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Manipulated Traces: Architectural Post- Productions' Contemporary Techniques

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Manipulated Traces: Architectural Post-Productions' Contemporary Techniques

Fabio Sorriga Ruggero Lenci

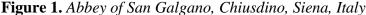
Abstract

Interventions on existing buildings are increasing every day. The actions do not only affect buildings to be preserved for their history or importance, but also "Tiers-Paysage": in other words, abandoned or marginal residual places and buildings become objects of interest. The object of intervention – once the spirit of conservation is abandoned in spite of re-use and the sacredness of the existing building – becomes manipulable, overwritable, making the waste as activator of imagination. Is it possible today to define an architectural language of modification? Nicolas Bourriaud, in his Postproduction affirms that from the beginning of the 1980s, artworks were created from pre-existing ones. He defines this tendency as post-production, or the artist's action to create manipulation "processes" on materials that already exist. The use of this term is borrowed directly from the audiovisual technical language used in filmmaking, to specify the last part of a movie production, which takes place when shooting is over and the process involves video editing. The present essay thus links cinema and architecture. Through this vision, we cover a narrative sequence of moving frames for a static viewer in a first case, or processed in the mind of a dynamic viewer in the second. If the perception and creation of architecture would take place as a mounting of scenes or frames, what would the editing design methodologies be? These might include *chroma-key*, *jump* cut, fast cutting, graphical mach, mach on action, fades, mounting trick, metamorphosis, cross-cutting, freeze frame, etc. New invention techniques are investigated through an analogical comparative process, made on a selection of projects in the built environment, by transposing the movie mountingtechnology and definitions within the architectural design discipline.

Keywords: Architectural manipulation, Editing, Post-production, Reuse, Ruins.

Introduction

"and only last summer I saw for the first time, from real life, the Saint Galgano Abbey in Tuscany, and it is maybe the most convincing example of an architecture turned back into nature, where the state of abandon is the beginning of the design, where the abandonment identifies with hope" (Figure 1).





The condition of the present moment becomes in these brief lines a description of a noble ruin of the past that blends with nature, which wraps it up and wants to bring it back to itself, as a sign of victory. It is mostly a glance towards the future, projecting on the ruin revenge thoughts and wishes. The ruin doesn't cause a romantic melancholy any more, but instead frees the imagination.

Nowadays, ruins are not considered only far archaeological evidence or, crystallized remains of past architectures. Ruins, and even, all the abandoned places that will soon be ruins, exist everywhere: fitted inside the city textures in the proximity of the suburbs, factories and abandoned barracks occupy entire lots; scattered in the territory and already natural background, old farmhouses, country houses and walls confront and blend with the context, belonging to the landscape that hosts them. Ruins have forever been available for imagination: in the Renaissance as refined sources of linguistic renewal, in the XVIII century as memories remains, subject of melancholic gazes, and today as *objets trouves* in the places of the architectonic *Tiers-Paysage*, built in a recent past. They are lacking a specific role and are objects in becoming, workable and over-writable. "Ruins... are not the simple result of a subtraction, but they present a series of innovative and evolutionary shapes, continuing to transform under the view of who keeps his

¹Rossi, Aldo, 1988, p. 96.

²Clement, Gilles, 2005.

eves on them." The theory of tabula rasa, among the modern architects' favorite themes, has been distanced by the same development foundations which conceived it. In this way, some presences, considered dead, today assume a new role inside our landscape and the architectural language as well. The words for the poet are new and the waste stimulates the renewal of the poetic architectural code (Figure 2). The continuous call to avoid an excessive use of the ground and the recent economic crisis force designers to rethink recently abandoned structures, by now downgraded to waste. They offer to the buildings another chance through an experimental duchampian remake applied to architecture: appropriation, rearrangement, change of meaning, selection, annexation, fragmentation. The preexisting state is not excluded, but rather is in continuous debate with the "new". The availability of some of these forgotten architectures gives the chance to work on their own skin, completely rethinking their final appearance, without necessarily conserving it. This process produces hybrid configurations due to many transformations happened in time: some examples could be represented by the Palace of Diocletian in Spalato, the Cathedral of Siracusa, the Basilica of Vicenza, the Theater of Marcello, the Cathedral of Santa Maria degli Angeli in Rome and the paleo-christian churches in the same city. It's all about the possibility to change, thanks to a deep appropriation that "bends" the existing to a new function. After the transition of modern interests towards the past and the crumbling buildings, what happened in other arts also happens again in architecture, where "from the beginning of the '80s, new artworks are made on the base of already existing artworks." Nicolas Bourriaud, in his Postproduction: How Art Reprograms the World defines this tendency as postproduction, which is the action of making "processes" of manipulation on preexisting material (usually as copies), just as it happens in the cinema, where in the post-production phase, cuts, editing, filters, modifications of scenes and filmed frames occur.

"The most important thing in a film is the cut in the editing. It's the only phase in which cinema doesn't borrow anything from the other artistic forms." But can it give it up? We'll try to borrow the language and the different kinds of editing, attempting to apply them to the intervention on the existing buildings, and precisely analyzing in this process the formal characteristics of transformation, combination and genesis of the new design proposal.

¹Augé, Marc, 2004, p. 22.

²Bourriaud, Nicolas, 2004, p. 3.

³Kubrick, Stanley, 1987.

Figure 2. Collage: Aphaia East Pediments Glyptothek Munich /Bruno Munari © Fabio Sorriga



If the perception and the conception of architecture occurred like an editing of scenes and frames, what would the kinds and methods of editing be? Once the kinds of editing and cut are defined, it's possible to obtain a specific modification language, such to become the engine of a potential "Grammar of Fantasy."

Cinema and Architecture

Cinema is a young artistic form. Without considering the shadow theater (common from the ancient times in the Middle East), the first experimentations with the leonardian dark room (1641) and the magic lantern (1646), cinema's birth can be dated from the end of the XIX century. These the main events: invention of the cinematographic film by George Eastman in 1885, invention of the first movie camera by Thomas Edison in 1889, first showing of a film in front of an audience in 1895 by the Lumière brothers. The film allowed simultaneous viewing of the same video by several people. The film, after an initial phase in which it showed familiar scenes where people used to recognize themselves, had the purpose of describe unreachable places, allowing the viewer to make a "still" travel. It showed, through wide panning shots, the city space and the countryside: roads, buildings, and parks, mountains, valley rivers, seasides, but mostly men and women, and vehicles moving, affirming the proper root of the word cinema (from Architecture remained the fundamental Greek. kínēma). cinematographic construction of the filmic scenes, establishing a direct relationship between both arts. Cinema together with architecture became an art of space and was developing as an interpreter of most daring dreams of architecture in imagining future scenarios. The same Ejzenstein, the famous Russian director and editor, had an architecture education, and many architects make scenographies for movies: in cinema, architecture and space where scenes occurred, become

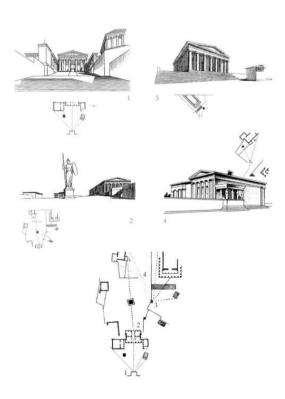
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¹ Rodari, Gianni, 2012.

scenographies that actively take part in the filmic emotions. In this way, these setting build exciting imaginary worlds to generate precise psychic emotional behaviors in the viewer during each scene.

The sight combines cinema and architecture. Through the sight, we travel on a narrative sequence, composed by moving images for a static viewer, or by a sequence of images processed in the mind of a dynamic viewer. Subject and object change their roles, and thus the vision is always moving. "An architectural set [...] is an editing from the moving viewer's point of view. [...] The cinematographic editing, as well, is a way of "connecting" in one only point – the screen – various elements (fragments) of an event, filmed in different dimensions, from different point of view and from different sides."

Figure 3. Auguste Choisy, Analysis of the Acropolis²



The *promenade architecturale* and the cinematographic route in this sense are strongly linked. Undeniably, cinema is composed of sequences, and, movements along a path; so much that Ejzenstejn talks about taking the viewer on a walk. Le Corbusier³ and Ejzenstejn,⁴ when discussing architecture and cinema, the first in *Vers une architecture*, 1923, the second in *Editing and Architecture*, 1937, recur to the description of the path inside the Acropolis of Athens. In so doing, they refer

¹Ejzenstejn, Sergej M., 1980, pp. 16-17.

²Choisy, Auguste, 1899.

³Le Corbusier, 1923.

⁴Ejzenstejn, Sergej M., 1985.

directly to the tables of Auguste Choisy's *Histoire de l'architecture*, which illustrate in sequence a moving viewer's sights along an established path (Figure 3). Such a description was for Le Corbusier a way to introduce movement into architecture, through the idea of a path inside buildings, then indirectly the fourth dimension, so putting in relationship space and time. This was a topic that later would become for Sigfried Giedion the key of architecture history in his "*Space*, *Time and Architecture*" (1941).

"By now architecture works like a psychic mechanism, building its own subject in time and space." Cinema and architecture are jointed through their psyco-emotional component related to perception. This connection related to architectural landscape, has been object of interest in the last ten years, with contributions of critics such as Giuliana Bruno and Anthony Vidler.

As regards cinema, Ejzenstejn already used to state that it should act on viewer's emotions, shaping his thought. For Vertov, it has to reveal the new world obtained through Revolution: reality, thanks to its cine-eye, had simultaneously to be caught from all possible points of view; in such way to be omniscient. In architecture, if we do not consider the various expressionist trends that succeeded in time, the link with the emotional and sensitive field is further away, but in contemporary times it reaches the extremes and gets intensified by the architecture of the emotional shock.

"Architecture ceases to be a background for actions, becoming itself an action. All this suggests that the architect has to produce a shock if architecture is needed to communicate". Bernard Tschumi, Daniel Libeskind, Coop Himmelblau, Greg Lynn, Morphosis are only few architects who propose a distort space, a labyrinth as a disturbing shape in a continuous stimulation of anxiety, phobias and fears of the modern living, outcome of "conditions of a daily life that doesn't know certainty."

Film Post Production and Architectural Post Production

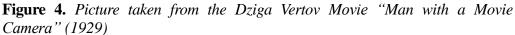
"I am kino-eye [...] In this room there are twelve walls shot by me in various parts of the world. In bringing together shots of walls and details, I've managed to arrange them in an order that is pleasing and to construct with intervals, correctly, a film-phrase which is the room."

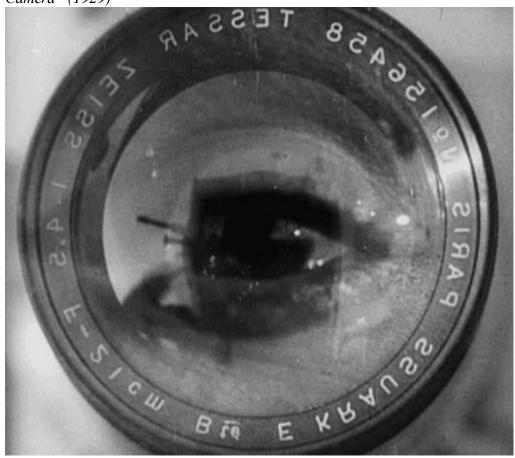
¹Vilder, Anthony, 2009b, p. VII.

²Tschumi, Bernard, 2005, p. 118.

³Vidler, Anthony, 2009a, p. 11.

⁴Vertov, Dziga, 1984, p. 17.





Dziga Vertov points out the fragmentary nature of filmic process: single shots are pieced together and edited as films just like walls are pieced together to shape a room. From this perspective the affinity between architecture and cinema, from this perspective, implies the possibility of working on pre-existing elements. Alike the walls that Vertov has shot in various parts of the world and the filmic units that can be combined to make a whole film (Figure 4). During the post-production phase, the "footage" that has been filmed goes through a complex editing process in order to obtain a specific narrative and to develop, through various techniques, a certain rhythm and pace. "[...] The frame permits the extreme formal manipulation of the sequence, for the content of congenial frames can be mixed, superimposed, dissolved, or cut up, giving endless possibilities to the narrative sequence."

Drawing from film post production theory and even praxis of pre-existing elements manipulation – following the example provided within the art field by Nicolas Bourriaud in "Postproduction. Culture as Screenplay: How Art Reprograms the World" – can be related to the architectural technique of appropriating and reprocessing. Those techniques aim to propose a new

¹Tschumi, Bernard, 2005, p. 133.

configuration of a pre-existing reality. "The term 'post production' implies negotiating and reprocessing what we already have: not only disused architectural spaces but also forgotten culture that needs to be reconsidered and investigated."

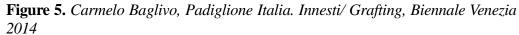
Architectural post production relies on time and memory traces, on forgotten and abandoned buildings, on ruins and remains of human-made architecture. It reshapes architectural replication of what already exists. For the purpose of this paper, we do not intend post production as a design attitude which, on the one hand, focuses on the re-use of buildings and, on the other, as a material attitude. In this context post production is considered as a design methodology which is able to promote and enable, through a formal, visual and mechanical process, various macroscopic and microscopic interventions on the architectural landscape. We are not interested in analysing building expansions, in considering the nobility of the building (ruins, remains, historical buildings, structural skeletons, interventions on archaeological sites), the type of intervention (expandings, upward extensions, restorations, reuses, renovations), the past or future function of buildings (museums, libraries, military barracks, markets, etc.). We will mainly focus on architectural editing, cutting and montage in order to investigate the possibilities of architectural manipulation: "a language of modification or a body of languages of modification, like the series of new languages that existed in avant-garde years."² To simplify, we can describe film editing as a process which allows to juxtapose and combine different shots according to a narrative, aesthetics or semantic project. From this point of view, we can distinguish between two different stages: the stages of micro-montage and that of macro-montage, and together they provide the stylistic unity of the movie. While macro-montage – which is defined by the screenplay – is concerned with the meaning and the narrative of the movie, micromontage focuses on single shots and their frames. This latter is a process that we can compare to eye blinking. As pointed out by Walter Murch, who edited the English Patient, this involuntary reflex accompanies the way in which we make sense of the discontinuities of our perceptions. "[...] we blink and that is the moment in which we have the right cut." Architectural post-production, according to this perspective, can be linked to the moment immediately after the blink of an eye, when a new shot is added to the film of our mind. The architect operates on existing architecture as a film editor operates on the filmic material. Just like the latter, he/she has initially to know what has been shot before starting the editing process, architects have to go through a preliminary knowing-gathering stage in which they learn about the building. At a later time, the film editor uses various micro-montage techniques (the already recalled jump cut, croma key, graphical match, etc.) to combine the different shots according to visual/formal or psycho/emotional purposes. During the design phase the architect is not indeed completely aware of the new elements that he is going to add to the existing material. Architectural post-production differs from film post-production in a sense that architects use micro-montage techniques as creative tools that can link

¹Aimonino A., Fontanari E., Gallo A., Marini S., Mosco V. P., 2014, p. 8.

²Gregotti, Vittorio, 1984, p. 2.

³Murch, Walter, 2007, p. 65.

together past and present. This is a stage in which some of the key elements or key images of the project are theorised. A stage strongly characterised from a formal and visual point of view and that necessarily involves the emotional sphere linked to memory. Time, in architectural post-production, is represented in its physical and spatial dimension considering pre-existing raw material. Similarly, the concept of time can be related to the notion of memory and its traces. We will investigate the graphic representations — and consequent hybridization — of relationship among existing and new material, namely the plans, sections and views. The combination between new and pre-existing materials — which can also be pursued through cuts and subtractions — defines an 'expected' formal solution which is strictly related to the formal elements of the pre-existing material. In this context, new architectural elements cannot often transform monuments or historical buildings. Nevertheless, these materials can be emulated, copied, simplified, edited, and scaled.





In other words, these elements can be manipulated overcoming the prejudice which is usually associated to the practice of architectural copying. "Through drawing, every existing building can be investigated as a developing body, like an organism in metamorphosis through time." It is in fact through drawing that Giovanni Battista Piranesi, in his Campo Marzio dell'antica Roma (1762) has been able to combine with archaeological knowledge and visionary arbitrariness the ruins of the past. Similarly, a photographer like Philippe Dujardin and architects such as Superstudio, Beniamino Servino, Carmelo Baglivo (Figure 5), through contemporary photomontages, are able to edit and copy, multiply and disassemble existing buildings, foreseeing their future alterations. What is new, in other cases, is identified by traces, footprints or documents that are destined to disappear and that are constantly recombined to produce new meanings and to bear witness of an ancient presence. The new is hence conceived as a body incorporating different materials from the past within the structure. The results of

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¹Marone, Raffaele, 2004, p. 32.

this operation can differ widely: from quasi-Dadaist collages characterised by a radical change in meaning produced by the free association of pre-existing materials, to the 'freezing of the ruins' to preserve their historical value. "Appropriation is the first stage of post-production". We also have to consider that the pre-existing material, which is made object of post-production manipulation, has already been altered by the action of time. Some of its characteristics have sedimented over time, while others have been completely erased. Architects, from this perspective, are like archaeologists: they work on strata and during the drawing stage – which precedes appropriation – they have to collect data and to investigate functions and formal aspects of the pre-existing material. It is in fact a dual process which moves from the pre-existing building to the project, and from the project to the building: "Those who work in architecture see the existing as the product of a complex action. This action can be identified with the architectural project and it is characterised by three stages. The first stage involves the recognising of the existent; the second stage implies its appropriation through an emphatic process; the third stage focuses on producing difference, namely the possibility of giving the existent a new identity"².

Architectural Post-Production Techniques

New creativity techniques are analysed through a comparative analog process over a selection of projects carried out on existing buildings, transposing the terminology and the definitions from film editing to the process of architectural design. Film editing is faced up with abandoned buildings, traces, memories, ruins, but also monuments and historic buildings or documents. The study consists of two parts: the first being dedicated to cutting, the second to film assembling.

Cutting

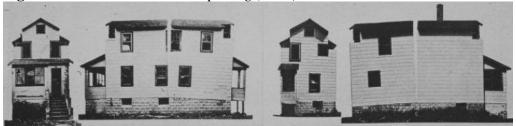
Cutting, as a subtraction, has always been one of the fundamental operations in the art of architectural design. In the current practice, the cut is "acknowledged" as an element of architectural design also on existing buildings and the examples presented highlight its potential: the subtraction becomes the act of seizing and occupying the building, generating a strong dialectical tension between the whole and the fragment, between transparent/hollow and opaque/solid. Cutting is a violent operation, it is violation, infringement. Subtracting becomes the foundation act for new forms. This operation proceeds though contrasts, altering the building by carving new unexpected and unforeseen openings. The cut uncovers the building' new functions and highlights its section, inquiring the wall and showing the materials' emotional aesthetics. In modern art, cutting or subtraction are found in Mimmo Rotella's torn *decollages*, where the subtraction intentionally reveals the successive layers, in Lucio Fontana's cuts, where the two-dimensional surface is opened up to the space, and in Emilio Isgrò's erasure works. However, the

¹Bourriaud, Nicolas, 2004, p. 18.

²Purini, Franco, 2002, p. 53.

closest contribution to the operations described becomes a manifesto in Gordon Matta Clark's artistic experiments. The American artist in the mid 70's worked on abandoned buildings just before their demolition, realizing works as *Conical Intersect* (1975), *Splitting* (1974) (Figure 6), *Day's End* (1975), in which he seized the buildings manipulating them with in order to cut inner and outer walls and floors according to specific designs, well defined directions and views to be photographed, so giving a new meaning even to small suburban houses. Previously discarded materials were transformed into art sculptures: antimonument, *Anarchitecture*.

Figure 6. Gordon Matta Clark, Splitting (1974)



The building, cut and violated, disassembled and re-assembled, becomes the representation of absence; the subtraction applied gives the opportunity to watch inside and see through from new viewpoints. After about thirty years, the fascination with this approach and with the spatiality created, have produced buildings like the Caixa Forum in Madrid by Herzog & de Meuron (designed in 2001). Here, the hollowed and consolidated shell of an old electric powerhouse is excavated at the base, to get an open square slightly embanked in the terrain, and is cut with seemingly randomly placed rectangular openings; by doing so the building seems to be suspended and floating over the underlying square. Among the other examples borrowing from Gordon Matta Clark's works it is worth considering the Utrecht City Hall (1997 competition) where Enric Miralles and Benedetta Tagliabue reassembled ten medieval small buildings.

Jump Cut – An Interrupted Continuity

In film making, a *jump-cut* is a fake link shot or skip editing, consisting of cutting some frames in a sequence in order to give the impression of a jump in time. The cut is clear, with not transitions and link shots; intentionally, there is no continuity in the sequence; the objects and the actors seem to jump from one position to another. In several cases, when applied between two sequential shots with too little different camera positions, it may seem a mistake. The *jump-cut* generates a sense of disorientation which is necessary to regain the audience's attention abruptly: the audience lives a sense of puzzlement being psychologically moved by the vision of dissonant images, i.e. unpredictable according to the common perception of space and time. The result is to increase the effects of drama and disorientation. This technique has been used for the first time by Jean Luc Godard in the movie À bout de soufflé with the Nouvelle Vague (Figure 7).

Prior to that, films were based on the narrative's sequential approach and were aiming to resemble reality hiding the assembly of scenes (invisible editing). The *jump cut* is a cut in a sequence, it is not necessary to tell the story, but it is a kind of linguistic mastery to reveal with strength the construction.

Figure 7. Jump Cut: Pictures taken from the Jean-LucGodard Movie "Àbout de Soufflé" [Breathless] (1960)



The *Nouvelle Vague* film directors wanted to make low cost movies, with small film crews, using fast, ultra-sensitive film stocks, short shootings in real-world settings; in the same way they wanted to make sellable movies capturing the truthfulness of the actual view. This truly real and even slightly nostalgic view is rather conflicting with questioning the natural logic progression in the film structure: neither real life nor thoughts or imagination, that follow paths of remembrance, are linear. The movie becomes fragmented and discontinuous, the actions of the main characters, which are never completely revealed, are unexpected for the audience.

This is the sense of puzzlement the viewer experiences in front of unexpected and abrupt, never repetitive, cuts on the façade of an existing building, on the roof or in any case on an element revealing its overall unity being disrupted. The cut is physically carried out on the body of the pre-existing building right like it was a film stock. The cuts are clear and randomly placed on what is existing. The result does never give the impression of being final: in fact, the consequential incompleteness triggers a cascade reaction of stimulations for the imagination so that "the element does not succeed to be coherently organized in the space, but its degree of nearly complete freedom allows us to deepen the phenomenon of imagination." There is no adding up between new and pre-existing in an evident time sequence, but a hybrid intersection, a superimposition mixing up what is there and what was there. Re-conquering the aesthetics of the poor, the re-use, the unfinished, the fragment, the use of traditional materials and techniques, vernacular clichés, collections of references, quotes, are among the evident themes of some architects particularly in and around the Netherlands.

The DVVT group of architects (De Vylder, Vinck, Taillieu) from Gent (Belgium), works initially on the refurbishment and extension of residential houses, "common" buildings in the Flanders region, manipulating them mainly depending on the clients' needs, the plan, the budget and the practical and legal

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¹Rogers, Ernesto Nathan, 2006, tav I, p. 116.

restrictions (Figure 8a). Domestic architecture becomes a research field. In their work, with limited budget, the architects aim to bring out the potential of what they find, highlighting its peculiarities. The pre-existing, cleared through cuts and subtractions, is blended with the new losing its previous identity and generating what is perceived as different. The materials often used in the realization of the new parts are applied in their raw and material form, without excessive finishing. The "rude" aspect is well integrated with the pre-existing as this is often left in the condition of unfinished. The final configuration is never accomplished, so to resemble a spontaneous architecture, a self-built. The materials used are many (glass, wood, bricks and concrete) and are left to explain how each construction element is made. The pre-existing building is largely manipulated in its volume, façades and interiors and becomes itself an object of DIY. Old and new fragments compose architecture and introduce, in their forms and materials, a poetical dimension of fantasy and imagination. Numerous elements become a game of non-sense: trompe l'oeil, mirrors, fake columns, walls and cut doors, walls with concealed doors, strong contrasting colouring. Nothing is for granted and there is no final one-way solution; it is stratification, a mixture always open to future changes. Time is overlapped and disappears, before and after are blended like in a mechanism of remembrance. The Koute House II (2003), the Rot Ellen Berg House (2007-2011), the Tangram at Kortrijk (2016), the New Service Centre at Ledeberg (2016) are some of the works characterizing their creative path.

Figure 8. Jump Cut: (a) Advvt, Melle-matta House / (b) 51N45, Lamot Center / (c) RAAF, Bunker n.599



In the Netherlands, between 2010 and 2013 at Diefdijk 5, next to the A2 highway, nearby Maastricht, the Dutch firms of architecture, art and landscape design RAAF and Atelier de Lyon (Figure 8c) have worked on a bunker (n.599) of the *New Dutch Waterline* (a military line that was flooded to defend the cities of Muiden, Utrecht, Vreeswijk e Gorinchem), cutting it exactly along its axis, carrying out an operation which is both clear and radical. The bunker, by its own nature an hermetic and impenetrable place protected by thick concrete walls, is cut and deprived of its circular space, now fitted with a wooden boardwalk extending towards the flooding waters. The violation makes its abstract cross-section visible. The intervention has a strong poetic content: those travelling on the A2 highway now have a different look over the area that seems to show itself in its violated intimacy, uncovering the secrets of the military defence line transformed into a memorial site. The bunker 599 is the architects' first work and, after the intervention, it has been declared a national monument. Also to be mentioned the

works by others Belgian architects: 51N45 (Figure 8b), GAFPA, Graux & Baeyens, and the Office Kersten Geers David Van Severen.

Fast Cutting – Discontinuity Recomposed

"...have a walk down a street in a city and put on canvas what you have just seen. You have seen half a person cut by a car, pieces and parts of road signs and billboards mirrored on a shop window — an assembly of fragments. Consciousness is a cut-up; life is a cut-up. Every time you walk down a street or look outside the window the flow of your stream of consciousness is cut by random factors."

Figure 9. Fast Cutting: Pictures taken from the Alfred Hitchcock Movie "Psycho" (1960)



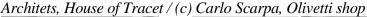
Editing or fast cutting refers to several consecutive shot of brief duration (a few seconds) with clean cuts in a rapid sequence; it is used to create suspense and to highlight the chaos in the scene. An example of fast cutting is the famous scene of the shower in Alfred Hitchcock's Psycho (1960) (Figure 9). The shots are extremely fast and linked in a chain to provide an immediate understanding of the information. This set of fake link shots culminates with an extremely fast editing where the average duration of each shot is less than a second. Today the fast cutting is used extensively in the adverts and in the music videos. This effect, in general, creates confusion and the final result is a patchwork of shots and details, celebrating the incomplete colliding fragments. Cuts in architecture often involve entire sections of the building re-mounted with new materials and re-inserted in the old context. The use on-site of the materials re-composed and re-mounted as fragments, makes them active elements of the new project. The façade of the House of Tracet (2016) (Figure 10b) by the London-based Tsuruta Architets, while keeping its formal unity of parallelepipedon, is made out of several bundled elements: the old façade in dark bricks with the pitched roof, re-mounted like a

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¹Burroughs, William, 1981, pp. 32-33.

fossil, and a steel structure framing either glass or solid concrete units. Even if deeply formal, this operation contains in itself the past as a re-elaborated text. In the new Utrecht City Hall (Figure 10a) by Enric Miralles and Benedetta Tagliabue (1996-2000), the architects have sought to re-compose the fragments of eleven pre-existing buildings: some of them are re-integrated maintaining their own formal identity, while bricks, lintels and cut-stones from the partially demolished buildings are re-admitted in the new building. The resulting effect is highly chaotic, also in this case with spatial and temporal overlaps that are hard to read.

Figure 10. Fast Cutting: (a) Miralles Tagliabue, Utrecht City Hall / (b) Tsuruta





Even the architect Carlo Scarpa, in the Olivetti shop in S. Marco (Figure 10c) square in Venice, designs the lateral façade on the Corte del Cavalletto with different assemblies strongly controlled by geometry: the door on the edge of the secondary entrance wall cuts the Olivetti logo, which is cut both on the wall and on the door itself; on its side the Istrian stone plaque with the "Olivetti" inscription and a same-size large window, all under the buildings mouldings. Scarpa's poetics is based on the accumulation of signs, moved from the focus on the detail which often becomes an exception: interrupted fragments, most often tending towards a geometric abstraction, show their own autonomy and contribute to the definition of the façades.

Montage

The *montage* phase starts after the film is cut. In this section of the paper we will analyse different types of montage strategies focusing on frames and shots continuity. Montage is an editing technique in which shots are combined and/or juxtaposed to obtain a specific aesthetic effect and to convey a specific meaning. George Méliès was among the first who discovered the potentialities of montage. His main discovery was substitution splicing, which can create the sudden appearance or disappearance of a filmed object or person. Unlike cutting, where new and existing elements are overlapping, the montage always implies some sort of mediation. We can compare it to the artistic technique of the collage, which allows the artist to create something new from pre-existing materials. In the case of architectural montage, existing buildings provide and suggest editing dynamics. The Italian for montage, literally means "operation through which different elements of a system or a mechanism are assembled together", at the same time,

the expression 'architectural composition' implies the combining of different elements to obtain a new system. In this paper, we believe that the montage process itself can suggest new geometrical and compositional configurations.

Substition Splicing

The *substitution splice*, also developed by the pioneering French filmmaker George Méliés, was the most popular film special effect in early fantasy cinema. In substitution splicing cuts can pass by unnoticed, as separated shots are matched seamlessly. The produced effect is that filmed images can disappear, reappear or transform in something different (Figure 11). We can affirm that, during this process, pre-existing elements, at the same time, disappear and preserve themselves inhabiting a new form. Between the pre-existing and new elements, then, a space is created from which what is pre-existing can be observed from a new perspective.

Figure 11. Substition Splicing: Pictures taken from the George Méliès Movie "Escamotage d'une Dame chez Robert-Houdin" (1896)



Bernard Tschumi, in his description of the Art Center Tourcoing in Le Fresnoy (1991-1997) (Figure 12a), theorises the presence of interstitial "in between" spaces. Spaces that only apparently are residual but that in fact can acquire new functions or become spaces of aggregation. The structure designed by the Suisse architect incorporates existing buildings and, in particular, the space between their roofs and the metal roof of the 'renewed' structure is occupied by a number of steel ramps, gangways and projecting roofs. These new structures provide visitors with new unexpected views and perspectives: a new narrative that can be compared to a filmic one. Within new contemporary spaces, we can find the nostalgic beauty of old factories, which is, at the same time, perfectly preserved and enlightened by a new perspective.

Figure 12. Substition Splicing: (a) Bernard Tschumi, Art Center Tourcoing / (b) Meixner Schlüter Wendt, Wohlfahrt-Laymann House Architekten



A similar example of this architectural attitude is provided by the Wohlfahrt-Laymann House (Figure 12b), designed by Meixner Schlüter Wendt Architekten and completed in 2006. In this case we have a traditional country cottage dating from 1920's integrated within the structure. The intermediate space between two elements becomes a living area with a double-height ceiling, which offers a peculiar perspective on the older building. The cottage preserves its original residential function but, at the same time, becomes a manipulated piece of architecture: the roof has been removed and the walls modified to assure aeration and illumination to the interior, provided by the windows in the outer structure. As a consequence, also in this case we have an "in between" space which creates a link between present and past.

Chroma Key

Chroma key compositing or chroma keying is a postproduction technique which allows to mix two images or videos together. It is used to place a moving figure – a person for example – against a separately filmed background and it can be considered a key element in many special effects (Figure 13a). Chroma keying permits to remove from pre-existing images or videos those elements that are considered unnecessary. To clarify how this technique can be used within the context of architectural post production we will consider the setting up of the Masaccio Prize exhibition in San Giovanni Valdarno (1968) by Gianni Pettena (Figure 13b), who was among the founders of the Italian radical architecture movement. Pettena incorporates within the Renaissance building attributed to Arnolfo di Cambio, a number of 'abstract' white panels closing up the space of the portico and the galleries. The set up provides a new perspective on the external of the building which acquires "a strange theatrical effect that doesn't allow any form of dialogue with Renaissance culture."

Figure 13. Chroma Key: (a) Pictures taken from "The Avengers" before and after the Effect / (b) Gianni Pettena, S. Giovanni Valdarno



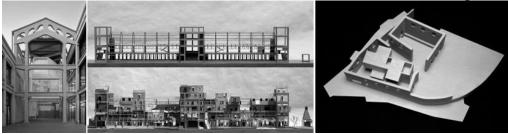


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¹Pettena, Gianni, 1968.

The new elements added within the building are often characterised by a structure which is independent from the old construction which, as a consequence, does not play an active role within the overall structure. From this perspective the Renaissance building can be compared to an old cage or an ancient container for contemporary architecture. For this reason, pre-existing buildings are often maintained in a state of ruin to symbolically represent the passing of time and preserve the memory of the place. For the same reason, pre-existing buildings are often only partially restored, just to maintain their structural stability. Hence, there is a discrepancy between their original function and the new role as containers, which house replaceable and interchangeable elements made of lightweight materials. These elements, on the one hand produce a contrast between old and new, on the other hand generate a new interesting dialectics that can further enhance the architectural design. Other works of architectural post production that can be assimilated to the chroma key compositing involve architectural interventions on unfinished abandoned buildings and, more specifically, on their load bearing skeletons. The unity of the architectural composition in those cases is provided by the structure of the 'container' which can highlight the importance of some architectural components. For example, if building frames or external infills are removed from the pre-existing structure, other elements such as the perimeter walls or the load bearing skeleton gain importance. We can see how chroma keying allows to edit different components, linking them in a content-container relationship, where usually the new architectural elements are inserted within the old pre-existing ones, that are in the foreground. This editing technique can produce contrasting feelings. It can evoke a sense of protection when the old elements are intact and seem to protect the new ones within their perimeter. It can produce a melancholic effect when the old architecture is preserved in a state of ruin or when it can be seen as a decoration embellishing the new architectural elements.

Figure 14. Chroma Key: (a) Langarita-Navarro Arquitectos, Medialab-Prado/(b) Studio Albori, Ecomostro Addomesticato / (c) Aires Mateus, House in Alenquer



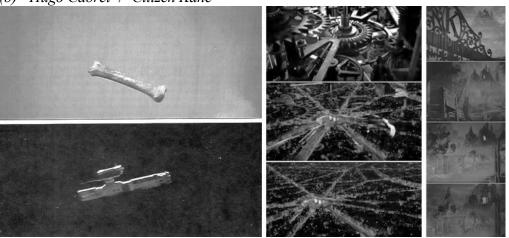
Madrid-based architectural design studio Langarita-Navarro Arquitectos has at least two projects characterised by a skeletonisation procedure. In the La Serrería Belga adaptation project for the Medialab-Prado (2013) (Figure 14a) the skeleton of the structure on the one hand defines the building and its limits, on the other, its seems conceptually and aesthetically unrelated to the space inside, as the concrete structure contrasts with the vivid colours and the light materials – wood, glass and aluminium – that characterise the flexible structure inside. In the project

for the Red Bull Music Academy, held in Madrid in 2011, the steel structure of the new Nave de Música (the music warehouse) houses several independent and demountable 'boxes' in lightweight materials as well as a number of gardens and other spaces functional to the festival activities. Another interesting project is the Ecomostro addomesticato by Studio Albori (Figure 14b) in which the abandoned skeleton of a train station designed in 1983 by Aldo Rossi and Gianni Braghieri is re-used and re-functionalised. Architects Francisco and Manuel Aires Mateus based their design for the house in Alenquer (Portugal, 2002) (Figure 14c) on the re-use of pre-existing walls to insert a new house within. The openings in the façade are preserved in these walls and there is a certain distance between the external walls and the new house which creates an intimate internal space. In this specific case the architectural intervention – which is developed within the old structure – doesn't share any elements in term of location and position. The Mill City Museum, designed by the Minneapolis-based architecture firm MSR (Meyer, Scherer & Rockcastle) and completed in 2004, is built within the ruins of an old mill destroyed by a fire in 1991. The architectural intervention, which includes the building of an eight-story glass façade, is based on the concept of merging the historic structures of the mill with modern components. Also in this case, the internal space between the new structure and the preserved ruins is used for public and collective activities. Also in this case, the encounter between modern architecture and post-industrial archaeology produces new spaces and offers them to the city and its inhabitants.

Graphical Match

In "graphic match cuts" the cut between two frames is characterised by some sort of formal homogeneity: in this kind of cut the shape, texture or colour of objects matches across the edit providing action continuity based on explicit or even metaphorical elements. One of the most famous examples of graphic match cut is provided by the bone-to-space station sequence in Stanley Kubrick's 2001: A space Odyssey (Figure 15a). Another example is provided by Martin Scorsese's Hugo Cabret (2011) (Figure 15b) when, at the beginning of the movie show a graphic match cut from the gears of a clock to the hub of 1930s Paris is shown. We can transfer this editing technique to architectural post production focusing on those geometrical pre-existing elements that can found in plans and views. Those elements can suggest an architectural intervention in which the resulting new building: the new building can be an extrusion of the inner or outer shape of pre-existence.

Figure 15. Graphical Match: Pictures taken from (a) "2001: A Space Odyssey"/ (b) "Hugo Cabret"/"Citizen Kane"



The project for the Environmental Monitoring and Interpretation (Figure 16a); offices by the Portuguese collective Embaixada arquitectura are based on the reintegration of an old mill. The ruins of the mill are integrated in a new structure and transformed into inner courtyards replacing the old rooms. Consequently, what was once empty has been made full and the once internal spaces become external. It is a transformative process in which the pre-existing elements are considered from a new, internal perspective as they delimitate the internal spaces of the building.

In an industrial area at Snape Maltings on the Suffolk Coast of England, existing buildings were converted to create the Aldeburgh Music's new creative campus. This project, realised by the London-based design studio Haworth Tompkins Architects, includes the building of the Dovecote Studio (Figure 16b) within the ruins of a nineteenth century dovecot, tracing its masonry line. The small structure was made entirely off site and inserted from above using a crane. The two storey volume takes on the archetypal of a house and it is characterised by a corten steel structure whose rust-red colour is almost the same as that of traditional Suffolk red bricks. In this kind of architectural intervention, in which pre-existing elements are preserved in a state of ruin, the editing process s associated to the *chroma keying* of the building façade. Other examples of this specific approach, are provided by the POSEhuset Studio (2010) by the Danish studio Svendborg Architects, the S(ch)austall (2004) by Stuttgart-based FNP Architekten or the art installation 'Precarious home'.

Figure 16. Graphical Match: (a) Embaixada Arquitectura, Project for the Environmental Monitoring / (b) Haworth Tompkins Architects, Dovecote Studio / (c) Ensemble Studio, Cultural Center Madrid

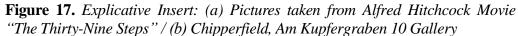


The opening sequence of Orson Wells' Citizen Kane (1941) is characterised by the continuing match of a window from frame to frame, until we reach the moment when, from being an external object, the window becomes an element through which the external space is visualised. The key procedure, in this case, is a dissolved transition editing, which allows to link the different shots while the key element is obviously the window, which constitutes a very small part of the frame but, at the same time, is the element linking the different shots. From an architectural point of view, the element of the window is crucial, for example, in the work made by the Ensemble Studio for Madrid's original slaughterhouse in 2010 (Figure 16c). This winning competition project, focuses on the linking of two repurposed warehouses (13-14) which were previously independent buildings. The linking is obtained through a number of 23 meters-long bridges, built in prestressed reinforced concrete, which are inserted through the original windows of the slaughterhouse. The windows, from this point of view, seem to play the 'extruder' role and, at the same time, permit a dialogue between past and present. The element of the window is a central one also in the Bombay Sapphire Distillery (2014) by Heatherwick Studio. The structure was formerly a paper mill comprising of more than forty buildings. Heatherwick Studio realised the creation of two solar greenhouses two grow exotic plants specifically used in the Bombay Sapphire gin distillation process. These two new structures, built in glass and steel, are connected to the building through two window elements which provide support for the steel structure and help providing the right ventilation for the greenhouses.

Explicative Insert. Mediation Body

Gap between two narratively consecutive framings filled by a third detail framing, underlining the presence of the third framing into the sequence (Figure 17a); it consists of the union of two framings, very different between them, through a detail of the scene that refers in this way to both framings. The reference

of an existing element in the preexisting, with a linked detail, is what happens in numerous interventions where the "new" inserts into historic structures. In the façade of David Chipperfield,'s 'Am Kupfergraben 10' gallery (Figure 17b), in Berlin, the inserted building perfectly traces the block, occupying an area left empty for years after a bombardment during World War II. The building shows its modernity, but recognizes, in the lateral perspectival joint, all the height relationships and urban layout limits. In particular, starting from the capital and from the base of a column of the joint building's façade, it transforms the line and the geometry in a big window, divided in three parts that refer to the column's lines themselves.





The configuration born from this detail is visually reproposed in a staggered way along the façades of the building, highlighting internal spaces dynamism. The detail of the described joint results to be a solution reworked from another Chipperfield's project, for the reclamation of Neues Museum. In particular the corner solution of the building recalls the lines of the adjacent façade and it proposes the addition of sculptures inside that give rhythm (in this case) to the corner façade. In the competition project for the Office Building for the Deutsche Bundesta in Berlin of 2013, the architects Barozzi and Veiga aim at the completion of the building, inserting in the façade the configuration of the bay of the adjacent aligned façade, isolating it.

Flashback – The Diegetic Displaced Insert. Temporal Variations

Flashback is not a kind of editing but a narrative process that, interrupting the temporal development of a narration, tells about an event happened before, as a true skip back in time. The first who used it was David Wark Griffith, in *Intolerance* (1916) but the term was coined in the mid-sixties. It represents in the cinema what is called analepsis in a literature text. At the beginning it is linked to character's memories or tales, in other cases it is used just to give to the viewer, in some references to the past, the information needed to understand the events of the present narration, getting to the memories a collective dimension.

Figure 18. Flashback: (a) Francesco Venezia, Gibellina Museum/(b) Carlo Scarpa, the Entrance of IUAV



In this last case the historical insert can manipulate the document. Francesco Venezia in the Gibellina museum (1981-1987) (Figure 18a), transfers in the project a fragment of the ruin of Di Lorenzo Palace, destroyed in the earthquake of 1968 with the whole city. The fragment is not inserted in the external façades to avoid the relationship with the new city, but introjected inside a courtyard entirely built with local stones. The fragment, real and nostalgic, hidden inside the memory, once dislocated and reinserted, making the memory of the old city and of the tragedy live again. In 1985, in the entrance of the Venice Architecture University (IUAV) designed by Carlo Scarpa, (Figure 18b), an ancient gate made of Ischia-stone found in the Tolentino during restoring works was inserted, but turned horizontal and re-used as a tank for a fountain. The above example being similar for its decontestualization to the inserted object of the Derby's Assembly Hall – a James Stirling's project of the '70s – where the neoclassical façade is reassembled with an ironic process similar to Pop Art, sloping in contrast with the glass façade of the building.

Freeze Frame, the Historical Taking. Strengthening the Memory

"In the measure in which it is fundamentally a fixed image, cinema is inhabited by death".

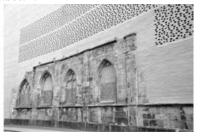
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¹Bruno, Giuliana, 2015, p. 38.

Figure 19. Freeze Frame: (a) Raffaele Stern, Colosseum / (b) Ortner & Ortner, Baukunst Archive / (c) Peter Zumthor, Kolumba museum







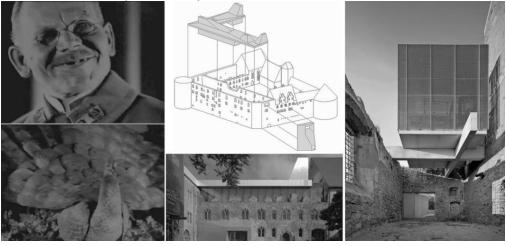
The *freeze frame* is a framing composed by a single frame. The film stops, nothing moves anymore. The preexisting, the ruin, is blocked in the state it is. The architectural intervention can be deduced historically from the restoring of the Colosseum by Raffaele Stern (Figure 19a). The architect in 1806 creates a stabilization with a buttress made of bricks for the entire ring, that, in the superimposition with the arches, freezes the moment in which the Colosseum suffered the damages: the early parts of the monument can be recognized immediately, highlighting the imbalance of the arches on the point of the collapse. Peter Zumthor's project of Kolumba museum (1997-2007) a Cologne (Figure 19 c), puts itself on the background of the preexisting site, introjecting then Roman archeology found during the excavating. Here, as well as in Francesco Venezia's project in Gibellina, the walls containing the museum are studied to adapt to the fragment of the medieval walls. The intervention, often used in ancient monuments restorings, is today spread to the current industrial archeology in the German State Archive in Duisburg. The 2013 Ortner & Ortner Baukunst Archive (Figure 19b) "freezes" the old structure of a thirties warehouse inserting then in the middle a huge and massive 76 meters high tower shaped like an enormous house without windows and beside a curvilinear building with windows. To stabilize the preexisting and to protect the archive from the light and the heat, all the openings are stopped up with the same bricks and with the same pattern used for the walls of the central tower, giving to the project a massive image of inviolability. The identities of both buildings stay preserved: the brown walls of the old building contrast with the red walls of the new one. NRJA (no rules just architecture) in the house of ruins (2002-2006) close to Saka, by the Baltic Sea coast, insert inside the old ordinary walls of a granary a steel and glass house, preserving their memory. The walls protect the new house and are strengthened with reinforced concrete walls that stop time on the outside. The contrast between this rough and massive materials and the transparent fragility of the glass in inside creates an interesting dialectic between the two buildings.

Detail Shot, the Non-Diegetic Insert. Inserts

It is a gap between two narratively consecutive framings filled by a third detail framing, not narratively related to the previous or the following. Such a gap breaks the vision of the framings and the chronological narration of the events. The most known example is the clockwork Peacock insert in the Ejzenstejn's film

October of 1927 (Figure 20a), where the operation becomes tool for metaphorical associations. The gap is sudden because it creates unpredictable situations inside the normal narration and takes the observer to a feeling of estrangement.

Figure 20. Detail Shot: (a) Pictures taken from Ejzenstejn Movie "October" (Alexander Kerensky/Peacock) / (b) Nieto Sobejano, Moritzburg Museum / (c) David Closes, Transformation of the Church De Sant Francesc



The preexisting architecture fully keeps its formal and constructive identity, but is inserted with a series of contemporary punctual interventions formally contrasting with it and with discordant materials. In the extension of the Moritzburg Museum of 2009 (Figure 20b), Nieto e Sobejano insert a series of figures inside the façade of the structure: on the top they create a new crowning with a bent covering that sustains inside the new exposition spaces, a new extremity that hosts a vertical communication unit and a trapezoidal space at the entrance. Architect David Closes operates transformation (2003-2011) of the church of the convent De Sant Francesc in Santpedor (Figure 20c), Spain, in multiuse spaces for cultural activities. First goal of the project is the differentiation of the new inserted elements, in the preservation of the original elements, keeping the aesthetic unity of the church nave. To preserve it, the spaces for the new purposes are put outside. The new distribution system cross the entire building starting from the entrance stairway, which is the main insert, together with the suspended hall added in the internal courtyard.

The Subjective Insert

The *subjective insert* is a framing that represents the subjective dimension of a character like a dream or memorie; usually it's preceded whit particular light effects. Interesting is the comparison with Lola Domènec and artist Edoardo Tresoldi's recent experiences. The first (2000-2009) works in Empuries (Figure 21a), an extremely suggestive archaeological site, with the archaeologists, architects try to clarify the reading of the II century roman city finds for a visitor. After removing all the superfluous, they show, with different colored soils, the

various purposes inside the area, such as the basilica, the temple, the curia, the forum. Always for didactic reasons, the temple podium is physically rebuilt and the map, in 1:1 scale, is drawn on the floor in microcement to highlight its importance inside the archaeological area.

Figure 21. Subjective insert: (a) Lola Domènec, Restoration and refurbishment of the Roman Forum of Empuries / (b) Edoardo Tresoldi, the Siponto basilica.



Edoardo Tresoldi, flanked by archaeologists and architects, rebuild in 2006, with a series of metallic wires, his artistic sign, the Siponto basilica (Figure 21b) in the archaeological park with the same name: the memory is revitalized offering the vision of what it used to be with a drawing in the air.

Conclusions

Through the observation of numerous projects on existing buildings, we came by analogy to the identification of a series of some design strategies. The method adopted for the definition of the modification techniques has been to carry out a transposition of the movie-mounting-post-production-technology within the architectural realm. To simplify, the montage which in the cinema industry represents the technical solution to link two scenes, in architecture becomes an ideas-generating operation. The existing buildings are the generator of the architectural design and through the post-production techniques, it will be possible to stimulate the imagination and suggest possible formal outcomes. In addition postproduction is proposed in architecture as a language of modification because of its condition of being "naturally" linked to the concept of reuse or recycling scenes, then able to activate defined complex project actions of intervention on the pre-existing environment.

Figure 22. Final Cut: Caixa Herzog & De Meuron, Forum in Madrid



We can now decompose one of the architectural structure previously analyzed as a first example of a post-produced architecture, the Caixa Forum in Madrid by Herzog & De Meuron (Figure 22), and try to narrate the formal genesis of this piece of architecture, decomposing it in the several operative post-production-phases previously identified, that lead to the final version of the project. The first two operations are *jump cuts*: the first one removes the basement obtaining a public square below; the second produces new openings in *accumulation* (an editing procedure based on the evident repetition of a group of framings with common characteristics), that immediately leaps out at the viewer because of the formal discordance with the rhythm of the other openings of the building. A *croma-key* isolates the containing walls with its windows, a *freeze frame* blocks the altered situation and, in the end, a *graphical mach* generates an extrusion of the map of the pre-existing volume. *Final cut* produces the ultimate version of the movie, at the end of the post-production phase. A series of editing processes come in succession to define the final solution of the overall architectural design.

As explained above, the applied techniques can be added together. Different ways of their dynamic combination will be able to achieve a rapid exploration of many possible forms, allowing continuous exchanges and contaminations between the existing building and the new design proposals. The final project solution will be the result of hybridizations between old and new parts, and the end-product of this process could be able to recreate to some extents the atmosphere of those stratified architectural complexes transformed over time have.

This methodology, that could be named "a grammar of imagination", may offer the possibility to be applied and used operatively giving to the designer an abacus of possible interventions so that traces of the past persist and constitute new unity with the new. Traces of the past, once discovered their inventive power and once developed the capabilities to work altering them, will help to correctly reinvent the city, the architectural spaces and those places where they always belonged.

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