DRAPE REHEARSAL

Layers of space between body and textile

Imprint

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1.1 ABSRACT

Regardless of its peculiar character and huge potential textile is usually confined to a passive role in the interior instead of being an active and programmable element. DRAPE REHEARSAL looks at the drape as a potential 3d element that stages an evolving functional and atmospheric definition of the room.

Textile tectonics and peculiarities inspired the development of an advanced sensibility towards the use of fabric in the interior as a way to orchestrate views, sensations, experience and atmosphere of a place.

The project investigates the Fabrication of Atmosphere as a way to enhance the in-store retail experience, through a reinterpretation of the standard module of a changing room. Fitting rooms are usually hidden, impersonal and unwelcoming. What if they could contribute actively to the customer experience? Escaping the logic of the rigid architectural box, Drop the curtain provides a surprising scenography that invites people to act as if they were on a stage, dramatizing the behavior of choosing, trying, deciding and buying.

The design is an expandable textile object that can be compacted and stored at the ceiling, a flexible element that can organize the space in temporary configurations. The potential for a volumetric expansion creates an ephemeral ghostly space, revealed by use. The theatrical effect of a curtain falling from the ceiling wraps the space around the user as if the fitting room was a wearable dress. Interior textiles are explored as layered, programmable and expandable surfaces. The expansion unfolds a collection of impermanent moments and effects that build a total experience around the user. This wearable dressing room incorporates experiential service-oriented features; A system of layered textiles integrated into the drape defines opacity, transparency and light-shadow effect. According to the way light hits the surface it creates an opaque or transparent screen; the customer can switch from transparent to translucent and control the privacy of the dressing room by turning on-off the light.

This system is reminiscent of the primal role of the curtain as a concealing or revealing device, both in the theatre and at home. It engages with the sense of fragility of the publicprivate dynamic of being in a dressing room, a very private enclosure in a yet public space.

1.2 INTRODUCTION

Fabric holds the potential to structure space, dampen sound, emanate light, influence the way we experience the interior. Textile fulfills a wide range of performances in our everyday life. Moreover it has the power to create a sense of intimacy, protection and domesticity as no other material does. It shapes our behaviors: A blanket makes us stay longer in a place as it keeps us warm, a carpet invites us to lay on the floor because of its softness. Regardless its peculiar character and huge potential textile is usually confined to a secondary role in the interior. As Bradley Quinn underlines in the book Textile Futures, Interior architecture and textiles have an odd, somewhat unresolved relationship (Quinn, 2010). Textile is usually considered a secondary and decorative element in architecture, which often plays the passive role of recipient rather than being an active factor in the interior.

The reason of this dichotomy can be found in the historical evolution of the role of fabric in architecture. In his theoretical work Der Still, Gottfried Semper, the Nineteenth-century German architect and art historian, indicates that architecture has its origins in textiles, in weaving and braiding, in the light and often richly decorated nomad tent architecture (Semper, 1860). Textiles did, however, begin to lose in significance as people became increasingly settled and as technology and the idea of domesticity evolved over time. Indeed the use of fabric was long avoided by architects in interior spaces in the first decade of the Twentieth century, or if used robbed of its sensual qualities: It was reduced to a means for adding a human dimension to the purely functional interiors. The reason behind this was most likely Modernism's obsession for hygiene. The richly decorated draperies of the 19th century were considered dust catchers and banished from the purely functional interiors (Kruger, 2009). Only tapestries survived as "nomadic murals", which modern man could carry with him as a portable work of art (Le Corbusier, 1925).

Even the new generation of e-textiles, which are supposed to enrich our experience, making the space more dynamic, surprising and spectacular, seems to have a limited contribution in terms of functionality and meaning. An example can be found in the work of UK-based textile designer Elaine Ng Yan Ling, who has developed Climatology, a project whose main focus is based on celebrating nature's survival tactics through a new experimental smart textile series that adapts to fluctuations in light, temperature and humidity. (http://fellows. ted.com/profiles/elaine-ng-yan-ling). Yet no functional application has been found for this smart textile yet. This project clearly shows how smart textiles still seem to be far from contributing to the interior architecture discipline. E-textiles respond to environmental stimuli changing their visual appearFig.1 Medieval bedroom by Eugene Emanuel Viollet le Duc.

The image shows a bed closed by curtains commonly found in France during the medieval times. (1860)



Fig.2 Tent Room by Friedrich Schinkel.

The image shows the Tent Room, designed by Schinkel for the Charlottenhotf palace in Potsdam. (1830)



1.2 INTRODUCTION

ance but they do not respond to specific spatial needs: Their spectacular ornamental power never extends to a functional performance that could benefit the space or its user.

A key figure in bringing back textile to architecture is Petra Blaisse, a Dutch interior and textile designer. She creates evolving spaces through the movement of curtains within architecture: A transformation that deeply influences our experience of the interior, entirely changing the atmosphere of a place from time to time. Blaisse refers to the 'emancipation of the curtain' where textiles are able to respond to many needs that architecture cannot solve, as they inherently accommodate qualities such as temporarily and impermanence (Kruger, 2009). In this regard I believe that Blaisse's work approaches functionality from a very inspiring point of view; Her projects take advantage of the flexibility of textile, translating its potential in multifunctional spaces that allow modification. At the same time she introduces textile as a spatial element, changing our perception of architecture and the way we design this experience. She considers the drape as a connection between man and architecture, going beyond the modernist paradigm of function only.

Considering her work as a starting point and argument, I would like to investigate further the role of textile in architecture. With my project I would like to foster the 'emancipation of the curtain' mentioned by Blaisse, exploring the idea of textile as a functional and atmospheric element in the interior. Questioning the simplification of textiles during the modern era and their consequent loss in significance over time, is it possible to reinterpret textile typologies for the contemporary interior in a meaningful way? Fig.3 Dutch pavilion: Re-set by Petra Blaisse at the 13th Architecture Biennale.



The image shows how Blaisse achieves the effect of the drape in its movement. (2012)

1.3 RESEARCH QUESTIONS

I have always been fascinated by the uniqueness of fabric, by its tactile and atmospheric qualities. As interior designer I find textile in architecture inspiring and relevant as a temporary and fragile material that implies a notion of impermanence, change, movement and surprise, characteristics too often neglected by architects.

My research focuses on this material as paradigmatic in terms of flexibility and potential in defining a multifunctional space that allows modification. How can the drape create surprising, functional, atmospheric and choreographic spaces? If a wall stands for the traditional understanding of architecture as a stable and permanent discipline, what does it mean to bring back a hanging wall in the interior? How to re interpret the drape from passive recipient to active factor?

Drape Rehearsal looks at surface as a potential 3d element that could be utilized in flexible ways I believe that the curtain can be considered as a layered and programmatic wall: This expansion of surface becomes the site for an evolving functional and atmospheric definition of the room.

Which kind of activities can the surface unfold in the interior? If the simple action of moving the drape leads to an evolving and complex spatial experience, can textile lead to a new reading that questions the stability of architecture? Furthermore: If architecture is regarded as a durable discipline based on solid and permanent materials, which kind of interior can textile create? Analyzing the relation between body and textile, we can consider cloth as something that is in contact with our body and, through the drape, becomes a living architectural component. It could be seen as a tool to define an intimate relationship between man and architecture, contributing to the fabrication of atmosphere.

"Curtains bring sensuality to this hard surface space, they make gravity visible, light apparent, they curve, move and are full of associations. The curtain makes a primal connection between space and people: The stuff that wraps our bodies and touches our skin becomes an element of architecture." (Ronalds, 2007, p.150)

To sum up, I believe that textile architecture can be seen as a territory worth to explore in the context of "the fabrication of atmosphere" since the drape is ephemeral, as interwoven with personal, primitive and emotional values as atmosphere is. Is it possible to build an experience in space that lasts as a collection of ephemeral moments?

Fig.4 Blue Bricks by Akane Moriyama

The image shows a re-interpretation of the wall as a three dimensional textile object (2013)

Fig.4 Blue Bricks by Akane Moriyama



The image shows a re-interpretation of the wall as a three dimensional textile object (2013)

CONCEPTUAL SKETCHES





1.4 METHODOLOGY

As mentioned previously, textile's peculiarities are related to senses, perception, touch, emotions and all the atmospheric qualities we perceive even before function. This is the reason why it is vital to develop a methodology that considers textile as construction, as architectural element that contains program and function. Because of the intrinsic qualities of the material, the tectonics of textile should be explored through an empirical research. In order to investigate the idea of surface as a programmable and thickened textile wall I decided to illustrate my process of making and experimenting with the material. These cycles of experiments become a body of work that explains the way I progressed and made decisions during my research.

An interesting example of empirical methodology applied to textile architecture research is the one Petra Blaisse employs in her work. In this regard D. van den Heuvel writes in OASE magazine:

> "Although the making and material itself are of pri mary importance in Blaisse's working method, she is not aiming for an architecture that wants to show the materials and characteristics as such. Architec ture is not understood as pure materiality, or pure surface that is made empty, free of meanings. Ar chitecture is understood as an effect. Only in this ef fect does the material become architectural." (D. van den Heuvel, 1997, pag.5).

Blaisse is a brilliant example of finding a balance between technical requirements and aesthetics, paying attention to details. She uses the following means to give the curtain an architectural effect: Light, air and movement; seam, hem and fold; and texture and pattern. (D. van den Heuvel, 1997) From my point of view this approach shows how the atmospheric peculiarities of textile are connected to an experimental approach. Indeed, in order to better explore what can be achieved with the above mentioned characteristics of textile. I have been inspired by how Blaisse designs curtains, experimenting and testing, working with several materials and techniques. It is maybe necessary to take inspiration from this and to investigate through research by making what this knowledge holds as potential and what could be added to it. I think that by exploring materials, touch, sense of weight and scale, and interaction with light, it is possible to develop an advanced sensibility towards the use of fabric in the interior. This approach will also lead to a deeper understanding of functionality as an answer to a variety of needs that include the way we experience a space, its views and sensations, its atmosphere.

1.4 METHODOLOGY

The method I apply to my research focuses on exploring surface with three main targets: The study of existing fabrics as surfaces that can be manipulated for a 3d result; An examination of the thread as the basic element of textile, an analysis of its tectonics and the way the disposition of threads can create space; An investigation of tools and processes for making textile in order to build a basic knowledge of machineries and techniques.

In order to organize my empirical research, I have mapped the process and suggested a method by illustrating the amount of produced exercises. Each experiment unfolds a list of variables/criteria related to the choice of the techniques/processes taken into analysis. Consequently, the outcome is affected by a series of parameters connected to the goals of the empirical research, that changed throughout the phase of experiments.

At the same time my modus operandi includes an historical and theoretical research. I developed a catalogue of textile typologies in the interiors, collecting examples and relevant case studies which explore the topic of surface through the filter of depth and programmatic use. Moreover a work in progress timeline has been developed in order to underline the evolution of the role of textile in the interiors and its contribution to the space as functional, decorative or symbolic element. Regarding the influence of textile in shaping the interior, I have been inspired by the way Sylvie Krüger organizes her research in the book Textile Architecture (Kruger, 2009). The author investigates the presence of the drape in history: She develops her analysis considering fabric in spatial terms as vertical, horizontal or three-dimensional space divider in order to stress the role of textile as an active element in the interior, that structures the organization of space.

In conclusion, my methodology has to be considered as a circular and not linear process in which theory and practice continuously feed and influence each other: I consider theory as a basis for practice and vice versa.

Fig.5 Naples palace Room.



The image shows the typical wall hanging acovering the room

Fig.6 Curtain by Petra Blaisse for Cornell University

System of drapes designed for the auditorium (2011)



2 THEORETICAL RESEARCH

2.1 About surface: Passive recipient or Active factor?

Drape Rehearsal aims for a new reading of the interior space through a study of textile as a programmable surface. This means that the drape is considered as a dynamic component in the interior, which performs a diversity of effects and creates a variety of spatial conditions and settings, incorporating a set of functions. Through an analysis of paradigmatic examples in the history of Architecture, my project investigates the role of surface in the evolution of the interior. As a consequence the literature review focuses on the interrelation between textile and space, raising awareness of the complex role that textile and more in general surface have played in architecture. In order to do so, a deeper understanding of surface as not purely decorative or purely structural element is required. At the same time, relevant case studies of the wall as an interface that facilitates flexible programs will be selected in order to open a new perspective on surface as an active and multifunctional element in the space.

Andrew Benjamin defines surface as "that which distributes programmable space, or functional concerns, or the elements of architecture (e.g. walls and columns)". In his paper Surface effects: Borromini, Semper, Loos, Benjamin outlines the position of architects and theoreticians regarding the role of surface in architecture. Semper considers the wall as a spatial enclosure that can be distinguished from structure: A surface that realizes a division in the space, defining the interior (A. Benjamin, 2006). Fundamental in explaining Semper's idea of surface is his description of carpets as elements that define boundary and separations:

> "Hanging carpets remained the true walls, the visible boundaries of space. The often solid walls behind them were necessary for reasons that had nothing to do with the creation of space" (Ibid).

Semper questions the radical distinction between structural and decorative and surface is considered as a complex spatial element.

Semper's idea of carpet as active factor in structuring the space, finds a continuity in Walter Benjamin theory;He defines hanging carpet as defining the space and describes the Victorian interior in his Arcade Project as: "A space that disguises itself, that puts on the costume of moods... To live those inte-

riors was to have woven a dense fabric about oneself, to have secluded oneself within a spider's web." (W. Benjamin, 1940). In the bourgeois interior textiles are a second skin that statically follows the outline of the room: The drape plays the role of a recipient, being a richly decorated protective shell.

Quite controversial is the position of Adolf Loos regarding surface. The interior surfaces of Loos' houses and buildings appear to be heavily ornamented. Emblematic in this direction is the picture of Lina Loos' bedroom (fig.3), wrapped by heavy curtains which, at first glance, might look extremely decorative. From a Loosian perspective they are not - cladding is not to be considered as ornament, its presence is organizational, and hence related to programmatic distribution (A. Benjamin, 2006). Indeed in Ornament and crime Loos argues against the role of ornament in modernity, which he considers purely symbolic as it has nothing to do with the creation of space. On the contrary in his own work surface organizes the interior and establishes a clear difference between inside and outside: the wall is the load bearing structure that holds the two organizational surfaces of the facade and the interior cladding, which, as a tool, "establishes spatial conditions through its materiality... What matters is how carpets - as cladding and thus as surface – work to space; in other words, the question to be addressed relates to the capacity of a given material – operating as a surface - to establish spatial conditions." (A. Benjamin, 2006, pag.26).

During the modern era fabrics and richly decorated drapery disappear from the purely functional and aseptic interiors; Although the house used to be considered as a machine, Dutch architect Gerrit Rietveld introduced a new parameter in his design of the Rietveld Schröder House: Flexibility. This house, built in 1924 in Utrecht, is a relevant example of interiors where surface defines a multifunctional and evolving space. The living area of the house is designed as an open space where sliding and revolving panels create an ever changing interior definition, leading to several potential spatial experiences. The wall is not the only structural element anymore, but for the first time color and surface are applied as a structural tool to define space.

The same principle can be found in the system of curtains designed by Philip Stark for the Groninger Museum: White draperies define a transformable exhibition area, dividing the space and structuring its functional organization. The designer orchestrates a special atmosphere through the use of light, playing with the primordial role of the curtain as something that conceals and reveals.

Petra Blaisse as well explores the idea of creating changing spatial relations through the movement of curtains. Blaisse

Fig.7 Adolf Loos, Adolf Loos Apartment



The image shows Lina Loos' Bedroom wrapped by heavy curtains . (1903)

Fig.8 Gerrit Rietveld, Rietveld Schröder House



The image shows the sliding panels system of Rietveld Schrröeder House . (1924)

2.1 About surface: Passive recipient or Active factor?

uses tracks to define paths to choreograph the movement of the drape, to which she refers as

"something that can be shaped independently from architec ture, to create space within a space and escaping rigid archi tectural logics, textiles have the potential to create varying spatial situations without permanency, they inherently accom modate temporarily and modification". (Blaisse, 2007).

An example of how Blaisse choreographs the experience of space by the movement of curtains can be found in the installation "Re-set" (fig.1). On the occasion of the XXIII Architecture Biennale in Venice she designed a system of moving drapes that creates a set of different spatial conditions; The space looks bigger or smaller, enclosed or open, bright or dark according to how he fabrics slide on tracks. She believes that the path is the same as the track: they both lead you or the object from one point to the next (Blaisse, 2007). By doing this she creates an engaging game of hiding and revealing, involving the visitor and showing unexpected perspectives on the existing space.

A different point of view on surface is what Alex Wall, architect and urbanist theoretician from the United Kingdom, underlines in the article "Programming the Urban Surface". He states that designing surface means increasing its capacity to support and diversify activities in time, even unpredictable ones (Alex Wall, 1999). Surface becomes an element that unfolds events in time, creating a layered topography equipped with services and furnishings that can be appropriated by the user as they are un-determined in their function in order to trigger a sense of discovery.

Wall talks about programming surface on a urban scale, but what happens when one would program interior surfaces in the same way? An impressive example of considering the domestic as a thickened and complex landscape is Visiona by Verner Panton. In 1970 the Danish architect created a visionary interior space for the Cologne Furniture Fair commissioned by Bayer Ag. In order to understand the design it is important to mention that Panton was commissioned to create this interior for a boat and not for a traditional domestic context, which clearly led to a specific choice for curvy and floating shapes; Instead of separate rooms with classical furnishings, Panton developed a domestic environment composed of colorful, modular upholstery elements, reflecting the informal, relaxed attitudes

and lifestyles of the time (Domus, 2014). In contrast to the rigid multifunctionality of the modernist interior this project shows how surface can define a multifunctional and yet ambiguous space that can be interpreted and appropriated by the user in several ways.

If in the early Twentieth Century the modern house was a machine for living, a different perspective on the interior can be found in the "surreal house", considered as a theatre. Jane Alison describes the surreal

Fig.9 Philip Starck, Groninger Musem

The image shows how curtains define a transformable exhibition area. (1999)



Fig.10 Verner Panton, Visiona Exhibition

Panton creates a programmable domestic landscape (1970)



2.1 About surface: Passive recipient or ACTIVE FACTOR?

house as:

"Everything the 20th century house is not... a dwelling like no other, a renegade house characterized by mysterious spaces, dreamlike vistas and strangely animated furnitures. The house comprises objects and space, container and contained." (Ali son, 2010).

A peculiar relationship of the house with its objects, and a taste for the unexpected in the familiar can be found in a contemporary house by the Spanish firm Elii architects; "Didomestic" (2013) is the renovation of an attic apartment in Madrid that combines " the ingenuity of Da Vinci with a cmyk color scheme and contemporary living" (Design Boom, 2013). In the limited space, the architects sought out a solution to allow the inhabitant to customize their home with a simple pull, push, slide, or turn, so that the space can adapt to almost any function (Ibid). The designers considered the house as a theatre, where everyday objects perform temporary and evolving functions, resulting in a multifunctional space; The home is composed by ephemeral moments and situations, much like what happens in a theatre: The space becomes a stage for living, in which the surface reveals hidden and unexpected functions. The small and repetitive rituals of the house create spectacle and wonder as they are playfully connected to a system of domestic mechanisms.

As a conclusion I believe that surface should be defined as a field of potential for the temporary definition of the interior space. Taking advantage of the above mentioned qualities of textiles in terms of flexibility, the drape can allow several configurations and uses, where a change in the structure results in a change in the program. My project looks at surface as a potential 3d element that becomes a site of performance and effect. It is considered as a "territory for architectural intervention" and innovation (Amanda Reeser Lawrance and Ashley Schafer, 2013).

Fig.11 Elii Architects, Didomestic apartment

The space becomes a stage for living. (2013)



Fig.12 Elii Architects, Didomestic apartment

Surface unfolds a set of functions (2013)



2.2 About SPECTACLE AND FUNCTION: TEXTILE IN THE RETAIL FIELD

The fabrication of atmosphere through textile tackles the issue of the secondary role that the drape plays in the interior in contrast to its rigid architectural configuration. Willing to reconsider the role of textile as an active factor in the atmospheric definition of the interior I would like to give some examples where the use of drapes in retail interiors orchestrates the user experience, creating a specific atmosphere that borrows theatricality from the scenographic field. The curtain organizes the space of the stage, which can be flexibly arranged and rearranged in a variety of temporary configurations. At the same time its movement up or down has an informative role: It indicates the start and the end of the performance. In this chapter I will select some emblematic retail design projects where there is a clear reference to the performative character of theatre.

Derek Lam store by Japanese Studio Sanaa (2009) is an example of the way textile can create a functional, minimalistic, intimate and warm environment. The space is divided by transparent, acrylic walls and metallic curtains. Sejima and Nishizawa have created a transparent canvas of modulating acrylic curved walls for Lam's refined and sensuous clothing (Dezeen, 2009). The architects decided to give the curtain a primary importance in the project as the transparent walls are almost disappearing and at the same time the metallic gold drape materializes a sophisticated atmosphere. The way the fabric interacts with light draws attention to the collection, becoming more than a background. The interior reminds of a theatre setting, where the users are engaged in a peculiar experience that goes beyond purchase. The curved shape of the curtain tracks also contributes to the definition of small enclosures that escape the rigid architectural box logic.

The same kind of theatrical curtain setting can be found in the restaurant Los Palillos, by Ronan and Erwan Bouroullec (2009). The project centers around one long wooden table facing the stainless steel kitchen. Naturally, the kitchen had to be the center of the space and thus it had to be wide open so that guests could see the preparation of the dishes from the beginning to the end. Consequently, the guests find themselves in the middle of the kitchen, while the chef acts in front of them. (Dezeen, 2009). The French duo decided to emphasize the contrast between the choice for a raw space designed with few materials and a shiny gold curtain placed behind the table. This clearly defines the area where the chef cooks as a stage, turning the mundane action of eating in a restaurant into the exciting experience of attending a performance. The example shows how textile can be a primary element in shaping the customer's experience.

Fig.13 Derek Lam Shop by Sanaa



The image shows the way textile interacts with light and draws attention to the collection . (2009)

2.2 About SPECTACLE AND FUNCTION: TEXTILE IN THE RETAIL FIELD	The work of the New York based Architect Gisela Stromeyer offers a different perspective on the way textile can shape the atmosphere of a space. She designed Elie Tahari's fashion show room by wrapping the space with tensed textile mem- branes. White and transparent backlit textiles build a fluid and soft installation that creates a sensual and refined mood. The curved shapes are reminiscent of body movements, as if the space would wrap the user into a cocoon. The treatment of the surface is minimalistic, as the textile is not stitched to sup- ports but directly attached to the space with hooks and invis- ible threads. The intervention valorizes the collection: Without stealing attention from the displayed products, this almost evanescent setting is able to materialize a sense of intimacy by the means of light and material.
	Some architects also worked with the idea of merging the flex- ible qualities of textile with unexpected solutions, resulting in playful and functional interiors. One of these is the Tokyo based firm Schemata Architects. In 2013 the designers creat- ed an expandable changing room inside furniture made from shipping crates in the Word Basics Fashion boutique in Par- is. Large wooden packing crates have been customized into display units for clothes and accessories. One of the crates has been made into a fitting room for the store and features a zip-up cocoon of sponge material at the front to provide additional room (Dezeen, 2013). I find the way this project an- swers the need for an economical use of space with a simple yet spectacular solution inspiring; The inflated looking textile pushes the boundary of the material, replacing hard corners with soft and welcoming shapes. The project re-interprets the fitting room as an intimate and comfortable pillow-like enclo- sure that surpasses the impersonal and uncomfortable tradi- tional dressing room.
	An example of a dressing room where the experience is piv- otal is the one OMA designed for the Prada Shop in New York in 2000. The design does not incorporate the use of fabric but it opens an interesting discussion regarding the rela- tion between function and atmosphere in the retail field. A series of experiential and service-oriented features enhances both functioning and aura of the stores. The dressing rooms are equipped with 'magic mirrors': A plasma screen invis- ibly built into the large mirror surface that allows customers to see themselves both from the front and the back at the same time. An integrated time delay can even capture and re- play movements (Ideo, 2000). The doors are made of Privalite glass that changes opacity and privacy level according to the user's interaction: Light can be turned on and off resulting in a transparent or translucent screen. I believe the way the architects choreographed the space is inspiring in terms of in-store experience. At the same time I wonder if the design

Fig.14 Los Palillos Restaurant by Bouroullec brothers

The image shows how textile can be a primary element in shaping the customer experience. (2009)



Fig.15 Elie Tahari's showroom by Gisela Stromeyer

White and transparent backlit textiles build a fluid and soft installation (2011).



2.2 ABOUT SPECTACLE AND FUNCTION: TEXTILE IN THE RETAIL FIELD

would benefit of a clever use of materials that would be able to create the same effect and experience without this massive employment of technological gadgets. Would textile be able to create such a temporary yet impressive set of experiences and atmospheres?

Fig.16 Word Basic Fashion Boutique by Schermata

The project re interprets the fitting room as an intimate and comfortable pillow like enclosure (2013)



Fig.17 Prada Store in New York by OMA

doors are made of Privalite glass that changes opacity and privacy level according to the user interaction (2000)





2.3 ABOUT THE FOLD AND THE DRAPERY: LAYERS OF SPACE BETWEEN BODY AND INTERIOR

An essential aspect that should be investigated in the context of my research is the fold, a term associated with clothing and drapery, contextualized as a way to anthropomorphize the interior (Anne Hollander, 2011), suggesting a connection between body and architecture. The fold (le pli), a term appropriated by French philosopher Gilles Deleuze, carries a different meaning in architecture.

> "Folds are also present in the interior but rarely ad dressed and placed in context. The body's proxim -ity to interior surfaces reinforces the idea that textile can share layers of space between body and interiors" (Lois Weinthal, 2011).

In her essay "Drapery", Anne Hollander outlines the historical evolution of the fold, simultaneously stressing the multipurpose role of curtains as a practical and symbolic solution in the interior. First examples of folded and draped cloth in paintings date back to the fourteenth century, when swirling banderols with names or mottos appear as stripes of cloths in Renaissance theatrical performances, a "silent narrative" (Lois Weinthal, 2011) that can be considered decorative as well as informative. Later paintings illustrate looping fabric, "suggesting that the painter anticipated the role of the interior designer by portraying the nuances in spatial experience, from flat to textured backgrounds" (Lois Weinthal, 2011). According to this reading, the use of curtains as interior decoration seems to be extensively used by artists of the sixteenth century, who depicted cloth as a pictorial background, a theatrical curtain that stages life scenes. The Baroque shows an abundance of draped fabrics that create a dramatic dynamic in the interior representation. Throughout the eighteenth and nineteenth century the strong presence of textile as backdrops in paintings proves the dominant role of textile in the interior.

I believe Hollander's research shows how the drape can be considered as a sensual element in the interior space, silently suggesting the presence of the body, theatrically dramatizing everyday life settings. The portrayal of curtains in paintings could suggest that painters interpreted the fold as a device to materialize a specific spatial aura: Fabric seems to embody a set of atmospheric features, becoming a sensual element that connects the hard surface of the squared architectural box to the body.
Fig.18 The Course of the Empire by Thomas Cole

Neoclassical painting for festive occasion. (1836)



Fig.19 The Nativity, Oil by Robert Campin

Swirling banderols with names or mottos appear as stripes of cloths in Fiftheenth century paintings $(\rm 1444)_{\rm c}$



3 DESIGN RESEARCH

3.1 INTRODUCTION

The design has been developed through a research-by-making approach based on a series of empirical tests. Each cycle of experiments has a specific focus: To investigate existing textiles as surfaces to manipulate for a 3d expansion; To study fabric, its properties and behavior on the fundamental scale of a thread; To analyze the apparatus of the loom and the production process of weaving. During this schematic design phase several material studies were conducted with the goal of exploring depth in surface, looking at textile as a potential 3d element that incorporates a programmatic behavior.

Each study was documented and explained according to different parameters and variables. At the end of each cycle of experiments conclusions were drawn in order to clearly show how decisions were taken during the process, critically reflecting on what was done. A collection of case studies will also be presented in this section as a guidance for understanding the design development.



3.2 TEXTILE AS SURFACE: 3D PATTERN

In order to investigate surface as a programmable element I started my experiments by looking at patterns as potential 3d components. My aim was to explore how the repetition of fractal shapes could extend to a functional or structural performance by changing some parameters such as thickness and material. My initial tests aimed to give a three-dimensional effect to the surface through a manipulation of the pattern. I investigated a very specific technique of embroidery called Smocking.

Smocking is an embroidery technique used to gather fabric into pleats, giving to the textile a 3d look. The technique was developed in England and has been practiced since the Middle Ages. Smocking was used most extensively in the eighteenth and nineteenth centuries as a decoration in fashion, representing power and status.

In the first place I decided to apply the technique on a variety of fabrics, resulting in peculiar light, texture and sound effects. In a second stage the smocked textile was manipulated and mixed with hard components such as resin, concrete, plaster and wood. The results showed a tension towards considering fabric as a "structural" surface. Through the tessellation and manipulation of the structure and through a hybridization of materials, the curtain was re-imagined as a rigid self standing partition.

Although the results were interesting in terms of aesthetics this first approach showed several limitations. Basically the tectonics of the fabrics still needed to be analyzed further in terms of light, effect and material use. Tri-dimensionality was not explored yet as a programmable expansion.

In my further research I will illustrate how I came back to these experiments from a different perspective; I applied the same technique in a slightly different way, layering several fabrics with different opacity and transparency levels, resulting in interesting light effects. Fig.20 Smocking technique illustration







Fig.22 Initial tests - Organza textile

The technique creates different opacity levels according to tension-compression applied to the piece



Fig.23 Initial tests, random smoked effect

Glue connects 2 layers of stretch and non stretch fabrics, creating an irregualr effec on surface



Fig.24 Initial tests, mixing hard and soft materials

Organza Fabric+Plaster



Fig.25 Initial tests, mixing hard and soft materials

Glass Fiber Cloth+Resin



Fig.26 Creating hybrids - Sketches



3.3 TEXTILE AS THREADS: AN INVESTIGATION ON FABRIC'S BEHAVIOUR

In the direction of exploring the tri-dimensionality of textile in different directions I investigated fabric on the scale of a thread. I found it interesting to see how the repetition and manipulation of this 2d element would lead to a 3d result.

The second cycle of experiments investigated the thread and analyzed its basic characteristics under forces such as tension and gravity. The thread was considered as a tool to determinate form. As a consequence several form finding experiments based on tension were done to study the self organizational behavior of strings under tension and constrained by control points.

Relevant physical form finding experiments in architecture can be found at the beginning of the Twentieth century. Antoni Gaudì used to build preparatory 3d models using hanging strings in order to calculate forces for the Sagrada Familia: gravity would "mold" the strings and determinate the most "economic" and organic shape of the arches.

In my experiments surface was investigated as a system of threads that incorporates structure and behavior. The form was studied as something that emerges from a balance of natural forces. Each experiment was defined by a set of criteria such as: position of control point in the grid, elasticity of the thread, flexibility of the frame, shape of the frame. Each variable led to different results in terms of density, opacity and flexibility, as is explained in the pictures below. It is evident that a high number of control points would result in a dense and opaque thread surface, which could be more or less flexible according to the material of the thread itself (elastic or rigid), and the eventual deformation of the frame. Fig. 27 Antoni Gaudì, Hanging stings as physical form finding experiments

The image shows Gaudi's Catenary System (beginning of 20th century)



Fig. 28 Form finding experiments with strings, the images show several variables outcomes



3.4 TEXTILE AS THREADS: TOWARDS A SPATIAL INVESTIGATION

In order to bring the thread studies further I decided to look at references in the art and architectural fields that create a spatial experience by using strings on a bigger scale in the interior.

In this regard the series of installations called Penetrable by the Venezuelan Artist Jesus Rafael Soto inspired my research by suggesting a different perspective on surface. Soto creates a virtual volume made by hanging threads: Surface dissolves and at the same time creates an immersive spatial experience. The body feels like enveloped by the space and the movement inside the installation creates evolving optical effects.

Odessa Restaurant by YOD Design Lab in Kiev is another relevant reference for my design research as it brings the thread installation into the realm of architecture. The architects designed a restaurant where hanging ropes define the space, creating an intimate atmosphere by playing with opacity and light.

These examples led me to the investigation of how to manipulate the 2d element of the thread into a 3d experience. A series of physical tests was developed in order to analyze the relation between thread disposition and space structure. The factor of flexibility was also introduced by experimenting with the movement of different groups of threads. Through testing I developed different spatial scenarios of immersive thread spaces, envisioning how the moving strings could create an evolving spatial experience: A room that could change its size, its ceiling's height or internal partitions. A variety of results in terms of light and opacity was given according to parameters such as the density of the threads' disposition and the kind of thread that was employed.

Even though I considered thread spaces visually intriguing and atmospheric, I realized that these physical studies were not performative in terms of function and program. The dissolution of the solid volume into a string space was an interesting aspect of working on the repetition of a 2d component but the experiments demonstrated that surface was still a passive element and not a programmatic and active factor. Fig.29 On the left: Jesus Rafael Soto, Penetrable Blu (1999). On the right: YOD Design Lab, Odessa restaurant in Kiev (2013)



Fig.30 Sketches of immersive and evloving thread space



3.5 TEXTILE AS PROCESS: THE LOOM AND THE ROPE MAKING MACHINE

After noticing the limited contribution of the second cycle of experiments in defining active and evolving spatial conditions I decided to look at textile from a different perspective, investigating its production process. My aim was to take inspiration from the way threads are interlaced into a specific and programmable result.

The third cycle of experiments investigates how a basic loom works and how the tectonics of making textile are comparable with the way we do architecture; The loom organizes a material source (the thread) in a specific programmatic arrangement that allows a second material to interlace with the first one creating a dense or less dense surface which is designed for a specific need. The same principle of programmatic distribution can be found in architecture where surfaces can be considered as informative interfaces of use and function: A non dense and transparent vertical surface will be immediately identified as a window, a hard and dense opaque one as a wall and so on.

In this view I created a group of models that simulates the behavior of a loom. By simplifying the mechanism of the weaving apparatus I built a frame with a simple sliding system embedded on the sides that would enable the movement of surfaces made of threads. Looking at this experiment as a space, we can envision a room that becomes a grid of potential where the space gets woven in A, B, C, D different configurations.

Another production process that I researched in this phase was the rope making technique. In a rope making machine single strings get interlaced into a rope. Looking at the process closely I noticed that a space is created by the temporary tension of threads. These precisely engineered movements orchestrated by the machine reminded me of a different kind of process: The Maypole dance, where people gather around a pole and, by choreographed movements, create a festive rope decoration. This analogy brought me to the realization of a physical model where I imagined the production process to be blown out of proportion, creating a carousel like space. The spectacularization of the process created an inhabitable space that could change according to the movement of the threads on the perimeter made by the user.

Fig. 31 Analysis of the loom Fig. 32 Space as a loom: textile room maker sketch



Fig.33 Loom models Fig.34 Rope making process experiments



3.5 TEXTILE AS PROCESS: THE LOOM AND THE ROPE MAKING MACHINE

3.6 TEXTILE AS PROCESS: FURNITURE AS DOMESTIC APPARATUS

This stage of my empirical research demonstrated that surface could be considered as an active element that defines temporary spatial relations. Applying the productive process of the loom to space through a participatory process, I wanted to explore how people not only create the atmosphere of a place but can also "build" the structure of the space itself. At the same time the loom and rope making inspiration proved to be limiting in terms of flexibility, since a machine is programmed for very specific and limited results.

As the scale of a space resulted to be problematic in terms of direct participation of the users in the process I decided to look at it from a different angle: I considered a different scale of intervention, looking at objects as possible production apparatus.

As a consequence I built several small infrastructures where the vertical warp strings were set up and the user could weave the horizontal weft threads in a variety of results in terms of color and pattern. In this view I also realized a round knitting loom infrastructure with the possibility of varying the number of pegs and consequently the resulting knitting density. This approach could result in less rigid and unexpected outcomes according to the interaction with the object. Indeed everyone would interlace the threads differently leading to unique results. Therefore the aesthetics of the product would be defined by the user and not imposed by the designer.

In conclusion of this phase of testing I realized that the process became more important then the product and its functionality. Moreover I understood that the experience of involving people in the process could be interesting but attract a limited number of users; Therefore I decided to abandon this path.

3.7 FURTHER DESIGN DEVELOPMENT: SURFACE AS PROGRAMMABLE WEAVING

In order to explore the concept of surface as an interface that unfolds events in time, I did a small group of experiments that investigated the idea of weaving and un-weaving as programmable. I was inspired by "Didomestic", the above mentioned project by Elii Architects, where the surface of the ceiling reveals several hidden functions according to needs. Therefore I decided to apply the same principle to the fabric, studying how a change in structure could result in a change in program and use of the object.

The first test was a textile surface made by weaving several felt stripes according to different patterns. The tessellated surface allowed to lift some parts of the pattern, resulting in a programmatic expansion of surface. Envisioning this small experiment on a bigger scale we can imagine the planar surface to expand in a series of 3d shapes, as if the textile was a performative carpet on the ground that one could modify according to needs. The same principle of extruding an existing textile was imagined as a fabric ceiling that one could start unweaving, creating space and revealing functions through the manipulation of this interactive surface.

After studying the loom and the weaving methods I decided to experiment further with this technique. The density of weaving was considered as programmatic in the sense that a more or less dense interlace would result in different opacity and use. In one of the models for example the woven part became a flexible joint that could temporarily connect different frames made of tensed threads. Other tests demonstrated how a loose weaving could result in a permeable surface that allows to see and walk through the surface. At the same time a dense pattern would completely block view and light. Fig. 35 Programmatic expansion of surface, tests and diagrams



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Fig. 36 Programmatic expansion of surface, tests and diagrams



:	3.7	CASE S	STUDIES	Aiming to bring these studies further I would need to start working in 1:1 scale in the space in order to test my ideas. Furthermore I started focusing on the specific context of the wall as a programmatic surface. To prepare for this, I selected some references in this direction.
				Soft Wall by Carsten Gerhards and Andreas Glücker (2002) is a brilliant example of a programmable textile surface which divides the space and at the same time becomes storage of small objects. It accommodates magazines and items that we need only from time to time - which would otherwise take up space on small tables, on shelves and in containers (Domus, 2002). This project opens a new perspective on the wall as an un-load bearing element that absorbs several functions into its soft surface.
				The next reference comes from the art realm: Intra Muros (2014) is an installation by the Chapuisat brothers duo which investigates the idea of inhabiting the wall. The installation consists of a white wall that could be entered by the visitor. Within the wall there is a narrow interior pathway and the inner space is divided in different sub-spaces which synthetize specific living areas like a kitchen, a closet, a restroom – minimal spaces for a paradoxical inhabitation. (Socks Studio, 2014). It is clear that the genesis of this project comes from a thorough analysis and mapping of the activities in the house. The Swiss duo envisioned a wall that becomes a living enclosure. This concept is reminiscent of Loos' idea of "an architectural strategy that starts with the wall and then creates rooms or spaces: They are the spaces left inside the walls". (A.Benjamin, 2006).
				Another relevant project is Cocoon by Tanya Shukstelinsky. The Israeli designer proposed a new type of affordable urban housing, with people living between two sheets of suspend- ed fabric (Dezeen, 2013). She describes it as "temporary liv- ing space for urban nomads" where the basic living areas are stitched in the surface. I believe this reference supports my first concept of "Inhabiting the drape", however this project stays in the realm of an installation. Indeed the stitched living areas such as bath, stairs and dining zones are more a repre- sentational mapping than functional inhabitable spaces.
				The installation Woven walls by the Dutch designer Weis Preijde is a system of wall hangings, hand woven with verti- cal yarns. Even though the fabric surface is bi- dimensional, the space appear three dimensional thanks to the pattern that creates a trompe l'oeil effect, giving an illusion of depth. Prei- jde shows how the pattern and the surface treatment play a pivotal role in defining the qualities of a space. Her research has a strong visual approach; It would be interesting to investi- gate how ornamentation could extend its visual and aesthetic characteristics to a functional performance.

Fig. 37 Carsten Gerhards and Andreas Glücker, Soft Wall (2002)



Fig. 38 Chapuisat Brothers, Intra Muros (2014)



Fig. 39 Tanya Shukstelinsky, Cocoon (2013)



Fig. 40 Weis Preijde, Woven Walls Installation (2013)



3.8 TOWARDS A DEFINITIVE DESIGN STRATEGY: LAYERING AND EXPANDING

After the last cycle of preliminary design experiments and after looking at references, I developed a definitive design strategy. I decided to work on the idea of reinterpreting the curtain as a layered, expandable surface that creates an ephemeral space, facilitating a variety of programs. I did a scale model to illustrate my idea of creating a ghostly environment, revealed by its use. When folded, the object looked like a 2d picture on which functions were overlapping in a sort of bi-dimensional mapping. Unfolding the layers revealed a volumetric expansion of concealed functions.



Fig.41 Preliminary studies on expanding surface: Accordion mechanism





Fig.42 Mapping the window: Activities



3.9 TEXTILE AND SPACE: FULL SCALE PROTOTYPE

Once I had developed a definitive design strategy for my project, the main issue to solve was the spatial aspect of my research. How to place my idea in the interior space, incorporating functions into the surface? As a last step of my research I decided to focus on experimenting in the space, working on 1:1 scale.

My first idea was to create a curtain wall-furniture, a hybrid between wall, wardrobe and changing room made by several layers of textile and an expansion mechanism; The expansion created an ephemeral space next to a window, that acted as a privacy screen and as a temporary storage for clothes and small objects. It integrated the functions of a dressing table and the small functions usually located next to the window, celebrating the small domestic rituals and gestures of dressing up and bringing back attention to the importance of the time we dedicate to ourselves.

A basic geometric pattern made of embroidered threads was extruded from one layer to the other, becoming a functional element to connect, to screen and to create a simple hanging system. This experiment represents a first step towards the translation of my previous research about threads into a functional design. The visual qualities of these vertical lines extended to a functional performance, informative of the different elements of the object; It outlined the main elements such as the door opening and the storage pockets, contributing to the definition of an optical landscape. The ornamentation of the surface was considered no longer as a designed entity but as a programmable one.

The prototype showed some limitation in terms of its atmospheric contribution to the space in terms of light, effect and flexibility; Even though the pattern was designed to organize the surface programmatically, it was too static and not flexible. Moreover the over-all shape, given by the repetition of rectangular surfaces, was too flat. Finally the interaction between object and space was not developed enough and the 2d-3d dynamics needed to be explored differently in order to contribute more to the user experience.











4 FINAL DESIGN

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4.1	INTRO	At this stage of the project I decided to work on the implemen- tation of my previous studies and of the knowledge I gained through my research into the final design. Looking at my ex- periments with threads I wanted to bring further the way a rib- bon system can programmatically organize surface. Therefore I studied a solution to make the strings part of the structure of the textile. As a result the pattern became an integrated mechanism that allows the curtain to be folded and dropped. At the same time I went back to my first cycle of experiments with the smocked textile and I looked at it from a different per- spective. I applied the same technique in a slightly different way, layering several fabrics with different opacity and trans- parency levels, resulting in peculiar light effects; According to how light hits the surface, it creates an opaque or transparent screen, much like what happens in the theatre with the stage system of layered backdrops. The surface changed from flat to a layered three-dimensional system of textiles that take advan- tage of the material qualities and of the construction tectonics in order to incorporate a programmable behavior.
4.2	DESIGN	Drape Rehearsal re-interprets the standard module of a fitting room as an expandable textile object that can be compressed and stored at the ceiling. The potential for a volumetric ex- pansion creates an ephemeral ghostly space, revealed by its use. Much like the ante-closet space that creates a temporary environment through the movement of the swinging door. A theatrical effect of a curtain falling from the ceiling wraps the space around the user as if the fitting room was a wearable dress.
		Textile is a paradigmatic material in terms of flexibility, imper- manence and potential in defining a multifunctional space that allows modification. Therefore the context I am address- ing is a retail environment, where multi-functionality and the need for minimizing the use of space are vital as square me- ters are economically extremely valuable. Drape Rehearsal creates an ephemeral space that can be installed in existing spaces and disappears when not in use.
		My project creates a flexible object that could organize the space in temporary configurations. At the same time it incor- porates experiential service-oriented features; Fitting rooms are usually hidden, impersonal and unwelcoming. What if they could contribute to the customer experience? Escaping

Fig.42 Kabuki curtain mechanism



Fig. 43 Diagram: a flexible object organizes the space in temporary configurations.



Fig. 44 Visual








	the logic of the rigid architectural box, the drape provides a surprising scenography that invites people to act as if they were on a stage, dramatizing the act of choosing, trying on, deciding and buying.
	Being enclosed by textile creates a connection between body and architecture, adding another layer to the retail experience by orchestrating views and sensations. It activates the interior, engaging the user in an on-off dynamic that structures the functional organization of the space for a temporary use. The whole space looks visually bigger or smaller according to the use of the fitting rooms, choreographed by the presence of its users.
Mechanism	The mechanism is partly incorporated in the textile, since it is based on a system of threads sewn into the fabric that allows the piece to be folded up. Previous studies about threads and movement find a functional application here, becoming part of this theatrical apparatus. Thanks to this open-closed flexible organization, when the fitting room is not in use the hanging system becomes an additional display.
Light Effect	A system of layered textiles incorporated in the drape defines its opacity, transparency and light-shadow effect. According to how light hits the surface it creates an opaque or transparent screen; the customer can switch from transparent to translu- cent and control the privacy of the dressing room by turning on-off the light. This system is reminiscent of the primal role of the curtain as a concealing or revealing device. It engages with the sense of fragility of the public-private dynamics of be- ing in a dressing room, a very private enclosure in a yet public space.
Technique	The pattern is inspired by the way textile folds and pleats while falling, making evident the effect of gravity on the surface and resulting in a 3d pattern. It dramatically emphasizes the light effect and at the same time makes the image of the body be- hind it unclear.



Fig.46 Diagram and pictures: Light on-off effect of opacity and transparency













Fig.45 Frame drawings



Fig. Mechanism-frame picture







4.3 CONCLUSIONS

"Drop the curtain" questions the stability of architecture, reimaging the interior as a system of textile surfaces that could organize the space in temporary configurations, unfolding ephemeral effects and atmosphere. If the wall hanging used to be considered as a passive and decorative protective skin, my project sheds a new light on interior textiles as functional and atmospheric active factors. A complex, evolving and surprising spatial experience is combined with simplicity of use: A single movement totally transforms the interiors, revealing or concealing, theatrically wrapping the space around the user.

I consider my work as an extension of what Petra Blaisse investigates as "The architecture of the effect".

> "Although the making and material itself are of pri mary importance in Blaisse's working method, she is not aiming for an architecture that wants to show the materials and characteristics as such. Architecture is not understood as pure materiality, pure surface that is made empty, free of meanings. Architecture is understood as an effect. Only in this effect does the material become architectural." (D. van den Heuvel, 1997, pag.5).

Blaisse creates changing spatial relations through the movement of the curtain. Her designs are about choreography, about orchestrating movement through space and the experience of space.

My project aims to develop an advanced sensibility towards the use of fabric in interiors. I would like to raise questions regarding what functionalism means in the contemporary practice of interior architecture, looking at it through an atmospheric lens and surpassing the modernist paradigm of pure function. In this regard I decided to develop my project for a retail context, where the experience is a pivotal aspect. Playing with the interaction between objective architectonic aspects such as light, material, proportions, views and their subjective perception, I materialized a series of effects and experiences through the use of textile.

The design is a result of hands-on analysis and research; testing and experimenting with the material I discovered unexpected and surprising results. My goal is open a discussion regarding how a deeper knowledge and clever use of textile can lead to spectacular and playful effects. In my case Drop the curtain shows how it is possible to create impressive effects of transparency and opacity by simply working with light and the tectonics of the surface of overlaying textiles with different characteristics, manipulating the pattern as an expanded surface. Whereas Semper and Loos seems to conceive surface as a two-dimensional element that represents the program distribution, I would like to investigate the idea of surface as a layered and three-dimensional element that becomes site of performance and effect; Surface is not considered as a merely structural or purely decorative element, it expresses both form and material, acquiring specific tectonics and taking advantage of peculiar material qualities.

Drop the curtain stages atmosphere as a collection of immersive and ephemeral experiences, aiming to create an intimate relation between man and architecture.





BIBLIOGRAPHY	Adriennechinn.co.uk. 2014. The History of Cur- tain and Drapery. [online] Available at: http:// www.adriennechinn.co.uk/article12.htm/ [Ac- cessed: 8 Apr 2014]
	Akanemoriyama.com. 2014.Akane Moriyama. [online] Available at: http://akanemoriyama. com/works/MilleFeuille/info/index.html [Ac- cessed: 8 Apr 2014]
	Alison, J (2010) <u>The Surreal House</u> Yale, Yale University press
	Balmond, C Bekkers, G Lavin, S Lemoine, H Ronalds, T andvan Luxemburg, R and Ota, K (2007) <u>Petra Blaisse: Inside Outside Reveling</u> Rotterdam, Nai Publishers
	Benjamin, A (2006) 'Surface Effects: Borromini, Semper, Loos' in <u>The Journal Of</u> <u>Architecture</u> No. 11, (pp. 1-35)
	Benjamin, W (2002) <u>Arcade Project N</u> ew York, Belknap Press
	Colomina, B (1996) <u>Sexuality and Space</u> Princeton, Princeton Architectural press
	Designboom architecture & design maga- zine. 2014. elii didomesticates an attic apart- ment in madrid - designboom architecture & design magazine. [online] Available at: http:// www.designboom.com/architecture/elii-di- domesticates-an-attic-apartment-11-24-2013/ [Accessed: 8 Apr 2014]
	Dezeen. 2013.Cocoon by Tanya Shukstelin- sky. [online] Available at: http://www.dezeen. com/2013/07/03/cocoon-by-tanya-shukstel-

BIBLIOGRAPHY	insky/ [Accessed: 8 Apr 2014]
	Domusweb.it. 2014.Softwall. [online] Availa- ble at: http://www.domusweb.it/en/products/ product.11004.softwall.html [Accessed: 8 Apr 2014]
	Domusweb.it. 2014.Visiona 1970. [online] Available at: http://www.domusweb.it/en/ news/2014/02/06/visiona_1970.html [Ac- cessed: 8 Apr 2014]
	Fabrizi, M. 2014.Enter the Space Inside a Wall: Two Installations by The Chapuisat [online] Available at: http://socks-studio. com/2014/03/01/enter-the-space-inside-a- wall-two-installations-by-the-chapuisat-broth- ers/ [Accessed: 8 Apr 2014]
	Hannula, M Suornata J Vaden, T (2005) <u>Artis-</u> <u>tic Research - Theories, Methods and Practises</u> Gothenburg, Art Monitor
	Havikl, K Teerds, H Tielens, G (2014) 'Building Atmosphere' in Oase No. 91, (pp.1-10)
	Hirsinger, Q Ternaux, E (2006) <u>Material World</u> <u>2</u> , Innovative Materials for Architecture and Design Amsterdam, Birkhauser Verlag AG
	Kinetic Wall Prototype. (2014). [video] Berlin: Barkow Leibinger.
	Kruger, S (2009) <u>Textile Architecture</u> Berlin, Jovis
	Pompas, R (1994) <u>Textile Design</u> Milano, Hoe- pli

BIBLIOGRAPHY	Quinn, B (2010) <u>Textile Future</u> , Fashion, De- sign and Technology New York, Berg
	Reser, A Schafer A (2013) 'Expanding Surface' in <u>Praxis</u> No. 9
	Seagroatt, M (1975) <u>A basic textile book</u> Lon- don, The Herbert Press
	Semper, G (1860) <u>Der Stil</u> vol.1 Mittenvald, Main edition
	Simpson T, van Gameren S (2008) <u>Miracle Ma-</u> <u>chines and the Lost Industry</u> London, Glithero
	Sveiven, M. 2010. AD Classics: Rietveld Schroder House / Gerrit Rietveld. [online] Avail- able at: http://www.archdaily.com/99698/ad- classics-rietveld-schroder-house-gerrit-rietveld [Accessed: 8 Apr 2014]
	V.A. (2012) <u>Textile lab yearbook 2012</u> Tilburg, Textile Museum
	van den Heuvel, D (1997) 'INSIDEOUTSIDE. On the Work of Petra Blaisse and the Architec- ture of the Drape' in <u>Oase</u> No. 47, (pp.2-19)
	Wall ,A (1999) 'Programming the Urban Sur- face' in Corner J, <u>Recovering Landscape</u> Princeton, Princeton Architectural Press, pp. 234-249
	Weinthal, L (2010) <u>Towards a new Interior</u> Princeton, Princeton Architectural press
	Wigley, M (2011) White Walls, Designer dress- es: the fashioning of modern architecture Cambridge, The MIT Press

Fig.1

Medieval bedroom by Eugene Emanuel Viollet le Duc. The image shows a bed closed by curtains commonly found in France during the medieval times. (1860). (2014). [image] Available at: http://fr.wikipedia.org/wiki/ Chambre_%C3%A0_coucher [Accessed 10 Jan. 2014].

Fig.2

The image shows the Tent Room, designed by Schinkel for the Charlottenhotf palace in Potsdam. (1830). (2014). [image] Available at: http://decoration-ancientandmodern.com/ post/10501316427/schloss-charlottenhofand-the-pleasures-of-tented-rooms [Accessed 16 Jan. 2014].

Fig.3

Dutch pavilion: Re-set by Petra Blaisse at the 13th Architecture Biennale. The image shows how Blaisse achieves the effect of the drape in its movement. (2012). (2014). [image] Available at: http://www.designboom.com/architecture/dutch-pavilion-re-set-by-petra-blaisseat-the-13th-architecture-biennale/ [Accessed 10 Jan. 2014].

Fig.4

Blue Bricks by Akane Moriyama. (2014). [image] Available at: http://www.designboom. com/architecture/729-blue-semi-transparenttextile-bricks-by-akane-moriyama/ [Accessed 16 Mar. 2014].

Fig.5

Naples palace Room. (2014). [image] Available at: http://madaboutinteriors.blogspot.

nl/2012_12_01_archive.html [Accessed 16 Apr. 2014].

Fig.6

Curtain by Petra Blaisse for Cornell University. (2014). [image] Available at: http://www.metalocus.es/content/en/blog/petra-blaisse-cornell [Accessed 16 Mar. 2014].

Fig.7

Adolf Loos, Adolf Loos Apartment, Lina Loos' Bedroom (1903). (2014). [image] Available at: http://archinect.com/features/ article/2220223/architecture-in-the-givenness-toward-the-difficult-whole-again-part-2 [Accessed 12 Mar. 2014].

Fig.8

Gerrit Rietveld, Rietveld Schröder House (1924). (2014). [image] Available at: http:// inhabitat.com/1920s-rietveld-schroder-housein-utrecht-is-a-simple-elegant-and-completely-transformable-home/gerrit-rietveldadaptable-rietveld-schroder-house-utrecht-8/ [Accessed 10 Jun. 2014].

Fig.9

Philip Starck, Groninger Musem (1999). (2014). [image] Available at: http://viewonretail.blogspot.nl/2012_03_01_archive.html [Accessed 4 Mar. 2014].

Fig.10

Verner Panton, Visiona Exhibition (1970). (2014). [image] Available at: http://www.austria-architects.com/de/pages/1407_Revisiting_the_Future [Accessed 12 Mar. 2014].

ig.11-12

Elii Architects, Didomestic apartment in Barcelona (2013). (2014). [image] Available at: http://www.dezeen.com/2014/01/12/dayin-the-life-movie-madrid-apartment-movingwalls-secret-furniture/ [Accessed 10 Mar. 2014].

Fig. 13

Derek Lam Shop by Sanaa (2009). (2014). [image] Available at: http://www.dezeen. com/2009/05/08/derek-lam-store-by-sanaa/ [Accessed 10 Mar. 2014].

Fig.14

Los Palillos Restaurant in Berlin, by Ronan and Erwan Bouroullec (2009). (2014). [image] Available at: http://www.dezeen.com/2009/08/11/ apartment-in-moscow-by-peter-kostelov/ [Accessed 9 Apr. 2014].

Fig.15

Elie Tahari's showroom by Gisela Stromeyer (2009). (2014). [image] Available at: http:// www.architonic.com/aisht/elie-tahari-fashionshowroom-gisela-stromeyer-design/5101011 [Accessed 17 Apr. 2014].

Fig.16

Word Basic Fashion Boutique by Schermata Archtiects (2013). (2014). [image] Available at: http://www.dezeen.com/2013/09/14/worldbasics-pop-up-store-by-schemata-architects/ [Accessed 10 Apr. 2014].

Fig. 17

Prada Store in New York by OMA (2000). (2014). [image] Available at: http://spatialinteractions. wordpress.com/2011/10/01/interactive-dress-

ing-rooms/ [Accessed 24 Apr. 2014].

Fig.20

Smocking technique explanatory drawing. (2014). [image] Available at: http://www.coletterie.com/books/the-collector-stitching-forstyle-by-nelle-weymouth-link [Accessed 10 Apr. 2014].

Fig.27

Antoni Gaudì, Hanging stings as physical form finding experiments (beginning of the 20th century). (2014). [image] Available at: http:// www.lowtechmagazine.com/2008/11/tilesvaults.html [Accessed 16 May. 2014].

Fig. 29

Jesus Rafael Soto, Penetrable Blu (1999). (2014). [image] Available at: http://www.exibart.com/notizia.asp?IDNotizia=18409&IDC ategoria=46 [Accessed 7 May. 2014].

Fig. 30

YOD Design Lab, Odessa restaurant in Kiev (2013). (2014). [image] Available at: http:// freshome.com/2013/08/20/inspiring-new-de-sign-for-the-odessa-restaurant-in-kiev-by-yod-design-lab/ [Accessed 18 May. 2014].

Fig.37

Carsten Gerhards and Andreas Glücker, Soft Wall (2002). (2014). [image] Available at: http://www.architonic.com/pmsht/softwall-bb-italia/1027900 [Accessed 19 May. 2014].

Fig.38

Chapuisat Brothers, Intra Muros (2014). (2014). [image] Available at: http://socks-studio. com/2014/03/01/enter-the-space-inside-awall-two-installations-by-the-chapuisat-brothers/ [Accessed 10 May. 2014].

Fig. 39

Tanya Shukstelinsky, Cocoon (2013). (2014). [image] Available at: http://www.dezeen. com/2013/07/03/cocoon-by-tanya-shukstelinsky/ [Accessed 10 May. 2014].

Fig.40

Weis Preijde, Woven Walls Installation (2013). (2014). [image] Available at: http://www. designboom.com/art/woven-walls-by-wiespreijde/ [Accessed 14 May. 2014].

Fig.42

Kabuki curtain mechanism. (2014). [image] Available at: http://www.camstage.com/sites/ default/files/imagepicker/49/Kabuki_Drop_ Curtain.jpg [Accessed 16 Mar. 2014].



