

Research Plan

Retail Building and Commercial Space

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Introduction

1.1. Research Context

Retail buildings and commercial spaces is one of the most widely distributed types of architectural spaces, and it has a significant impact on urban space and social life. Since the emergence of the retail industry, the contradiction between retail space and the expansion of commercial activities has always existed, which is the reason why retail buildings and spaces are always changing and expanding. They can choose to follow the trend to evolve; otherwise they are confronted with extinction, like the Molenpoort.

Date back to 1972, the popularity of the American shopping mall gave birth to de Molenpoort in Nijmegen, the first shopping mall in Europe. Because it is a product of emulation, the Molenpoort did not take root in the city, but isolated from the context and grew savagely in the city center. On the one hand, ignoring the problem of Molenpoort and simply protect it as a heritage building make no contribution to the rebirth of "dead mall". On the other hand, totally replace the Molenpoort with another building or open it as a shopping street to fit in the urban fabric will also be a loss for Nijmegen.

To reflect upon this situation and find a way to resolve these problems, the Urban Architecture Graduation Studio introduced the topic of "Bricolage" as a way of thinking, researching and designing. In the story of Robinson Crusoe, he collected all the resources at hand and used the wisdom of bricolage to build his own kingdom on an uninhabited island. Similarly, from the perspective of architect, we build our realm using the existing constructing logic and limited materials, to make something different and new from the old, which seems to be the way and even the trend from the future.

In my opinion, the ancient technique *spolia* is one of the results of bricolage in architectural history (Figure 1); *the IKEA messenger bag* is an extension of what the product used to be by using bricolage in fashion design (Figure 2); the *Chinese Patchwork (Hundred-Family Robe)* is a traditional crafts and also the source of my inspiration towards bricolage for urban architecture (Figure 3). Those scraps of fabric are similar to different architectural elements, being collected from hundred families, selected carefully and then sewed together to form a unique art piece -- a fascinating urban block. More importantly, children wearing these homemade clothes will grow up with fortune and blessing from hundred families, and the urban block that integrates domestic history, culture, lifestyle, collective memory and diversified architectural typologies is exactly the treasure trove of the city.

Introduction



Figure 1 (left): *Spolia*, retrieved from <https://i.pinimg.com/originals/03/b1/aa/03b1aad9e0e6593aad2da05c4369967e.jpg>
Figure 2 (right): *The IKEA messenger bag*, made by author



Figure 3: *Chinese Boy's Robe during Guangxu period in Qing dynasty*, retrieved from <https://i.pinimg.com/564x/e6/a9/b2/e6a9b20dc48512a19e2d6955441d61d8.jpg>

1.2. Research & Design Problem Statement

1.2.1. Retail Building

Shopping never dies, but retail building has a life cycle, and Molenpoort is in its last throes.

Retail spaces have evolved rapidly in its turbulent history: it developed into market space, bazaar, arcades, department stores, passages and shopping malls and ultimately even colonizing our digital world (Figure 4). However, as trends in shopping come and go, it has left many malls to die and gaining a skeptical reputation on their function in urban life.

The emergence and development of retail architecture doesn't depend only on architect, but society, finance, technology, culture and so on. In this case, the real problem hidden behind the Molenpoort is not only the unappealing architectural space itself, but more about not following the trend, that is to say, the Molenpoort may not be the outcome of society and lifestyle in Nijmegen in this era or in the foreseeable future. This is the most general and essential problem from several disciplines such as architecture, environmental psychology, consumer psychology and during the research and design process, followed by two specific and tangible problems focusing on the site itself from the perspective of urban architecture.

1.2.2. Problems in the Molenpoort

Passage De Molenpoort has been perceived as a problematic place by local people and tourists because of its covered architectural space, gigantic inner structure, growing shop vacancy and decreasing visitor number. In order to resolve the problems, the municipality has its plans ready to demolish this building and turn it into an open-air shopping street with housing on top, which seems to be an efficient solution. However, new problems occur: (1) whether it is necessary, from the perspective of heritage value, to add one more shopping street at the expense of demolishing such a unique covered passage and roof parking space; (2) whether it is wise, from the perspective of city center, to choose residence project instead of any other public facilities.

1.2.3. The Position of Molenpoort in the City

Zoom out to the urban scale, the large volume and structure of Molenpoort itself is incompatible with the surrounding buildings, and its edges are directly connected to different functions like the main shopping street, the church, and residential areas. In this case, how to deal with its positioning and boundary in the city is also an important issue.

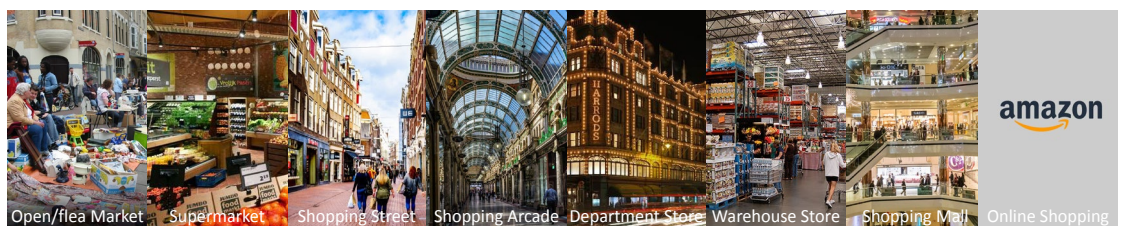


Figure 4: Development of retail space, retrieved from Archdaily

1.3. Research Question

Hence, based on the problem statement, the research question is proposed as followed:

How can retail building and commercial space expand by interacting with the society?

Then the sub-questions will be:

What architectural bricolage strategies are available to improve the retail space inside and outside the existing building?

How retail spaces form and evolve in its turbulent history from the perspective of architecture?

What factors influence retailing and what is the trend for retailing from the perspective of geography, psychology and other disciplines?

How retail buildings and commercial spaces coexist with residence and other public facilities in the city?

Field

2.1. Beauty or the Beast

Our group’s research focused mainly on the Molenpoort itself and people’s daily routine especially shopping behaviors here. The huge building takes up a large proportion of the urban block in the city center, and the entrances of which lure customers in for shopping, just like a beast (Figure 5). But as we stepped into it and started to uncover more of its secrets, stories and history, our perception changed drastically: we found there still existing fascinating aspects which make it unique, and the “dead mall” was actually a “sleeping beauty”, waiting for a second life.

Based on the observations and interviews to people working or living near the Molenpoort, problems like the entrance barrier, typologies of shops and even the architectural form itself are the main resistance that prevents customers from coming inside. Their views are true reflections of residents, consumers, and operators, which are also effective approaches for us to get closer to the Molenpoort. Opinions contain three aspects as followed:

2.1.1. Passage or Shopping Center

The leather shop owner in Molenpoort said since it is more a passage than a shopping center, the entrance, like a dark hole, is not very inviting to come in, leading to less and less customers nowadays. However, from the clothing shop owner’s point of view, a passage is outdated and old-fashioned, while Molenpoort is actually a covered shopping center and it sounds more friendly to people.

It is not uncommon that people often compare Passage de Molenpoort to American shopping mall, because the private owner of the Molenpoort is an American investor, and the half-passage half-mall form is apparently the combination of American shopping mall and European style of shopping. An American shopping mall is approximately 6 or 7 times as big as a European passage, and it is able to hold 10 restaurants and a cinema in the basement, though the huge volume of which won’t fit in the urban fabric in the Netherlands.



Figure 5: *The Beast*, drawn by author

Besides, what will always be the case is that people need to take an extra step to get into a passage or shopping center. In a normal open-air shopping street they walk through more easily, but in a covered shopping mall, questions like ‘what do we find behind those doors?’ will influence their behavior that whether to go through doors. Like the leather shop owner said: “on one hand I would throw the roof off because there is a certain group of people that don’t want to go inside a shopping center anymore, but on the other hand I think every city needs at least one covered shopping center.”

2.1.2. Shops and People’s Shopping Behavior

Except for the local residents, a large amount of visitors come from cities around Nijmegen. Most of them will park their cars on the roof, go downstairs to the Coop or the Xenos, and leave again. This is because Molenpoort itself is really a center for the small entrepreneurs from Nijmegen, and these unattractive small shops need big “magnet stores”, that is the Coop, Xenos, Big Bazaar and Prenatal. We found out that both the Coop and Xenos have been here for a very long time, and these shops located in the best hallway of the two passages in the middle, which is different from American typology that ‘magnet stores’ are often in the edges of the center. For small shops like the leather shop, most customers visit it “by accident”, and then they think it is a nice shop and are surprised that it has been here for over 30 years.

By interviewing on several customers and tracking their routes, we found that they come to the Molenpoort with a specific purpose, and then they head to the shopping streets in the city center or go back home (Figure 6). “People shop differently compared to 30 years ago”, said the owner of Hill’s clothing shop in Molenpoort, “They don’t just come to buy clothes, but they grab a lunch, or go to the cinema or the theater. They make a complete day out of it.” In this case, a great variety of shops in the city center is more attractive for customers, and the open-air shopping streets function well in Nijmegen. The reason why some operators, like the café owner, would like to have a shop inside the Molenpoort instead of on the Molenstraat is that the rent prices outside is often much higher, which seems to go against our prediction that inner shop price will be higher due to safer and better shopping environment and management issues.

Since people nowadays want to be entertained, it is successful to add more entertainment to the shopping centers in many countries, instead of having the focus only on shopping. For Nijmegen, however, the holistic experience is already in the city center, and there are lots of cafes, cinemas and other facilities in the rest of the city, so the Molenpoort doesn’t have to facilitate all these things.



Figure 6: Shopping routes of several customers, drawn by author

2.1.3. The Future Plan

The municipality has a new plan to open the Molenpoort and add more housing on top of it (Figure 7), but most people tend to the idea of renovating it instead of totally demolishing it. “My preference would be to keep the Molenpoort, but refurbish it, and as an entrepreneur you can choose where you want to have your shop, inside or outside”, said the owner of leather shop, “The advantage is that the existing shop has a name for itself. But when you do move, the customers will lose you.” Besides, since there already exist many empty shops inside the passage, the cafe owner believed that getting more housing and expensive shops is not something that Nijmegen needs.

However, opinions about roof parking are quite different: some customers think the roof can go, because it is not a passage but a street, like every street in the city center, while others are in favour of parking on top of the Molenpoort. “If it becomes a street we will lose our parking spots, and those are holy to me”, said the clothing shop owner. Although Nijmegen is a left municipality and the middle class want to get rid of all the cars within the city, it is not a tourist city, and we rely on people from Nijmegen and cities around it. Their demand is to be able to park their cars in the center easily, and parking space on the roof is apparently better than that on the street.

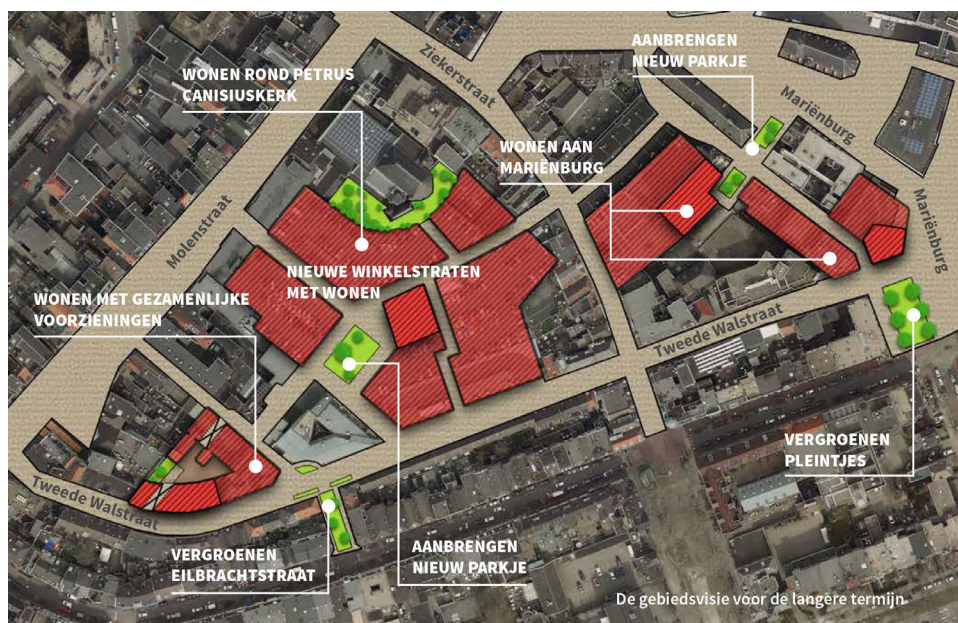


Figure 7: The future plan for Molenpoort urban block, retrieved from <https://www.nijmegen.nl/over-de-gemeente/dossiers/dossier-ontwikkeling-centrum/vlaamsegas-en-ringstraten/>

2.2. Commercial potential in Molenpoort urban block

The mapping (Figure 8) shows the function distribution of shops on the ground floor, and conclusions are made as followed:

1. The commercial form including typology and distribution in Molenpoort is completely different from the surrounding areas;
2. The same type of shops tends to gather together to form a small group or cluster. On the one hand, the cluster as a whole will form a better commercial atmosphere and attract more customers. On the other hand, within the cluster it will lead to greater competition between shops.
3. The plot between Tweede Walstraat and Van Welderenstraat is mostly residential areas, which to some extent hinders the future extension of the commercial atmosphere towards south. In this case, the existing passage direction that connects Molenstraat and Ziekerstraat is essential and should be preserved.

Unlike the shops and public spaces on the street which managed by the municipality, the Molenpoort is a private-owned passage and the commercial space inside is also private. As a result, shop owners are allowed to put their stuff outside to the passage, and decide what can and cannot happen there. This informal commercial extension increases the scope of every shop, and creates more “grey space” for commercial activities as well.

Since there is a large amount of existing residence around this plot and more housing tend to be added here based on the new plan, we can introduce more for-profit or non-profit facilities for the community, such as a play field, a gallery, a school, a service center, etc. Besides, the private church garden can be enlarged and even opened to the public, functioning as a harmony green space.



Figure 8: Function distribution on the ground floor, drawn by author

Theme

3.1. Retail buildings and commercial spaces

Molenpoort is not a beast, but retailing is. The ever-expanding demands of people influence it all the time and the only purpose of retail is to make higher profit. In this case, retail spaces will seize every opportunity to expand, occupy and control the city. As Vincenzo Ruggiero once said, "In the end there will be little else for us to do but shop."

The key term "retail" is the process of selling consumer goods or services to customers through multiple channels of distribution to earn a profit (Retail, 2020). "Retail building" and "commercial space" are buildings and spatial forms that accommodate retail activities. The concept of "mall" first appeared in the United States in the 1950s. When Victor Gruen, the father of retail architecture in the American Shopping mall, first proposed this concept, he wanted to create a comfortable shopping experience that was different from the noisy, dirty, and disorderly urban impression of American cities in the 1950s. Therefore, in 1956, he designed the world's first fully enclosed Mall, located in Southdale, Minneapolis, to isolate shopping and car traffic, and at the same time creates a comfortable artificial environment through an air conditioning system. In the following two decades, the fully enclosed Mall has been accepted and recognized by the society, has always been the mainstream form of commerce, and has also become an integral part of the process of suburbanization in the United States after the war.

However, retail building has a life cycle, including the shopping mall. Aggressive builders like Walmart chief executive officer David Glass, along with old retail pros Stanley Marcus, are predicting that 50 to 75 percent of present retail will be extinct within a decade (Lewison, 1994). After the shopping mall had entered the old age and had begun to

transform, the "Dead Mall" phenomenon occurred. The so-called "Dead Mall" refers to those shopping malls that have fallen into recession due to the decline in attractiveness and passenger flow, tenants moving out one after another, and declining occupancy rates. And the Molenpoort, the half-mall and half-passage architecture form, was also a by-product of this transformation process.

Since the birth of the retail industry, the contradiction between the form of retail building and retail space and the expansion logic of commercial activities has always existed. This contradiction is the fundamental driving force and motivation for the development and change of retail building. The logic of business activities is to always pursue greater profits and meet the needs of an expanding population. Therefore, the space occupied by commercial activities has been continuously expanding. It is keenly chasing every possibility of expansion, to every corner of the social space at all levels. In the process of adapting to the continuous expansion of commerce, the architectural form of the retail industry is also constantly changing forms to reconcile this contradiction. Therefore, grasping the formation of retail building and space, as well as the contradiction between the restriction of form and the expansion logic of commercial activities in the contemporary state, is the key to guiding the design of retail building and commercial space in Molenpoort.

3.2. Concepts and Theories Related to Retailing

3.2.1. Formation Process and Distribution of Retailing Spaces

During the evolution of retailing, new commercial spaces like linear shopping street or covered shopping mall with circular walking paths inside are constantly springing up, leading to the emergence of new shopping behaviors and modes. The purpose of retail spaces is to maximize the satisfaction of people's consumption needs, and the layout of space and circulation depends on the distribution of shops. According to the development of the retailing mode, the layout includes homogeneous commercial clusters with equal small and medium-sized shops or heterogeneous commercial clusters dominated by several magnet stores, the latter of which is similar to the layout in the Molenpoort. In this case, the Central Place Theory, the Commercial Micro Location and theories related to them are introduced to this research, aiming at illustrating the formation process and distribution of retailing spaces.

The German geographer Walter Christaller introduced central place theory in his book entitled *Central Places in Southern Germany* (1933), and it explains the spatial arrangements and distribution of human settlements and their number based on population and distance from another human settlement. According to the central place theory, retail spaces are distributed in urban nodes according to hierarchies, and they serve specific target consumer needs within the scope of this level. Due to the increasing congestion of the city, the dominant position of rental price and shopping accessibility in the central area of the city is gradually weakened, which gives opportunities to next level of regional and community-level retail spaces which may have more advanced positioning and wider radiation range.

B.J.Garner studied the relationship between the hierarchical functions of retail locations and land prices in 1966. He believes that the higher the hierarchical functions of retail locations, the higher the ability to pay land prices, and location will tend to be in the city center. Garner explained this relationship with Von Thunen's location theory (1826) and pointed out that the space with the best market location and the highest land price will be occupied by high-level functional shops that can afford this land price. The low-level retail shops, however, will gradually be pushed to the edge of commercial areas due to limited capacity to pay the land price. After studying the distribution of Chicago's commercial districts, he found that department stores, clothing and footwear stores, and jewelry stores are located in the core area of major intersections. As the distance increases, the distribution of household appliances, bakeries and restaurants has increased significantly, and hardware, groceries, meat, beverages, cloth and laundry shops are located in the fringe area.

3.2.2. Collective Space of Retailing Buildings

The existing commercial collective space in Nijmegen is the outdoor public space on the square and on the street. Since the Molenpoort has shopping mall's gene, the inner spaces like atrium, the pond (demolished), circulation space and interior streets are what make it unique from other shopping streets, department stores and passages in the Netherlands. In this case, outdoor and indoor collective space in this plot should be considered carefully in the future design proposal.

With comfortable environment and convenient facilities, public spaces are able to meet the needs of customers to walk, rest and communicate, the needs of retailers to extend their commercial area and carry out promotional activities, and other social activities. Generally, the information transmission channels in public spaces are unobstructed and there are relatively few obstructions. Therefore, the collective commercial space can effectively increase the stay time of potential customers, continuously motivate them to participate in various commercial activities, guide and stimulate their consumption, and attract people to visit again with a good atmosphere.

3.2.3. Shopping Environment and Consumer Psychology

Based on the research in the field of architecture in retailing spaces (3.2.1) and collective spaces (3.2.2), this part introduces environmental psychology (architectural psychology) and consumer behavior (consumer psychology) as reference and guidance for architectural design. Customers' psychological activities directly dominate their purchase behaviors, the psychological process of which is mainly divided into attraction, interest, association, desire, comparison, trust, action, satisfaction. The American psychologist Abraham H. Maslow divides human needs into five levels from low to high, which are: physiological needs, safety needs, emotional needs, self-esteem needs and self-realization needs. It means that people's needs are hierarchical, and the satisfaction of a lower-level need will lead to people's needs for a higher level. In retail buildings and commercial spaces, people have three different levels of environmental requirements: the first level is basic requirements, that is, safety and consumption; the second level is general requirements, that is, communication and comfort; the third level is advanced requirements, that is, potential innovation and commercial atmosphere.

3.2.4. Trend for Retailing

With the development of economy and culture, people's living and consumption levels have increased correspondingly, and shopping concepts have also undergone a fundamental change. The famous American urban planner Kevin Lynch has studied the shopping behavior of North Americans: people regard shopping as a kind of leisure, and the shopping behavior is from the stage of looking for goods to taking a rest, and then continues to search. During the shopping process, they will go to shops, or chat with acquaintances, or sit and watch others pass by and shop, or eat something next to the fountain (Lynch & Hack, 1984). In this case, the shopping process is affected by three factors: consumer behavior, consumer psychology and commercial environment. The environment promotes the change of consumer behavior and psychological needs, and the changed demand becomes the driving force for changing the environment, thereby promoting the development of the commercial space environment.

Since the shopping mall is the latest form of commercial building, what is the future for physical retail spaces? Based on the investigation of the US shopping space, Koolhaas made his own judgment on the development trend of the retailing space: The scale and function of commercial buildings such as shopping center and department store are becoming larger and more comprehensive, which degrades other types of commercial buildings, resulting in a lack of consumption space types (Chung, Inaba, Koolhaas, & Leong, 2001). Besides, the privatized industries in society are gradually being redefined. The original public industries, such as airports, museums, schools, churches, etc., have gradually become private, and the government has reduced its investment in them (Figure 9). Therefore, these departments unanimously use the retail industry as a profitable means to expand the commercial space to increase funding sources. At the same time, the retail industry has found a way to expand itself by penetrating into various fields, and it is difficult to separate other functions in cities from retailing.

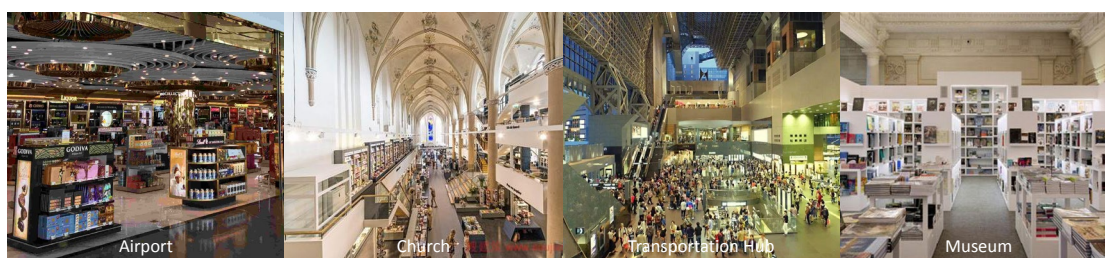


Figure 9: Expansion of Retailing Spaces into Various Fields, drawn by author

3.3. A retail-oriented 'Molenpoort lifestyle'

The decline of Molenpoort may not only be attributed to the architectural form, but also affected by the trend of the retail industry, changes in people's shopping habits and lifestyle. The Molenpoort's edges are directly connected to different functions like the main shopping street, the church, and residential areas, how to deal with its positioning and boundary in the city is an important issue.

From the author's point of view, refurbishing the heritage building and reusing it adaptively seems to be a neutral and widely-used method, but the Molenpoort needs more radical measures. The Nijmegen city does not lack of shopping streets or retailing spaces, but a retail-oriented 'Molenpoort lifestyle'. The reason why it is retail-oriented is that the commercial gene on this site is an important element that worth keeping, and in people's collective memory, Molenpoort is a place for shopping; though not function well, but definitely a shopping place. The 'Molenpoort lifestyle' includes:

1. Local people and visitors can still perceive this place as the unique Molenpoort urban block, which means the existing elements like volume and structures need to continue in another way, tangible or intangible;
2. The typology and function in the "dead passage" need to be rearranged to meet consumer demands and also follow the trend nowadays, and the unique collective spaces inside and outside allow more potential consumer behaviors;
3. The positioning of this plot takes not only retailing but also other facilities into account for communities around, thus the environment here is different from that in the city center. 'Molenpoort lifestyle' means not only shop here, but "live" here.

In this case, bricolage was introduced to the site

and by using the concept and tool of bricolage, the author will form the retail-related database and local material depot and using them to regenerate the site. The retail-related database includes a vertical analysis of the historical development of the retail industry, the horizontal comparison of different retail patterns in various countries and regions, and factors affecting retailing spaces and consumer behaviors. The local material depot is a material library about the city of Nijmegen, including the commercial genes in the Molenpoort urban block, memories of people, and elements in the whole city, which is to ensure that the final bricolage products are native and domestic.

Methodology

Literature Study

There are five research points (Figure 10, in Methodology part) based on previous site research, all of which will be aligned to specific field of theories or aspects:

1. "Passage or shopping mall" is related to the architectural form of retailing, and the author will look into the different typologies of retail spaces especially the passage and the shopping mall (proposed by Victor Gruen) which are the most related types to the Molenpoort.
2. Since the plot is retail-oriented, "typologies of shops" is an essential content. Thus theories including central place theory and commercial micro location are introduced to the research, aiming at figuring out the formation of retailing space and logic behind distribution of shops. This part will involve architecture, geography and probably principles of business economy, aiming at rearranging the typologies of shops in the plot.
3. The Molenpoort urban block has huge "commercial potential" due to the outdoor and indoor collective space: it has the advantage of shopping mall (the inner collective spaces), private-owned passage (allows informal commercial activities even outside the shops), and facilities around (church garden and squares), all of which make the Molenpoort different from the shopping streets (linear outdoor space).
4. "Shopping behaviors" is related to architectural psychology and consumer psychology. By studying the psychology behind customers' behaviors, retailing spaces that we design will be able to meet the real demands and become attractive.

5. Since the "future plan" may be an unsatisfactory solution to some extent, the new trend for shopping in the foreseeable future is an intangible driving force for the evolution of retailing space.

In this case, concepts and theories from different angles of retailing and interdisciplinary fields are bricolaged together, aiming at creating a unique "Molenpoort lifestyle" on the "retailing island". By looking into the related concepts and theories above, a basic framework on retailing building and commercial space would be generated.

Case Study

Case study is the foundation of the Molenpoort lifestyle, in which the analysis of different retailing space based on the time axis (development history) and space axis (genealogy of in different countries) will be included. This part will also take references and cases in the Netherlands into account, such as de Passage and de Bijenkorf in The Hague, Lijnbaan in Rotterdam, Hudson's Bay department stores based on former V&D buildings, and chain stores or merchants like Peek & Cloppenburg and HEMA.

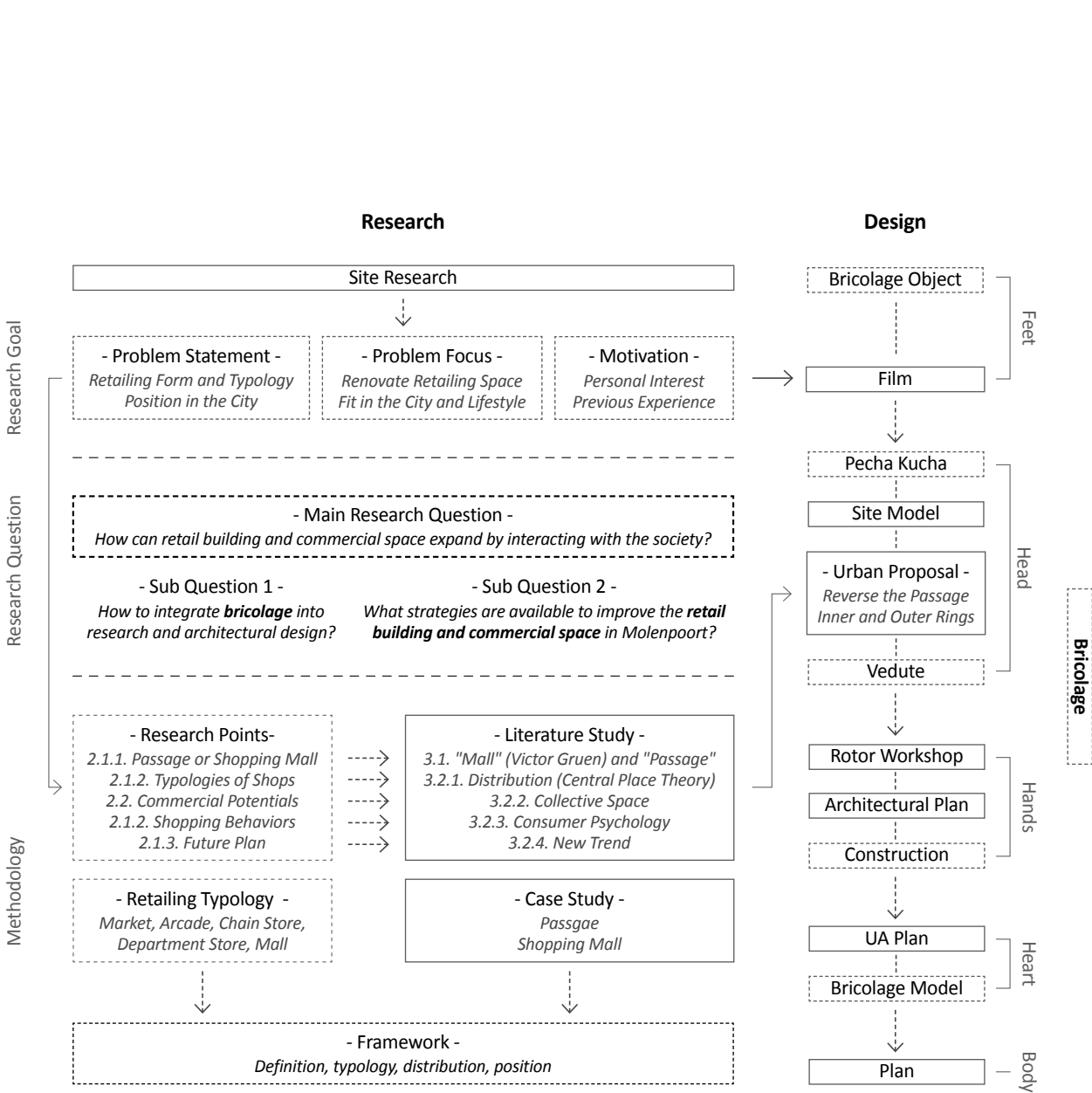


Figure 10: Research Design Structure, drawn by author

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