

Designing the Threshold: A Close Reading of Olafur Eliasson's Approach to 'Inside' and 'Outside'

Demet Dincer,^{1,2} Thea Brejzek,² Lawrence Wallen² ¹Istanbul Kultur University
Turkey

²University of Technology Sydney
Australia

Abstract

This article discusses Icelandic installation artist Olafur Eliasson's approach of the threshold as a productive liminal space rather than as a static boundary between the inside and the outside. Often defined as the physical division between the interior and the exterior in architecture, the authors argue that by looking at Eliasson's works in detail, the threshold's inherent capacity of comprising a dynamic dialogue between inside and outside where one is determined by the other, unfolds. This paper proposes that designing the relationships between inside and outside involves subtle renegotiations and redefinitions of conventionalised notions of their boundaries and a resultant emergence of new design strategies.

Eliasson designs thresholds in diverse ways that he analyses and provokes the spatial associations between inside and outside, interior and exterior. While in Eliasson's work the categories of inside and outside remain mutually exclusive, they physically co-exist at the same time; deliberately refracted, juxtapositioned, connected or confounded in an experimental yet rigorous approach that employs different scales and common characteristics. Seventeen of his works are analysed and grouped into four different threshold design strategies that result in an object, an association, an event and an immersive space.

Keywords: Olafur Eliasson, inside, outside, threshold, design approach, architecture

Introduction

The article discusses the threshold or liminal space between inside and outside as it appears in Olafur Eliasson's works as a contradiction or juxtaposition, by considering them as a creative space. The threshold between inside and outside is referred to as a physical boundary in the spatial design disciplines. In the first section of this paper, we investigate the subject through a discussion of inside and out, supported by theoretical and practical examples. Subsequently, selected works by Studio Olafur Eliasson (SOE), are contextualized within their spatial context, and analyses show the different ways in which Eliasson represents threshold situations in each.

Inside-Outside Relations

Inside and outside stand as the reason for each other's becoming, defining each other while generating a whole. In a process of what Elizabeth Grosz calls "subtle renegotiation and redefinition," an outside becomes active in the production of an inside (Grosz, 2001, p. 96) and both are equal actors in a bidirectional relationship, rather than fixed components in a rigid duality. Deleuze, citing Foucault, posits that "the outside is not a fixed limit but moving matter, animated by peristaltic movements, folds, and foldings that altogether make up an inside, precisely the inside of an outside" (Deleuze 2006, p. 80-82). Thus, it is argued here, inside-outside relationships cannot be understood simply as comprising physical realms, but are seen in the context of this article as opportunities for new, relational, design strategies.

From an architectural point of view, thresholds between interior and exterior are usually addressed as physical boundaries, like a wall enclosing an interior space. A brief overview of the development of the dwelling as much as of the city shows that the basic architectural elements of wall, floor, door and window continue to be part of an ongoing discussion in architecture. The primitive hut, rendered as a primordial dwelling, invites a realization of the fact that humans exclude nature to survive, by creating the inside as a secluded space of shelter and safety. Historically, physical city walls were critical in defining and defending urban space since the Greek polis and continued as fortification throughout mediaeval times. In the first edition of the *Dictionnaire de l'Académie Française* (1694), a city is described as "a collection of many buildings and houses spread along streets and enclosed by a communal physical barrier, which is usually made out of walls and a moat" (Mintzker, 2012, p.26).

Similarly, *Diderot's Encyclopédie* defines the city as a walled settlement, containing public spaces and buildings (Mintzker, 2012, p. 26-27). By the 19th century, however, the majority of European cities had lost their fortifications through a process called *defortification* (Mintzker, 2012, p. 25). *Defortification* points to a remarkable change in the understanding of a city's identity and safety that questions the necessity of a physical wall and replaces the built with the political in terms of the often-contested borders of nation states. While border conflicts redirect our attention to zones of inclusion and exclusion, architectural elements such as doors and windows, placed in a wall or as a wall, equally broaden the discussion on the inquiry of inside and outside. Doors and windows delineate, limit the gaze, open or close spaces while forming an inside and/or an outside. However, and particularly from a phenomenological perspective, a window is more than a source of light and a door is more than just a linking element between exterior and interior.

In *Archetypes in Architecture* (1987), Thiis-Evensen discusses the architectural archetypes of wall, floor, door and window and begins by referring to doors and windows as 'openings'. Stating the relationship between inside and outside as a 'dynamic dialogue', he posits that each work of architecture must find its place between complete closure and complete openness. According to Thiis-Evensen, the span between opening and closure is outlined by three qualitative concepts: motion, weight and substance. These concepts define how the elements (roof, wall and floor) are closed or opened to each other, and establish inside and outside relations. Accordingly, he terms these qualities as 'existential expressions' of architecture: Motion describes the dynamic nature of the elements where they expand, contract or are in balance. Weight represents the heaviness of the elements and is related to gravity and substance is related to the materials, whether they are soft, hard, warm or cold. The first archetype is the floor, which defines an interior space affected by an exterior space. The floor directs people from one place to another, delimiting a space from its surroundings and supporting us by providing a firm footing. Thiis-Evensen (1987) defines the second archetype as a wall that frames a space and supports the roof, and the roof protects an interior space against an exterior space.

Supporting the notion of the house as comprising of several architectural archetypes, Peric (1974) suggests that all rooms of a house are alike and a sort of cube that always has at least one door, and quite often a window. And while pointing out that doors break and separate the space, splitting it, preventing osmosis, and imposing a partition, Peric (1974) nevertheless defines a room as a 'malleable space' and asks provocatively if it is possible to

design a space without any function. Physical as well as material characteristics of architectural elements impact on the relationship between inside and outside. For example, Dutch doors and revolving doors have been significant in establishing specific inside-outside relations. Dutch doors are divided horizontally where one part might remain shut, with a possibility to be half opened or closed at the same time. Revolving doors, on the other hand, patented in the 19th century, brought a new understanding of a threshold in that the door is defined as an enterable space. The patent describes the door's advantages as being noiseless, not being blown open by wind, being used by persons that pass both in and out at the same time preventing the intrusion of wind, snow, rain or dust (Siegert, 2012). Siegert (2012) states that the "revolving door is a paradox: one passes through a door that is permanently closed, in fact, 'always closed' being one of the first advertising slogans for revolving doors" (p.18).

While the act of opening a door was modified and made more complex and differentiated with the introduction of revolving doors, the door remained a space between the inside and outside. Simmel (2000) observes that doors unify the inside and outside, and their closure provides the person on the inside with the feeling of isolation from everything external. Teyssot (2008) defines a window as a device that is a paradigmatic example of a threshold between interior and exterior. He mentions that the etymology of the term window (originated by words 'wind' and 'eye') refers to what is both insulated and combined: the interior eye and the outside wind. Thus, the window articulates the gulf between a formal exterior apparatus and an interior that is being transformed within the various rules of propriety, distinction and comfort (Colomina, 1992).

The definition of what can be regarded as inside and what can be regarded as outside largely depends on materials and design strategies, where an interior space might become an exterior one, with the inside becoming more like outside. Consequently, the threshold must be regarded as one of the main actors defining the relationship between inside and outside.

Designing the Threshold: Olafur Eliasson

Olafur Eliasson occupies a critical place in the recent development of visual arts. His studio emphasises an interdisciplinary approach, integrating the visual arts with the practice of product design, interior design and architecture. The studio involves artists, architects and technicians who work and experiment together. The work articulates many binary oppositions including nature/

manufactured, inside/outside, visible/invisible and is used as a means to debunk easy assumptions and encourage dialogue. Mieves (2017) asserts that by transcending binary oppositions, Eliasson questions our understanding of reality itself. Eliasson uses opposites such as inside and outside, visible and invisible, material and immaterial while at the same time challenging their very premises by designing a threshold experience where these opposites merge.

The intent, scale and complexity of Eliasson's work result in atmospheric spaces. Not limited to exhibition spaces, his works go beyond the conventional understanding of installation art to a new spatial association. Eliasson categorises his works through tags on his website and in publications, and one of the most used tags is that of 'inside-outside'. This section aims to evaluate his works tagged 'inside-outside', not as an indication held by the authors but by the artist himself. Reviewing the studio's published books, and the official website one comes across a total of fifty-eight works tagged 'inside and outside' as the defining keyword, including artworks, installations and essays. Seventeen of these projects comprise a threshold experience by challenging inside and outside relations, and in this, the authors argue, present spatial possibilities for the discipline of design. These are chronologically listed in table one with original commentary from the Studio, and form the case studies for this paper. This section aims to analyse the particular properties of Eliasson's approach to the inside-outside relationship.

As mentioned in the first section of this article, inside and outside relations involve the process of subtle renegotiation and redefinition. How Eliasson materialises this process and how 'inside-outside' have become active in the production of each other in his work, are the central enquiries of this paper. This relationship is frequently discussed in regards to the position of the viewer and viewer experience. By being the occupant inside, and a spectator outside, where inside is considered as the hidden or private, and outside is public, and shown as exposed (Franck, 2007). The strategy to either involve or distance the viewer from the artwork is not new; however, Eliasson's work marks a further shift in our understanding of inside-outside relations in the deliberate challenging of viewing conventions.

The indicators of this inquiry are the materiality and positioning of the work, the viewer's participatory role as well as the work's association as a threshold experience. Designing the threshold between inside and outside is a way to redefine or reproduce each by prescribing the relations in-between.

Table 1
Seventeen
work and their
descriptions by
Studio Olafur
Eliasson, referred
to 'inside-outside'
(Studio Olafur
Eliasson, n.d.)

Work Title	About	Materials	Reference
1. Fensterkaleidoskop (1998)	The kaleidoscope projects through the window of the exhibition space into the outer room, covered with mirror foil.	Steel, wood, mirror foil	Threshold as an object
2. Your Circumspection Disclosed (1999)	A darkened room accommodating installations, half-real and half reflected images of the outside which is transmitted / projected onto the wall opposite the window.	Mirror, wood, lens	Threshold as an association
3. The Drop Factory (2000)	A geodesic dome made from a steel framework and triangulated mirror panels that are reflective on both sides, visually fragmenting the surrounding while the panels inside multiply the installation by the use of water and light.	Stainless steel, aluminium mirrors	Threshold as an immersive space
4. Der Drehende Park (2000)	Cube-shaped wire cages filled with different sized chunks of local sandstone generate curved wall elements, arranged as an open form with no view to the outside.	Stainless steel, aluminium mirrors	Threshold as an immersive space
5. Your Now is My Surroundings (2000)	Transformed a section of the gallery into an exterior space, the installation opened the gallery to the sights and sounds of the city within atmospheric conditions, by the walls lined from eye level upwards with reflective materials.	Stones, wire, metal	Threshold as an event
6. Seeing Yourself Sensing (2001)	Surroundings of a museum reflected by mirrors placed on its facade, where viewers see their fragmented reflections	Glass mirrors, concrete, metal	Threshold as an association
7. The Blind Pavillion (2003)	Glazed with angular panes of clear and black glass, the pavillion is situated outdoors on a wooden platform. The surrounding world are framed in sections or reflected and partially obscured by the black glass, where visitors experience the reflected echoes.	Steel, glass (black and transparent), paint (black)	Threshold as an immersive space
8. The Glass House (2003)	There is a trapezoidal hole in a wall. At about eye level, the hole is cut so that it offers a vanishing point perspective. Depending on the hour of the day, the sunlight projects the shadows of the bushes in the exterior space onto the inside wall in a vanishing perspective	Cut in façade	Threshold as an association
9. Fog Doughnut (2004)	Visitors enter and move around and inside the work which contains steel-tube rings spiral upwards from the outside of the work to the inside. The structure is combined by the tubes emitting water at high pressure, shrouding a mist.	Stainless steel, water pump	Threshold as an immersive space
10. The Body as Brain (2005)	A wooden channel split in two within the museum, one flowing down past a stair to the ground floor, ending as a projected on a wall, the other branch continuing outside again	Wood, metal, water	Threshold as an event

Work Title	About	Materials	Reference
11. Dream House (2007)	15 truncated pyramidal forms are attached to an icosahedral frame. Each has a lens mounted at the narrow end, and a projection screen at the wide end where it meets the frame. When standing inside the Dream house, the viewer can see the 15 screens, onto each of which an inverted view of the surroundings is projected.	Wood, mirror, di-bond, lenses, plastic, cotton	Threshold as an object
12. The Curious Museum (2010)	A large mirror, supported by scaffolding, is positioned directly before the gallery windows. The mirror enables visitors to see themselves seeing, to see themselves in relation to the building that contains them, and to appreciate the museum's ornate facade from within.	Glass mirror, scaffolding, steel, aluminium	Threshold as an association
13. Color Activity House (2010)	Curved glass walls organised in an open space by the use of color models, transforming the view of the city and the surroundings outside the pavillion as like a lighthouse for the city's inhabitants.	Laminated glass (cyan, magenta, yellow), stainless steel, plastic, lamp	Threshold as an immersive space
14. Microscopia Para Sao Paulo (2011)	Walls of mirror foil formed an inverted pyramid and extended from the floor up to the museum's latticed skylight, resulting as a kaleidoscopic space within the reflections created by the mirrors.	Scaffolding, mirror foil, aluminium, daylight	Threshold as an immersive space
15. Panoramic Awareness Pavilion (2013)	Viewed from the outside, the work presents a circular colour spectrum interrupted by fragmentary perspectives of the surrounding sculpture park. At night, a fresnel lamp mounted on a tripod at the centre of the sculpture, creating a kaleidoscopic rainbow effect and interacting with the city lights beyond.	Partially silvered coloured glass, stainless steel, Fresnel lens, tripod, halogen bulb	Threshold as an immersive space
16. Inside the Horizon (2014)	Triangular columns are clad in mirrors on two-sides, and one by yellow glass tiles illuminated from within. The work presents a vibrant play of light, shadows, and reflections, and offers constantly changing perspectives, while reflecting a city image from the surrounding.	Stainless steel, aluminium, LED light system, coloured glass, mirror	Threshold as an association
17. Fjordenhus (2009-2018)	The building is formed by four intersecting cylinders with brick facades, formed as curved walls. Different floors are organized with specially designed furniture and lights, while the double-height ground floor is open to the public, containing two aqueous zones with site-specific artworks.		

By analysing the indicators and how inside-outside relationships are reproduced by Eliasson, the following four categories suggest four different design approaches. The illustration shown in Figure 1 represents inside and outside by two-coloured clouds, not considering them as separate entities but as abstract entities that define each other. Dashed lines symbolise Eliasson's approach as: (a) The threshold is an object designed to be viewed from the inside to shift the perception of an outside; (b) The threshold is an association, allowing the viewer to observe an integrated inside-outside image. The work can be considered as a reflective wall/opening, generating the togetherness of each side and constituting a new experience; (c) The threshold is an event creating a new inside-outside context within the existing environment. The work becomes a catalyst, forming as a threshold experience; (d) The threshold is an immersive space, with a shifting delineation of the inside-outside, to be experienced from both the outside and the inside of the respective space.

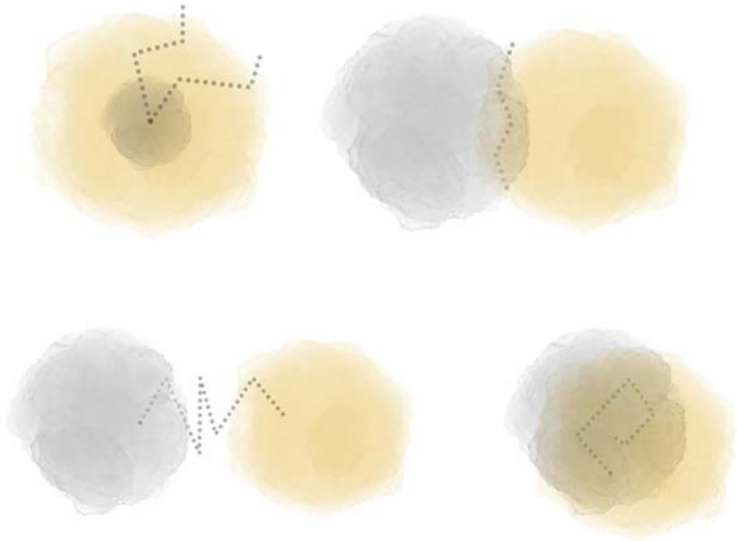


Figure 1
Illustration: (a)
threshold as
an object; (b)
threshold as
an association;
(c) threshold
as an event; (d)
threshold as an
immersive space
(Illustration by
Demet Dincer)

These four approaches are spatial inquiries as identified in Eliasson's sixteen works. While Table 1 shows a total of seventeen works and their links regarding each approach, project no. 17, *Fjodenhaus* (2018) unfolds the discussion towards architectural rather than object scale.

Threshold as an object

Eliasson's design approach towards the threshold in the two projects, *Fensterkaleidoskop* (1998) and *Dream House* (2007), frames an object or object-space for the viewers to perceive the outside from a shifted perspective. The threshold itself presents as an object, designed to be viewed from the inside to alter the perception of the outside. Eliasson's two projects, *Fensterkaleidoskop* (1998) and *Dream House* (2007), relate to the design principle of a kaleidoscope, albeit at different scales. The kaleidoscope, as an optical instrument with reflective surfaces, creates multiple reflections for viewers to perceive the outside first through fragmentation and then through recombination of visual reality.



Figure 2a-2b
Fensterkaleidoskop
(SOE, 1998)

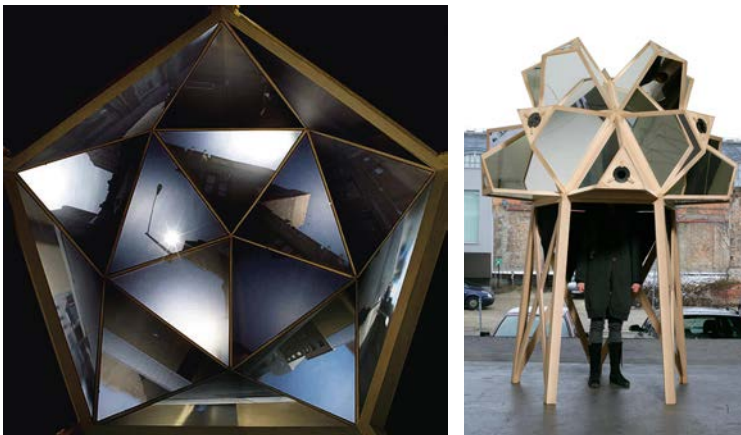


Figure 3a-3b
Dream House
(SOE, 2007)

Fensterkaleidoskop is designed as a kaleidoscope, that corresponds to the size of the window in the exhibition space (see Figures 2a

and 2b). Its four surfaces are covered with mirror foil, reflecting the window's exterior view as a scene. *Dream House*, on the contrary, is placed in an exterior space. The project stands as a box made up of fifteen pyramidal forms attached to a frame. When standing in its centre, the viewer sees the images of the surrounding, reflected on the screens. *Dream House* stands like a 'house' where the viewer experiences the threshold between inside and outside as mediated images only. *Dream House* presents as an upscaled version of *Fensterkaleidoscop* in that it becomes an enterable space where the viewers need to be inside for a view of the outside (Figures 3a and 3b).

Eliasson describes his interest in using the concept of the kaleidoscope as showing that our perceptual apparatus, and the way the eye functions is a construct and cannot be assumed to be neutral: "Through our perceptions, we may change the surrounding reality" (Eliasson & Ursprung, 2012, pp. 239-240). The stable structure of the multi-faceted kaleidoscope in both installations shows and manipulates the limits of our perception of the real. Both works become optical toolkits for a threshold experience.

Threshold as an association

Eliasson's second approach to the design of a threshold is that of an association, allowing the viewer to observe integrated inside-outside imagery by altering the conventional function of a wall as closure or an opening such as a window toward wall and window visually connecting the inside and the outside. Eliasson's works within this approach have a common characteristic of allowing viewers to perceive both inside and outside as an association. The threshold thus stands as a connection, generating what Eliasson calls as a 'half-real' image where the works are interpretations of so-called real vistas.



Figure 4
Your
Circumspection
Disclosed
(SOE, 1999)



Figure 5a-5b
*The Curious
Museum*
(SOE, 2010)

Your Circumspection Disclosed (1999) is a two-part installation set in an exhibition space (Figure 4). The visitor encounters firstly a camera obscura in a darkened room hosting diverse and imaginary outside views. Following on from this first encounter, the visitor sees a semi-elliptical mirror comprising as if the bottom half of a window positioned on the gallery floor. Together, mirror reflection and window vista generate a circular integrated image comprised of an interior and an exterior detail as the inverted image of the outside is half-reflected on this semi-circular window in the same space, overlapped with a 'half-real' view (Eliasson & Ursprung, 2012). In a third step, the overall juxtaposed image is projected onto the wall opposite the window.

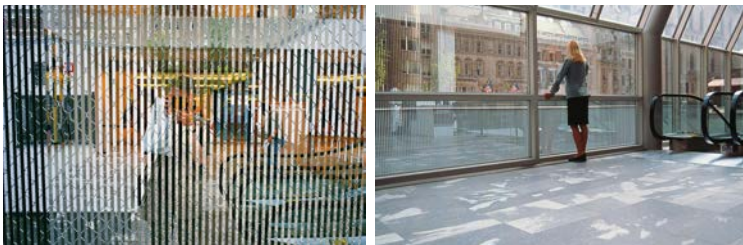


Figure 6a-6b
*Seeing Yourself
Sensing*
(SOE, 2001)



Figure 7a-7b
Inside the Horizon
(SOE, 2014)

Another Eliasson work that uses a similar approach is *The Curious Museum* (2010). A large mirror is positioned directly outside the large windows of the exhibition space (Figure 5a) supported by

scaffolding that is not visible from the inside (Figure 5b). In this construction, the viewers see themselves seeing while looking out the windows, framed within the museum building's façade. Eliasson's work allows the viewer to visually perceive themselves as being inside the building within an outside context.

Eliasson's projects, *Seeing Yourself Sensing* (2001) and *Inside the Horizon* (2014) provide a surface effect by the repetition of vertical elements (as columns or colonnades) on different scales (Figures 6a, 6b, 7a, 7b). These elements are formed by transparent (glass) and reflective (mirror) materials, where the viewers see themselves as fragments in their surroundings. Central to both works is the visitor's physical experience of moving among alongside these frames that offer multiple perspectives and sites for individual reflections. Inside the Horizon uses triangular columns opposite the Foundation Louis Vuitton Building in Paris, designed by Frank Gehry. The columns present a play of light and reflection, with one illuminated surface made of yellow glass tiles and the other two sides clad in mirrors. Viewers re-experience Gehry's building through the actual and reflected repetition of the columns, while the gaps between the columns let the viewers see the corridor of the building. The repetition of the columns generates a translucent surface effect from a distance, which changes through the movement of people, seeing their reflections within an existing architectural context. The threshold becomes an association, defining a new inside-outside where inside and outside merge. While one can observe a similar design approach repeated in each of the installations discussed, it is evident that Eliasson continues with the same approach on a larger scale, ultimately reaching an architectural scale.

Threshold as an event

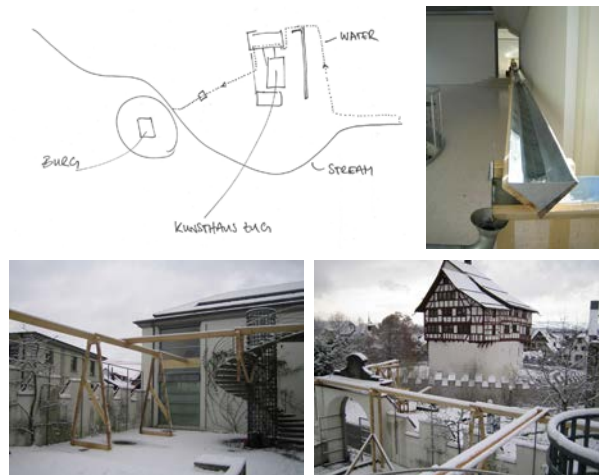


Figure 8a-8b-8c-8d
The Body as Brain
(SOE, 2005)

Eliasson's third approach in designing a threshold is considered here as a connection that is not about creating a physical association but that rather results in an event. Inside and outside relate to each other in the same way as a catalyst increases the rate of a reaction, while not being changed itself chemically. An installation by Eliasson that can be read as a catalyst by increasing the rate of a reaction (relation) while precipitating the event (as an artwork to be viewed), is exemplified by *The Body as Brain* (2005). *The Body as Brain* is the third part of a five-year project, located at Kunsthhaus Zug, Switzerland (Figures 8a and 8b) and in the city. Eliasson installed a wooden channel, which splits in two within the museum, diverting the Burgbach, a small stream traversing the city of (Figures 8c and 8d). One branch flows to the ground floor to a dead end where rippling water is projected on the wall. The other branch continues outside and is channelled back into the stream.

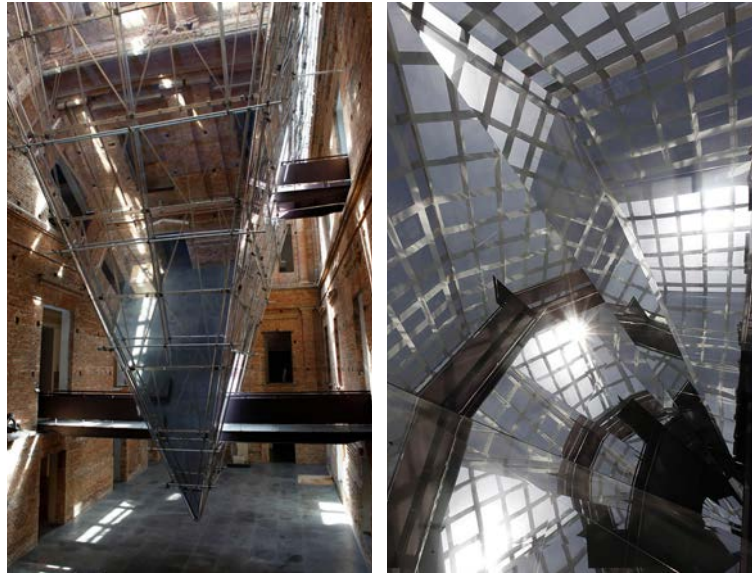
Eliasson's sketch (Figure 8a) is at the scale of an urban plan, showing the museum and its position along the Burgbach (Eliasson & Ursprung, 2012, p. 205). This installation turns out to be a connection between the museum as a singular built object and its surroundings, symbolised by the water stream. The Burgbach flows through the city and finds itself in the garden of the museum building as the leading actor of Eliasson's work. The viewer witnesses the work 'outside' of the museum, while, through Eliasson's artistic intervention, the stream also runs within the museum and can be observed from the 'inside'. *The Body as Brain* represents the threshold as an event in the simultaneity of inside and outside through the element of flowing water.

Threshold as an immersive space



Figure 9a-9b
The Drop Factory
(SOE, 2000)

Figure 10a-10b
*Microscopia para
 Sao Paulo*
 (SOE, 2011)



Eliasson's specific, highly atmospheric works also present, in what the authors call his fourth design approach, immersive spaces by transforming traditional inside-outside relationships. *The Drop Factory* (2000) and *Microscopia para Sao Paulo* (2011) are both placed in an interior space and use similar materials including aluminium and mirror. *The Drop Factory* is a geodesic dome made from a steel framework and mirror panels that are reflective on both sides (Figures 9a and 9b). The outside visually fragments the surrounding space, while the panels multiply the installation by the use of water and strobe lights inside. *Microscopia para Sao Paulo* also uses the reflectiveness of mirror panels, while allowing the daylight to enter from the museum's latticed skylight (Figures 10a and 10b). Mirror foil panels are supported by a scaffolding that is exposed while moving towards the installation. "Collapsing inner space and the world outside", as mentioned at the studio's website, the project "concerned itself with the relationship between museum and city, architecture, space and perception" (Studio Olafur Eliasson, n. d.).

Figure 11a-11b
The Blind Pavilion
 (SOE, 2003)





Figure 12
Fog Doughnut
 (SOE, 2004)

The Blind Pavilion (2003) is placed outdoors on a wooden platform, constructed with clear, transparent and black painted panels that are attached to two steel framework structures and was first exhibited at the 50th Venice Biennale in 2003. The project has both inner and outer layers, where visitors view their reflections within the imagery of the surrounding. The viewer encounters the work through a walkway (Figures 11a and 11b). Being inside the pavilion offers another way of perceiving the surrounding by the black glass panels as the reflections change according to physical and atmospheric conditions.

With yet another structure where the viewer is positioned inside the immersive work, Eliasson's installation *Fog Doughnut* (2004) is made up of doughnut-shaped steel-tube rings that creating a fog experience (Figure 12). Located outdoors and standing as a toroid structure. The three tube rings are built within a spiral order, from outside to inside and each tube has small openings that generate mist by emitting water at high pressure. Visitors move through the inside of the structure, while the surrounding becomes a blurry image seen through the disorienting fog. The boundary between inside and outside becomes unidentifiable and, as in *The Blind Pavilion*, the visitor is immersed in the fluid and dynamic visual and atmospheric conditions.

Fjordenhaus: A threshold design?

Tagged as an inside-outside project displaying attributes of the projects previously discussed Eliasson shifts to an architectural scale in the realisation of the *Fjordenhaus*. The work is an office building designed in 2014 and opened in 2018, for a Danish investment

company, Kirk Kapital (Figure 13a). Eliasson has been working with architects for decades; however, *Fjordenhaus* is his first architectural project, together with Sebastian Behmann.¹

Figure 13a-13b-13c
Fjordenhaus
(Photographs by
Ander Suna Berg,
SOE)



Fjordenhaus is a building that seemingly rises out of the water thus connecting Bejle Fjord and the city centre of Vejle in Denmark. There are four curvilinear cylindrical towers made from brick walls, intersected as curved forms with arched windows. The building is connected to the dockside by a footbridge, and the voids in-between appear more complicated on the first view but are resolved by the continuity of circles and ellipses with “no vertical walls” (Lowenstein, 2018). The building is designed as a whole on several different scales, including Eliasson’s light fittings, sculptures and office furniture within the building.

The ground floor is an exhibition space including a courtyard, which contains two ‘aqueous zones’ with site-specific artworks and functions as a shared space with lift access to other, non-public office floors (Eliasson, 2018). The ground floor hosts a viewing platform over the fjord (Figure 13b), letting the daylight filter into the semi-open space contributing to its atmospheric condition: “The idea was for contemplative space, or a space where we can celebrate the atmospheric conditions – the quality of the air and the wind” (Thorpe, 2018).

Surprisingly, the studio’s approach to perception, physical movement, and the experience of space is only highly evident in the courtyard whereas the upper floors are more conventional in the design approach and do not display the characteristics generally associated with Eliasson’s work. The surface of the water and its variations over time in coalescence with the wind directed by the building, create an atmospheric experience corresponding with the studio’s stated notion of “the non-quantifiables defining our lives” (Thrope, 2018). However, the offices on the upper floors provide a much more familiar environment with a beautiful view and can be argued as a typical architectural response to a functional brief

¹ While the building is a Studio Olafur Eliasson (SOE) project; yet, Studio Other Spaces (SOS) was established in 2014 by Eliasson and Behmann as a company that engages with larger-scale architectural projects.

(Figure 13c). The courtyard can be acknowledged as the only space to embody Eliasson's non-quantifiables, not *Fjordenhaus* as a whole.

Edwin Heathcote (2018) describes *Fjordenhaus* as an Expressionist castle with its parabolic arches and expressionist language of shadow. Lowenstein (2018) entitles his review *A Modern Fairytale* and draws the same castle analogy referring to *Fjordenhaus* as a '21st century castle'. He states that countertradition from 20th century lives on through the use of brick as an organic element within a curvilinear architectural language. Drawing a comparison between Louis Kahn's Bangladeshi National Assembly Parliament from 1964/1982 and the contemporary *Fjordenhaus*; Behmann states that "The difference here is in the physical relation to a building. A certain type of 3D experience, one which works on your senses and on your body" (Lowenstein, 2018). The building is tagged as 'inside-outside', the ground floor presents the atmospheric conditions with the aqueous zones, connecting outside through the design of an inside, arising as an in-between space. Eliasson's interest in architecture and the way a building can allow the user to be a 'co-author of the space', is only evident in the ground floor giving an opportunity for the viewer to experience both an inside and outside within this spatial realm.

Conclusion

The threshold is often defined as a physical division in architecture and interior design between the interior and the exterior. This division might be a wall enclosing an interior space or a window visually connecting the interior to exterior. A threshold is not a static boundary but exists in a dynamic dialogue where one determines the other. Designing inside-outside means designing the threshold. In Eliasson's works, inside and outside remain mutually exclusive, but co-existing simultaneously. His works are deliberately refracted, juxtapositioned, connected or confounded in a continual approach that embodies different scales and common characteristics, whether the design approach to the threshold is an object, association, event or an immersive space.

Olafur Eliasson embodies 'inside-outside' in his work while simultaneously challenging the binary nature of such constructions. In the works discussed distinct spatial meaning becomes implicit in the design of the threshold. In analysing the common characteristics of works tagged 'inside-outside' the threshold experience is challenged. The spatial consequence of the works was analysed through the perspective of the viewer and the specific materiality of the threshold. Four different threshold experiences are proposed

to represent four different design approaches that consider how the inside and the outside merge. *The threshold as an object* is designed to be viewed from inside to shift the perception of outside, whereas *the threshold as an association* allows the viewer to observe an overlapped inside-outside imagery. *The threshold as an event* is differentiated by it being active in creating the event, analogous to a catalyst in a chemical reaction; it creates a new inside-outside context within the existing environment. The last approach, *the threshold as an immersive space*, is a way of shifting the inside-outside and can be experienced from both outside and inside the space itself.

By analysing and provoking the spatial association within works raised, Eliasson's thresholds have been determined to have common characteristics, which are stated within the four design approaches. In the works discussed, the threshold proves to be a central defining element, and the material and spatial elements operate to support the experience of the viewer. However, with the change to the architectural scale in the case of the *Fjordenhaus*, such categorisation is no longer possible. A hybrid between artistic imagination and pragmatic building emerges, and, while retaining some of Eliasson's stated non-quantifiables and innovative inside-outside design approaches, the viewer's experience of *Fjordenhaus* is sadly limited to the functional demands of an office building.

References

- Colomina, B. (1992). Intimacy and spectacle: The interior of Loos. In J. K. J. Whiteman, & R. Burdett (Eds.), *Strategies in architectural thinking* (pp. 90-113). Cambridge, Mass.: The MIT Press.
- Deleuze, G. (2006). *Foucault*. (S. Hand, Trans.). London: The Athlone Press.
- Eliasson, O. (2018). *Fjordenhaus 2009-2018*. Retrieved from <https://olafureliasson.net/archive/artwork/WEK107304/fjordenhus#slideshow>.
- Eliasson, O., & Ursprung, P. (2012). *Studio Olafur Eliasson: An encyclopedia*. Köln and London: Taschen.
- Eliasson, O. (2007). *Take your time: Olafur Eliasson*. San Francisco: Thames & Hudson.
- Franck, K. A. (2007). Inside, outside, and inside out. In K. A. Franck, & R. B. Lepori (Eds.), *Architecture from the inside out* (pp. 18-45). Chichester, England and Hoboken, NJ.: Wiley-Academy.

- Grosz, E. (2001). *Architecture from the outside*. Cambridge, Mass.: The MIT Press.
- Heathcote, E. (2018, June 30). *An artist who means business*. *Financial Times*. Retrieved from <https://www.ft.com/content/c7c8a88e-7925-11e8-8e67-1e1a0846c475>
- Lowenstein, O. (2018, July 15). Modern fairytale. *Blueprint*, (359).
- Mintzker, Y. (2012) The dialectics of urban form in absolutist France. In M. Silberman, K. E. Till, & J. Ward (Eds.), *Walls, borders and boundaries: Spatial and cultural practices in Europe* (pp. 25-41). New York: Berghahn Books.
- Perec, G. (1974). *Species of spaces and other pieces*. London: Penguin Books.
- Studio Olafur Eliasson (n.d.). Retrieved from <https://olafureliasson.net/studio>.
- Simmel, G. (2000). Bridge and door. In D. Frisby, & M. Featherstone (Eds.). *Simmel on culture: Selected writings* (pp. 170-174). London: Sage Publications.
- Siegert, B. (2012). Doors: On the materiality of the symbolic. *Grey Room* (47) pp. 6-23.
- Teyssot, G. (2008). *Mapping the threshold: A theory of design and interface*. London: AA Files.
- Thiis-Evensen, T. (1987). *Archetypes in architecture*. Oslo: Norwegian University Press.
- Thorpe, H. (2018, June 1). Olafur Eliasson's first building completes in Denmark. *Wallpaper*. Retrieved from <https://www.wallpaper.com/architecture/olafur-eliasson-fjordenhus-vejle-denmark>