

high key lighting environment which uses a main source of high intensity, creating few shadows and making the whole picture easy to read.

low key lighting environment which uses a main source of low

intensity, making the dark parts of the picture stronger and generating a strong contrast between lights and shadows.

voice-in voice which source is included in the diegesis and in the *champ*.

voice-off voice which source is included in the diegesis but hors-champ.

voice-over voice which source is excluded from the diegesis.

slow-motion/acceleration slow down or acceleration in the motion due to a decreased/increased projection of shots. Nowadays, this operation is the result of a trick or a bad setting, projecting for instance a silent film shot with 16 images per second in the current 24 images per second speed.

flashback broken chronological order of the narrative to move backwards and relate previous events. Usually introduced by a narrator remembering or explaining the events.

flash-forward opposite process of the flashback or anticipation in the narration.

fix shot shot taken from a still camera, usually immobile on a tripod. Not to be confused with a **freeze frame** which is a still image momentarily freezing the action in time.

Hollywood Transparency Regime classic editing type defended by Hollywood's institutions, referring to an aesthetic erasing false connections between shots, jumps etc... to generate fluidity and continuity.

Exhibitionist Cinema in the early times of Cinema, the spectator's attention is frequently explicitly solicited, therefore making him aware of his status but absorbing him in the action thanks to direct addresses, gazing into the camera etc...

Voyeurist Cinema opposed to the previous concept, the spectator becomes a silent witness of the action, an omniscient narrator whose presence is unnoticed by the characters.

FILMOGRAPHY / by chronological order

The Cabinet of Dr. Caligari, Das Kabinett des Dr. Caligari, Robert Wiene, 1920

Nosferatu, Murnau, 1922

L'Inhumaine, Marcel L'Herbier, 1924

Battleship Potemkin, Sergueï Eisenstein, 1925

L'Aurore, Murnau, 1927

Metropolis, Fritz Lang, 1927

Le Mystère du Château de Dés, Man Ray, 1929

Architectures d'Aujourd'hui, Pierre Chenal 1930

Die Neue Wohnung, Hans Richter, 1930

City Lights, Charlie Chaplin, 1931

Things to Come, William Cameron Menzies, 1936

Rebecca, Alfred Hitchcock, 1940

Citizen Kane, Orson Welles, 1941

Suspicion, Alfred Hitchcock, 1941

Rope, Alfred Hitchcock, 1948

Rear Window, Alfred Hitchcock, 1954

Vertigo, Alfred Hitchcock, 1958

Psycho, Alfred Hitchcock, 1960

Charade, Stanley Donen, 1963

Playtime, Jacques Tati, 1967

2001: A Space Odyssey, Stanley Kubrick, 1968

Rosemary's Baby, Roman Polanski, 1968

Enter the Dragon, Robert Clouse, 1973

The Man With The Golden Gun, Guy Hamilton, 1974

Indian Song, Marguerite Duras, 1975

Moonraker, Lewis Gilbert, 1979

Le pont du Nord, Jacques Rivette, 1981

Vincent, Tim Burton, 1982

Imagine, Zbig Rybczynski, 1987

Hard Boiled, John Woo, 1992
Kafka, Zbig Rybczynski, 1992
Pulp Fiction, Quentin Tarantino, 1994
Copycat, Jon Amiel, 1995
The Matrix, The Wachowski, 1999
Memento, Christopher Nolan, 2000
Monsters, Inc., Pete Docter, 2001
Russian Ark, Alexander Sokurov, 2002
Dogville, Lars von Trier, 2003
The Matrix Reloaded, The Wachowski, 2003
Kitchen Stories, Bent Hamer, 2004
The Village, Night Shyamalan, 2004
Sin City, Roberto Rodriguez & Frank Miller, 2005
Pan's Labyrinth, *El Laberinto del Fauno*, Guillermo del Toro,
 2006
Sweeney Todd, *The Demon Barber of Fleet Street*, Tim Burton,
 2007
The Artist, Michel Hazanavicius, 2011
Dans la maison, François Ozon, 2012
Sin City: A Dame to Kill For, Roberto Rodriguez & Frank Miller,
 2014
Mother!, Darren Aronofsky, 2017
Kidding, Season 1 Episode 3, Michel Gondry, 2018

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FIG. 1 / Photographic study of motion, E.Muybridge, 1878 / from plate 626 in Muybridge, Eadweard. *Animal Locomotion. An Electro-Photographic Investigation of Consecutive Phases of Animal Movements. 1872-1885*. University of Pennsylvania. 1887.

FIG. 2 / Articulation of the institutionalised narrative structure of a scenario under the Hollywood Transparency Regime / scheme by author

FIG. 3 / Charles de Beistegui's Apartment, Paris, Le Corbusier, 1929 / image from *Le Corbusier, Pierre, Jeanneret, Pierre, Boesiger, Willy, Stonorov, Oscar, and Bill, Max. Le Corbusier - Œuvre Complète 2 : Volume 2: 1929-1934*.

FIG. 4 / Villa Le Lac, Corseaux, Le Corbusier, 1923 / image from « Villa « Le Lac » Le Corbusier », consulté le 11 décembre 2019, <https://www.lescouleurs.ch/fr/journal/posts/villa-le-lac-le-corbusier-le-trou-dans-le-mur-et-autres-experimentations/>.

FIG. 5 / *The Cabinet of Dr. Caligari*, Robert Wiene, 1920 / image from the film

FIG. 6 / *The Cabinet of Dr. Caligari*, Robert Wiene, 1920 / image from the film

FIG. 7 / *Discorsi Per Immagini*, Superstudio, 1969 / The Continuous Monument: Alpine Lakes, project (Perspective), 1969, collage, colored pencil and oil stick on board, Superstudio, Gian Piero Frassinelli, Cristiano Toraldo di Francia, Alessandro Magris, Roberto Magris, Adolfo Natalini

FIG. 8 / *Discorsi Per Immagini*, Domus n° 481, Superstudio, / image from Domus n° 481, Gian Piero Frassinelli, Cristiano Toraldo di Francia, Alessandro Magris, Roberto Magris, Adolfo Natalini, 1969, p.44

FIG. 9 / Palais Royal chase scene, *Charade*, S.Donen, 1963 / image from the film

FIG. 10 / Shot sequence on the Odessa stairs scene, *Battleship Potemkin*, S. Eisenstein, 1925 / images from the film

FIG. 11 / Observations on the Acropolis of Athens, *Histoire de l'Architecture*, A.Choisy, 1899 / Choisy, Auguste. Le pittoresque dans l'art Grec: partis dissymétriques, pondération des masses. in *Histoire De L'architecture*. Paris: Vincent, Fréal & Cie, 1954, p. 415

FIG. 12 / Demonstration of the Kuleshov Effect, A. Hitchcock, 1964 / from « A Talk with Hitchcock (1964) - Hitchcock Explains the Kuleshov Effect », Video, consulté le 11 décembre 2019, <http://www.criticalcommons.org/Members/kfortmueller/clips/a-talk-with-hitchcock-1964-hitchcock-explains-the>.

FIG. 13 / Parallel between the filmic and architectural project and analysis / scheme by author

FIG. 14 / Operations of the filmic discursivisation process / table from A.Gaudreault, *Du littéraire au filmique*, Paris/Québec, Armand Colin/Nota Bene, 1999 [1988], p. 110

FIG. 15 / Postponed death in *The Village*, N.Shyamalan, 2004 / images from the films

FIG. 16 / Over-framing from the outside looking inside in *Rear Window*, A.Hitchcock, 1954 / image from the film

FIG. 17 / Over-framing from the inside looking outside in *Rear Window*, A.Hitchcock, 1954 / image from the film

FIG. 18 / Photograph from the set of *Rear Window*, A.Hitchcock,

1954 / image from « En images : avec Hitchcock sur le tournage de Fenêtre sur Cour », consulted on December 7th 2019, <https://www.konbini.com/fr/entertainment-2/en-images-coulisses-fenetre-sur-cour/>.

FIG. 19 / Focal length deformation demonstrated on a close up / image from « Cinéma sur Instagram : This is how the choice of the lens changes the appearance of the face. », Instagram, consulted on December 7th 2019, <https://www.instagram.com/p/B4kuEkzB9VJ/>.

FIG. 20 / Combination of framing and focus works in *Citizen Kane*, O.Welles, 1941 / image from the film

FIG. 21 / Minimal lighting scheme for the understanding of a filmed image / scheme by author

FIG. 22 / Work on contrasts in *Suspicion*: projected shadow of the unframed window, backlighting of the anonymous character and highlighted (poisoned?) drink, A.Hitchcock, 1941 / image from the film

FIG. 23 / Work on shadows in *Suspicion*: anticipated entrance of a character, A.Hitchcock, 1941 / image from film

FIG. 24 / Work on shadows in *Nosferatu*, Murnau, 1922 / image from the film

FIG. 25 / Nod and tribute to *Nosferatu* and contrast in German Expressionism in *Vincent*, T.Burton, 1982 / image from the film

FIG. 26 / *Vertigo*, A.Hitchcock, 1958 / image from the film

FIG. 27 / *Sin City*, R.Rodriguez & F.Miller, 2005 / image from the film

FIG. 28 / *The Artist*, M.Hazanavicius, 2011 / image from the film

FIG. 29 / Reflected reflections in *Sweeney Todd, The Demon Barber of Fleet Street*, T.Burton, 2007 / image from the film

FIG. 30 / Reflected traits of character in *Citizen Kane*, O.Welles, 1941 / image from the film

FIG. 31 / Segmented action in *Enter the Dragon*, R.Clouse, 1973 / image from the film

FIG. 32 / Reflected Eiffel Tower in *Playtime*, J.Tati, 1967 / image from the film

FIG. 33 / Domestic pantomime in *Playtime*, J.Tati, 1967 / image from the film

FIG. 34 / *Man as a Dancer*, Oskar Schlemmer, 1921 / image from <https://www.du9.org/breve-visuel/man-as-a-dancer-par-oskar-schlemmer/> consulted on Decembre 23rd 2019

FIG. 35 / *Kitchen Stories*, Bent Hamer, 2004 / image from the film

FIG. 36 / Scenario structure and narrative time line, *Memento*, C.Nolan, 2000 / scheme by author from interview : 18-Minute Analysis By Christopher Nolan On Story & Construction Of *Memento*, consulted on Decembre 7th 2019, <https://www.youtube.com/watch?v=tYScjZWHaHA>.

FIG. 37 / Double chase in *Pan's Labyrinth*, G.del Toro, 2006 / image from the film

FIG. 38 / Neighbourhood plan in *Dogville*, Lars van Trier, 2003 / image from the film

FIG. 39 & 40 / Views of Menderley in *Rebecca*, Alfred Hitchcock, 1940 / images from the film

FIG. 41 / Design for a row of London Houses, Mr. Kerr, 1864 / image by author from website document Consulted on December 11th 2019, http://www.plandsg.com/warm-decor/#gdl-b5677b_

FIG. 42 / Photograph of the 1:10 Set / photograph by author

FIG. 43 / un-Framed from the Drawing Room window / photograph by author

FIG. 44 / Framed from the Drawing Room window / photograph by author

FIG. 45 / un-Framed from the staircase's lateral window (area for light) / photograph by author

FIG. 46 / Framed from the staircase's lateral window (area for light) / photograph by author

FIG. 47 / Almost closed door / photograph by author

FIG. 48 / Slightly opened door / photograph by author

FIG. 49 / Ajar door / photograph by author

FIG. 50 / Fully opened door / photograph by author

FIG. 51 / Focus on the first pair of columns, enhanced foreground / photograph by author

FIG. 52 / Focus on the second pair of columns, enhanced background / photograph by author

FIG. 53 / Lens 18 mm (narrow angle) / photograph by author

FIG. 54 / Lens 17 mm (wide angle)/ photograph by author

FIG. 55 / Diffuse & Welcoming - a neutral situation with little rim light, soft key light and multiple fill lights / photograph by author

FIG. 56 / Diffuse & Gloomy - Increased Key Light / photograph by author

FIG. 57 / Hard & Invasive - Increased Fill Light / photograph by author

FIG. 58 / Hard & Scary - Increased Rim Light / photograph by author

FIG. 59 / White lighting - cloudy day or artificially lit space / photograph by author

FIG. 60 / Blue lighting - soothing, silent, dawn or dusk atmosphere / photograph by author

FIG. 61 / Red lighting - stressful, alarming, worrisome atmosphere, perhaps an emergency light? / photograph by author

FIG. 62 / Green lighting - uncanny, unsettling atmosphere / photograph by author

FIG. 63 / Yellow lighting - sunny day, familiar and welcoming / photograph by author

FIG. 64 / A neutral situation / photograph by author

FIG. 65 / Quantity & quality: how big is this room? How far

can I go without hitting myself? Am I really in a huge room, surrounded by so many columns? / photograph by author

FIG. 66 / A neutral situation with a door frame / photograph by author

FIG. 67 / Invisible limit : a space is hinted behind another through the reflective surface but can't be reached, another one is suggested as the apparent window on the left is actually the reflection of the window behind us / photograph by author

FIG. 68 / Embodiment awareness : reflections allow us to see both in front of us and behind us at the same time, making us more aware of being in a space and making it harder to understand the space itself. / photograph by author

FILM 5 / Antonio Vivaldi, *Violin Concerto In F, Op. 8/3, RV 293, Autumn - 3. Allegro*, track 9 on *Les Quatre Saisons, Eternelle Musique Classique*, Atlas Editions, January 1st 2009, compact disc.

/ The Black Keys, *Lonely Boy*, Octobre 26th 2011, track 1 on *El Camino*, Nonesuch Records, December 6th 2011, compact disc.

/ Bernard Herrmann, *The Murder*, March 6th 2014, track 17 on *Psycho (The Original Soundtrack Theme)*, Soundtrack Records, March 6th 2014, compact disc.

Schemes which are not listed in this iconography are designed and produced by the author.



DVD / content

FILM 1 / SPEED

Controlled experiment sequence

Accelerated sequence (x2)

FILM 2 / SPEED

Controlled experiment sequence

Same starting point, same finish point, longer sequence

FILM 3 / RHYTHM

Absence of doors

Presence of doors

FILM 4 / RHYTHM

Falsly infinite sequence

FILM 5 / SOUND

Baroque atmosphere: Vivaldi's *Autumn*

Modern Rock atmosphere: The Black Keys' *Lonely Boy*

Tense String Music: *Psycho*'s soundtrack

FILM 6 / SOUND

Wind & Crack

Rain & Storm

Countryside

FILM 7 / SOUND

Steps on wooden parquet

Steps on marble

FILM 8 / COMBINED EFFECTS



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