

ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL

**ARCHITECTURAL LEXICON ON VOID:
AN INTERCONNECTED READING APPROACH**

Ph.D. THESIS

Türkan Oya EKMEKÇİ GERONYMAKİS

Department of Architecture

Architectural Design Programme

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**BOŞLUK ÜZERİNE MİMARLIK LEKSİKONU:
BAĞLANTISAL BİR OKUMA YAKLAŞIMI**

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To my dear family; Arzu, Esin, Bilal and Jannis,

FOREWORD

Many people have contributed to this long and challenging journey. First of all, I would like to thank my advisor Ayşe ŞENTÜNER and the jury members Semra AYDINLI and Funda UZ for their support, patience and insight throughout the entire process. I am fortunate that Nurbin PAKER KAHVECİOĞLU and Güldehan Fatma ATAY shared my enthusiasm by joining us for the final jury.

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ARCHITECTURAL LEXICON ON VOID: AN INTERCONNECTED READING APPROACH

SUMMARY

A comprehensive understanding of architecture and its inherent role is significantly nourished by the inspirational and creative aspects of conceptual thinking within the field of architecture. Conceptual thinking stands as a catalyst in elevating the quality of architectural design and discourse, having the capacity to unveil concealed yet substantial features of architecture. The exploration of the concept of void in architecture, sparked by an intuitive journey, opens a new perspective. What began as an intuitive exploration evolves into an expansive research project, driven by a profound enthusiasm to establish "void" as a fundamental concept for comprehending architecture and enhancing architectural meanings in dialogue with other disciplines. The dominant tendency to view architecture primarily through the lens of construction, in other words solidity, presents challenges when attempting to engage with an intangible concept such as void. However, understanding the concept of void can open new perspectives for both architectural theory and design. This study advocates for a conceptual reading on void, aiming to contribute to a novel architectural *repertoire* by embracing new relational meanings. This aspect requires an interdisciplinary approach, generated by an interconnected lexicon which acts as both method and outcome of the research process.

Beginning with an exploration of the meaning of void in architecture, the study identifies the limitations of current approaches, such as defining empty space solely in terms of urban vacancy, or as an enclosure formed by solid architectural elements. Instead, the research of void is posited as a means of discussing architecture through a renewed framework, the tectonics of the invisible, moving away from a focus on tangible building elements. Initially, lexical meanings might constitute the primary source for comprehending a concept. Nevertheless, this research employs building a lexicon as a research approach that goes beyond the formation of fixed definitions as in a common dictionary. Instead, the process integrates interrelations, revealing perpetually evolving meanings within an open-ended research framework with each "encounter". This ongoing process entails the interconnection of different levels of research, which remains in constant flux, while introducing "mediators" as a means of enhancing understanding. It unfolds through distinct layers within an interconnected lexicon, encompassing the "main concept," "different states," "encounters", "secondary concepts," and "mediators." Initially shaped by exploring linguistic comprehensions on the concept of void, the lexicon identifies synonyms and antonyms as denoting the "different states" of the "main concept." Encounters from various disciplines illustrate that meanings extend beyond linguistic definitions, and are enriched by diverse representations of the creation of void. Throughout the research, encounters contribute to "secondary concepts," concealed concepts deepening relational interpretations beyond lexical meanings. These multilayered meanings, generated through "mediators", serve not only as an outcome but also as a method of reading in this open-ended research endeavour.

Emphasizing "understanding" over "defining", the research adopts an essential approach of interconnectivity borrowed from neuroscience. Inspired by lexicography and mental lexicon studies, the research conceptualises constructing a vocabulary.

Language, etymology, philosophy, and physics, alongside architecture, art, and literature, play pivotal roles in exploring diverse representations, in other words meanings, of void. As lexicon enables an architectural reading, the content and research method intertwine, drawn from interdisciplinary studies. Despite its architectural scope, this approach also holds potential for relational readings in other disciplines.

The thesis is structured in three interrelated parts. The first chapter describes the intuitional research journey. The second chapter presents the theoretical background for the reading approach adopted in the research, in which various disciplines provide inspiration within a holistic perspective. These disciplines not only shape the research approach but also contribute to the lexicon through the encounters. The final part of the thesis introduces a written version of the interconnected lexicon on void. This research approach is influenced by neuroscience studies, emphasizing interconnectivity. Insights from mental lexicon studies, which explore the learning process of words, inspire a method for articulating concepts. Furthermore, philosophy and linguistics play important roles in interpreting the intricate relationships among "concept," "word," "meaning" and "understanding." In this way, it attempts to go beyond basic lexical interpretations of the concept of void, by recognising its nuanced connotations that evoke multiple and ambiguous meanings. Acknowledging the inherent ambiguity of void requires an open-ended research method in which relational and conceptual readings generate the research approach. At this point, lexicon functions as a relational reading tool, revealing latent yet essential concepts related to void through interrelationships. The lexicon integrates research elements ranging from etymological and philosophical studies on conceptual meanings to various encounters related to the representations of void from different disciplines such as architecture, art, literature and physics. As an outcome of this endeavour, *The Architectural Lexicon on Void* distinguishes from a linear dictionary and seeks to unravel relational meanings and hidden concepts within an interconnected whole. This results in dynamic patterns and clusters of concepts that changes over time in the lexicon.

The research medium evolves throughout the entire research process, from analogue sketches and collages into a digital tool, while exploring different multi-layered representational techniques. The digital lexicon, developed through a complex mapping software, comprises distinct layers or clusters, including the main concept (void), different states of the concept (synonyms and antonyms), encounters (examples from diverse disciplines), secondary concepts (introduced by each encounter), and mediators (hidden concepts facilitating understanding). This digital lexicon is continuously updated as the research progresses, and is accessible via a dedicated website, which allows the readers to explore different clusters and concepts, and provides multiple readings within different frames.

Mediators function as concepts indicating interconnectivities within the lexicon, playing a two-fold role in enabling relational understanding and structuring the linear written format of the thesis. Each mediator re-establishes the lexicon around related encounters and secondary concepts, abandoning the linearity of a conventional dictionary and emphasising interconnectivity. Cross-references between secondary concepts and different states of void reinforce connections throughout the thesis, enabling a dynamic reading experience within a linear text. Despite the limitations of a linear thesis format, this approach draws out the interconnected nature of the lexicon, and highlights the importance of mediators in structuring the lexicon as well as the presentation of the thesis. In addition to this, visual representations that accompany encounters enhance the vocabulary, highlighting the interplay between words and images.

The interconnected lexicon has the capacity to generate relational meanings beyond traditional lexical interpretations. Incorporating conceptual and relational thinking within an interdisciplinary framework can advance both architectural theory and practice. This thesis aims to improve architectural research and its *repertoire* by revealing hidden concepts and enriching architectural meanings. With this reading approach, each researcher or architect can create their own distinct mental lexicon or mental space, sharing similar content but varying in interconnections. This highlights how conceptual and relational thinking not only supports research but also contributes to the architectural vocabulary, especially in the field of design. This study explores the utilisation of a lexicon beyond a conventional list of words, highlighting its potential as a tool for conceptual reading and understanding in research. It advocates for adopting interconnectivity as an approach, fostering an open-ended and non-linear research process. The research demonstrates that understanding void, an intangible and ambiguous concept, requires an interconnected reading method. Embracing ambiguity stems from the constantly evolving meanings inherent in an open research process. The study highlights the role of mediators in revealing relational meanings, while interconnectivity inspires the exploration of openness, ambiguity and relationality of void as a continuous process of becoming.

BOŞLUK ÜZERİNE MİMARLIK LEKSİKONU: BAĞLANTISAL BİR OKUMA YAKLAŞIMI

ÖZET

Mimarlığı ve rolünü derinlemesine anlamak, mimarlık alanında kavramsal düşüncenin ilham verici ve yaratıcı yönlerinden önemli ölçüde beslenir. Kavramsal düşünme, mimari tasarım ve söylemin niteliğini geliştirmede bir aracı olarak mimarının ilk bakışta görülmeyen ama potansiyel taşıyan yönlerini ortaya çıkarma kapasitesine sahiptir. Bu bağlamda, araştırmanın yolculuğu mimaride boşluk kavramının keşfi üzerinden yeni bir perspektif sunuyor. Sezgisel bir keşif olarak başlayan çalışma; mimariyi yorumlamak ve diğer disiplinlerle etkileşim içinde yeni mimari anlamlar geliştirmek için boşluk kavramını anlamaya yönelik yoğun bir hevesle gerçekleştirilen geniş kapsamlı bir araştırma projesine dönüşüyor. Mimarlığa öncelikle inşaat, yani doluluk merceğinden bakma yönündeki baskın eğilim, boşluk gibi soyut bir kavramla çalışırken çeşitli sorunsallar ortaya çıkarıyor. Bununla birlikte, boşluk kavramını anlamak hem mimari teori hem de tasarım için yeni yaklaşımlar ortaya koyabilir. Bu çalışma, ilişkisel anlamları benimseyerek yeni bir mimari dağarcığa katkıda bulunma amacıyla boşluk üzerine kavramsal bir okuma sunuyor. Bu girişim, araştırma sürecinin hem yöntemi hem de çıktısı olarak işlev gören, bağlantısal bir leksikon tarafından üretilen disiplinler arası bir yaklaşım sergiliyor. Bu şekilde sözlük, tanımlamanın ötesinde bütüncül bir yaklaşımı teşvik ederek bağlantısal bir okumaya öncülük ediyor.

Mimaride boşluğun anlamının araştırılmasıyla başlayan çalışma, boşluğun yalnızca kentsel boşluk açısından ya da dolu mimari öğelerle kuşatılmış bir mekan olarak tanımlanması gibi mevcut yaklaşımların getirdiği sınırlamalarla karşılaşılıyor. Bunun yerine, boşluğun araştırılması dolu yapısal elemanlara odaklanmaktan uzaklaşarak, mimariyi yenilenmiş bir pencereden, görünmeyen tektoniği üzerinden tartışmanın bir aracı olarak sunuluyor. Başlangıçta, sözlük anlamları bir kavramın anlaşılması için birincil kaynağı oluşturabilir. Oysaki bu çalışma, klasik bir sözlükte olduğu gibi değişmez tanımlar sunmanın ötesine geçen bir araştırma yaklaşımı olarak bir leksikon tasarlıyor. Her bir "karşılaşma" ile anlamların devamlı olarak evrildiği bu açık uçlu araştırma süreci, bağlantısallıkları bünyesinde barındırıyor. Devam eden bu süreç, sürekli akış halinde olan farklı araştırma katmanlarının bağlantısallığını "aracılar" üzerinden kuruyor. Bu bağlamda; "ana kavram", "farklı haller", "karşılaşmalar", "ikincil kavramlar" ve "aracılar" bağlantısal leksikonun katmanlarını oluşturuyor. İlk olarak boşluk kavramına ilişkin dilbilimsel anlamların araştırılmasıyla leksikon, "ana kavram"ın "farklı halleri"ni oluşturan eşanlamlı ve zıt anlamlı sözcüklerle şekillenmeye başlıyor. Çeşitli disiplinlerden gelen karşılaşmalar, anlamların dile ait tanımların ötesine geçtiğini ve boşluğun yaratılmasına ilişkin farklı temsillerle zenginleştiğini gösteriyor. Araştırma boyunca karşılaşmalar, sözlük anlamlarının ötesinde ilişkisel yorumları derinleştiren örtük kavramlar olan "ikincil kavramları" leksikona katıyor. "Aracılar" ile kurulan çok katmanlı anlamlar, bu açık uçlu araştırma girişiminde sadece bir çıktı olarak değil, aynı zamanda bir okuma yöntemi olarak da değerlendiriliyor.

"Anlama"yı "tanımlama"nın önüne koyan araştırma, nörobilimden beslenen bağlantısallık yaklaşımı benimsiyor. Leksikografi ve zihinsel sözlük üzerine yapılan çalışmalardan esinlenen araştırma, bir kelime dağarcığı oluşturmayı kuramsallaştırıyor. Dil, etimoloji, felsefe ve fiziğin yanı sıra mimari, sanat ve

edebiyat, boşluğun farklı temsillerini, diğer bir deyişle anlamlarını keşfetmede önemli roller üstleniyor. Leksikon, mimari bir okumayı mümkün kılarken disiplinler arası çalışmalardan beslenen içerik ve araştırma yöntemi birbiriyle iç içe geçiyor. Mimarlık alanından bir çalışma olmasına rağmen, bu araştırma yaklaşımı diğer disiplinlerdeki ilişkisel okumalar için de uygulanabilir.

Tez, birbiriyle ilişkili üç bölüm halinde kurgulanıyor. İlk bölümde sezgisel araştırma yolculuğu yer alırken, ikinci bölüm çeşitli disiplinlerin bütüncül bir bakış açısıyla ilham verdiği araştırmada benimsenen okuma yaklaşımının kuramsal arka planını sunuyor. Bu disiplinler sadece araştırma yaklaşımını şekillendirmekle kalmıyor, aynı zamanda karşılaşmalar aracılığıyla leksikona da katkıda bulunuyor. Tezin son bölümünde ise, boşluk üzerine bağlantısal leksikonun yazılı bir versiyonu yer alıyor. Kelime öğrenme sürecini inceleyen zihinsel sözlük çalışmalarından elde edilen kavrayışlar, kavramların ifade edilmesine yönelik bir yöntemle ilham veriyor. Ayrıca felsefe ve dilbilim, "kavram", "kelime", "anlam" ve "anlama" arasındaki karmaşık ilişkilerin yorumlanmasında önemli bir rol oynuyor. Bu şekilde, boşluk kavramının çoklu ve muğlak anlamlar barındıran nüanslı çağrışımlarının farkına vararak, kavramın temel sözlük tanımlarının ötesine geçmeye çalışıyor. Boşluğun doğasında var olan belirsizliği kabul etmek, ilişkisel ve kavramsal okumaları mümkün kılan açık uçlu bir araştırma yöntemi gerektiriyor. Bu noktada leksikon, ilişkisel bir okuma aracı olarak işlev görüyor ve karmaşık ilişkiler yoluyla boşlukla ilgili muğlak ancak önemli kavramları ortaya çıkarıyor. Leksikon, kavramsal anlamlar üzerine etimolojik ve felsefi çalışmalardan; mimarlık, sanat, edebiyat ve fizik gibi farklı disiplinlerden boşluğun temsillerine ilişkin çeşitli karşılaşmalara kadar uzanan araştırma katmanlarını bir araya getiriyor. Bu girişimin bir sonucu olarak, Boşluk Üzerine Mimari Leksikon, doğrusal bir sözlükten ayrılıyor ve bağlantısal bir bütün içinde ilişkisel anlamları ve görünmeyen kavramları açığa çıkarmayı araştırıyor. Böylece leksikonda zaman içinde gelişen devingen örüntüler ve kavram kümeleri beliyor.

Araştırma, tüm araştırma süreci boyunca analog eskiz ve kolajlardan dijital bir araca doğru evrilirken, farklı çok katmanlı temsil tekniklerini de keşfediyor. Bir karmaşık haritalama yazılımı aracılığıyla geliştirilen dijital leksikon; ana kavram (boşluk), kavramın farklı halleri (eşanlamlılar ve zıt anlamlılar), karşılaşmalar (farklı disiplinlerden örnekler), ikincil kavramlar (her karşılaşma tarafından eklenen) ve araçlar (anlamayı kolaylaştıran gizli kavramlar) olmak üzere farklı katmanlar ve kümelerden oluşuyor. Araştırma ilerledikçe sürekli olarak güncellenerek okuyucuların farklı kümeleri ve kavramları keşfetmesine olanak tanıyan ve çeşitli çerçeveler içinde çoklu okumalar sağlayan leksikona, bir internet sitesi aracılığıyla erişilebiliyor.

Araçlar, leksikon içindeki bağlantısallıkları kuran kavramlar olarak, ilişkisel anlamayı sağlamak ve tezin doğrusal yazılı formatını yapılandırmak gibi iki yönlü bir role sahip. Her bir aracı, leksikonu ilgili karşılaşmalar ve ikincil kavramlar etrafında yeniden kurarak geleneksel bir sözlüğün doğrusallığını geride bırakır ve bağlantısallığı vurgular. İkincil kavramlar ve boşluğun farklı halleri arasındaki çapraz referanslar, tez boyunca bağlantıları güçlendirerek doğrusal bir metin içinde ilişkisel bir okuma deneyimi sağlıyor. Doğrusal bir tez formatının sınırlamalarına rağmen bu yaklaşım, leksikonun ilişkiselliğini ortaya çıkararak onun yapılandırılmasının yanı sıra tezin yazımında da araçların önemini ortaya koyuyor. Buna ek olarak, karşılaşmalara eşlik eden görsel temsiller, sözcükler ve imgeler arasındaki etkileşimi vurgulayarak kavramsal dağarcığı ve anlamları zenginleştiriyor.

Bağlantısal leksikon, geleneksel sözlük tanımlarının ötesinde ilişkisel anlamlar üretme kapasitesine sahiptir. Kavramsal ve ilişkisel düşüncenin disiplinler arası bir çerçeveden ele alınması, hem mimarlık kuramına hem de pratiğine katkı sağlar. Bu tez, ilk bakışta fark edilmeyen kavramları ortaya çıkararak ve mimari anlamları zenginleştirerek mimarlık araştırmalarını ve dağarcığını geliştirmeyi amaçlar. Bu

okuma yaklaşımlarıyla, her arařtırmacı veya mimar, benzer ieriđi paylařan ancak bađlantıları farklı olan kendi zihinsel szlđn veya zihinsel mekanını yaratabilir. Bylece kavramsal ve iliřkisel dřnmenin sadece arařtırmayı desteklemekle kalmayıp, aynı zamanda tasarım alanında da mimari dađarcıđa nasıl katkıda bulunabileceđini vurgular. Bu alıřma, bir kelime listesi sıralamanın tesinde arařtırmada kavramsal okuma ve anlama iin bir ara olarak leksikonun potansiyelini aıđa ıkarır. Aık ulu ve dođrusal olmayan bir arařtırma srecini teřvik eden bir yaklařım olarak bađlantısallıđın benimsenmesini savunur. Arařtırma, soyut ve muđlak bir kavram olan bořluđu anlamının, bađlantısal bir okuma yntemi gerektirdiđini gsterir. Belirsizliđi benimsemek, aık bir arařtırma srecinin dođasında bulunan ve srekli evrilen anlamlar sebebiyle gereklidir. alıřma, iliřkisel anlamların ortaya ıkarılmasında aracılarn roln vurgularken, bađlantısallık yaklařımı srekli bir oluř halindeki bořluđuun aıklıđının, belirsizliđinin ve iliřkiselliđinin keřfedilmesine olanak sađlar.

Bořluk zerine Mimari Leksikon, bořluk kavramının tanımını yapmayı amalamamaktadır. Bunun yerine, aynı ieriđin farklı olası evirilerine olanak tanıyarak bořluđuun eřitli anlamlarını keřfeder. Bu tezde leksikonun tek bir versiyonu sunulmakta ve arařtırmacının kendi zihinsel mekanı zerinden yaptıđı yorum ve bakıř aısı sz konusu olmaktadır. Bununla birlikte, bařka bir okuyucunun okuma erevesi bu eviriyi deđiřtirebilir nk leksikon bađlantısal olduđu iin oklu yorumlara olanak tanır. Bu alıřmada arařtırmacının keřfi, bořluk kavramının farklı durumlara ve ok katmanlı anlamlara sahip olduđunu, muđlak kaldıđını ve farklı iliřkisel olasılıklara aık olduđunu ortaya koymaktadır.

1. INTRODUCTION

“Architectural Lexicon on Void”¹ is an attempt to read the concept of void in architecture via an interconnected research approach. The common tendency to interpret architecture through solidity makes it challenging to discuss it via an intangible concept. The aim here is to provide a new *repertoire* for architecture by adopting new concepts from different disciplines or new meanings of familiar concepts. This aspect requires an interdisciplinary reading method which is generated by an interconnected lexicon in this research.

Lexical meanings are commonly addressed as the primary source for understanding a concept. However; in this research, a lexicon is built as a research approach which goes beyond providing solid definitions found in a common dictionary. Instead of seeking for fixed definitions, relationalities emerging from different “encounters” reveal multilayered meanings during the research process. Understanding via interrelations provides ever-changing meanings in this case. The open-ended process involves research layers which are in the state of flux and introduces “mediators” as tools for understanding through interconnections.

Generating an architectural *repertoire* acts as a mental lexicon which is an ongoing process of vocabulary learning. New concepts can be added to the mental lexicon while old ones are dropped based on their interrelations. In this way, the study highlights the ambiguity of meanings and the potentials of “becomings” in the architectural lexicon. It presents the lexicon as an interconnected “reading” which contributes to an interdisciplinary research approach. Here, “reading” the concept of void in architecture is considered as a means of “understanding” and “interpreting”, which embraces an open-ended research process. When mentioning his ideas on openness, Eco (1962/2016) emphasises that being ambiguous comes with being “open” for different readings. In this research, “reading” is comprehended through Gadamer’s (1975/2006) emphasis on “understanding” and “interpretation”, together with Deleuze’s (1990/2013) discussions on “concept” and “thought” as becomings.

¹ The Lexicon on Void was exhibited as part of *RSD10 Relating Systems Thinking and Design Symposium* at TU Delft in November 2021. See Ekmekci Geronymakis (2021).

Within this frame, “understanding” incorporates different reading possibilities and lexicon itself implements an open-ended research process.

Research layers, in other words the layers of interconnected lexicon, can be traced throughout the thesis as “main concept”, “different states”, “encounters”, “secondary concepts” and “mediators”. The lexicon began to take shape by visiting the language for different meanings of the concept of void. At this stage, it is realised that synonyms and antonyms can refer to the “different states” of the “main concept”. During the research process, each encounter from different disciplines demonstrates that meanings are not simply defined by language, but rather are complex and multilayered by various representations. Here, “encounters” refer to the examples from different disciplines, which relate to the creation of void. They enrich the lexicon by adding “secondary concepts” which are the hidden concepts that bring new relational meanings beyond lexical ones. All of these (layered) meanings can be read via “mediators” which establish interconnections between research layers and reveal concealed meanings. In this way, the interconnected lexicon becomes not only an outcome but also a reading method for this open-ended research process.

Since this research is not about defining the concept of void but rather “understanding” it, interconnectivity, borrowed from neuroscience, becomes an essential approach for an open-ended lexicon. Besides, lexicography and mental lexicon studies give insights for the attempt of building a vocabulary. While searching for different meanings of the concepts; language, etymology, philosophy and physics played an important role as well as architecture, art and literature for representations of void. It should be stated that the content and the research method are interwoven and are fed from interdisciplinary studies while the frame of the lexicon serves for an architectural reading. Even though it is an architectural research attempt, this approach can also be used for relational readings in other disciplines. The journey of this deep and multilayered research process of establishing an interconnected lexicon will be explained thoroughly hereinafter.

1.1 Initial Ideas on Reading the Concept of Void

The intention to discuss the concept of void stems from the need to criticise the limitations of the common tendency associated with architecture as a solid product. However, this attempt should not be considered as an approach where empty simply refers the opposite of full. Instead, this study emphasises the unity of empty and full in a holistic manner, interpreting both as different states of void.

Perhaps, the tendency to attribute fullness and solidity to architecture is based on describing the features of architecture with stability and solidity². However, by approaching architecture as creating void instead of constructing solid, this research aims to reveal the unseen and focus on the interval between tangible and intangible. In this way, understanding the concept of void becomes a means of reinterpreting architecture, which is represented by building, the constant solidity. From this point of view, it becomes challenging to explore how void is embodied in architecture, in other words, how to depict the tectonics of void.

During the initial research phase, it was discovered that the concept of void is used in a limited context within architecture. The discussions on void are either focused on urban voids, which refer to empty or vacant sites without a construction; or defining empty space with built elements, which goes back to the definition of “space as enclosure”³. At this point, the urge to deepen meanings of the concept of void for architecture holistically has arisen. Stemming from this motivation, it is aimed to expand the architectural *repertoire* by drawing inspiration from different disciplines. The idea of creating a relational lexicon going beyond the basic lexical meanings borrowed from the language evolved from this perspective.

Architecture can be considered as creating different states of void, which provides openness and different probabilities in space and design. In this sense, the research focuses on understanding the significance of void for architecture in order to support new architectural approaches and comprehension of space. The potential of the concept of void was first realised with the encounter of Malevich’s work *Black Square*. Slavoj Žižek (2011) exemplifies Malevich’s work, while mentioning an unpredictable in-between space, which emerges between the skin and the structure. He draws attention to the existence of two different frames at this work: the visible frame of the painting and the invisible one, which actually shapes one’s perception of the picture. According to him, there is an unseen “gap” between these two non-intersecting frames and the main content of the picture is placed here (p.107). The emphasis on this “unseen gap” promises a potential for comprehending architectural space beyond defining a kind of emptiness as enclosure.

The concept of void does not simply refer to something which is not full. Lexical meanings demonstrate that there are plenty of synonyms such as *gap*, *empty*,

² With reference to the Vitruvian canon, naming one of the main features of architecture as *firmitas*, *utilitas*, and *venustas*.

³ Gottfried Semper (1851) states one of the main definitions of architectural space as empty space enclosed by walls.

empty space, space, blank, void, vacant, vacuum, lacuna, hiatus, hole, and cavity...etc. (Oxford University, 2021, Definition 1). These concepts can all connote “an empty space”; however, they have subtle nuances which can reveal different states of an empty space⁴. The research journey began with the idea that architecture actually creates spatial emptiness, in other words void; which can dwell different states similar to the nuances of different synonyms. Although the concept of void may connote something lacking or missing, it is not simply the antonym of “full”. Therefore, the first phase of this research consists of thoroughly deciphering the concept of void and its synonyms. The research therefore proceeds by collecting different concepts which connote void and exploring some relational concepts which characterise it. This phase involves researching the lexical meanings, depictions in philosophy and conception of void in physics. With the evolving understanding of the universe in modern physics, the distinction between empty and full shifts into a state of flux. Readings on architectural space, evolution of void in physics, etymological descriptions, and philosophical approaches accumulate in “different states of void” as one research layer. Different states of void comprise the selected concepts which mean void such as *emptiness, vacancy, blank, gap* and *fullness*⁵.

Parallel to researching different meanings of the concept of void, various encounters are collected during the research process. “Encounters on void” are the examples which represent void or adopt the concept of void as an initial idea. Just like different states, these encounters are fed from different disciplines, in this case mainly architecture, art, literature and physics. Deciphering these encounters reveals some “secondary concepts” which do not directly connote void, but relate with tectonics of void. They are the hidden concepts which designate different means of creating void. The research material collected through each encounter and concept begins to form distinct relational layers (Figure 1.1).

While researching the concept of void thoroughly and collecting encounters from different disciplines, taking in-depth notes became essential for this multilayered research process. Notes on encounters, which can be both conceptual and visual, generate personal representations of each research material. They can belong to a theoretical reading or an architectural example on void. The common side of these

⁴ Throughout the thesis, the word “void” is preferred as the main concept while stating the spatial emptiness in a broader sense. In-depth explanations about different usages of the words are included in the following chapters (See Chapter 3.1).

⁵ As previously mentioned, there are different synonyms for the concept of void. However, certain ones have been chosen as a starting point to frame “different states of void”. Although “fullness” simply means “having no empty space”, it is closely associated with void and is considered as a state of void in this research (See Section Fullness).

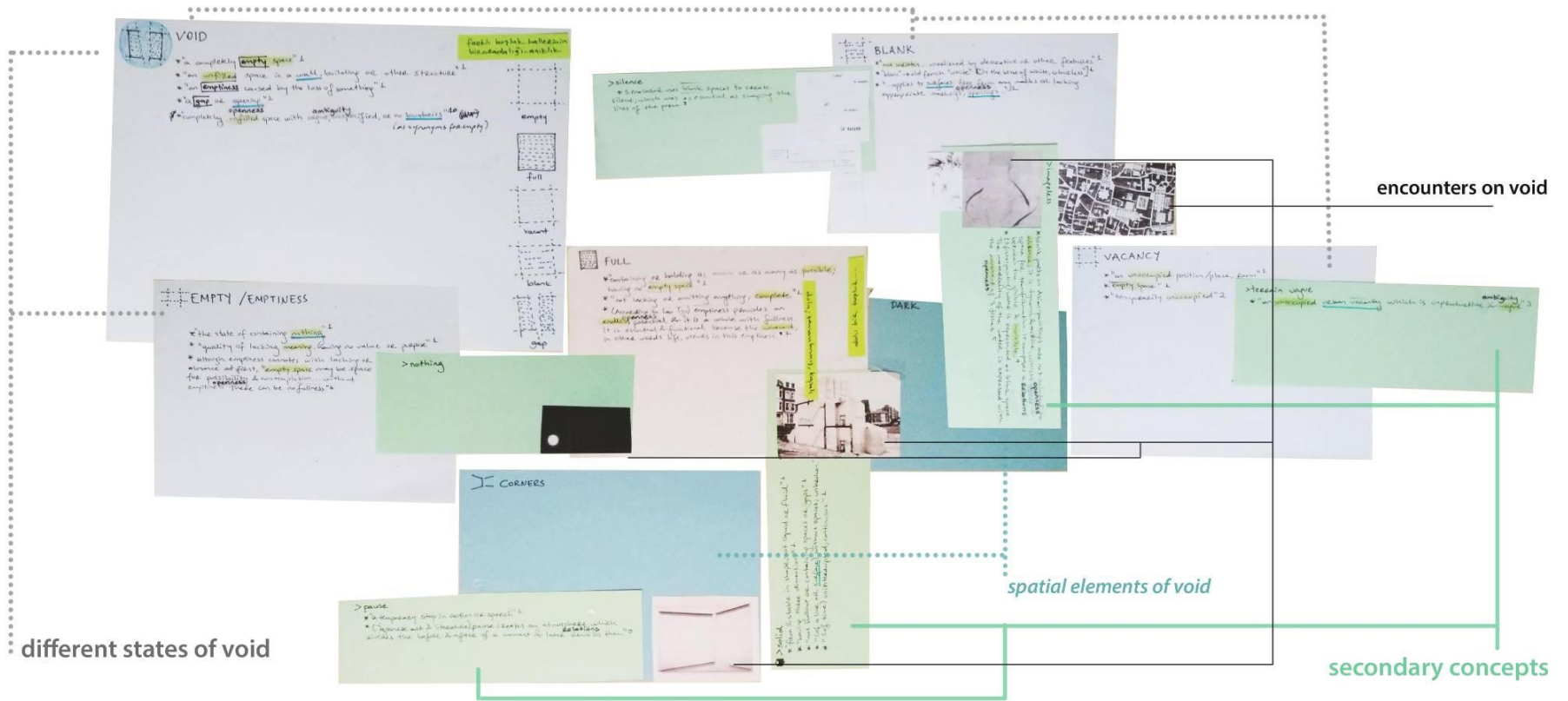


Figure 1.1 : First notes on different states of void.

notes is that they comprise of an in-depth reading on each research material through associated concepts. These notes reveal significant concepts from a specific encounter together with the relations between them. Eventually, the concepts related to void are highlighted with a different layer on the notes on encounters (Figure 1.2). This introduces a new group of secondary concepts related to void. The main issue at this stage becomes to develop a tool for a comprehensive assemblage of the multilayered research material.

Assemblage of the research material is based on simply cutting and pasting the relational concepts arising from each encounter. The similar mixed-media technique with notes on encounters is used at this stage. Firstly, the states of void and secondary concepts are assembled according to their interconnections via a collage technique. The collage which comprises all of the research material collected until that stage, forms new clusters of concepts based on their relations. In this way, different research material could come together as a whole. Different states of void, secondary concepts and encounters become visible on these relational layers (Figure 1.3). The assemblage served as the starting point for specifying the main conceptual framework of the thesis, which would subsequently expand into a new structure. It indicated that concepts with closer relations formed denser clusters. Sketching on the assemblage, similar to sketching during the design process, resolved the relations into different layers (Figure 1.4). These layers were the states of void, secondary concepts and spatial elements of void which was initially considered as an intermediate layer in relation to the tectonics of void⁶. However, reading tectonics of void through spatial elements could not integrate as an intermediary element within the research layers. On one hand, there are different states of void, on the other; secondary concepts, which are both intangible. Attempting to directly connect intangible and tangible spatial elements resulted in a descriptive and closed relationship. At this stage, secondary concepts foster potentials for the relational and conceptual thinking in the research. In terms of understanding the tectonics of void, in other words how void is created in architectural space, the focus shifted from the constructional elements to the secondary concepts which were the hidden ones (Figure 1.5).

⁶ The challenge here lies in a new approach for tectonic reading. A reading with the familiar tectonic elements would not bring new insights. Instead of repeating an already existing interpretation, this research attempts to comprehend the void as an open whole. Hence, a multilayered reading is adopted in interconnectivity and tectonics is interpreted through the emphasis on connections (See Chapter 2.1).



Figure 1.3 : Assemblage of the research: Clusters of concepts via collage technique.

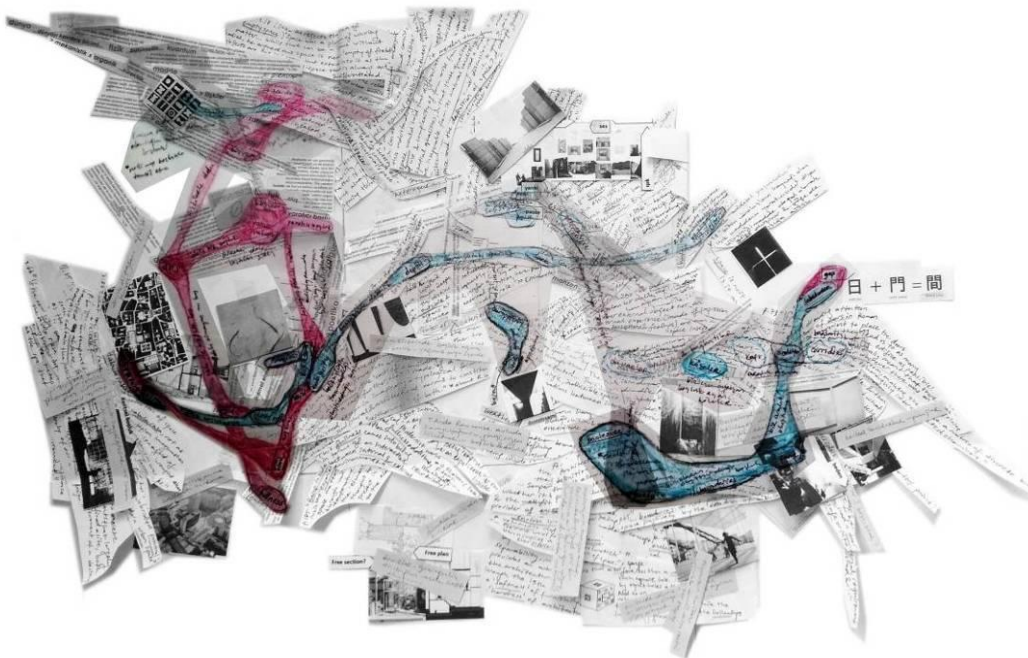


Figure 1.4 : Assemblage of the research: Sketches on clusters of concepts.

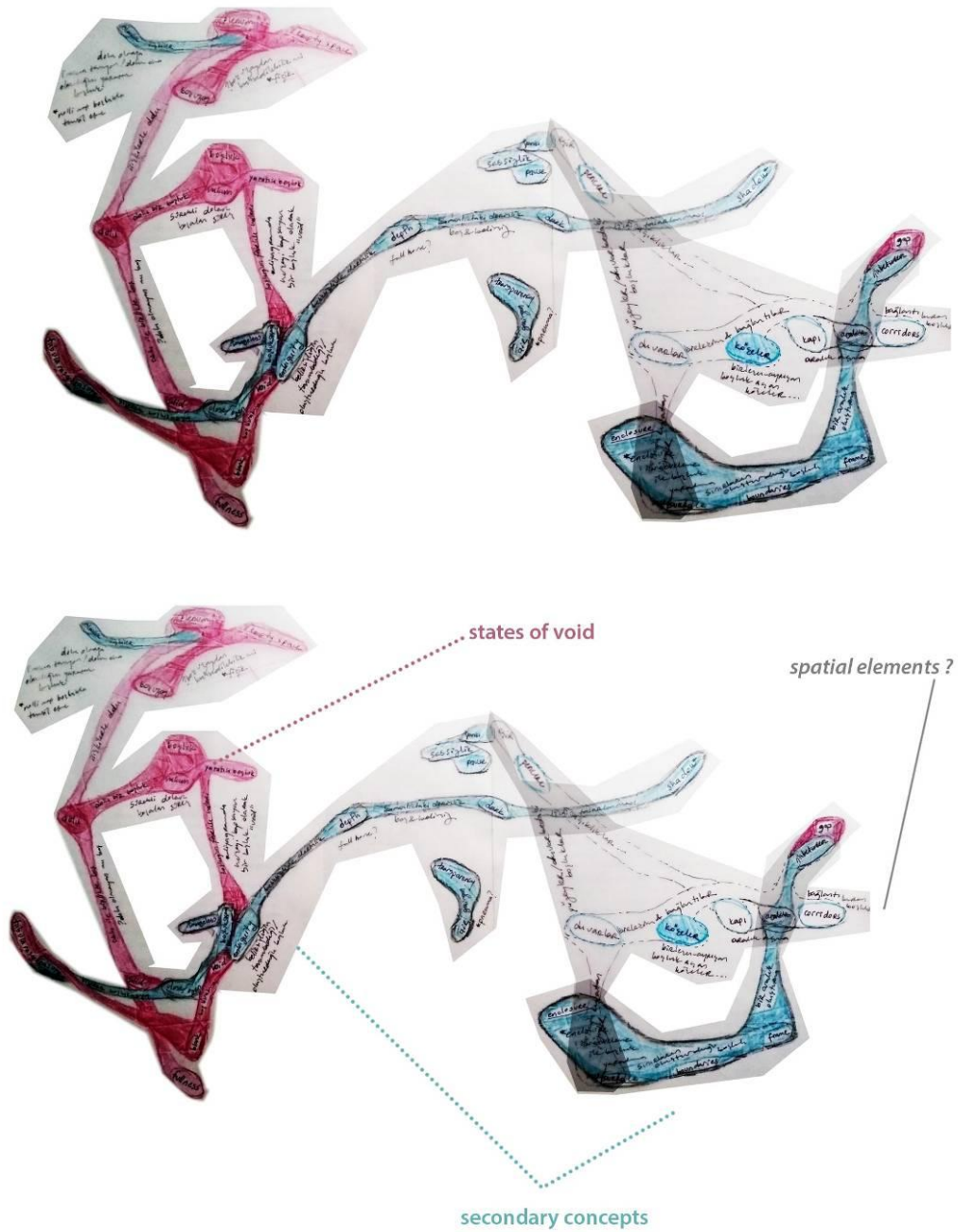


Figure 1.5 : Assemblage of the research: Clusters of concepts and relational layers.

Due to the necessity of an interrelating layer for this reading, the relation between secondary concepts and void still required a deeper examination as a next stage. While studying secondary concepts in-depth, some concepts distinguished from other ones. These concepts serve to characterise void instead of exemplifying the making of void. They are the denser clusters in relation with more than one secondary concept and/or different states of void. They are named as “mediators”, which provide interconnections among the entire research elements. Specific state of void connects to a mediator while this mediator links to certain secondary

concepts. Mediators become the essential element for the “reading”, which holds different layers together by forming a relational layer (Figure 1.6). The research process results into a non-linear and multi-layered reading and mediators become a means to explore different ways of “understanding”.

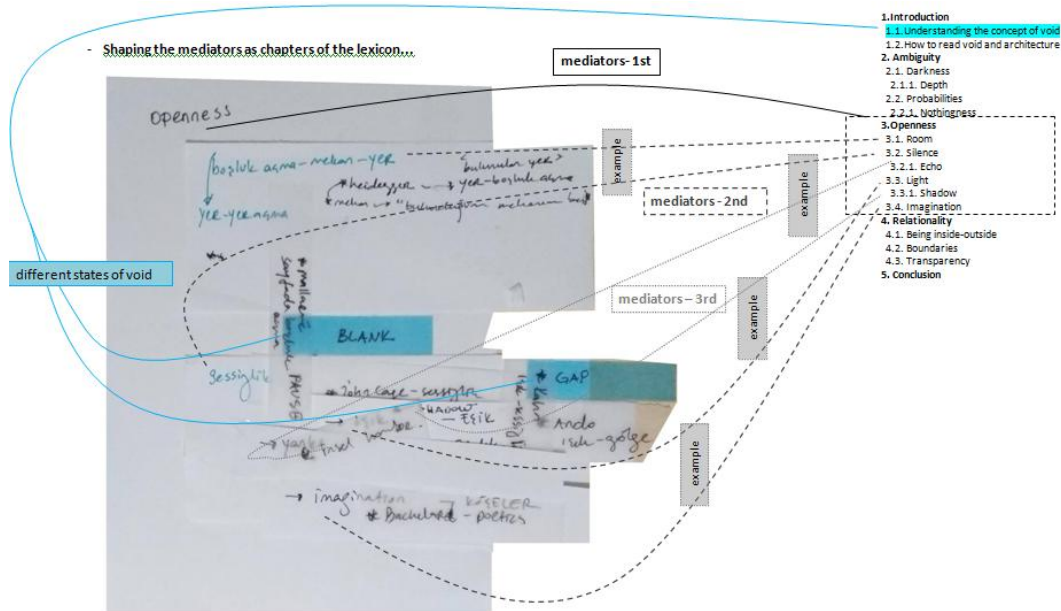


Figure 1.6 : First sketches on mediators of void and shaping the lexicon.

In addition to discussing architecture through void, an intangible concept, it is stimulating to generate a method for a relational and conceptual reading. However, in the succeeding stages of the research, it was challenging to embody this multi-layered research outcome in a linear written form of a thesis (Figure 1.7).

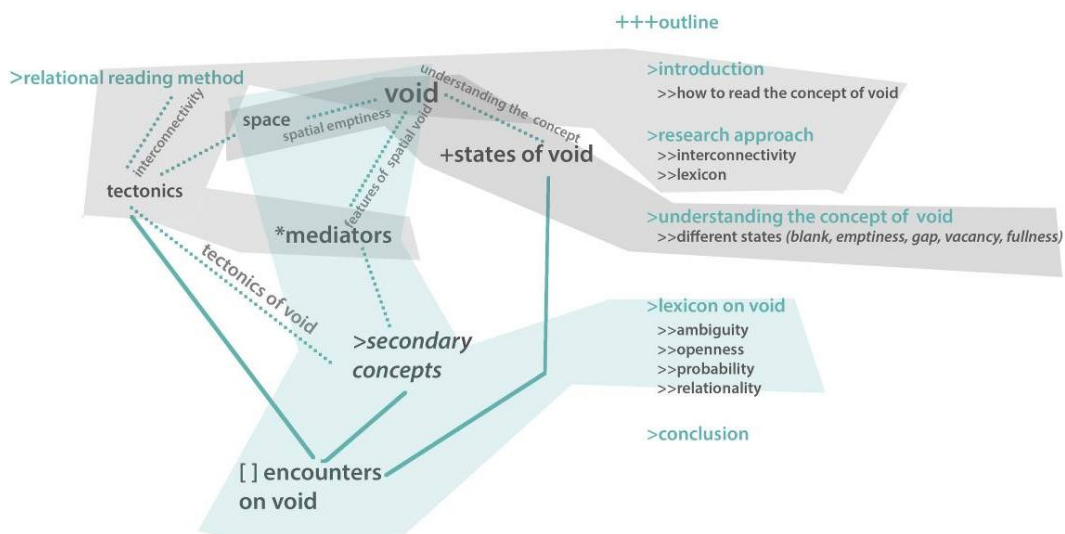


Figure 1.7 : Sketches on the outline of the thesis.

1.2 Unfolding the Lexicon into a Relational Reading Tool

Following the initial assemblage of the research, some concepts were added or dropped as a result of gathering encounters throughout the process. Thus, different states of void, secondary concepts and mediators constituted the key elements to decipher each encounter on void. The notes on encounters are constantly updated to make relational concepts explicit within the conceptual frame of the research. This is achieved by enriching the note-taking process both conceptually and visually (Figure 1.8). Certain relations in an encounter are open to change eventually. Due to the flux nature of the whole research process, a flexible relational mapping tool becomes necessary to update the open-ended research framework. Additionally, creating an architectural vocabulary regarding the concept of void is an intended research outcome. At this point of the research, a critical question arises: Is it possible to establish an open-ended and relational lexicon?

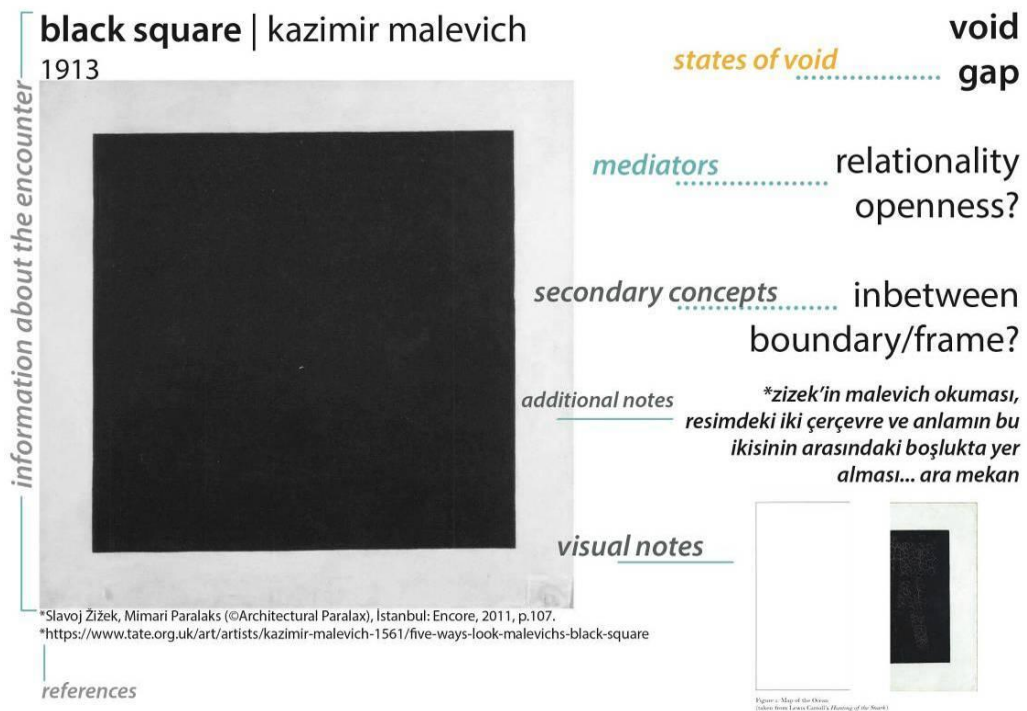


Figure 1.8 : Taking notes on encounters: Black Square, Kazimir Malevich.

Lexicography refers to “the art and craft of dictionary making”. The word’s origin is Greek, *lexikos* derived from *lexis*, which means “speech” or “word”. Lexicography consists of two words, which are *lexicos* meaning ‘of words’ and *graphe* meaning ‘writing’. Thus, lexicography denotes “writing of words” (Dash, 2007, pp. 226, 229). Lexicon means “the vocabulary of a person, language, or branch of knowledge”

(Oxford University, 2021, Definition 1). Additionally, it means “a list of terms relating to a particular subject” (Harper Collins, n.d., Section 2, Definition 2). It can refer to an open-ended mental lexicon of a person, which is in constant evolution according to inclusion of new words or exclusion of the old ones. Thanks to providing a relational collection of concepts, the lexicon adapts better to this research than a dictionary which promises to define all relevant words. Hence, this research seeks to nourish a mental lexicon for architecture by exploring the interconnections between concepts. Specifically, it proposes an interconnected lexicon on the concept of void, which provides an open-ended process of developing an architectural vocabulary. The lexicon does not simply contain explanations of concepts but rather their relations by means of “mediators”. In addition to the textual content, it includes visual representations, which are formed by taking visual notes on encounters (Figure 1.9).

4'33"

for any instrument or combination of instruments

John Cage

I

60♩ = <—>

4/4

LECTURE ON NOTHING

I am here . . . and there is nothing to say . . . If among you are
 those who wish to get somewhere . . . let them leave at
 any moment . . . What we re-quire is
 silence . . . but what silence requires
 that I go on talking . . . Give any one thought
 a push . . . it falls down easily . . .
 but the pusher . . . and the pushed . . . pro-duce . . . that enter-
 called . . . a dis-cussion . . .
 Shall we have one later ?

II

60♩ = <—>

4/4

Or . . . we could simply de-cide . . . not to have a dis-
 cussion . . . What ever you like . . . But
 now . . . there are silences . . . and the
 words . . . make . . . help make . . . the
 silences . . .
 I have nothing to say
 and I am saying it . . . as I need it . . . and that is
 This space of time . . . We need not fear these . . . silences, —

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Figure 1.9 : Visual notes on encounters: On the works of John Cage.

Assemblage of the research contributed to explore the clusters of concepts and their relations. After specifying each encounter in relation with these concepts, a digital mapping is used to revise and extend the assemblage. In order to enhance the relational reading and enable updating it in a flexible way, a non-linear mapping

software program is used⁷. The similar method with the assemblage of the research is employed digitally here. This tool provides different layouts to structure the research. By shifting from one research frame to another, it also enables the formation of the lexicon through ever-changing relations (Figure 1.10). In this way, it is possible to decipher void in architecture within the same content but different relations in the lexicon. This relational mapping allows for reading the research from different perspectives and facilitates the writing of the thesis in a linear format within a chosen frame. As mentioned before, a reading within the frame of “mediators” is adopted for this thesis to reveal the hidden relations (Figure 1.11).



Figure 1.10 : Video showing the ever-changing relations in the digital lexicon (Ekmecki Geronymakis, 2022).

The digital mapping provides a lexicon which is formed by different research layers rather than by an alphabetical order. This provides openness and allows for reshaping the lexicon constantly as relations between the concepts change. Additionally, the digital lexicon is published via a website which is regularly updated (Ekmecki Geronymakis, 2021-present). The website promotes an open-ended research approach which represents an unfinished process.

⁷ With this mapping programme, it is possible to link each node (concept) within different hierarchical relationships. Both nodes and links can be named or described, emphasising the relations rather than mapping by just linking the concepts. It is also possible to create different layers by labelling or grouping them in a connected integrity. Additionally, visual images and text can be part of this lexicon. Here, the complex mapping software is used as a tool to reveal interconnections, clusters of concepts, and different layers. Any other tool can be employed within the same approach. However, the challenging issue here is defining the relations between concepts as lines. If it is possible to represent these relations as fields rather than lines, interconnectivities could be better understood. In order to avoid this problem, “mediators” are formed as interconnecting layers (See Chapter 2.3.4).

Since a lexicon defines the vocabulary of a specific subject or branch, an architectural lexicon on void is preferred as a tool for the conceptual reading. The method and content of the thesis evolved together as a whole via this lexicon. The lexicon seeks to realise an interconnected reading on void in architecture, rather than a mere collection of terms. It is structured by relational layers under specific clusters of concepts, instead of a linear, alphabetical order. The meanings of concepts shift depending on the ever-changing relations which they establish in the lexicon. In this way, the lexicon leads to an interconnected reading, fostering a holistic approach beyond determinism.

After the introduction to the story of this multi-layered research journey at this chapter, the second chapter focuses on the research method, specifically the approach of interconnectivity and its relation to the mental lexicon. In addition to explaining different elements of the research, it also discusses how the lexicon is formed as an interconnected reading method. The open-ended lexicon constitutes different layers that are in state of flux. Research layers including “main concept”, “encounters”, “secondary concepts” and “mediators”, are intertwined in the form of an interconnected lexicon on the contrary to a linear research process. The evolution of this research process will be explained in terms of interconnection of these layers hereinafter.

The core chapter of the thesis presents the written form of one version of the interconnected lexicon on void. In this third chapter, “different states of void” which are *emptiness*, *blank*, *gap*, *vacancy* and *full*, are discussed via their lexical meanings and nuances as an introduction to the lexicon. Following this, the lexicon is subdivided into “mediators” as different sections in this chapter. As the research progresses, every “encounter” related to the main concept evokes “secondary concepts”. “Mediators” establish interconnections among the concepts in the lexicon, which embraces relational meanings. Thus, this chapter is constantly reshaped via different sketches and the digital mapping throughout the process. It is important to note that the lexicon can be presented in the form of a thesis using different frames, whilst the content remains the same.

Finally, the challenges that were encountered during the research process and opinions about how to continue this open-ended lexicon are discussed as conclusion and further studies.

2. AN INTERDISCIPLINARY READING APPROACH

The urge to generate an interdisciplinary approach arises from interpreting architecture through reading the concept of void, on the contrary to the common tendency to perceive it in terms of solidity. This research commences with an attempt to explore what the meaning of void in architecture. In the field of architecture, certain approaches such as defining empty space as urban vacancies or as an enclosure shaped by solid surfaces like wall, floor, and roof; may be inadequate in bringing a new perspective to the research. However, understanding the concept of void can offer potentials for discussing architecture via new tectonics, tectonics of the unseen rather than solid building elements. The research follows an interdisciplinary approach to comprehend different meanings of void. The aim is to expand the architectural repertoire by adapting new concepts from different disciplines and/or exploring new meanings of familiar concepts. Nevertheless, this interdisciplinary research requires a new way of conceptual reading which needs to be interconnected.

This chapter theorises the reading approach of the thesis research, where different disciplines play an inspirational role within a holistic viewpoint. These disciplines contribute to developing a research approach besides the content of the lexicon which is also shaped by encounters from different disciplines. Interconnectivity, originating from neuroscience studies, becomes the main source of idea for the research approach. Mental lexicon, associating with learning process of words, gives inspiration as a method for articulation of the concepts. Additionally, philosophy and linguistics are influential for interpreting the relation between “concept”, “word”, “meaning” and “understanding”. In this way, the thesis aims to contribute to architectural research by adopting conceptual and relational thinking within an interdisciplinary approach.

In this chapter, the features of interconnectivity will be discussed in the light of neuroscience and brain connectivity studies. Subsequently, mental lexicon will be interpreted to establish a relational vocabulary for architecture. Finally, the research approach of the thesis and its layers will be explained thoroughly via the lexicon as a means for an interconnected reading on void.

2.1 Interconnectivity as a Holistic Viewpoint

The research approach feeds off the transformation of the conception of the world from solid to unstable. For many years, Western thought was formed by dualism, which was based upon the ideas of Greek atomists. The division between mind and matter created a mechanistic comprehension of the world, which was subsequently grounded in Newtonian universe model. This scientific approach became highly influential until the end of the nineteenth century (Capra, 1975). Due to the impacts of the Quantum Theory, the classical worldview underwent a significant change from order and stability to flux and unpredictability (Prigogine, 1997, p. 4). These developments have introduced complexity and interconnectivity which leads to a holistic view. As the fundamental scientific perspective shifts from determinism to probability, from dialectics to interconnectivity, and from Cartesian thought to network thinking; the exploration of complex systems in different areas of life has revealed the significance of interconnected unity rather than understanding the universe through its parts. Thus, the mechanistic world evolves into an interconnected network of relationships (Capra, 1975, p. 137; Capra, 2015, p. 242; Kılıç, 2019a, pp. 100, 101). The network thinking introduces complex systems as relational integrities. Complex network systems, constituting interconnectivity as the fundamental characteristics, are utilised in various fields such as computer science, epidemiology, neuroscience (Barabási, 2009, p. 413), brain connectivity, collective behaviour and mental lexicon (McCarthy & Miralpeix, 2020, p. 7). Seemingly, complex networks and interconnectivity become a significant research method for different disciplines. Besides using complex networks as a means, can interconnectivity provide a holistic point of view for interdisciplinary researches? In order to seek an answer for this question, it is essential to understand the features of interconnected systems, which becomes the primary inspiration for this research.

Brain connectivity studies introduce a deeper understanding of interconnected systems. Kılıç (2019a) highlights brain connectome projects as a key source of inspiration for considering interconnectivity as an emerging scientific approach. Mapping brain connectome indicates the importance of relational networks in brain structure rather than the sum of individual neurons (p.97). The complex brain network generates an interconnected unity which is formed by relations beyond the particular qualities of each part. Therefore, it is possible to reshape different wholes with the same parts of a system, since the whole is actually comprised of the interconnections of these parts. The term connectome refers to illustrating the brain

network by using both the elements and their connections. It constitutes an inclusive connectivity map of neurons in order to unfold the brain structure (Sporns et al., 2005, p. 245; Sporns, 2012, p. 30).

Complexity of brain stems from the ever-changing relationality which creates different neural patterns. Neural patterns in brain seemingly introduce diverse potentials of interconnectivity. Brain contains numerous probability networks, which constitute different patterns in constant change within any moment (Kılıç, 2019a). Hence, relationality between parts generates various probabilities within a unity. In other words, a solid and steady point of view evolves into an approach for probabilities, as in the physics of probabilities, which does not actually mean “probabilities of things, but rather probabilities of interconnections” (Capra, 1975, p. 138). In this regard, main features of interconnected systems seem to be relationality, probability, and openness. Thus, interconnectivity can be described as an open-ended unity, which constitutes countless relational probabilities. Besides a scientific approach, neuroscience contributes to a holistic viewpoint via introducing interconnected systems. In relation with architectural design and experience, Arbib (2015) indicates that neuroscience offers potentials for new design tools. He emphasises that the design process is the constant interaction of the whole and the parts, rather than a whole defined by the parts or vice versa (pp.80, 94). This research comprehends architecture as designing interconnected wholes and approaches architectural research from this point of view.

Interconnectivity evokes ever-changing relational probabilities, which define an open whole. While discussing openness as a feature of artworks, specifically in the field of cinema, Deleuze (1990/2013) highlights that the whole is not close but constantly open (pp.63, 64). In addition to this, Eco (1962/2016) discusses *The Open Work* as an organic whole, whose structure is not a form as object but a system of relations in-between different levels (p.55). Thus, interconnectivity structures the open work, architecturally speaking, tectonics of the open whole.

Tectonics, evolving from the art of construction to “the poetics of construction” (Frampton, 1995, p. 387), becomes a challenging issue when it comes to discussing the tectonics of void in a holistic way. Lexicon on void is not only a tool to establish new conceptual meanings but also to explore tectonics of void in architecture. As mentioned at the first chapter, the initial attempt to comprehend the concept of void in architecture was limited to defining the empty space by structural components. However, such tectonic discussion becomes insufficient as it only separates solid and void, in other words, constructional elements and space. This approach can

only determine void through solidity (See Chapter 3.1). On the other hand, tectonics of void in this research requires togetherness of solid and void to achieve a comprehensive understanding and reveal new meanings. From this point of view, “fullness” is also considered as a form of void. Otherwise, a tectonic approach based on elements would not provide a holistic approach for understanding the multilayered meanings of the concept of void. On the contrary, it would be a continuation of a common reading through tectonic elements in architecture. Still, discussions on tectonics may provide clues for further approaches. Frampton (1990/1996) criticises the common meaning of the word “tectonic” when it is limited to structural components. Stemming from Semper’s emphasis on “joint”⁸ as “the art of building” (p. 524), he carries it to an ontological discussion: “...the joint as the primordial tectonic element as the fundamental nexus around which building comes into being, that is to say, comes to be articulated as a presence in itself.” (p. 522). Joining becomes the key features of tectonics as “narrative capacity of a building” beyond merely the constructing (Maulden, 1986). Within this frame, joints can be traced as embodiment of connections in a unity rather than a divided component itself. Frascari (1984/1996) also points out the importance of detail in tectonic expression, which corresponds to joints as an architectural element. According to him, details can become the source of “architectural production of meaning” since they are actually “generators” rather than subdivided units in construction (p.500). In this sense, the focus on joining evokes interconnectedness of the whole beyond an interpretation via elements.

If “architectural meanings” tectonically can be traced in joints, in other words connections, reading the tectonics of void beyond constructional components can unfold new meanings within the interconnectivities of the open whole. Thus, lexicon aims to introduce an open process of reading and understanding rather than repeating fixed architectural meanings. Therefore, discussing architecture via a tectonic approach based on interconnections can support a new vocabulary for architecture, evoking different ways of architectural thinking and practice.

In this study, lexicon forms an interconnected reading on the tectonics of void, in other words how architecture deals with void. In lights of interconnected systems and the idea of openness, tectonics can be traced in *autopoiesis*. *Autopoiesis*, connoting “self-making”, refers to a process of constant change and remaking within the components of a living network (Capra, 2015, p. 244). Hence, the relational

⁸ Here, Frampton (1990/1996) discusses the relation between “knot” and “joint” etymologically on Semper’s main ideas (p. 524).

structure between the parts undergoes continuous transformation, resulting in changes to the whole. The interconnected reading on void proposes an open-ended lexicon, which manifests the probabilities of conceptual relations. This process emphasises how interconnectivity reveals the hidden concepts and different relational possibilities for an architectural *repertoire*: the mental lexicon.

2.2 An Attempt for an Architectural Mental Lexicon

The research challenges the conventional focus on solid elements in architectural discourse by introducing an open-ended lexicon on void, incorporating a conceptual exploration of the tectonics of void. As mentioned above, Eco's open work constitutes relations in-between different levels. These different levels can be interpreted as parts of interdisciplinary information levels and lexicon assembles them together as an interconnected whole. Establishing an open-ended vocabulary for architecture becomes challenging at this stage. Neuroscience promotes interconnectivity as a holistic approach to interdisciplinary research. Furthermore, understanding lexicography and mental lexicon processes is also critical to shaping the research approach.

"Mind is not a thing but a process" (Capra, 2015, p. 245) which is ever-changing and relational. Interconnectivity of neural networks inspires the researches on lexical learning process. Originating from the brain activities, some mental lexicon studies embrace network connectivity as a research method. For instance, connectionist approach analyses learning process in mental lexicon by simulating neural networks (de Sousa & Gabriel, 2015, p. 344). Hence, new words are collected in a mental lexicon not as divided units but through an interconnected network. The process of learning a new word and including it in one's mental lexicon occurs within a relational context according to the connectionist models.

The word lexicon means "the vocabulary of a person, language, or branch of knowledge" according to the *Oxford English Dictionary* (Oxford University, 2021). Besides referring to the vocabulary of a language, lexicon can belong to a person or a specific field. Notably, it connotes "a list of terms relating to a particular subject" (Harper Collins, n.d.). Since lexicography, "the art of dictionary making", gathers knowledge from diverse contexts; a lexicon is based on how a specific dictionary maker structures it (Dash, 2007, pp. 226, 231). In this sense, the creation of a lexicon is not an objective and descriptive process, but rather a subjective and open-ended one. In fact, one's mental lexicon is naturally formed by the open-ended

process of adding and dropping words. In this sense, it seems possible to approach the conceptual research process as generating a mental lexicon for architecture.

Lexical meaning of mental lexicon is “the store of words in a person's mind” (Harper Collins, n.d.). There are different opinions about how this term was used for the first time. Either Triesman (de Sousa & Gabriel, 2015, p. 338) or Oldfield uses the word “mental dictionary” for the first time as referring to a storage of meaning of words (McCarthy & Miralpeix, 2020, p. 2). Besides different approaches about how mental lexicon processes words, Elman (2004) criticises the common conception of mental lexicon as passive word storage (p. 301). New words join to one’s mental lexicon while old ones are removed depending on utilisation. Hence, this mental vocabulary is in constant change and revision (Dash, 2007, p. 231). Contextual relations between words re-forms mental lexicon continually.

Words are not just stored in mental lexicon after encountering them; moreover, they become a part of a complex and self-organised network (McCarthy & Miralpeix, 2020), which works as an “interface structure” and relates different information levels of words such as orthographic, semantic, and phonologic (de Sousa & Gabriel, 2015, pp. 356, 348). Therefore, this interface structure plays a relational role in-between parts, providing an interconnected unity. The whole is formed by the interconnections of units rather than independent entities. The important point here is within which relations the words exist in the lexicon rather than which ones are incorporated into it. The mental lexicon is a dynamic process that depends on the usage of specific words in different contexts. Words do not have standalone meanings but rather relational meanings. From this point of view, the mental lexicon can be seen as an open-ended, complex and interconnected whole. In this research, the intention is to provide a mental lexicon for architecture within the context of void, through revealing relational concepts. This mental lexicon contributes to an architectural vocabulary by interrelating with concepts from different disciplines. Similar to a person’s mental lexicon, there can be diverse architectural lexicons based on different conceptual relations.

Architecturally speaking, a mental lexicon can associate with mental space. In his book *Spatial Intelligence*, Leon van Schaik (2008) indicates “mental space”, where eidetic recalls, memories, feelings, senses, and journeys are collected. He mentions “translation” in relation with mental spaces of different designers. According to him, translation does not simply connote literal meanings of words in specific languages but rather it obtains unfamiliar perceptions (p.42). Just like speaking a language via one’s mental lexicon, translation can be possible within the capacity of translator’s

mental space. Thus, meanings can vary according to the possibilities of the translation or the translator's interpretation. Gadamer (1975/2006) associates translation with "the process of understanding" and interpretation which involves different relational possibilities (p.388, 399). Mental lexicon enables possible relational interpretations and interconnected understanding for architecture. The attempt for an interconnected lexicon contributes to collecting architectural probabilities related to a main issue, in this case, the conception of void. Although the lexicon is structured within the frame of this main concept, this research approach can be applied for reading any other concept in the search of different "translations" in architecture.

2.3 An Interconnected Reading on Void

While interconnectivity provides a holistic approach, mental lexicon establishes an architectural *repertoire*. In order to create an architectural lexicon on void, different encounters from diverse disciplines, in other words contexts, are gathered within an interconnected reading. Interconnectivity constitutes complex relations, openness and probabilities. As can be seen from the previous sections, it is possible to comprehend mental lexicon as an interconnected whole. Mental lexicon is an open-ended vocabulary learning process based on the relations and probable usages of words. It can evolve with new encounters from different contexts. In addition to collecting and relating concepts, representing the lexicon is also a challenging issue for this research. The lexicon should provide an interconnected and open system, similar to a mental lexicon, and be structured according to the relations between concepts. Furthermore, these relations should be open to constant changes.

In a lexicon, words are generally structured within alphabetical order; however, they can also be categorised by means of different contexts such as semantic or denotation (Dash, 2007, p. 232). A linear alphabetical order of the lexicon cannot provide a relational reading because of explaining the meaning of each word separately. In this sense, it should be processed like a mental lexicon, rather than defining the concepts independently in a linear order. In order to provide an ever-changing mental lexicon, a complex mapping software is used, as mentioned before. Thanks to this mapping, the research method and outcome are embodied in this relational lexicon as an interconnected unity.

In this section, different layers of this research such as *main concept, different states of the concept, encounters and secondary concepts, clusters of concepts and mediators* will be explained. The lexicon comprises interconnected layers, each

contributing different aspects. Evolution of the research process will be specified within interconnection of these layers. The interpretation of each layer within the research framework will be thoroughly illustrated hereinafter.

2.3.1 Main concept: void

The research begins with a conceptual reading, in this case of the concept of void, and evolves into building a mental lexicon within the relations of this main concept. The initial idea of the research was to read the concept of void and reveal the related concepts in order to contribute to an architectural vocabulary. Therefore, this conceptual reading becomes a means of “understanding” in the research process.

The word “concept” itself has a close relation with “understanding”. Lexically it means “an abstract idea” and originates from the Latin word *conceptum*, “something conceived” within the sense of “thought, imagination”. In philosophy, it denotes “an idea or mental image which corresponds to some distinct entity or class of entities, or to its essential features...” (Oxford University, 2021, Definition 1&1.4). According to Burge (1993), concepts are means of thinking since they are “components of thought contents”. Concepts differ from words, however; they are manifested by words and consist their meanings (pp.310, 315). In this case, collecting related concepts in the lexicon demonstrates different ways of thinking beyond the aim of merely defining the words. Gadamer (1975/2006) relates hermeneutical experience with interpretation of concepts which is a constant formation process. According to him, understanding is “interwoven with concepts” (p.404). In this way, concepts do not only possess meanings of words but also ideas and thoughts. In addition to this, Deleuze (1990/2013) emphasises philosophy as being “production of concepts” (p.147). According to him, a concept generates thoughts as becomings (Colebrook, 2002). However, the production of a concept is only possible through a relational matter (Zabunyan, 2006, p. 40).

Creation of concepts, which are means for understanding, is possible only if there is a relational matter. Interconnectivity indicates that everything possesses a meaning within the network it exists, in other words the relation it has (Kılıç, 2019b). As it is emphasised before, mental lexicon consists of interconnectedness. In mental lexicon, the meaning of a word builds upon the denotation of relational words (de Sousa & Gabriel, 2015, p. 350). Mentioning a concept naturally brings along all meanings related to it (Burge, 1993, p. 310). Therefore, concepts associate with relational thinking and mental lexicon generates ever-changing patterns within these relations. Even though Burge states that owning a concept means knowing that

specific concept, knowledge appears as something incomplete (Abath, 2020, p. 427). Hence, knowledge of a concept is not complete but in constant change. Comprehension of a word requires the knowledge of its relations with other words (Elman, 2004). Interconnectivity between concepts generates relational meanings instead of certain lexical descriptions of each word. In this way, this research is embodied in an ever-changing vocabulary, namely a mental lexicon, rather than a descriptive dictionary. During the research process, the relational concepts accumulate in the lexicon while understanding the main concept “void” and exploring new ways of “thinking” for architecture.

2.3.2 Different states of the concept: synonyms and antonyms

Lexical meaning of the main concept “void” demonstrates that there are plenty of words used as synonyms, such as *gap*, *empty*, *empty space*, *space*, *blank*, *void*, *vacant*, *vacuum*, *lacuna*, *hiatus*, *hole*, and *cavity* (Oxford University, 2021, Definition 1). Even though void refers to spatial emptiness in a broader sense, these concepts can all connote “an empty space”. However, they have subtle nuances which can reveal different states of void. Lexically, these different states can be understood via synonyms and antonyms. There are dictionaries comprising of synonyms and antonyms of words, which can be beneficial especially for translations or learning a language since they provide relational information of words (Dash, 2007). Here, these words are used to understand distinct features of the main concept void, which are named as “different states of void” (See Chapter 3.1).

For this research layer, researching lexical meanings can form initial understandings on the concept of void. Since meaning of the concept of void has references in different disciplines than architecture, such as philosophy and physics, interdisciplinary comprehensions of the concept contributes to different states of void. Readings on theories of architectural space, evolution of void in physics, conceptions in philosophy and etymological derivations accumulate different states of void in one relational layer at the lexicon. This research layer comprises some selection of concepts which connote void, such as *emptiness*, *vacancy*, *blank*, *gap* and *fullness*⁹. Although “full” simply means “having no empty space” (Oxford University, 2021, Definition 1), it is closely associated with void and it is considered as a state of void in this research. Different states of the main concept can be expanded with more concepts which demonstrate different aspects of it. During the

⁹ As seen above, there are various synonyms and antonyms of the concept of void. However, these specific concepts are chosen as different states of void in order to frame our study.

research process, these synonyms and antonyms can enhance the particular vocabulary while understanding the main concept thanks to their relational meanings.

2.3.3 Encounters and secondary concepts

Besides researching diverse meanings of the main concept, some examples on void are collected from different disciplines. These examples either represent void or adopt the concept of void as an initial idea. They form another research layer named as “encounters on void”, which dwells new comprehensions for the main concept from different contexts. In this way, this research layer can enrich the architectural vocabulary via new means closely relation to the tectonics of void.

The word “encounter” denotes “an unexpected or casual meeting with someone or something” (Oxford University, 2021, Definition 1). On the other hand, there is also *rencontre* which is a rather special encounter according to Deleuze’s ideas. This rare and inexhaustible *rencontre* can be considered as an *événement*, which is casual but yet exceptional as long as there is enough sensitivity for the clues of the encounter (Lapoujade, 2006). Thus, the clues of such inexhaustible encounter which stimulates an *événement* can be traced in relationalities in this research.

In this phase, different encounters on the embodiment of the concept of void are researched and collected. Following this, different states of void are associated with the encounters. In this way, representations of specific states of void can be explored within the lexicon. Deciphering the research encounters reveals new relational concepts which can be considered as “secondary concepts”. These concepts are the ones which do not directly connote different states of void; however, they are the secondary concepts which introduce the means to create different states of void. Every encounter, or specifically *rencontre*, re-structures the relational situation in the lexicon as part of an open research process.

Whilst interconnecting to one or more different states of void, each encounter adds some secondary concepts to the lexicon within their own context. For instance, *The Church of Light* building of Tadao Ando occurs as an encounter during the research process since the main design idea is shaped around the concept of void (See Section *Ma*). At first glance, the architect approaches different states of void in this building by creating an empty cross on the *blank* concrete wall. Nevertheless, representation of void is not limited to the absence of the material. Actually, the light going through the empty cross defines the void by “shaping the darkness” (Baek, 2010, p. 8), in other words by creating the shadow. This can be the spatial

representation of the Japanese word *Ma*, meaning “the light of the sun shining through the gap in the gate” (Snodgrass, 2004, p. 65). Here, a *gap* where sunlight seeps into the void is created in this example. The gap generates an intermediary space which connects inside and outside, light and dark, while providing an opening as a form of void. In the lexicon, this specific encounter is connected to the states of void *blank* and *gap*, and adds the secondary concepts such as *shadow*, *ma*, *in-between* and *absence* to it (Figure 2.1).

Encounters on void are collected not only from the field of architecture but also other disciplines. The main concept of void and its different states lead to some examples which can be part of the lexicon relationally. Besides these concepts, the secondary concepts bring new encounters to the lexicon in the succeeding stages of the research. For instance, *The Church of Light* mentioned above is encountered while researching the concept of void in architecture. One of the secondary concepts this encounter adds to the lexicon is *absence*. When deciphering this concept in relation with void, an old Asian painting called *3 Fishes* comes into the picture. In Asian paintings, blank space fulfils an important role. These blank parts are where there are no images on the picture. In this sense, it is not related to absence but it is something dynamic and active, which opens a space for transformation. It composes a relation between the visible and invisible (Cheng, 1979/2006, pp. 50, 51). At the painting of three fishes in a pond, water is represented as blank space. The materiality of water is expressed with the movement of three fishes indirectly (Xiaodong, 2002, p. 96). Although empty space here is imageless, this blank space is actually filled with the existence of movement. *Blank*, as a state of void, is unwritten part of a surface, which creates a pause. In the lexicon, this encounter is connected to the secondary concepts *absence*, *pause* and *room* together with the different states *blank* and *full* (Figure 2.2). Since the digital mapping is constantly updated upon each encounter, the relational state of each encounter, as well as other concepts, is constantly changing in the lexicon. In this way, unexpected encounters of the research process become rare *rencontre* within the relationalities in the lexicon.

Architectural vocabulary expands via encounters introducing new secondary concepts which are hidden. They are not directly linked to the main concept of void in the lexicon but they give relational clues to the means of the creation of void. In this way, encounters on void enrich the vocabulary via secondary concepts; similar to a person encountering a new word or a familiar word within a new context, and adding it in one’s mental lexicon in relation with the other words.

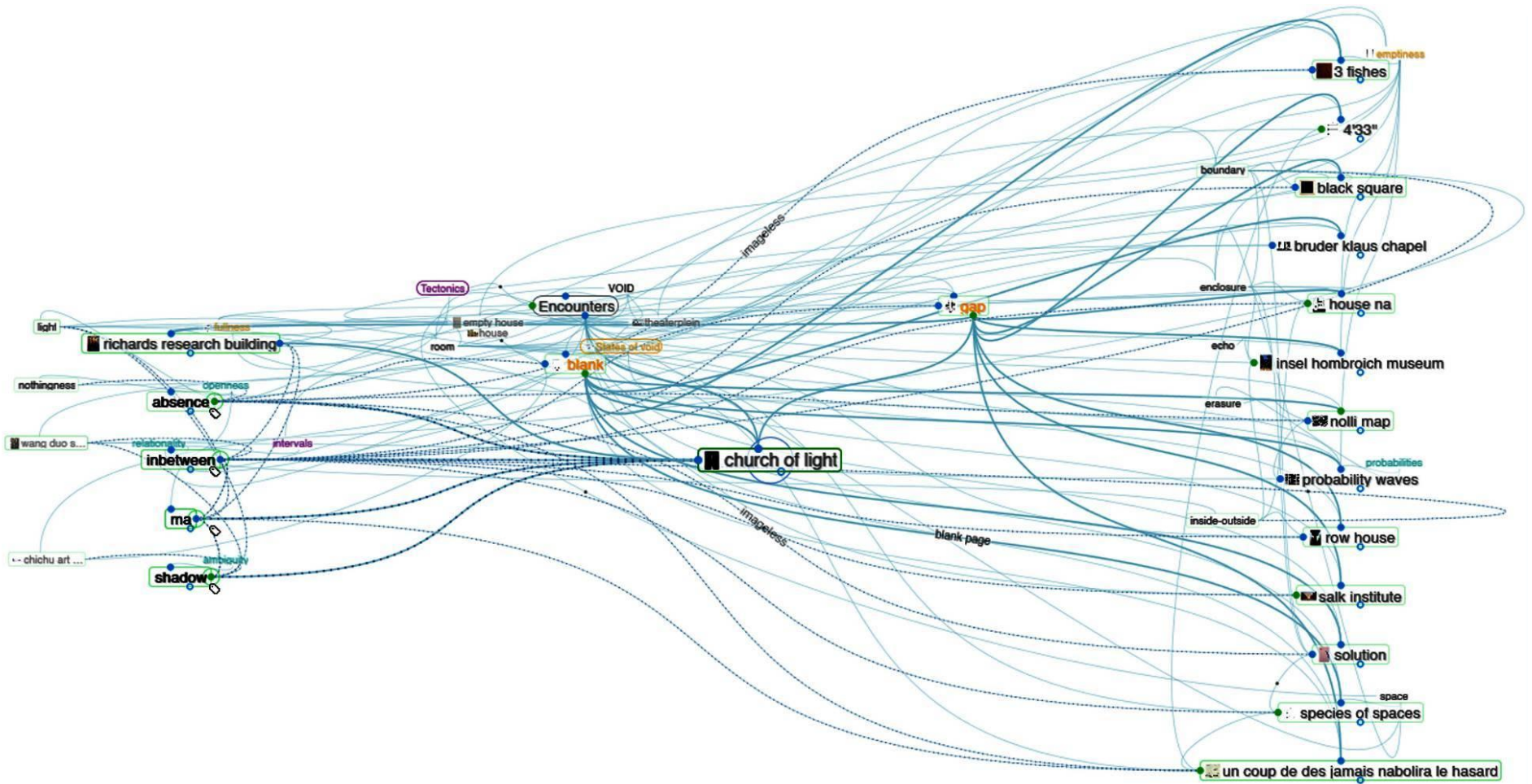


Figure 2.1 : Relational state of a specific encounter in the lexicon: The Church of Light.

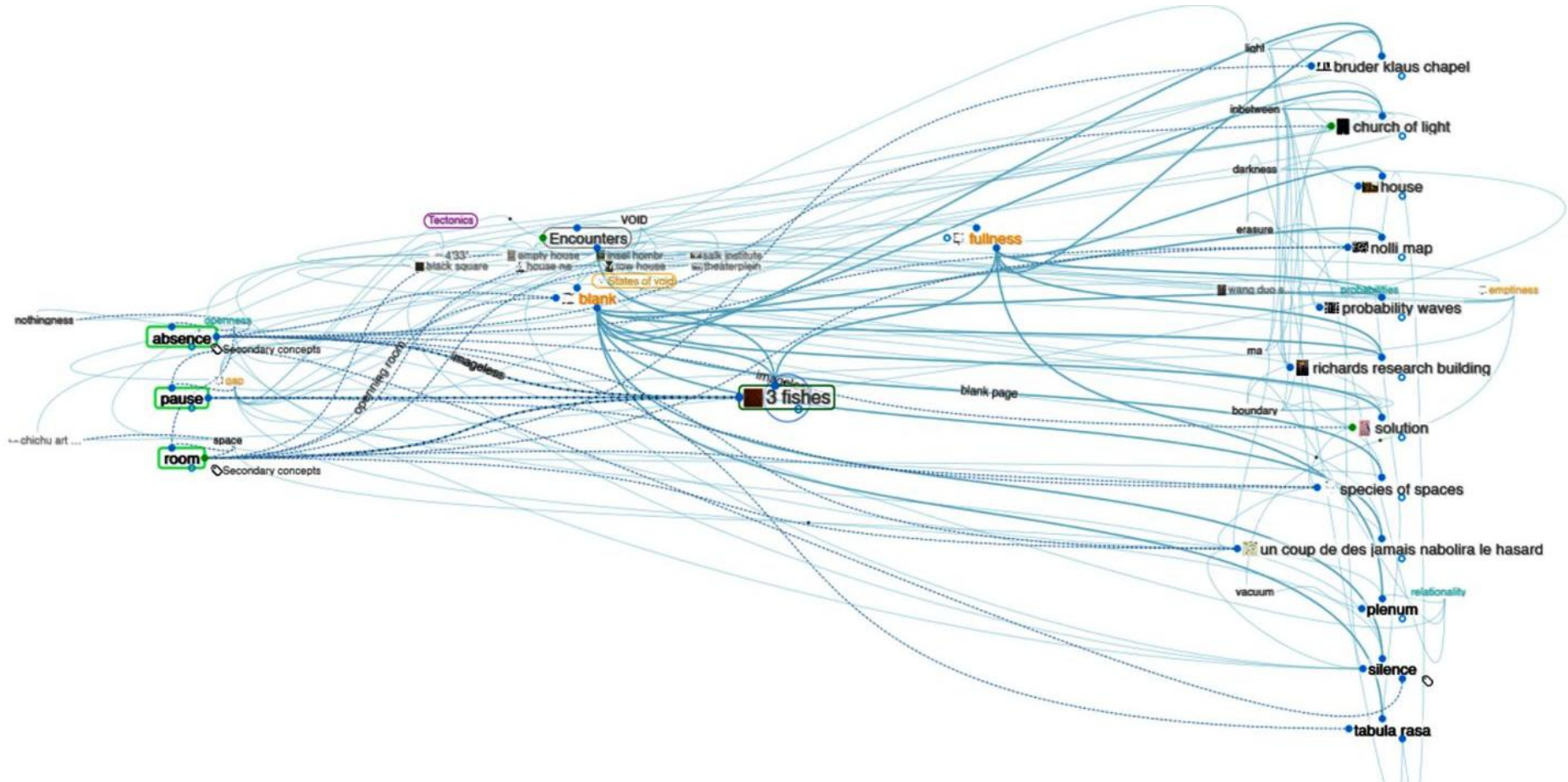


Figure 2.2 : Relational state of a specific encounter in the lexicon: 3 Fishes.

2.3.4 Clusters of concepts and mediators

Different states of void, encounters and secondary concepts are incorporated into the relational lexicon. This accumulation which comprises the whole research material starts to form denser relationships between some concepts. The mapping indicates that some secondary concepts have connections with each other whereas some has closer relations with specific states of void. These conceptual relations are revealed via the digital mapping which is used as a tool to decipher the interconnections in the lexicon. However, by merely linking the concepts manifests a representation which is limited to the lines as relations. The interconnected reading requires tracing the relations via layers instead of lines in the mapping. In this way, clusters of concepts work as relational layers rather than categories in the lexicon just like the neural patterns formed by information flows in the brain (See Chapter 2.1). At this stage, another research layer which might manifest the interrelations is created in the digital lexicon. This would be the “mediators”.

During the research process, it is realised that some concepts such as *openness*, *ambiguity* and *relationality* distinguish from other concepts. These concepts differ both from different states of void, which denote the concept of void, and from secondary concepts, which refer to the tectonics of void. Instead; they serve to characterise void. They are the densest clusters of concepts intermediating in the whole reading to reveal unseen features of void. Specific state of void links to a mediator while this mediator connects to more than one secondary concept. By interconnecting different research layers in the lexicon, mediators form the main means of understanding in the research. Each mediator provides different reading frames in the lexicon, as part of an intermediary role which becomes essential for the ever-changing lexicon (See Chapter 1.2 and Figure 1.11). Beyond defining the meaning of concepts, the lexicon serves as a method to understand the concepts relationally thanks to the mediators establishing meaningful interconnections. While discussing meanings of words, Elman (2004) explains words as “clues to meanings” rather than containing meanings themselves. He interprets word as “operator”, not as “operand” (p.301). From the same point of view, mediators, differentiating from other research layers, do not specify the meanings of concepts in the lexicon, but rather provide clues to meaningful interconnectivities. They are the research elements which form new relational frames in the lexicon beyond a categorisation of concepts (Figure 2.3).

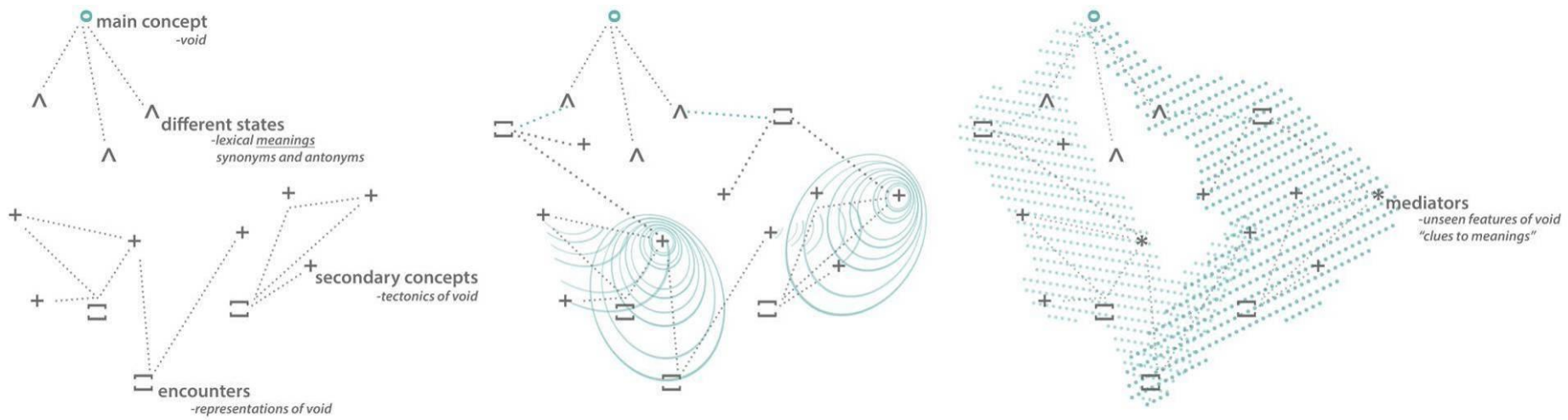


Figure 2.3 : Evolution of the research layers.

In addition to this, Norberg-Schulz (1966) mentions the “intermediary object” which is created by our perceptions through our experiences. He relates the process of perception to interpretation (p.34). Moreover, it is possible to approach “mediators” as a state of being in-between, an interval for ever-changing interpretations. Gadamer (1975/2006) emphasises the close relationship between understanding and interpreting. There are different ways of understanding the same thing. He associates the possibility of understanding with the possibility of “mediating interpretations” (p.399). In this sense, mediators enable interconnections between all research layers in the lexicon and provide openness to diverse possible “translations” of the concept of void in architecture.

2.4 How to Read and Write the Lexicon on Void

Beyond basic lexical meanings, it is realised that the concept of void has diverse connotations which evoke ambiguous meanings as potentials for different readings. Embracing the ambiguity of void unfolds the necessity for an open-ended research approach. While shaping the method of the research, relational and conceptual reading re-articulates the content. Lexicon as an interconnected reading method reveals the unseen but substantial concepts in relation with void. These concepts provide a multi-layered reading which is formed by interconnections. In order to achieve such relational interpretation, a complex mapping tool is used for this research process.

The content of this research generates an interconnected lexicon, which consists of relational concepts describing and representing void in association with architecture. It gathers different research elements in order to reveal conceptual relations and enrich an architectural vocabulary. Conceptual meanings comprise an etymological and philosophical research, whilst representation of void collects different encounters from various disciplines such as architecture, art, literature, and physics. This accumulation embodies in the *Architectural Lexicon on Void*, which indicate meanings within the relations that the concepts have. The aim of this lexicon is not forming a dictionary with definitions of specific words in a linear alphabetical order but unravelling relational meanings and hidden concepts as an interconnected unity. These relations create different patterns and “clusters” which are in constant change. It introduces an interdisciplinary reading method by collecting different “encounters” related to the main concept. Each encounter from different fields adds a new related concept and/or relational pattern to the lexicon.

The lexicon is developed via a digital mapping software program, which includes conceptual relations, clusters of concepts, visual images, and explanation notes. This open-ended lexicon is updated constantly during the research process and can be followed via its website (Ekmekci Geronymakis, 2021-present). The digital lexicon has different layers/ clusters such as “main concept” (in this case void), “different states of the concept” (synonyms and antonyms), “encounters” (examples from different disciplines), “secondary concepts” (related concepts introduced by each encounter) and “mediators” (hidden concepts mediating to understand the main concept). Viewers of the lexicon can visit the website and wander around the digital lexicon by clicking on specific concepts and/or different clusters. Playing with this interconnected unity and breaking its scale by zooming in and out, provide different readings for each audience. The lexicon reveals tangible and intangible concepts related to the tectonics of void, which can be traced via secondary concepts in the lexicon. Beyond separate constructional elements, a tectonic approach based on interconnections can introduce a new vocabulary for architectural thinking and practice.

By clicking on each mediator in the digital lexicon, which can appear and disappear whilst the research continues, it is possible to zoom in and read the concept of void through different frames. However; mediators do not only serve to understand the concept of void relationally but also to write the lexicon in a linear format of the thesis. Thus, the challenging issue of writing an interconnected lexicon, rather than a linear and alphabetically ordered one, leads to the emergence of mediating research layers in the lexicon. As can be seen in the following chapter, the lexicon is written under the sections of each mediator. In this sense, mediators should not be considered as categorisations but mediating concepts, which indicate interconnectivities of the concepts in the lexicon. Under the sections of each mediator, the lexicon is structured based on secondary concepts and the discussion is shaped around related encounters. While writing the lexicon, the digital mapping is followed and related secondary concepts and encounters are mentioned together, endeavouring to explain them within a flow in the text based on their interconnections.

It is attempted to reveal the meanings through secondary concepts and mediators instead of different states of void which are already lexically indicated words as synonyms and antonyms in the language. During the text, secondary concepts are referred to the specific different states of void which are discussed in the introduction section of the lexicon (See Chapter 3.1). These cross-references are

used throughout the thesis to project the connections of the concepts in the written format of the lexicon. In this way, reading and writing the lexicon back and forward establish relations by breaking the linearity in the text. Even though the written format of a thesis has limitations, this way of writing and outlining opposed to a linear descriptive dictionary could emphasise interconnectivity in the lexicon. In this way, it is possible to re-write the lexicon within the same content yet different frames of mediators. This can be considered as an important aspect of an interconnected whole consisting of possible relational meanings. Thus, mediators are not only important to understand the features of void but also to structure the lexicon and make it possible to write it in the thesis format.

In addition to this, encounters add visual representations to the lexicon besides textual explanations. Visual notes on encounters are used to enrich the meanings in the lexicon. In this way, the lexicon is not only written by words but also with images. Even though these visual images can be considered as personal creations of the researcher, they become essential by means of collections in translator's mental space during the research process. It should be noted that the following chapter demonstrates only one written version of the lexicon, which can be considered as a mental lexicon of this specific research process. It can be interpreted as only one of the translations from a certain moment of writing, which also involves the mental space of the researcher in the process.

3. LEXICON ON VOID

In the first chapter, it was mentioned how the lexicon evolved into a research method while attempting a conceptual reading in the intuitive research process. The limitations of the conception of void in architecture led to the idea of creating a lexicon that draws from different disciplines. Therefore, the introduction section deals with the various tools used in designing the lexicon and its progress. All of these tools, including collages, sketches, visual and textual notes, were reflections of the search for multi-layered meanings. The coexistence of meanings from different disciplines, as well as visual and textual representations, moulded the idea of designing an interconnected lexicon. The initial assemblage of the lexicon evolved into a digital map as the content was expanded. The lexicon was then textualised based on the current version of this mapping in the thesis.

The evolution of the meaning of void inevitably involved the disciplines of physics and philosophy. In the research of the concept of void, "interconnectivity" from neuroscience shed light on the issue of bringing together the meanings obtained from different disciplines in the lexicon. The transformation of the interdisciplinary approach into an interconnected reading method was the subject of the second chapter. The journey of the lexicon's intuitive and free progressive formation is theorised in this chapter through interconnectivity and mental lexicon. The layers of lexicon on void and how they establish each other were also discussed in detail in the second chapter.

The third chapter presents a written trial of one version of the interconnected lexicon used as a tool for understanding the void. The text is accompanied by visualisations produced by the researcher on the encounters. The chapter begins with an introduction to the lexicon, discussing the concepts in the "different states of void" layer, particularly their implications in physics, philosophy and language. Here, the concept of void is not intended to be defined by synonyms and antonyms. Instead, it is unfolded via mediators, which are openness, ambiguity, and relationality. The secondary concepts emerging from the research framework of each mediator constitute the lexicon on void through the following sub-sections. The text is ordered according to their relationality with specific encounters and links with each other, highlighting the close relations of mediators and creating different meanings of void.

The interconnections within the lexicon can be traced by following the cross-references between the sections.

3.1 Understanding the Concept of Void

Simply looking at the lexical meanings of void reveals various meanings and related concepts. Different disciplines adopt this concept with different meanings as well. Thus, meaning of the concept of void in architecture needs a deeper understanding. During this research, it is realised that there is a necessity of manifesting the potential of this concept to grasp in-depth features of void and trace its relation with architectural space. As an introduction to the lexicon on void, comprehension of different states of void and their nuances is explained in this section. The primary attempt here is not describing the lexical meanings of words connoting void but rather manifesting the approach to different states of void within the research frame. Subsequently, the lexicon on void is illustrated via the mediators and secondary concepts.

The definite distinction of solid and void has been changed in lights of new approaches in physics. These approaches offer different ways of understanding the universe. While classic physics makes a distinction between empty space and matter, modern physics comprehends them together as a whole. The certainty of solid matter shifts to the becomings of probability waves with Quantum Physics. These probabilities are actually based on the mutual relations between objects. In this way, the classical approach of comprehension of void goes beyond the distinction of solid matter and empty space. Solid and void become a unity rather than two separate concept. Physicists explore that completely empty space does not exist in reality; on the contrary, it is filled with continuous creation (Capra, 1975). The change in the comprehension of these concepts provides an organic and holistic point of view, which emphasises complex relations and probabilities instead of certainty (Figure 3.1).

Considering the concept of void, The Newton model was similar to the ideas of Greek atomists, which considers matter as passive particles moving in the void. On the contrary to the Western dualism, Eastern approach is organic, which originates in interconnections of all matter and phenomenon rather than their distinction. Void becomes a dynamic quality beyond steady divisions (Capra, 1975). This division of the perception of void between the Eastern and Western perspectives can be based

on an ontological approach. While discussing the ontological status of the concept of void, Powers (2014) emphasises how Epicurus uses the words “void”, “place” and “room” referring to an “intangible substance”. He uses “void” when a substance is empty of all body; if occupied then it is “place”. It is named as a “room” when bodies wander around it (p.414). Thus, they all connote the different forms of void from an ontological viewpoint. As it can be followed in the coming sections, Eastern thought interprets the concept of void different than an ontological issue. When Western point of view sees it as a matter of existence or non-existence, Eastern teachings such as Buddhism and Taoism, comprehends it as a potential or possibility (Watson, 2014). In this sense, “nothingness” becomes something different from non-existence (See Section Nothingness).

The concept of void has been the topic of physics, philosophy, art, architecture and so on. All these approaches occur within different aspects. Discussions on void in architecture mainly have the focus on urban sense. Urban site where there is no construction refers to void, whilst the one where there is a building defines solid¹⁰. Thus, architecture becomes to have a role to fill the urban vacancies via construction. In The Dictionary of Urbanism, void is defined as “an element of urban form other than a building or structure (a street, square, park, or space within a block, for example)” or “the space contained within a building, as opposed to its elements” (Cowan, 2015, p. 442). In addition to an urban void, the concept is also used in reference to space itself, which is basically defined as an enclosure by building elements¹¹. These approaches employ small fragments about the concept of void in architecture; nevertheless, it is difficult to encounter a holistic understanding about how architecture deals with void. Firstly, the separation of solid and void should be brought into question once again. As a basic approach, a building element could refer to solidity when it frames void, in other words an empty space defined by walls. In his readings on tectonics, Frampton (1990/1996) discusses Semper’s “space as enclosure” through distinction of the mass and the frame. While materiality of the mass represents the earth, the framework representing the aerial can be considered as dematerialised. This goes beyond a kind of contrast between light and dark, earth and sky when the massive wall becomes a “dematerialised” frame, in other words as emptied solidity. He perceives this contrasts in a “dialogical movement” (p.527) and perhaps, gives the hints to the

¹⁰ This idea forms the basic representation of figure-ground maps which are used in architecture and urban design as part of urban analysis.

¹¹ One of the early definition of space is stated as “space as enclosure” by Gottfried Semper (1851).

togetherness rather than distinction of solid and void, where the meanings are shifting.

Architecturally speaking, the concept of void is mainly considered in relation to spatial emptiness or urban void. However, it is possible to create a deeper understanding on the concept itself and its different states within a relational approach rather than these two separate definitions. Within the context of the concept of void, Kuloğlu (2013) emphasises a design approach embracing the togetherness of urban and spatial void. Beyond defining urban or architectural space independently, void has a potential of establishing relations, which gives the essential meaning to architectural space.

In order to comprehend the concept of void thoroughly, lexical meanings can be discussed first. According to The Oxford English Dictionary, meaning of the word void is “a completely empty space” or “an unfilled space in a wall, building, or other structure”. The word has various synonyms such as *gap*, *empty*, *empty space*, *space*, *blank*, *vacant*, *vacuum*, *lacuna*, *hiatus*, *hole*, and *cavity*...etc. (Oxford University, 2021, Definition 1 & Synonyms). Etymologically, these synonyms can have obscure nuances, which can enrich the meaning at the same time. As a synonym of empty, void refers to unfilled space, which is, in a sense, ambiguous by having no boundaries (Random House, n.d., Synonyms 1). This ambiguity can create potentials by means of embodying diverse features of void. According to Davidts (2010), emptiness as a kind of space left vacant has a tangible sense when void connotes the abstract.

The synonyms and antonyms as different states in the lexicon on void which are mentioned here are emptiness, vacancy, blank, gap and also full, in reference to the togetherness of solid and void. For instance, as a synonym, empty connotes “without appropriate or accustomed contents” while blank “applies to surfaces free from any marks or lacking appropriate markings, openings”. Vacant, on the other hand, indicates something “temporarily unoccupied” (Random House, n.d., Synonyms 1). Thus in this chapter, different states of void will be discussed within their subtle nuances and references from different disciplines (Figure 3.2)

Bachelard (1964/ 1994) comprehends the potential of void as “the raw material of possibility of being” while discussing the poetics of space (p.218). With and beyond their mere lexical definitions, different states of void can give clues to explore the potentials of void as a beginning of the discussion.

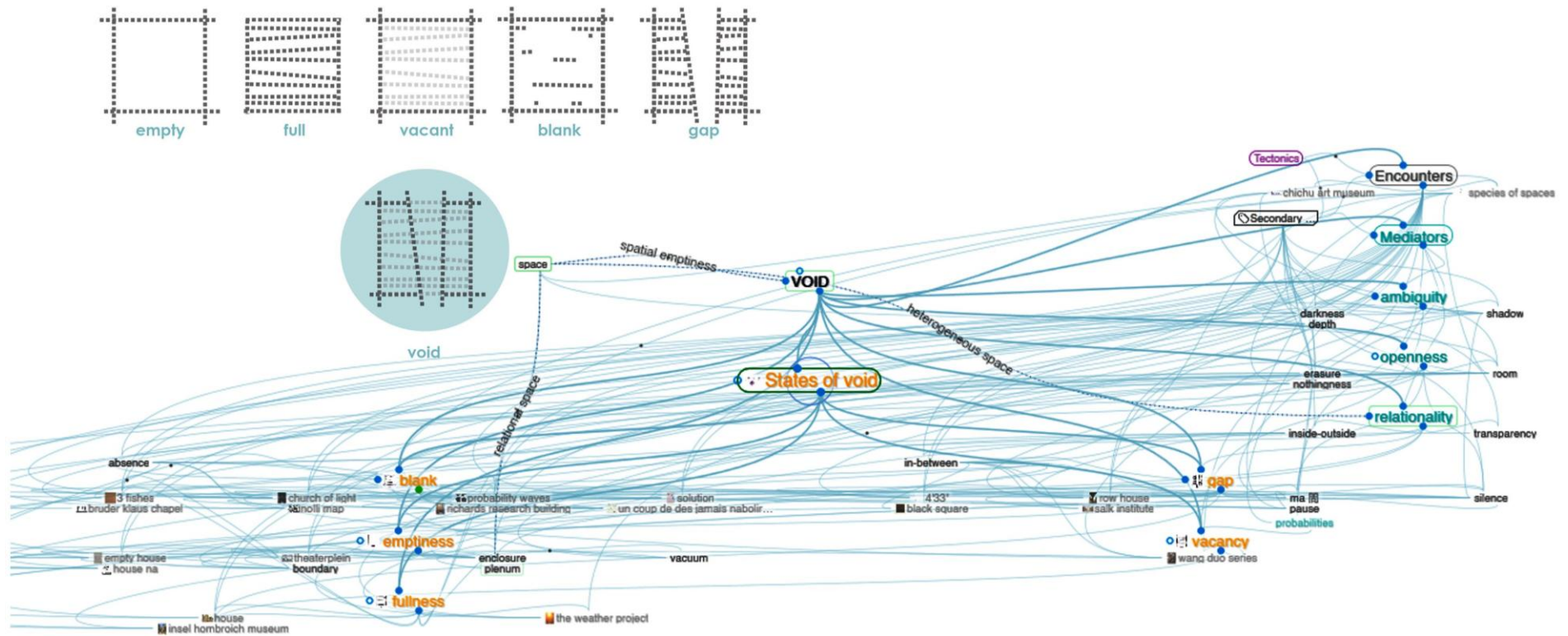


Figure 3.2 : Relational state of the “different states of void” in the lexicon.

Emptiness

The word emptiness is one of the main synonyms of void. Via its antonym full, empty is defined as “not filled or occupied” (Oxford University, 2021) and emptiness as “the state of containing nothing” (Oxford University, 2021, Definition 1). According to the Newton physics, space is considered as an empty container where objects can be located. Thus, between the objects, there can be nothing else but only empty space. On the contrary, Leibniz states that there cannot be emptiness in real world. Perhaps, Newton’s emptiness is not eventually completely empty (Weatherall, 2017). In physics, emptiness and nothing have been examined to find out if it is possible to obtain an empty space as vacuum (See Section Nothingness). As a counter-view of Aristotle’s *horror vacui*, which literally means “fear of emptiness”, Pascal experimented on different varieties of vacuum (Vidler, 2000). According to Pascal, nothing is everywhere and vacuum is nature’s default space (Stacey, 2011). Since the distinction between matter and empty space dissolved with The Quantum Field Theory, vacuum becomes a creative process instead of an empty container. The theories show that actually vacuum is not empty rather it is a never-ending creation and extinction process of particles. It becomes a constant physical phenomenon, which constitutes not only dynamic interactions of particles but also a living emptiness (Capra, 1975).

When it comes to philosophy of emptiness from the physics of it, an alternative approach becomes essential. According to Watson (2014), emptiness cannot be merely interpreted as absence of existence or meaning. She points out Buddhism and Taoism for a different insight on the philosophy of emptiness beyond the duality of Western approach. In this way, it can be comprehended as a space of possibilities in between existence or nothingness since “without emptiness there can be no fullness” (p.10). It is the emptiness which provides openness for different probabilities rather than the duality of empty and full (See Chapter 3.2). Taoism emphasises the meaning of emptiness within the sense of openness for the possibility of utilisation (Cheng, 1979/2006, p. 62). This idea of emptiness reflects on the interpretation of Chinese space. Just like the landscape paintings where the existence of emptiness is essential, the main part of a building is the courtyard in Chinese architecture, which creates a kind of spatial depth (Xiaodong, 2002, p. 101). Seemingly, the comprehension of emptiness extends beyond being or non-being (Baek, 2008) and rather it refers to “a state of becoming” (Watson, 2014, p. 15). From this point of view, emptiness connotes something positive rather than

simply lacking. In the light of physics, emptiness has a feature of a dynamic creative process.

Since lexically referring to containing nothing, emptiness requires some boundaries. In this sense, empty space with defined boundaries recalls the approach “space as enclosure” as Gottfried Semper (1851) discusses in his book *The Four Elements of Architecture*. This was one of the first definitions of space, an enclosed emptiness by boundaries, in his words walls. Enclosed space offers a volumetric definition, which can be related to the Germanic word *raum* in the sense of space (See Section Room). When it comes to architecture, perhaps the focus can be shifted towards the potentials, creations, and ideas which emptiness opens up to fill (Verhetsel et al., 2013, p. 31) rather than what defines it. Separation of empty and full cannot completely manifest the potential of void but seeing “architecture as a meditation on emptiness” can (Paige, n.d.). The focus of this state of void is not only having defined boundaries and being unoccupied but also being open for constant creation.

Vacancy

As a synonym of empty, “vacant is usually applied to that which is temporarily unoccupied” (Random House, n.d., Synonyms 1). The word vacant denotes a place which is “not occupied, empty”, originating from the Latin word with the usage of “remaining empty” (Oxford University, 2021, Definition 1). Lexically, the word vacancy connotes “empty space” (Oxford University, 2021, Definition 2) which is temporarily uninhabited but yet available for probabilities to be filled. Since The Quantum Theory replaces the perception of solid matters with existence of probabilities, it is not possible to predict an electron’s certain place in a certain moment; instead matter has probabilities of occurrence. The illustration of probability waves represents the low probability of occurrence of an electron as dark while depicting higher probability as bright (Capra, 1975). These waves show the traces of different possibilities, where empty spaces are unoccupied but available just like a vacancy.

In *Metapolis Dictionary of Advanced Architecture*, void as “a space to be inhabited” is associated with the concept of “transitoriality” (Gausa et al., 2003, p. 656). Since it constitutes the sense of time, this state of void can be considered as vacancy. In architecture, the usage of the word vacancy is mainly encountered in urban sense like urban vacancies that are not temporarily inhabited. Within this sense, vacancy has a relation with the French term *terrain vague*, which refers to an urban vacancy, unoccupied and vague (Paige, n.d.). Urban void in relation with the concept *terrain*

vague can be adopted as residual areas that do not have to be occupied but reinterpreted in a different approach of use (Gausa et al., 2003, p. 654). It refers to a kind of void which is ambiguous and open for some possible usage within certain period of time.

From a different point of view, when discussing void in Korean architecture and art, Cho (2018) relates imperfection and incompleteness with a kind of “ephemeral vacancy” beyond a “simple vacancy of space” (p.47). The rawness of objects and material, their incompleteness and casualness shape the aesthetics of Korean culture in this way. Here, incompleteness creates the temporality of void. As a different state of void, vacancy might have defined boundaries like emptiness but it consists some traces instead. It is temporarily open to different possibilities in relation with these traces (See Section Traces).

Blank

The word blank is “not written” and “unrelieved by decorative or other features” (Oxford University, 2021, Section adj., Definition 1). It refers to “a space left to be filled in” (Oxford University, 2021, Section noun, Definition 1). It is an empty space on a surface which has no shape, image or marks (Random House, n.d., Synonyms 1). This word originally derives from Middle English “in the sense of white, colourless”, which is based on the word Old French *blanc* “white” (Oxford University, 2021, Section origin). Thus, it refers to a kind of void with no colour, image or form, which is unwritten but can be considered open to be written (See Section Absence). Beyond representing emptiness on canvas, blank part is essential for Chinese painting. It triggers imagination and creation of meaning in the relationship of the visible and invisible without clear definitions. The painting becomes, in a way, incomplete and opens room to paint by one’s imagination (Shen, 2011; Cheng, 1979/2006).

When it comes to space, Perce (1999) indicates the potential of blank to discuss his species of spaces. He starts with a blank page and uses the signs and words on it while creating different kind of spaces. Koolhaas (1996) also emphasises importance of blank for architecture when discussing void. He mentions leaving something blank, in a way undecided and undefined, could highlight the space itself rather than its “packaging” (p.63). As a form of void, blank gives a kind of pause or creates an interval in the busy landscape of the city (Paige, n.d.). Just like essential blank parts on the canvas of an Asian painting, it creates a kind of in-between space for possible relationalities that are based on imagination.

Gap

The word gap denotes “a break or hole in an object or between two objects” and it is “a space or interval; a break in continuity” (Oxford University, 2021, Definition 1 & 2). Additionally, the word void is described as “a gap or opening, as in a wall” (Random House, n.d., Section n., Definition 10). Some of its synonyms are pause, interval, break and blank (Oxford University, 2021, Definition 2). Through these lexical explanations, gap can form a kind of void, which opens an interstice as an intermediary. According to the early atomists, every object constitutes atoms and void as a gap between them, which is essential to make the movement of atoms possible. This movement can actually reform the void itself (Powers, 2014). This state of void constitutes an interval or an interstice in-between two things as a mediator. Gap creates a kind of betweenness.

Snodgrass (2004) discusses Japanese comprehension of space through the concept of gap while remarking that design could be re-interpreted as “grasping betweenness” (p.76). He refers to the Japanese word *madori*, which denotes “design” with the literal meaning of “grasping space”. In relation with the Japanese word *ma*, he interprets gap as a break in continuity, which provides an intermediate space (See Section *Ma*). This creates an atmosphere which divides the before and after of a moment and later reunites them. While discussing the solidity of architectural object, he sees the betweenness of gap as a kind of fluidity. Thus, architecture should focus more on gaps instead of manipulating the solid forms (Snodgrass, 2004). Additionally, void is stated in relation to “in-between” in The Metapolis Dictionary of Advanced Architecture (Gausa et al., 2003, p. 654), where the discussion is mainly around urban void. Perhaps, adopting the in-between might give the hints for the new uses of space rather than defining the ways of filling it. Beyond solidity, gap in architecture generates an intermediary space, connecting inside and outside, light and dark, providing an opening as another state of void.

Fullness

The in-betweenness is possible via the interconnection of empty and full. Instead of focusing on only the full, in other words the constructed, void can function “as an operative system” for architecture (Gausa et al., 2003, p. 655). Beyond the duality of empty and full, relational space can come into question in this sense. Because of their essential togetherness, fullness as an antonym of void should be considered as a state of it. The dominant duality in Western thinking is based on considering the matter and empty space, in other words solid and void, as separate notions in

classical physics. Later on, with the Relativity Theory they are perceived as an interconnected and inseparable whole (Capra, 1975).

The word full lexically means “completely filled, containing all that can be held” (Random House, n.d., Definition 1). In this sense, there must be defined boundaries in order to be filled within its whole capacity. Additionally, synonym of the word fullness is “completeness” (Philip Lief Group, 2013, Synonym 1). In this sense, the word fullness denotes a kind of closed situation like being complete within its boundaries. On the other hand, in Chinese thinking, empty and full are not binary. Void is not perceived as something non-existent; contrarily, it is a dynamic and active entity. It opens room for itself to transform and fullness makes it possible to reach to wholeness. It is possible to encounter the unity and incompleteness in void, within the togetherness of empty and full (Cheng, 1979/2006). Hence, void is not merely the opposite of full; by contrast, they form a dynamic co-existence which is constantly changing (Kim, 2012). It is possible to consider empty and full as a unity in constant transformation of void; opening room and occupying it repeatedly.

Togetherness of emptiness and fullness fosters relationality of void, instead of division of the two. This connection can be traced through the evolution of the mass in architecture. The solid and constructional elements in architecture evolved into the lighter and transparent elements with modern movement as a result of industrial revolution. Frdz and Jorge (2013) discuss the change in the perception of the mass in architecture and the architecture of emptiness via Japanese architectural approaches. Boundaries between man and nature, inside and outside, dark and light, empty and full dissolve and these dualities flow into each other while their connections actually define the space. From this point of view, it seems unlikely to comprehend emptiness without fullness and void without its different states. Void, at first, has a negative connotation such as something lacking or absent. On the other hand, it is possible to comprehend its potentials by means of being ambiguous and open. Eastern philosophy and art embraces void in this sense. Within this point of view, void is needed in order to fill in. It opens a space for movement, transformation and creation. It is a pause to separate things and then join them together.

The research process shows that there is not a specific single definition of void. Different states of void vary from different relations. Here, understanding the concept of void is not conducted via a chronological or methodological reading within a certain field; but a relational reading. Instead of the necessity of categorisation, it provides relational meanings enriched by different disciplines such as physics, philosophy, linguistic, art, literature and architecture. Additionally, the

lexicon derives from search of interconnected meanings rather than an ontological apprehension of the concept of void.

In summary, different states of void contributes to an in-depth understanding for the concept via subtle nuances. The word emptiness refers to a state of containing nothing within certain boundaries. Fullness connotes a closed state with defined boundaries since it is occupied with full capacity. However, their togetherness creates a potential transformation. When it comes to ambiguity, vacancy manifests a kind of availability by consisting temporality. It was first full then becomes empty and open to be filled again; however, it is vague how or when it might happen. The word blank denotes an unwritten or imageless state, mainly like on a surface, and still associates with openness. Similarly, gap indicates an interval, a state of in-betweenness which breaks, creates a pause and reconnects. Both blank and gap involve togetherness of empty and full and offer an opening for connections. Void, meaning the spatial emptiness, denotes a broader conception which contains all of these different states without clear boundaries. It is open for different probabilities and relationalities.

“Different states of void” is an initial attempt to understand the concept via its synonyms and antonyms and to take it beyond their lexical meanings. Nevertheless, the lexicon is structured through the hidden concepts emerged by interconnectivities. In this way, architecture could be discussed via the potentials of void rather than described by solid. As Youngju (2008) emphasises that there must be new comprehensions of this concept in order to explore the empty fullness within nothingness of void (p. 59).

3.2 Openness

Void provides openness for different probabilities. On the contrary, full cannot open for further possibilities. In this sense, Chinese philosophy interprets void as involving endless potential. Taoism attributes meaning to void as a necessity to be able to fill. It is essential and functional because the movement, in other words the life, occurs in void (Kuban, 2013). It has a feature of being “open” not only to be filled but also to provide a dynamic change and constant movement. This feature of void can associate with “incompleteness” (Paige, n.d.), which triggers imagination of the user via a continuous “dialogue” (Kim, 2012, p. 55). Watson (2014) designates this as “openness to contingency” (p.176), similar to Eco (1962/2016) focusing on the movement in the artwork and embracing the indeterminacy. He mentions that the possibility of openness occurs in interrelations.

Openness is one of the mediators to understand the concept of void, which interrelates with other ones such as ambiguity and relationality in the lexicon. Here, openness is discussed via the concepts of room, erasure, absence, nothingness, silence and *ma*, where relational meanings can be followed throughout these concepts (Figure 3.3). Although they are under different subtitles, they form a unity to comprehend void and its different states.

Room

Comprehension of space in Chinese philosophy can be interpreted via Lao Tzu's ideas on void which is created to open a room for utility (Xiaodong, 2002). The concept of room has been used in relation with void and space in different context. For instance, Powers (2014) mentions the distinctive usage of the words void, place and room when discussing space in Stoic ontology. The concept of void refers to the situation of non-existence of body in space when place is used with the occupation of body. On the other hand, room is distinguished by being occupied partially (p. 417). Thus, there is room for further usage since it is not completely full and closed.

Heidegger (1969/1997) uses the word *raum* within the context of void and space in his writing *Art and Space (Die Kunst und der Raum)*. He discusses space and emptiness through sculpture, which, in his words, "deals with artistic space" (p.116). According to him, emptiness is something different from nothing. Sculpture is not about the occupation of space; rather, it has an important role for constituting places, which are released by clearing-away. He emphasises the word clearing-away, which is *räumen* in German; connoting openness for dwelling. Making-room (*einräumen*) generates places by freeing and opening which bring possibilities to relate to those places (Heidegger, 1969/1997). In this sense, emptiness closely associates with place. For him, space includes clearing-away and freeing places (Leach, 1997, p. 94) and *raum* can be interpreted as this open and free space within a boundary, for settling (Sharr, 2013, p. 57). From this point, making-room means openness as creating places.

Through the end of the 19th century, a different conception of architectural space beyond focusing on constructional elements is generated via *raum* (Vidler, 2000, p. 143). *Raum*, meaning space in German, connotes a volumetric and interiorised sense of space (Hight et al., 2009, p. 18). Although, etymologically it has the same origin with the English word room, Rasmussen (1962) emphasises German word *raum*, also *rum* in Danish, having a wider meaning. It refers to an empty space, cavity as he used, which has defined boundaries. It is the space, which is three

dimensional, enclosed by external walls. *Raum* gives him an understanding on different architectural approaches; one focusing on the cavity when others mainly on the structure. Eventually, he indicates the possibility of an architectural approach which focuses on voids rather than solids. Additionally, von Meiss (1986/1991) emphasises the dual feature of void and solid in architecture which he describes as “the art of the hollow” (p. 101). Either cavity or hollow, they both refer to openness, a room within the defined borders and both authors draw attention to void.

The philosophy of emptiness opens room for imagination (Watson, 2014). In void, there is room for possibilities providing utilisation and triggering creativity.

Erasure

Erasure can provide clearing away to create openness. The Latin word *tabula rasa* originally signifies “a scraped tablet, from which the writing has been erased”, which denotes “an opportunity for a fresh start, clean slate” (Harper Collins, n.d., Section etymology & Definition 2). This state of blankness is created by erasure. In 1690 John Locke uses this term, referring to human mind, which is purified from any inherent restrictions. Albert Pope (2009) emphasise the possibilities of *tabula rasa* in the context of architecture by freeing the urban space from historical limitations of form. He uses it as a metaphor in reference to Locke’s blank slate of mind, which might be considered as erasing differences, therefore heterogeneity. However, he draws attention to *tabula rasa* as freeing from the domination of form considering the voids in contemporary city.

With erasure, the focus shifts from the priority of form to space in this sense. As a result of this act of removing, traces occur (See Section Traces). Paige (n.d.) interprets erasure as revision by unfolding the unseen; and affirmation of a different kind of presence in emptiness such as absence and traces. Act of erasing opens space to hidden by creating blankness.

Absence

Void stimulating imagination is presented in traditional Asian painting as a foundational element. In this sense, space is defined with the absence of materiality and goes beyond the image and the landscape (Xiaodong, 2002). Thus, imageless parts of the paintings become an essential feature in these paintings. Blank space left unpainted does not create an undefined space but actually an active existence in the absence (Joon, 2007). Here, blankness on the painting can be filled and completed via imagination of the viewer (Youngju, 2008). In Asian paintings, blank space which fulfils an important role, are mainly depicted with the parts where there

are no images on the picture. At this point, the absence becomes dynamic and active, which opens a space for transformation. It composes a relation between the visible and invisible, which enables inspiration (Cheng, 1979/2006). For instance, at the painting of three fishes in a pond, water is represented as blank space (Figure 3.4). The materiality of the water is expressed with the movement of three fishes indirectly (Xiaodong, 2002). Although it is imageless, this blank space is actually filled with the existence of movement. As a form of void, blankness in this case is unpainted parts on the canvas, which creates an opening for imagination.

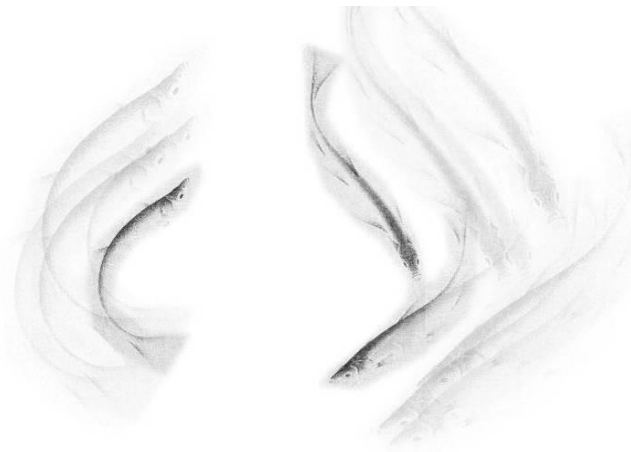


Figure 3.4 : On Three Fishes.

Water is unstable; it flows into and animates everything. Full makes the form visible but void forms the utilisation (Cheng, 1979/2006). Blankness in the painting enables the expression of the movement and fluidity. This absence in the painting is essential, which unfolds an interval and depth for the viewer to interpret (Shen, 2011, p.256); it is an opening for different translations beyond solid images.

Nothingness

In physics, nothingness is represented with the state of vacuum. Meaning “a space entirely devoid of matter”, the word *vacuum* is a synonym of nothingness among others such as empty space, void, and absence (Oxford University, 2021, Definition 1& Section synonyms). In lights of Quantum Field Theory, its conception is beyond the common comprehension of absence of something. Nothingness does not simply refer to nonexistence of things but a possible configuration of them. Vacuum state gives information about the probabilities of occurrences. Thus, it refers to the possibility of encountering something even there is nothing existing (Weatherall, 2017). In this sense, nothingness does not suggest a stable situation but rather possibilities.

In Western philosophy, nothing is understood via ontological meaning of something, which may relate to nihilism. On the other hand, in Taoism, void has a positive aspect of nothingness with endless creation and becoming beyond the absence of thingness (Stalling, 2010). From a different perspective, Asian philosophy comprehends nothingness as a dynamic feature of being instead of an issue of nonexistence (Joon, 2007). In Buddhism, void as becoming is not a form of nothingness but the essence of any form (Capra, 1975). As a synonym of void (*ku*), nothingness (*mu*) connotes a clearing and opening in Buddhist writings. It is represented as clearing the unfelled trees in a forest to reach the light (Snodgrass, 2004, pp. 70,71).

When discussing “Species of Spaces”, Georges Perec (1999) starts his journey of various spaces with a blank page. While referring to the space of a page, he forms the blank spaces on the page; he gives breaks and then continues, he points the margin, the footnote, in other words all the possibilities which the space of a page provides (Figure 3.5). He indicates that it all starts with “nothingness, the impalpable, and the virtually immaterial” (p.5).

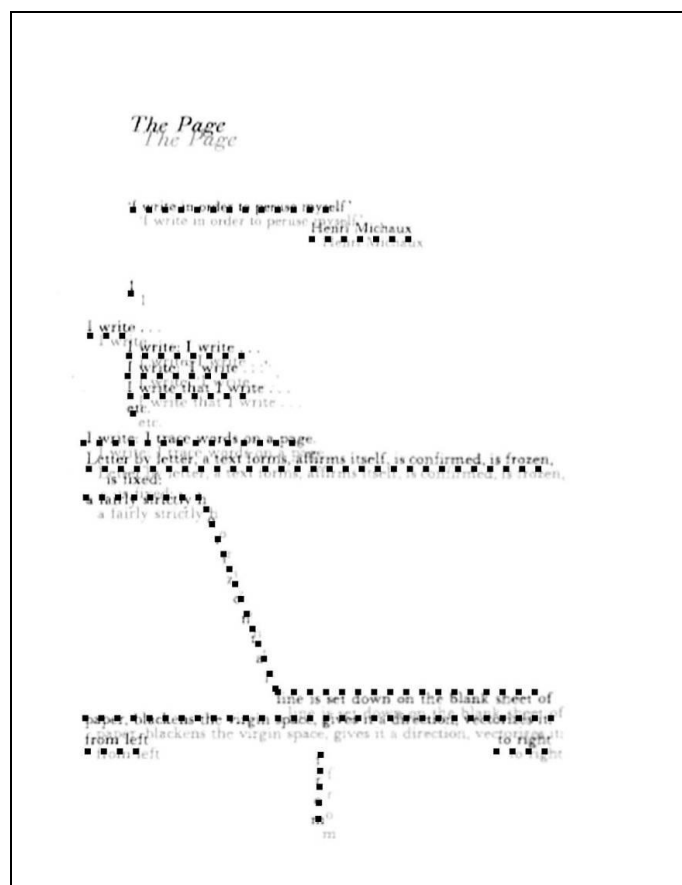


Figure 3.5 : On Species of Spaces.

When it was invented, the number of zero represented a bead remaining in its place on abacus. This motionlessness could identify the right value of a number and it was actually non-existence of any number in numeral system. When pointing the role of zero, Karatani (1995) associates Lao Tzu's "nothing as useful" with Mallarme's ideas (pp. 41, 42), whose works constitute the essential usage of blankness.

Silence

Stéphane Mallarmé (1897/2013) uses blank spaces on a page in his poem *Un coup de dés jamais n'abolira le hasard* to create a kind of silence. According to him, creating the silence occurring in the space between the margins of the page was as essential as forming the lines of the poem (as cited in Karatani, 1995, p. 42). In this poem, blank parts of the page become essential parts of the poem, not only structurally but also atmospherically (Figure 3.6). The void around words and the formal structure of the poem on the page opens it to endless connotations. It manifests a kind of openness for the reader's imagination and interpretation (Eco, 1962/2016, pp. 73-74). In this sense, Mallarmé's poetry with interwoven blank spaces recalls the creative emptiness in Chinese paintings (Shen, 2011, p. 289).

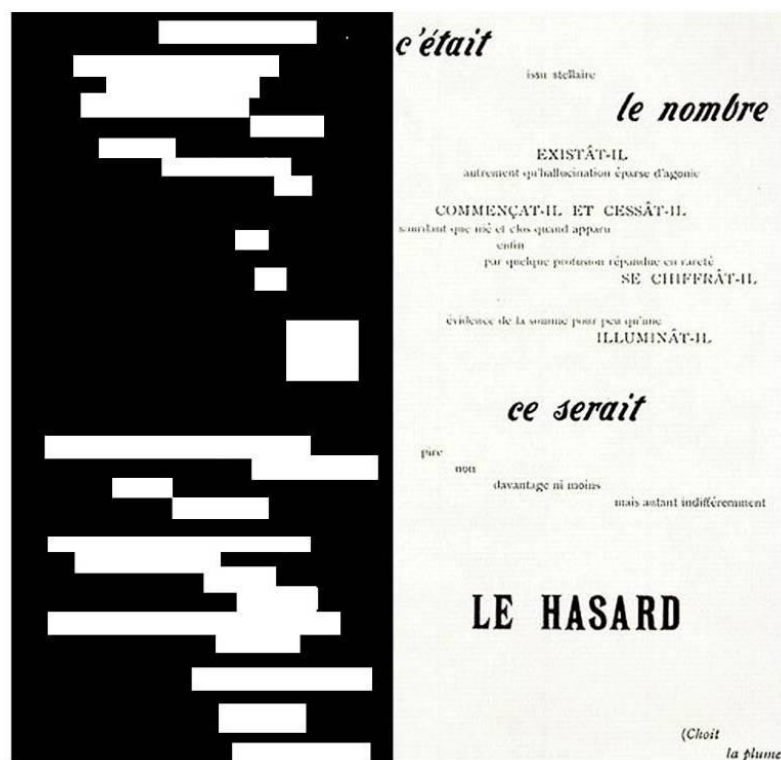


Figure 3.6 : On Mallarmé's poetry.

At Mallarmé's poem, blank parts create pauses on the page. They are essential to form a kind of silence in-between words. He defines this poem as a state, a situation beyond an experiment disconnected from traditional poem (Mallarmé, 1897/2013). John Cage's partitions within different time and sound, or silence, resemble Mallarmé's blank lines (Artun, 2013, p. 346). Cage's work 4'33" is a performance of this silence. At this work, which was first performed in 1952; a musician sits down at his piano at the stage, closes the lid of the piano and stays silent during the performance. The silence, at the same time the environmental sounds in the place, composes the music, which Cage finds more interesting than listening to the music performed at a concert hall. Actually, the silence is not completely silent in this case (Watson, 2014). In both Mallarmé's and Cage's work, silence is the main concept which is formed by blankness, in other words, which is unwritten and unplayed. From this perspective, void evoking imagination, is not just represented visually but also poetically or musically through the silence (Joon, 2007). The silence, which John Cage created is blank in time and space. The performance does not produce any sound and embraces the environmental sounds in a specific space within a specific time. Thus, silence becomes openness in space and time.

Just like emptiness provides potentials for contemplating, silence can create an opening for possible sounds (Watson, 2014, p. 10). In musical sense, void can be considered as a pause enabling connection to the next sound, which is actually created by silence in the first place (Cheng, 1979/2006). Pause is essential to break the continuity and open a gap; for instance, in traditional Korean *seungmu* dance, it is a part of the choreography (Cho, 2018). Additionally, the pause as a "bridge between sound and silence" forms the aesthetic quality of Japanese *rakugo* storytelling performances (Nitschke, 2018, Ma: The Realm of Art section).

Similar to Cage, Louis Kahn (2003/2017) also states that silence is not absolutely silent (p. 34). According to him, it is one of the most important qualities of architectural space, which reveals the breathing of space. He associates silence and light within architectural context. Silence is immeasurable and immaterial when light is measurable. When light surrounds every corner, silence takes over the space (Erzen, 2017, pp. 296-297). In this sense, his silence is not empty but full with the sound of space and light. His approach relates to Cage's silence, which creates openness to hear the sound of space.

Kahn (2003/2017) indicates that light and its different forms are what create the space and mentions a kind of threshold in-between light and silence. This threshold within the relation of light and silence can be traced in his design of The Richards

Medical Research Laboratories. In this building, he uses “light as a joint” (Maulden, 1986, p. 89) at the corners of the walls, which are transparent (Figure 3.7). More than a hollow in a wall, the corner gap is actually opening out the space itself (von Meiss, 1986/1991, p. 108). For him, joining and corners are the most important matter in design. Hence, he rarely simply attaches two walls or vertical and horizontal surfaces together; they stand independently in space. A window is not a hole in the wall but rather an element separating and connecting inside and outside while relating the light and the landscape (Erzen, 2017, pp. 289-290). Light becomes a tectonic element in this building and opens the corners to the silence. In this sense, Kahn designs silent corners by breaking the continuance of a surface, a wall and the corner creates a gap with the existence of light.

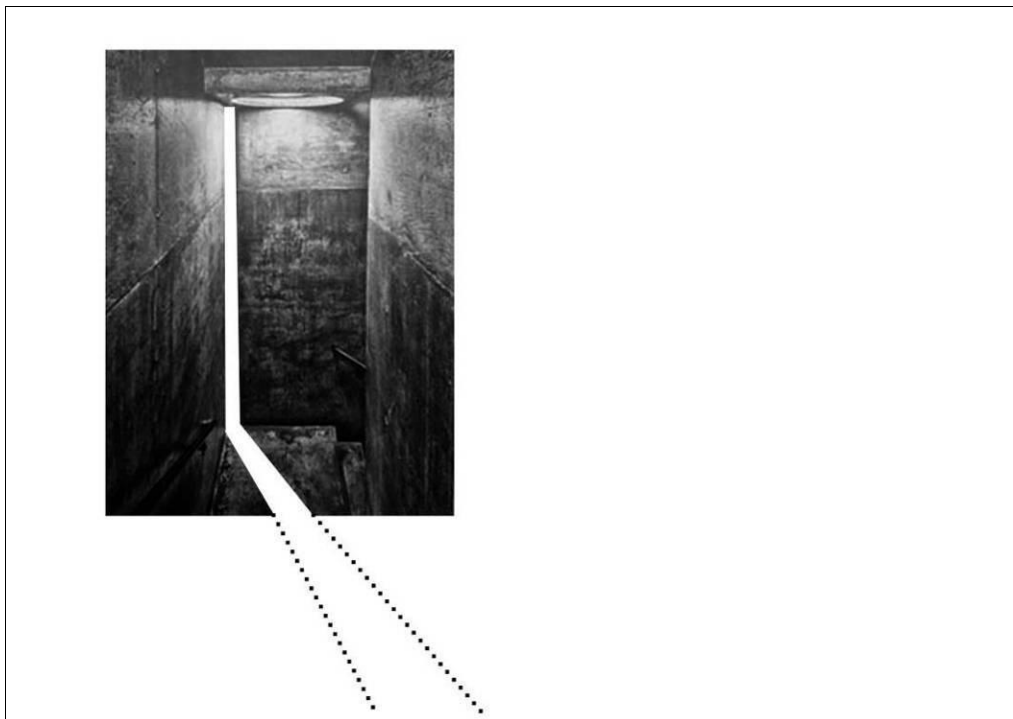


Figure 3.7 : On Louis Kahn’s silent corners.

Ma

Gap, as a break and a pause in continuity, which provides an intermediate space, can be interpreted via the Japanese word *ma*. Both spatially and temporally, it creates an atmosphere which divides the before and after of a moment and later reunites them. The word *ma* can be translated as “space” in English although it connotes different meanings. In Japanese, the word *madori* (間取り) denotes “design”, which is “grasping space” literally. A part of this word, *ma* 間 includes the character *hi* 日 (the sun) in-between *mon* 門 (gate). Etymologically it means “the light

of the sun shining through the gap in the gate". Thus, it does not merely refer to space but more to an interval (Snodgrass, 2004, pp. 65, 73). *Ma* can be considered as a gap, which breaks and then connects two solids and provide continuity through an opening. Even though there can be different usages of the Japanese word *ma*, Nitschke (1988/2018) prefers to translate it as "place". Perhaps, this can be related to opening room, which create places, as Heidegger comprehends (See Section Room).

Comprehension of void can have a close relation with the concept of *ma*, which institutes openness, an active interstice dividing and connecting (Kim, 2012). In Buddhism, the word *ma* is employed to grasp the concept of void. For instance, the word *tae-ma* (絶え間), which literally means discontinuous place and refers to gap and pause, is used in Buddhist poems to represent an understanding of void (Nitschke, 1988/2018). The character of *ma* is illustrated with light, which metaphorically refers to the light of void (Snodgrass, 2004, p. 71). The gap is created with the source of light in this sense. Furthermore, this concept can be traced in Japanese architecture as embodiment of gap in-between materials (Verhetsel et al., 2013). It is possible to comprehend *ma* as an architectural approach, in other words, designing a space by opening a gap. This approach can be traced in the Japanese architect Tadao Ando's works. For instance, The Church of Light does not purely comprise of an empty cross on the concrete wall, however, the light going through it creates the empty space in-between light and dark. This is not simply an enclosed emptiness but a spatial void defined by the penetration of the light, just like in the example of *ma* (間) (Baek, 2010). Here, Ando does not only construct the space with light but translates everything related to it into void, which recalls the Japanese word *kage*, including shade, darkness, reflection, silhouette besides light (Ando, 1991, p. 9). For Ando, abstraction of nature is important and beyond geometry and material, light is an important element for his architecture. In this example, the form of light and dark is essential rather than the architectural form. He abstracts the nature via light (Ekincioğlu, 2000). The Church of Light can be a spatial representation of the character *ma*, providing a gap for the sunlight to seep into the empty space as an architectural approach. It becomes an intermediary space, connecting inside and outside, light and dark; providing an opening as a form of void (Figure 3.8).

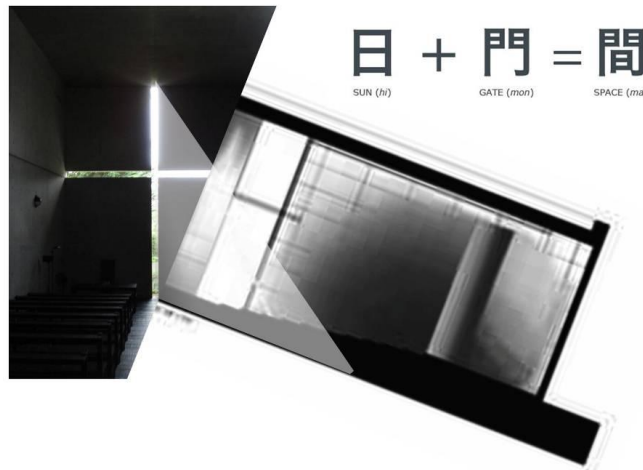


Figure 3.8 : On The Church of Light and *ma*.

3.3 Ambiguity

Even though void denotes a space of unpredictability, it actually enables a space of possibilities (Watson, 2014). This quality of void resides in ambiguity. Void does not imply nothing nor non-existence; rather, anything which does not exist “yet” or can exist in any ways. Here, “any” initiates the ambiguous feature of void, which is a space of probability, transformation and incompleteness (Doğan, 2006, p. 9). According to Eastern philosophers, void has the capacity of inexhaustible creation (Capra, 1975), which gives it the quality of ever-changing and incomplete. Perhaps, this emerges from probabilities of imaginative and endless interpretations (Youngju, 2008). As mentioned before, Eco (1962/2016) emphasises ambiguity as a state of openness to countless interpretations. It provides a probability space for different readings and understanding since it is not defined within certain boundaries. When discussing ambiguity in lights of urban experience, Aydınli (2012) indicates the urban void which enables the possibility for multiple readings. The relationality in experiencing the city evolves into multiple reading via perceptual ambiguity, which transforms the desire of certainty into an inexhaustible movement.

Considering different states of void (See Chapter 3.1), the concept of void is grasped with a broader sense, consisting of spatial ambiguity. Ambiguous spaces are the essence of emptiness, voided meanings, indeterminacy and uncertainty (S. Aydınli, personal communication, March 31, 2021). Ambiguity creates unclear boundaries and shifting meanings. In relation with other mediators, void can be considered as openness for ambiguity which brings endless probabilities. The mediator ambiguity interrelates with the concepts of shadow, echo, depth, darkness and traces in the lexicon (Figure 3.9).

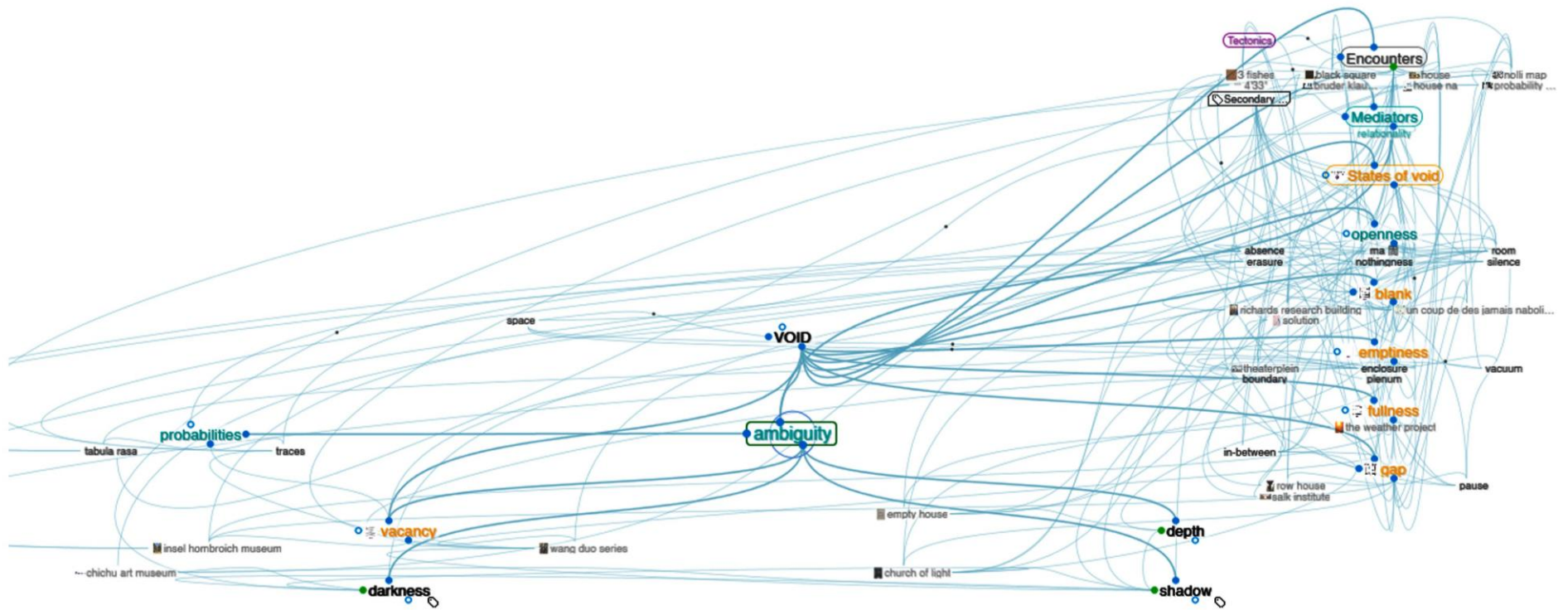


Figure 3.9 : Relational state of the mediator “ambiguity” in the lexicon.

Shadow

In the example of The Church of Light, the phases in-between light and dark defines the void. However, light and dark are not the only two definite phases but there are different layers within transition between the two. In this sense, shadow defines a gap within the intersection of light and dark. Kahn (2003/2017) describes this intersection as formation of shadow. He associates architectural space and shadow closely, since shadow belongs to light and everything consisted of light creates the shadow. This evokes the relation between *ma* and *kage*, which is a gap not only created via light but everything related to it, including shadow (See Section *Ma*). Similar to Kahn, von Meiss (1986/1991) indicates the unity of light and shadow, whose gradation actually forms a kind of spatial depth. According to him, light and shadow have more impact on the usage of space than its dimensions or shape. Additionally, Muschenheim (1964) draws attention to light and shadow in forming space besides other architectural elements within the frame of spatial void and mass.

From a philosophical reading, Watson (2014) emphasises the role of emptiness, which could introduce a new understanding for the immaterial and unseen. For instance, a blank page contains traces and shadows, which already exist in its emptiness. Comprehension of void provides an insight on perceiving hidden elements and meanings from this viewpoint. Thus, a blank page may become an ambiguous space of shadows. As he discusses the dark space, Vidler (1992/1998) mentions its relation with body via expressing how the shadow of one's body vanishes into void and loses the sense of depth in darkness (See Section *Darkness*). In fact, shadow reveals the existence in void; it is the embodiment of absence, free from its original source and features. Shadow gives the clues about the elements that form the space (Yardımcı & Yürekli, 2010, pp. 15-17). Seemingly, shadow creates the space of ambiguity in a different sense than light and darkness; but within the coexistence of them.

Echo

The relation of light and shadow is influential in creating the spatial void in architecture. Besides enclosure or light in architecture, void can be defined by other spatial qualities such as echo (von Meiss, 1986/1991). Architectural space can echo just as the light reflects on its surfaces. It is possible to hear architecture as part of experiencing the space (Rasmussen, 1962). In this sense, echo can be considered as hearing the void and actually filling the empty space at the sametime.

In this sense, void and its relation with intangible architectural qualities can be illustrated via the pavilions of Insel Hombroich Museum in Germany. It is designed as “an open experiment” with the words of the founder Karl-Heinrich Müller (2006). The museum has been established as an on-going process for an open-air museum in a rural area in Neuss, Germany in 1982. It consists of a series of pavilions, which design a route as part of the landscape. The sculptor Erwin Heerich designed eleven pavilions as “architectural sculptures” for the museum island between 1982 and 1994. First pavilion of this route is a square plan, brick pavilion; which is an empty building without any artwork exhibited. The narrow windows frame the view of surrounding on the white walls of this building, just as paintings hanged on the wall of a white cube exhibition hall. Here, in this space, the colours are perceived denser and the surrounding sounds are heard more clearly. In this empty space, the senses are experienced more intensely (Weilacher, 2005). Some of the pavilions are left as empty spaces in order to function as “walk-in sculptures” and an instant sound in space can be experienced as a lasting fading echo (Oliver, 2000, pp. 237-238). Within these walk-in sculptures, the sculptor experiments with form, space and void. Each pavilion establishes different relations with void and its different states (Figure 3.10). Some of the pavilions are empty, which are just to walk through while experiencing the silence. On the other hand, some of the pavilions are defined by sound itself. For instance, Vitrine Pavilion is an empty space, which is shaped by assembling two cylinders, one transparent one solid. In this pavilion, echo is the main element which defines the space. The sound of visitor’s footstep echoes gradually while walking in this circular space. Here, echo creates void via fullness of reverberation of the sound of visitor’s movement in certain moment. Some of the pavilions create a gap in the landscape, however; Vitrine Pavilion introduces a vacancy by temporal echoes.

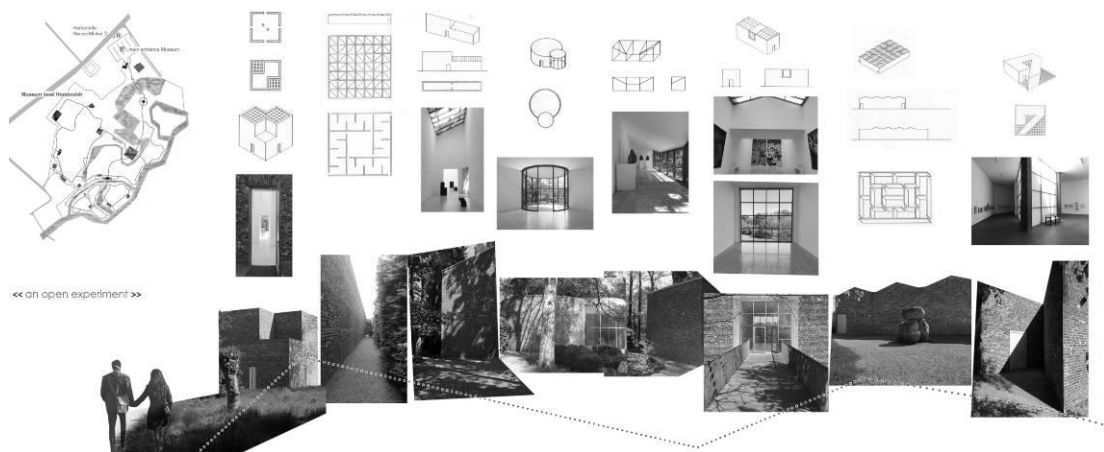


Figure 3.10 : On the experience of Insel Hombroich Museum.

Depth

The artist Can Aytekin produces a series called Empty House. The series consists of paintings and drawings representing an empty house, not simply as a house without furniture. At some pictures, windows, stairs, doors, facades are recognisable architectural elements while some create more of an ambiguity. Colours become surfaces, lines are folded as corners, and different layers shape openings. These paintings create a space without certain images of objects. Emptiness here provides a space of transformation, change and different connotations. Even though empty house denotes a lack of meaning, vacancy or solitude, house is the fundamental space where both dwelling and imagination become possible. The ambiguity in the emptiness of the house and representation of its elements recall the memories and imagination of the viewer (Aytekin, 2018). He draws sketches of stairs, corners, edges, facades, which are named as “templates”, as part of a research process. The architectural elements of the house turn into surfaces, lines, corners from facades, windows, doors, stairs, and walls. For some paintings, he uses only one colour or shades of a specific colour. He folds the paper, creates shades and depth. This depth calls the viewer to inside of the house. The depth in these paintings is not simply created with perspective but folding or layering. Aytekin opens his empty house from his memories to the viewer by making the structural elements more ambiguous. Eventually, emptiness is not depicted by leaving the house without furniture but it is related to spatial ambiguity where our imagination can dwell. In his work, he associates architecture, writing and painting. Beyond forming the space through illusion, depth or perspective on the paintings, the relation with physical space establishes the space of empty house in the viewer’s perception via some clues in the paintings. Thus, the paintings and their relation with the exhibition space itself becomes significant as well (Arter, 2018).

At Empty House series, it is possible to encounter different spatial approaches. Aytekin’s works start with “space as enclosure”, which is shaped in-between walls. Especially with the monochrome paintings, and the space slowly turns into “space as void”, which has ambiguous edges, surfaces, lines, corners. Instead of space as an enclosure, which is defined with walls and boundaries, it becomes an ambiguous space. In this context, void refers to spatial emptiness rather than emptying a house from its furniture. Architectural elements such as walls, windows, doors turn into intangible spatial elements to create the void. Especially ambiguous corners of the empty house can generate this kind of space. These corners call creative imagination as Gaston Bachelard (1964/ 1994) mentions. He discusses different

parts of a house from cellar to garret in relation with the poetics of space. He emphasises empty corners of a house, in which our memories can dwell. Corners relate to loneliness, silence, and intimacy, which evoke imagination. It is possible to trace this at the corners of the Empty House, which create void recalling memories and triggering imagination of the viewer. Empty House provides an ambiguous space between art and architecture, empty and full, visible and invisible; and artist's memories and viewers' memories (Figure 3.11).

According to Bachelard (1964/ 1994), act of dwelling interconnects empty and full. House accommodates dreaming and it is the emptiness reviving imagination. Every corner of the house, every corner of the wall is solitude for contemplation. For dreamers, corners are not empty but full. Ambiguous corners enable a state of void for creative imagination.

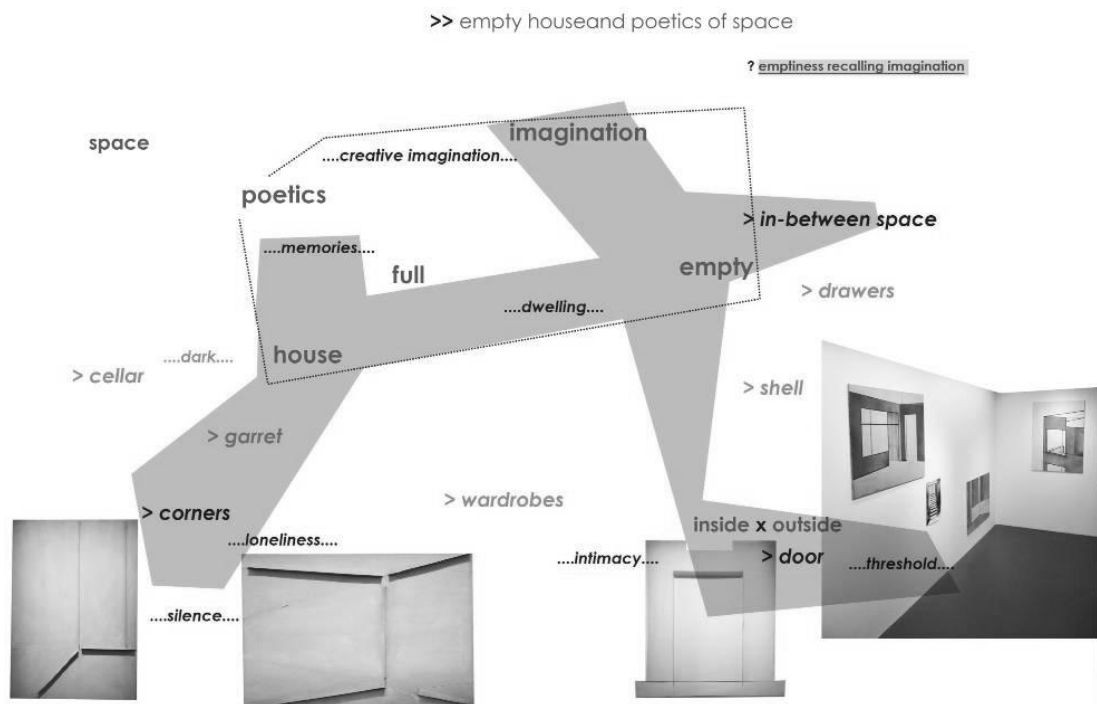


Figure 3.11 : On Empty House and The Poetics of Space.

Darkness

At The Poetics of Space, Bachelard (1964/ 1994) characterises the cellar as the “dark entity of the house”, where dreaming activates its deepness (p.49). Darkness does not simply refer to the lack of light; however, its ambiguity surrounds the body in the limitless depth of dark space (Vidler, 1992/1998).

Aytekin depicts emptiness of a house with his series of work, on the contrary; Rachel Whiteread's House represents fullness (See Section Fullness). She explains

that she works with objects as sketchbooks and changes objects by doing simple acts like casting. This specific work consists of casting a whole house completely with concrete, which was an old house planned to be demolished (Tate, 2017). Eventually, it is not possible to go inside of the house; which is literally closed off. It creates the feeling that nothing can exist inside and memories cannot dwell there any longer. Whiteread's House becomes close and therefore full (Figure 3.12).

Openings of the house like doors and windows are visible as architectural elements but completely covered with concrete. Thus, blankness in the walls are not blank anymore but blocking the only visual and physical connection between inside and outside. In his discussions, Vidler (1995; 2000) states that Whiteread actually creates dark space with this specific work. The daily life and memories belong to the house is silenced; however, preserved like the example of Pompeii where life remains frozen in time. Similarly, the artist describes House as a fossil being excavated (Illuminations, 2005). Silencing the House through dark space recalls Kahn (See Section Silence). The silence in darkness is uncanny (Erzen, 2017) because of its ambiguity, which can also relate to the uncanniness in Vidler's dark space.

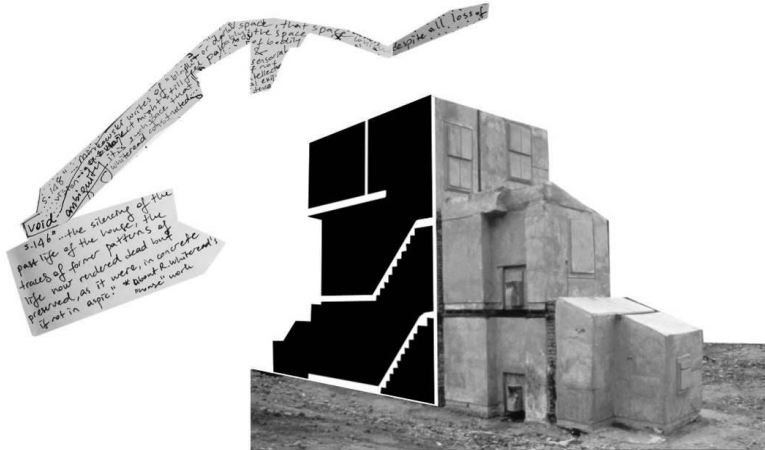


Figure 3.12 : On Rachel Whiteread's House.

Traces

In terms of the representation of spatial void, figure-ground maps, which are mainly used in urban planning, provide a fundamental understanding. These plans portray the built and unbuilt environment as solid and voids, depicted in a straightforward black and white colour. While providing specific information about the built environment on city scale, a figure-ground diagram excludes ambiguity. The solid

black represents the structures, while the white void for open areas such as streets, parks, and squares. However, The Nolli Map of Rome from 1748 illustrates the interior layout of public buildings, as the street extends into the building. The connection of public buildings within the street access and both public and private areas are also included in this representation (Hebbert, 2016). Private spaces are shown in black colour since they are enclosed or blocked areas representing fullness. Conversely, blank areas represent accessibility, which connotes the possibility of movement. Beyond lacking of information, mapping emptiness can be considered as an ambiguous value which can open to different probabilities of the continuous dialogue between the actual and representation (Pàez i Blanch, 2014). In this sense, the absence of buildings represents open spaces, visual gaps, the residues that can have a negative impression in urban space. However, void can actually be used as an instrument to deal with the landscape in a creative and impactful manner (Gausa et al., 2003, p. 655).

The representation of Nolli Map shows the possibility of movement in the city as white (*blanc*) on the map. This may relate to the depiction of probability waves in the field of physics. With Quantum Physics, matter could not have any certainty at all by means of time and space; rather, showed "tendencies of occurrence" which are called as "probabilities" as multiplicities appearing in the form of waves. Hence, the solid matter of classical physics transforms into probability waves in Quantum Theory, which actually do not represent the probabilities of objects, but the probabilities of their interrelationships. This diagram of waves illustrates high probability of occurrence of an electron as bright; and, dark when it is low (Capra, 1975). Even though it resembles a kind of figure-ground map, probability waves diagram represents the information of uncertainty, in other words the traces of probabilities, instead of elimination of ambiguity (Figure 3.13).

In Chinese ink paintings, the lines create a kind of ambiguity, which do not merely outline the form on the canvas but relate with the blank space and other forms in the painting (Snodgrass, 2004). The contemporary artist Chen Guangwu produces a series of ink paintings inspired by Chinese characters. At first glance, they resemble calligraphic art, but he shifts the focus from the character itself to the blank space around it by creating multi-layered paintings. A sheet of paper, which is identical in size to the first layer of the artwork, is placed directly underneath during the painting process. The relationality between the painted character and its form's materiality emerges from the multilayered painting (Akkoyunlu Ersöz et al., 2019). The act of painting renders the characters unclear and creates ambiguous spaces by leaving

traces on the underlying surface. This process generates different states of void; the first layer is blank and full while the second layer reveals the traces of the first as vacancy. Blankness of the first layer reflects on the second layer, which previously had clear boundaries and is now both vacant and ambiguous (See Section Vacancy).

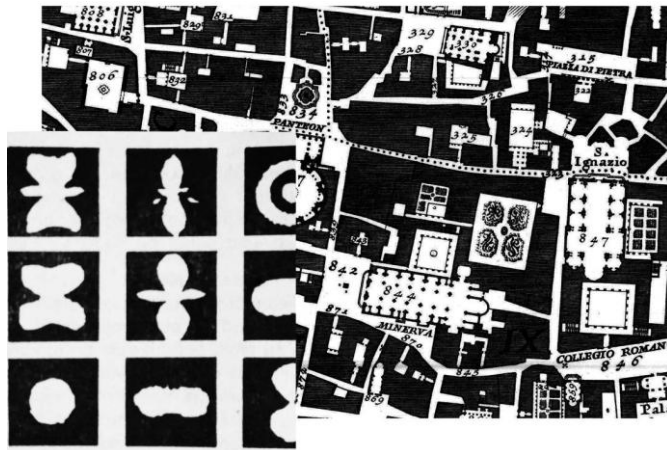


Figure 3.13 : On probability waves and Nolli Map.

3.4 Relationality

Void contains various relational possibilities which are in constant change. As mentioned before, Quantum Theory focuses on the probabilities of relationalities within a unity rather than things. It manifests the fundamental interconnectedness of the universe, which suggests that the world cannot be divided into small units that exist independently and apart from each other (Capra, 1975). Void as a whole can only be perceived through relationality. In fact, void embodies emptiness and fullness as an intertwined phenomenon rather than a binary opposition (Watson, 2014). It opens a space that enables mutual interaction (Cheng, 1979/2006) and interconnectivities. Void sustains its existence through the continuity of holistic relations. It is a unity which is constantly and creatively in motion through time, by means of continuous relationships and transformations between its parts (Doğan, 2006). Thus, the meaning of the whole is in a constant change owing to the relationship between things (Yardımcı & Yürekli, 2010). In this sense, Baek (2008) refers to a philosophy of emptiness, which positions the quality of architecture in a dialectical realm where opposing values are actually co-existent and interrelated. For instance, Chinese comprehension of space is described in terms of interrelationships within its context, as can be seen in traditional landscape painting, where the relationship between elements is significant within a holistic approach (Xiaodong, 2002).

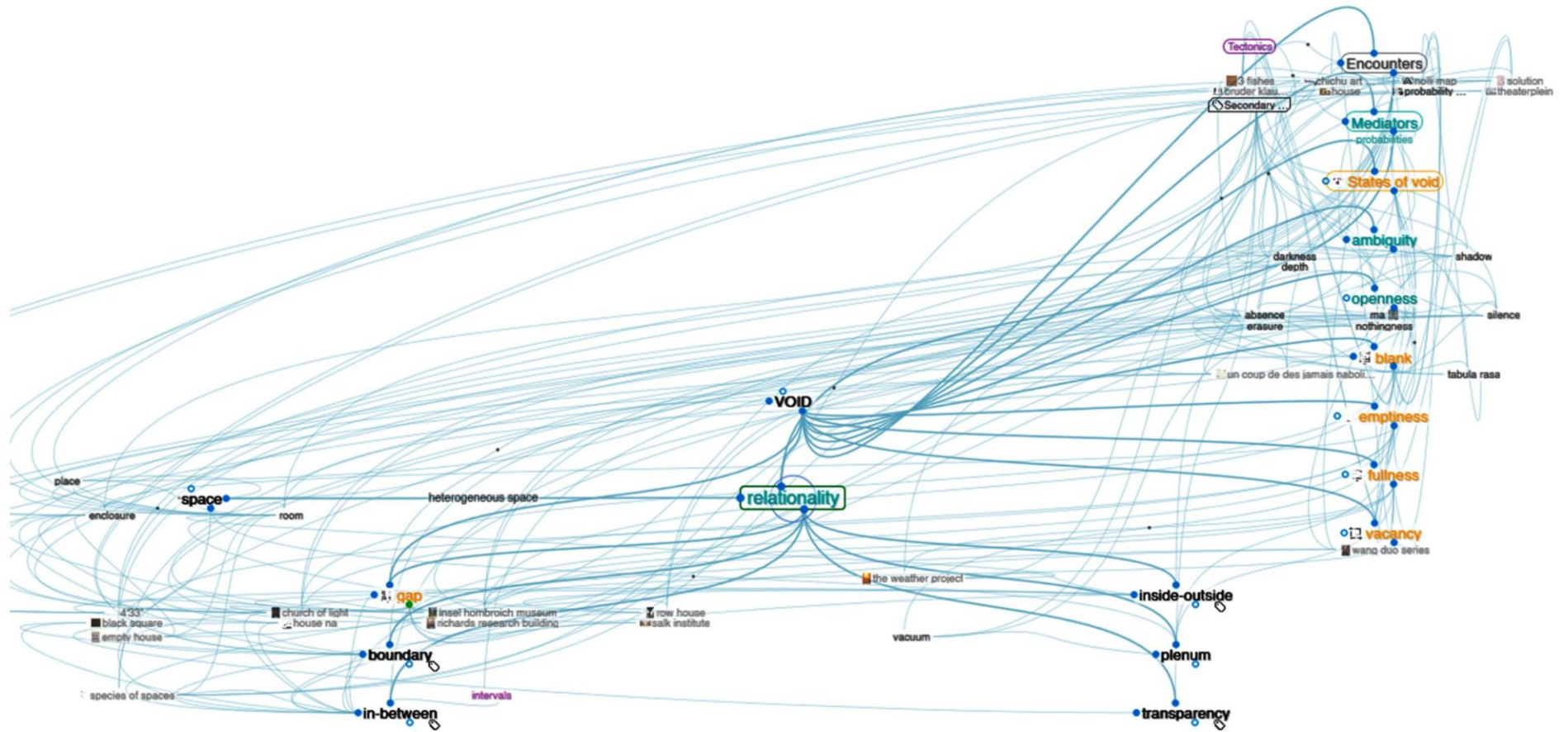


Figure 3.14 : Relational state of the mediator “relationality” in the lexicon.

According to von Meiss (1986/1991), it is the interrelation between objects, surfaces or boundaries that creates architectural space. Tschumi (2009) raises the question of whether architectural space is an accumulation of spatial relationships that goes beyond mere matter. From this point of view, void features connectors that link dissimilar and heterogeneous elements of the space (van den Heuvel, 2003). Relationality of void recalls the understanding of heterogeneous space. All approaches to heterogeneous space attempt to expand notions about relational space. Heterogeneous space, in constant state of flux, becomes “the field of relations between differentials” (Hight et al., 2009, p. 13). Void opens a space for different relational probabilities. Relationality, as a mediator of void, is interconnected to the concepts plenum, boundary, inside-outside, transparency and in-between in the lexicon (Figure 3.14).

Plenum

As heterogeneous space is established through relationalities, void can be grasped via a state of fullness with different relational possibilities. In contrast to Newton's concept of absolute space, Leibniz maintains that space is not a physical entity containing objects, but rather a concept describing the relationships between them. Even though vacuum seems to be theoretically possible, Descartes abandons the notion of empty space. Space without bodies may exist; nevertheless, it is never empty. Multiple relationships between bodies constitute the reality, which refers to a plenum. Thus, objects are not simply located in space, rather they expand into it while structuring dynamic and ever-changing field of relations (Hight et al., 2009). According to him, space is an expansion occupied by the forms of objects, which cannot remain empty due to the close connection between things and space. Descartes believed that all space must be filled with a very subtle and unobservable substance, which he named as plenum (Weatherall, 2017). Opposed to vacuum, plenum refers to space filled with matter in physics. It is originated in Latin connoting the word “full” (Random House, n.d., Definition 4 & Section etymology). In fact, vacuum is not completely empty, but rather filled with countless particles that are constantly re-created within a never-ending cycle. The relationship between these particles and vacuum is therefore dynamic, which leads to an inexhaustible process of creation and destruction. Many physicists consider the dynamic nature of the vacuum to be the most remarkable discovery of modern science. It is no longer considered as an empty vessel carrying physical phenomena, but a living multiplicity (Capra, 1975). The relationship between plenum and vacuum evokes the coexistence of empty and full (See Section Nothingness). In this sense, plenum

enables an understanding of fullness, as a state of void, by referring to the possibility of being full in terms of the multiplicity of relations.

Boundary

Space is expansive yet enclosed. Enclosure in architecture, which has been considered important in defining a place, involves both boundary and threshold. Thus, architecture emerges within the boundaries, representing a threshold that embodies the dualities and differences as a unity (Maulden, 1986). As mentioned before, space as enclosure originates in Semper's ideas, which discusses a different understanding of tectonics in architecture. In this sense, the fundamental architectural element that defines space is cladding, derived from the textiles as partitions, which actually envelops the framework and establishes boundaries. Textiles separating the inside from the outside create private space. According to him, the primary meaning of walls is enclosure, even though they conceal a solid structure or framework underneath (Schwartz, 2016). From his perspective, wall as the major means of enclosure functions as a surface, covering structure and form in order to project an enclosed space beyond the functional requirements of the field of architecture (Rice, 2009). Pope (2009) indicates that boundaries indirectly determine the space through the production of the dominant form. If void is simply perceived as the remaining space between these surfaces as solids, architecture indirectly designs the void by shaping its solid enclosure (Kim, 2012). As a matter of fact, the conception of boundary needs to be reconsidered as something fluid and intangible, extending beyond the solid walls in architecture (Frdz & Jorge, 2013). For instance, in works of Ando, whose architecture is characterised as architecture of walls, walls express themselves as their own beyond functioning as structural qualities. They are used as connections of light and shadow, surfaces to reassign the light or as means to represent the light in void (Ando, 1991). From this perspective, walls are not only architectural elements that enclose space, but rather embody relationships in space. Therefore, boundaries do not merely divide but instead they interconnect.

Wouter Davidts (2010) illustrates Perce's investigation of species of spaces with van den Broek's paintings within the frame of comprehension of void. Instead of dealing with the void, he works with what is around or inside it in his paintings. Similar to Perce's attempt with his writing, van den Broek does not only use painting as a means to represent space but also to question it in terms of both form and concept. His painting *Solution*, created in 2007, exemplifies this approach. The painting depicts a street from a vertical perspective, with two curbs, in red and blue. The blank surfaces between the borders, one floating and the other stable yet balanced

together, create an abstract configuration. Davidts (2010) names this almost tangible space not as void but as blankness which is framed within boundaries resembling remains from earlier. Despite its minimal architectural detail, the image still represents a comprehensible blank space.

Potentially, void may have no boundaries or form; moreover, it consistently re-establishes the relationship between the tangible and the intangible as Youngju (2008) states. Nevertheless, boundaries in architecture can accommodate a space of relationships rather than one of division. Besides the basic understanding of space as enclosure, the relationality of boundaries can be understood through different states of void, such as blankness in the case of van den Broek's painting.

Inside-outside

The interior is not solely defined by the space enclosed by the facades. It is important to note that the exterior and interior are established simultaneously, and the notion that the exterior is merely a covering for the interior is therefore misleading. The relationship between inside and outside lies in the walls that separate them while multiplicity of boundaries is introduced (Colomina, 1996). Snodgrass (2004) criticises the Western approach of designers, which puts emphasis on lines, typically representing walls that separate spaces and create external boundaries. In order to form a spatial void, these lines create an opposition by separating the inside from the outside. In contrast to this solid separator, he mentions the feature of walls in Japanese houses called as shoji screens, which are translucent paper sliding-walls. Since these panels function as both a separator and a connector between the interior and exterior, they create a sense of movement and transience through a fluid division between the two. Similarly, in Eastern architecture, terraces have a dynamic aspect, which can be considered as both extending the interior space outside and embracing the nature inside (Kim, 2012). According to Kahn (2003/2017) a courtyard has a unique quality that makes it an inviting space, blurring the line between indoors and outdoors. He characterises it as an outside-inside space.

At the example of Tadao Ando's Row House, the courtyard creates a kind of gap, which functionally connects the inside spaces through the outside space. In order to go from one room to another in this house, one must pass through the inner courtyard outside. Furthermore, the courtyard as an empty space is actually full with the sensation of nature. The architect seeks to establish a communication with nature, while reaching to one interior space to another, through the sounds of wind

and birds, appealing not only to the eyes but to all the senses (Ekincioglu, 2000). This focus on the senses can also be the tactility of light on the skin, or the sound of falling rain. Ando (1991) describes his search for communication with nature as more abstract, seeking to recreate its meaning in architecture rather than interacting with nature as it is. In this way, the gap created within the house is filled by the relationships between man and nature, interior and exterior.

Von Meiss (1986/1991) distinguishes the interior and exterior space from the covered and uncovered. Instead, he indicates that humans tend to perceive their surroundings where they are actually being present, as interior spaces even if it is an outside space. The bodily experience of being inside is relevant in this regard. According to Rice (2009) enclosure, or the state of being inside, is determined by the weather. He further adds that the atmospheric qualities in architectural space enable a kind of spatial fullness, in addition to the state of enclosure, which arises from the dialogue between inside and outside. As an example, the Weather Project, an installation by Olafur Eliasson, located in Tate Modern's Tribune Hall, transforms the space with a sun-like yellow light, a reflective ceiling, and clouds of smoke, by creating a captivating atmosphere (Davidts, 2007). Experiencing the interior in this artwork is less about a defined space and more about the elements of the weather that are normally associated with the outside. However, these elements, such as air humidity, light density, and temperature, now convey an experience of the interior (Rice, 2009). In this sense, the relation between inside and outside shifts and creates fullness as different states of void.

Transparency

Modern architecture reinterprets the division between inside and outside through transparency, offering a new relationship between the two. It also introduces a unified space that is not divided into rooms, but open and freely planned. In this sense, transparency can be considered in terms of relationality, beyond the characteristic of materiality. It is not only about the transparency of the building element, but also about the movement, accessibility and penetration in space. Sou Fujimoto's House NA can be illustrated from this perspective. When discussing the evolution of the mass in architecture, Frdz and Jorge (2013) gives some examples from Japanese architecture, including the works of Foujimoto. Since relationships are the elements that constitute space according to the architect, he seeks to re-establish the connections between man and nature, inside and outside. Within this context, spatial relationships in House NA metaphorically refer to a tree. Thus, the

space is not defined by assigning a specific function to each individualised space, rather it allows for fluid experiences of inhabitation.

At first glance, the house is perceived transparent because of its glass exterior walls. However, thanks to its fluid section, this transparency actually reveals the embodiment of multi-layered spatial relationships. The influence of transparency in modernism can be seen in the permeability of materials and reinterpretation of surfaces and walls, which is also reflected in the open flow of the free plan. In the case of House NA, the free plan seems to evolve into a free section (Figure 3.15).

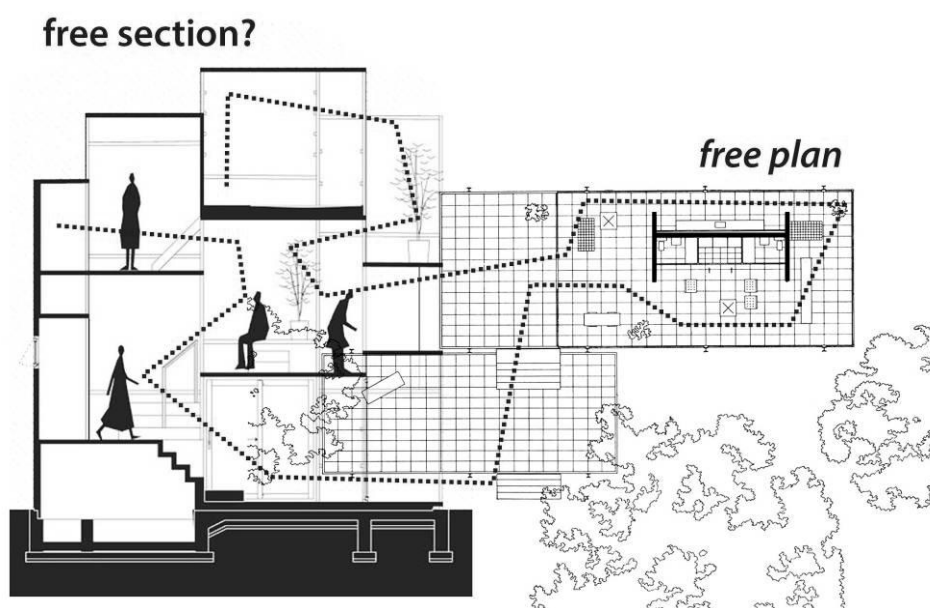


Figure 3.15 : On House NA and free section.

Transparency can at first be seen as void rather than solid. Nevertheless, it can be transformed into translucence, reflection and the depths of obscurity, seemingly its opposite (Vidler, 1992/1998). Beatriz Colomina (2016) discusses the use of X-rays and röntgen architecture to demonstrate the shift between solid and void in terms of transparency. The usual relationship between inside and outside is re-established with the invention of X-rays, which exposes the private interior space of the body that is normally concealed by the skin's solidity. This invention leads to a new worldview that transparency is the characteristic of all bodies; not only the human body but also the whole world can be in some way transparent through X-rays. The author associates this new transparency with the skin-bone metaphor of the glass

modern architecture. Through X-rays images, the flesh of the body, which is solid, becomes obscure. According to her, the space of X-ray, which may appear fragile, is transformed into an architecture that is both inhabitable and experiential. The blurring of reflections and transparencies replaces the sharpness and clarity typically evoked by modern architecture.

In-between

Tschumi (2009) raises the question of whether space, which is neither a beginning nor an end, can be an in-between. The relationality between two potentials is also emphasised in Deleuze's ideas. Rather than a beginning and an end, he considers the in-between states. Although this may appear to be an entrance, it is not a beginning but rather an opportunity for an interval between potential entrances (Akay, 2006).

As illustrated by the example of the Japanese character *ma*, which is depicted as a gate, time is represented as intervals in space (See Section *Ma*). The entities in the dynamic continuity of space and time are connected by the interaction in the gap (Kim, 2012), which is generated by *ma*. From Japanese perspective, which could be traced in the language, an object is not solely shaped by its outline borders but rather, what is in-between. In this sense, architecture is not merely concerned with solid forms, rather with the void which becomes a question of interstitial spaces (Snodgrass, 2004). In this sense, Baek (2008) states that architecture should not prioritise one meaning over another in duality. Instead, it should provide coexistence of relationality in-between differences. Aydınli (2012) explains that in-betweenness creates a space of possibilities where things unite while they simultaneously release their distinct individuality. Additionally, Slavoj Žižek (2011) discusses an unpredictable in-between space that emerges between the skin and the structure. In his discussion on Malevich's Black Square, he mentions the existence of two different frames: the visible frame of the picture and the invisible one that frames our perception of the picture. According to him, the main content of the picture is located in the unseen gap between these two non-intersecting frames, which serves as a mediator (Figure 3.16).

The emergence of voids through relationalities creates a state of in-betweenness, resulting in a gap that breaks the continuity and later reconnects within multiple possibilities (See Section Gap).

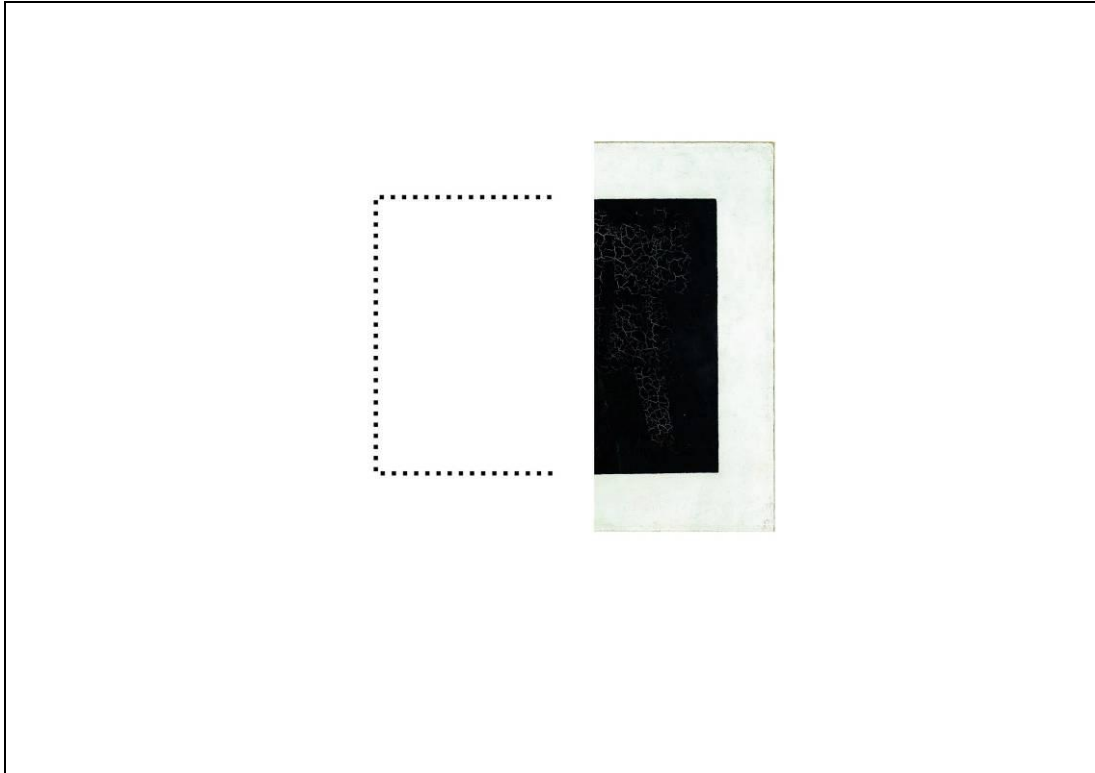
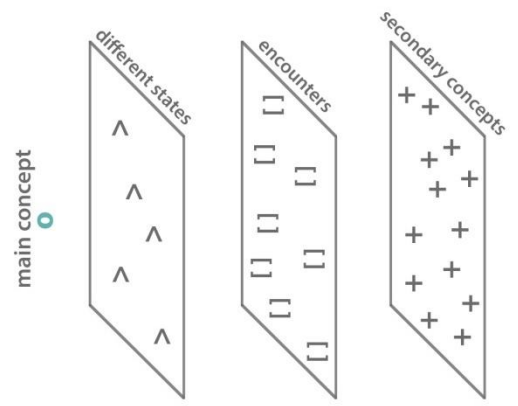


Figure 3.16 : On Malevich's Black Square.

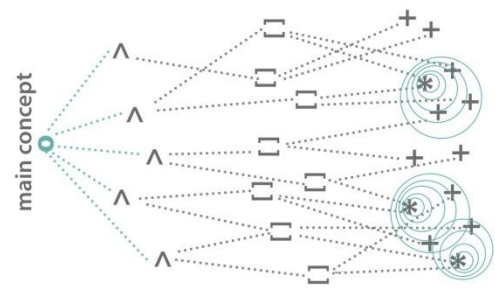
3.5 Findings of the Lexicon

The Lexicon on Void does not provide definitions of the concept of void. Instead, it enables different possible translations of the same content, resulting in varying meanings of void. This chapter presented a single version of the lexicon, incorporating the researcher's interpretation and perspective through their mental space. However, the framework of another reader can alter this translation since the lexicon allows for multiple interpretations as it is interconnected. In this case, the researcher's exploration reveals that the concept of void has different states and multi-layered meanings, remaining ambiguous and open to different probabilities of relationality.

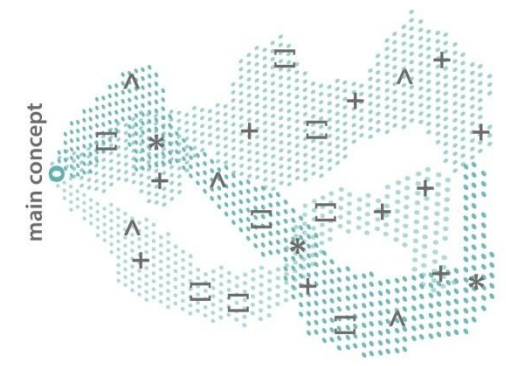
The layers of the lexicon are not built separately and linearly. On the contrary, they have been generated within the context of interconnectivity. Different states, encounters, and secondary concepts establish relationalities and mediators provide the interconnectivity between these layers (Figure 3.17). Therefore, a written version of the lexicon on void is presented above at this chapter within the framework of mediators and related secondary concepts. While exploring these layers, the tectonics of the void provides clues to the tectonics of the lexicon .



separate and linear research layers



relations and clusters of concepts



mediators and interconnectivity

Figure 3.17 : Layers of the lexicon and interconnectivity.

The openness of void establishes its tectonics through *autopoiesis*. Encounters on void and the coexistence of relational secondary concepts enable the emergence of ever-changing meanings between the visible and the invisible, beyond a deterministic approach. This introduces the possibilities of an open whole that constantly regenerates itself. In this research, the continuous process of restructuring the lexicon was achieved through the digital complex mapping tool. The significance of mediators should be pointed out here once again, as they enable the interconnectivity approach.

In this chapter, the lexicon is presented under the sections of openness, ambiguity and relationality, which also serve as mediators in structuring its written version. The lexicon on void is not categorised under the sections of different states, such as emptiness, vacancy, blank, gap, and fullness, which are already existing lexical definitions of void. Instead, understanding the concept of void is achieved through the mediators, and the tectonics of void is traced in secondary concepts. This configuration of the lexicon is closely related to the structure of the thesis (Figure 3.18). As the meanings of the concept of void were not retrieved from the basic lexical definitions, the tectonics of void was not recalled by the basic architectural elements that form the spatial void. Therefore, an in-depth study of the tectonics of void has led to a new tectonic approach via the lexicon. As mentioned before, architectural meanings are tectonically embodied in “joints” as generators. By exploring the tectonics of void beyond constructional elements, relational meanings within the interconnectivities of the open-ended whole are revealed. Therefore, adopting a tectonic approach based on interconnections has the potential to develop a new architectural vocabulary, promoting alternative modes of architectural discourse and practice.

Each research consists of its own mental lexicon whilst each researcher utilises their own mental space during the research process. It is important to remember that these relationships are in a state of flux. The framework presented in this chapter represents only one version of the lexicon created by a specific researcher. A similar reading method can be developed for other concepts, ideas, designers, architectural buildings, books, and so on. The essential thing here is to acknowledge the open-endedness of the process. At the beginning, as in the example of the lexicon on void, a main concept or idea, work, person etc. to be read can be selected. Different definitions or expressions of this main concept in the literature can form "different states". The encounters in the process of researching the main concept reveal a series of "secondary concepts" and different research layers emerge.

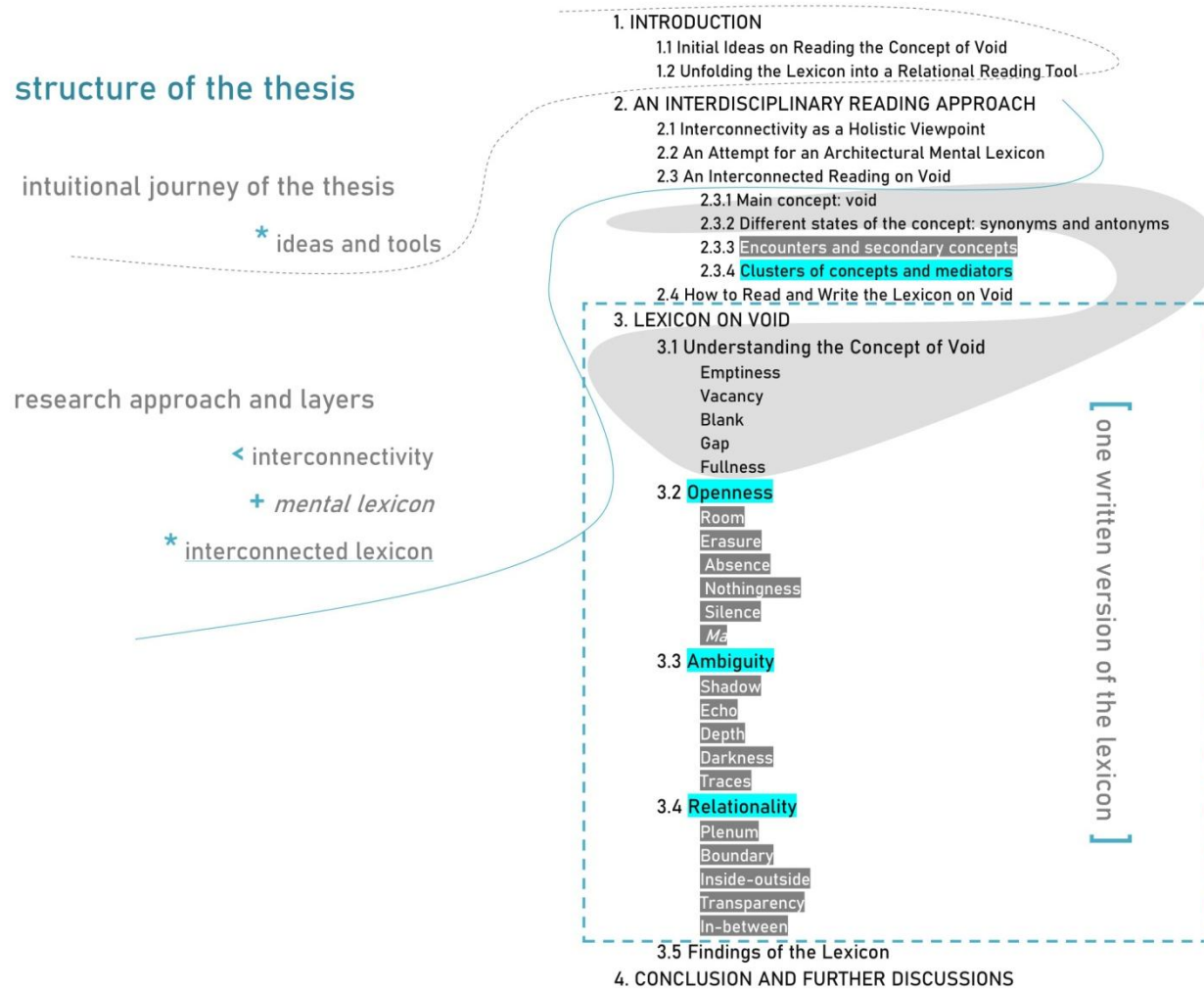


Figure 3.18 : Structure of the thesis and the lexicon on void.

Among all of these layers, the key research element that establishes the interconnectedness is "mediators". They are specific to each research process and may not be immediately apparent; however, they contribute to the researcher's mental space and meaningful connections in the mental lexicon. The "mediators" layer cannot be predicted or described in advance. They occur depending on each mental lexicon, which harbours ever-changing meanings within its relationalities.

4. CONCLUSION AND FURTHER DISCUSSIONS

Comprehending architecture and its role thoroughly feeds from the inspirational and creative side of conceptual thinking in architecture. Conceptual thinking enhances the quality of architectural design and discourse. It can reveal the unseen but substantial features of architecture. In this sense, understanding the concept of void in architecture has opened up a new window. This intuitional journey evolved into an extensive research project thanks to the great enthusiasm to manifest “void” as an essential concept to comprehend architecture and enrich architectural meanings in relation with other disciplines.

The research journey began with the humble question of whether architecture fills or creates void, which was a critique towards the figure-ground maps commonly used in urban analysis representing buildings as solid and black. The initial encounter with Kazimir Malevich’s work *Black Square* and its invisible “gap” interpreted by Slavoj Žižek revealed the potential for hidden meanings of void. The research evolved into an attempt to comprehend void by acknowledging that it cannot be defined merely as an absence, lack, or the opposite of fullness. Instead, void provides “openness”. The study delved into the meaning of void in architecture, language, and various disciplines, resulting in a deeper understanding. The concepts collected in this process indicated that void may actually have different states rather than a fixed definition. The multi-layered meanings of the concept of void required the design of a relational reading method. Hence, different layers of research began to emerge.

Since the concept of void in architecture was discussed within a limited framework, the research process has led to a series of close readings from different disciplines, revealing new relational concepts. At the beginning of the process, a conceptual reading was proposed, which evolved into the idea of creating a lexicon. The lexicon, developed as a research tool, initially appears as a collage of relational readings assembled together in the same way. It becomes a tool for “understanding” rather than defining, which focuses on developing a specific architectural vocabulary embodied in a relational lexicon. In fact, this constitutes the mental lexicon of the research process and the mental space of the researcher that enables different translations. A series of sketches on the assemblage of the lexicon revealed

different research layers and clusters of concepts. The relationalities in the lexicon were explored by adopting interconnectivity which is interpreted as a new scientific approach introduced by neuroscience brain connectome studies. Just like the ever-changing connections between neurons in the brain, everything has ever-changing meanings within the relationships it establishes. The lexicon was first designed through an analogue collage and layered sketches, and subsequently developed via a digital complex mapping programme that enabled flexibility and open-endedness. The interconnected lexicon facilitated a layered structure in the linear format of the thesis and contributed to its writing method. This was achieved by creating an outline through the “mediators” layer, which provides interconnectivities within the lexicon. The interconnected lexicon can be structured in different ways; however, this thesis presents a single version of the lexicon at the current stage of the research process. This study proceeded from a subjective and intuitive reading to an interconnected research method. The research process was shared through workshops, lectures, exhibitions, presentations, and an article theorising the temporality of this open-ended research.

The initial attempt of understanding the concept of void evolved into a relational reading with the aim of bringing new concepts and meanings in architectural *repertoire*. In this case, the need for a relational reading method and an interdisciplinary research approach arose. This search eventually formed an architectural lexicon in order to explore new architectural meanings while feeding off other disciplines. The main aim here was not endeavouring to read and categorise all architectural approaches related to the concept of void. Beyond descriptions and categorisation of ideas, an open research process is achieved by establishing new relations and meanings via the lexicon. The concept of void itself is ambiguous and has multilayered meanings; thus, openness becomes essential for this research approach. A chronological reading does not form the research; instead, a main concept and relational concepts re-structure the lexicon and establish new relational meanings by every *rencontre* during the process. Therefore, the lexicon should be considered as an attempt for an interconnected reading and open-ended research approach, rather than a finished outcome. This thesis manifests a section from the incomplete process of architectural lexicon and theorises the research approach.

An interdisciplinary reading is possible by adopting and relating new understandings from different fields. Essentially, comprehension of interconnectivity introduces a holistic viewpoint for various disciplines. In the light of human brain studies, neuroscience becomes influential to understand the features of interconnectivity.

Additionally, it is intrinsically similar to processing a new vocabulary and establishing conceptual relations, which is an open-ended process of mental lexicon. Firstly, this study attempts to theorise how the research method was structured by different research layers and eventually, how it is used as a means for reading and interpreting. Embracing language as a tool for interpretation contributed to understanding the relation between word and concept, concept and understanding, interpretation and translation. Additionally, philosophy, physics, literature and art introduced new meanings within the frame of understanding the concept of void to enhance the architectural vocabulary as well as the reading method.

This vocabulary spawned from different research layers. The first layer “main concept”, the concept of void in this case, is the starting point of the research. Different meanings of the concept via its synonyms and antonyms, forms another layer which is “different states” of the concept. Beyond a collection of exemplars, “encounters on void” introduces relational concepts to the lexicon. These concepts constitute “secondary concepts” which provide understandings on the means for the creation of void. While the main concept involves different states, encounters on void add secondary concepts to the lexicon. Finally, “mediators”, providing interconnectivities between all research layers, unfold hidden features of void. In this way, they differ from secondary concepts or different states of void in the lexicon. They serve as a means for various readings by mediating between different concepts and layers in the research. Therefore, the lexicon distinguishes from a conceptual mapping or replicating structure of a mental lexicon; rather, it provides openness for different readings and “translations”. Interconnectivity as an approach supports the idea of openness whilst forming the lexicon. Hence, it enables an ever-changing whole which is open for different relational possibilities. In this way, the interconnected lexicon can produce relational meanings beyond lexical ones. Unfolding hidden concepts and enhancing architectural meanings contribute to both architectural theory and practice. Every researcher or architect can establish different mental lexicons, and/or mental spaces within the similar content but different interconnections. Therefore, conceptual and relational thinking supports the architectural *repertoire* not only in research but also in design field.

It is important to note that this thesis does not analyse the theories of architectural space, although the concept of void is closely related to the concept of space. Instead, it mentions some spatial theories, such as enclosed space, dark space, and heterogeneous space, within the relationships in the lexicon. Additionally, earlier sources that discuss elements of architectural space can be read from a new

perspective. For instance, the tectonics of void is traced through the relationalities in the lexicon, rather than the architectural elements. The second chapter of the thesis explores the association between the significance of “joint” in tectonic discourse and interconnectivity. In this context, “joint” is considered as a “generator” of architectural meanings, similar to the mediators establishing relational meanings in the lexicon, rather than simply dividing or joining elements. In fact, the tectonics of void and the tectonics of the lexicon are enmeshed at this point. This has been one of the discoveries of the architectural lexicon on the void. Furthermore, the mediators in the lexicon such as *openness*, *ambiguity* and *relationality* are seemingly similar to the features of interconnectivity. In this sense, is it possible to consider void as an interconnected whole? Perhaps, architecture creates open-ended interconnected voids instead of solidities.

Thanks to the interconnected lexicon as a research tool, the theory and method are intertwined in this research. The content generates the research method whilst it evolves from the method. Thus, it can offer an approach to emphasise conceptual thinking within the intersection of design thinking and practice. This interconnected reading approach manifests the significance of the hidden concepts and mediators in the lexicon. Beyond the conception of void in architecture, this reading method can be applied to any other main concept and in other research fields. The endeavour to work in an interdisciplinary way is in fact embraced as a potential for openness to different translations. In other words, each research process can create its own mental lexicon, resulting in an open-ended approach. It has also been discovered that this is essential in order to grasp the meanings of the concept of void, being ambiguous and multi-layered.

The challenges encountered in this study actually give rise to prospective potentials (Figure 4.1). Due to the complexity of comprehending such concept as broad and multi-layered as “void”, a reading which integrates meanings from various disciplines was developed. The discussion of the tectonics of void solely through tectonic elements appeared insufficient. At this stage, interconnectivity became a significant inspiration for the emergence of these concepts, in between the tangible and intangible. The potential arising from this challenge is to expand the meanings of the concept of void and apply this reading approach to other disciplines, adding further layers of research. Another crucial challenge is the issue of representation of the lexicon. The use of various research tools together and the requirement for a linear thesis format have highlighted the potential of “mediators” .

challenges + further potentials

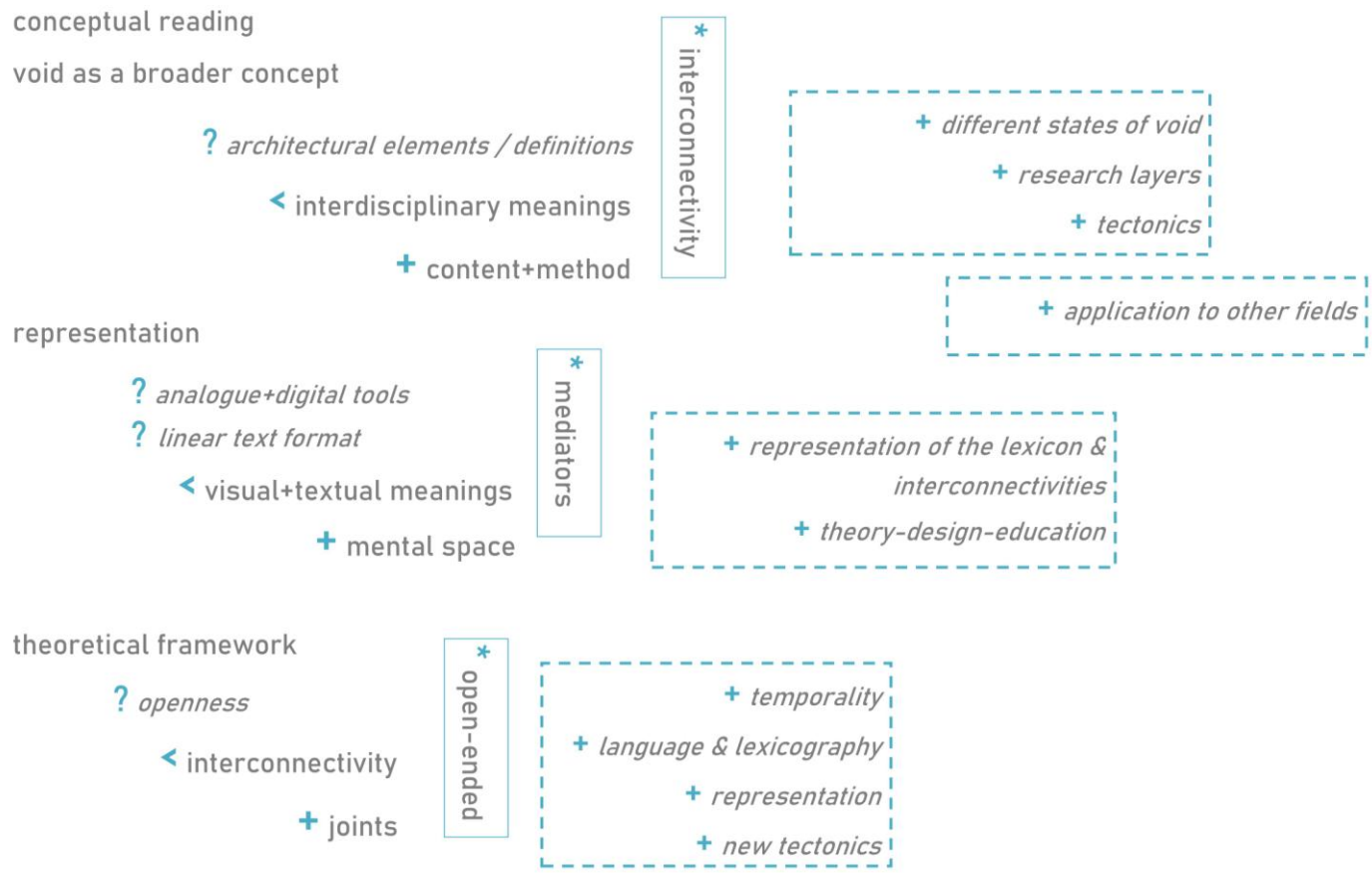


Figure 4.1 : Challenges and further potentials of the research.

The lexicon is perceived as the researcher's mental space, with each research process generating its own unique mental lexicon. Leon van Schaik's emphasis on the designer's mental space suggests that it could foster individual interpretations and "translations". The formation of a mental space through interconnected lexicon on void has potential applications in architectural theory, design, and education.

In the research, Umberto Eco and Gilles Deleuze's ideas on openness have created a theoretical framework brought by interconnectivity in terms of open systems thinking. The article produced from this thesis initiates a discussion on the temporality of an open-ended research process, which is subject to a potential theoretical development. Furthermore, the theoretical background of the study can be enhanced by exploring the relationship between representation, language, and meaning. Moreover, the interconnectivity that generates meanings in the lexicon has led to a deeper theoretical discussion of tectonics through 'joints'. In this context, the tectonics of the void and the tectonics of the lexicon overlap.

As mentioned before, the main difficulty in the research was structuring a non-linear and open-ended process. Writing of the thesis in a defined linear format in this sense was also challenging. Mediators as the interconnecting research layers enabled structuring the text under related subtitles. The secondary concepts in the lexicon are closely interrelated and accessible through different mediators. However, the linear structure of the thesis chapter attempts to provide fluidity via connections of the concepts. In other words, the secondary concepts are mentioned under specific mediators in the text, considering their relationalities with the encounters mentioned before and after. If an encounter is related to multiple secondary concepts, it is included under a specific mediator that provides closer relations with other secondary concepts it involves. The thesis presents a single version of the lexicon, with the researcher's interpretation and perspective taken into account. The order of the text can, however, be altered by the perspective of another reader. The lexicon allows for multiple interpretations thanks to its interconnectedness.

Another difficulty was the representation of the interconnectivities in the lexicon. Lexicon here is not designed as an outcome; instead, it is used as a tool to support a non-linear research and thesis writing process. Even though it is not a finished outcome, the representation of the lexicon and interconnectivities in the lexicon needs improvement as a following work. On the other hand, the whole process involved various representation techniques, from analogue to digital, such as collages, sketches, diagrams, and complex mapping. These visual representations as a whole are considered as part of the mental space of the researcher, and

significantly contribute to the interconnected reading. They are also included in the thesis, accompanying the lexicon on void and manifesting the relational research frames. Hence, the thesis should not be conceived only as a written work, but also as a visual one, which enhances the meanings in the lexicon.

For further studies, the lexicon on void can be developed by enriching the current layers as well as adding new research layers. For instance, different states of void can be extended with other synonyms and antonyms while new secondary concepts are included to the lexicon. Additionally, this relational and interdisciplinary reading method could be used in other disciplines. In this way, it can be improved by creating different research layers and mediators. Theoretically, the relation with language and lexicography can be extended thoroughly. On the other hand, the issue of representation and its relation with the lexicon are also open for a further theoretical discussion. Within this frame, the relational meanings that are established in the lexicon can be deciphered as a source of knowledge, both visual and verbal.

This study highlights that lexicon, beyond a list of words and their descriptions, can be used as a means for a conceptual reading and understanding in research. Moreover, interconnectivity can be adapted as an approach for an open-ended and non-linear research process. Understanding void as an intangible and ambiguous concept could only be possible via an interconnected reading in this research. Ambiguity comes from the ever-changing meanings, which is embraced by an open research process. Mediators unfold multiplicity of meanings and interconnectivity inspires to discover relational meanings of void as becomings.

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