Space for leisure

experiencing Dutch inner city shopping areas

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"Though we see the same world,

we see it through different eyes."

~ Virginia Woolf, Three Guineas, 1938

Visiting Westmoreland Mall in Greensburg, Pennsylvania

preface

2010. The year I discover a love of shopping malls. Taking the 20 minute drive from the small Pennsylvania town where I live with my host family, I am transported from a place where nothing happens, to a place where everything is possible. The large indoor mall is warm during the cold, snowy winter; it provides an escape with palm trees, fountains, and many different shops. There is no need to leave this bubble when we get hungry, for everyone can find something of their taste in the foodcourt, take a break, and then continue shopping again. As night falls outside and the stores close, the trip can go on. We grab some food at a nearby restaurant, and settle in the comfy seats of the movie theater, before heading home with all our shopping done, and all our senses satisfied, in just one place. I have never loved shopping in the Netherlands as much as in the USA.

Before you lies my graduation thesis. This research, carried out as part of the Explorelab graduation studio at the faculty of Architecture and the Built Environment of Delft University of Technology, started with this fascination. Over the past seven years of studying Architecture in Delft I have —amongst many other things— dipped my toes into the worlds of retail design and neuromarketing, following from a fascination with consumption and architecture, but also with people and their (manipulable) behaviors and experiences. I am very grateful for the opportunity to combine these fascinations in my graduation project.
I would like to thank my mentors, Maurice Harteveld, Robert Nottrot, and Jan van de Voort, for their support. Their shared passions, guidance, and knowledge have enriched my entire graduation process.

Besides the hard work, fun was also to be had, during coffee and (many more) tea breaks, walks to the Botanical Garden, or just in the studio. Thank you to Amela, TJ, Ali, Stella, and many more fellow 'Explorers', for almost making me not wanting this to end. (almost)

Finally, a big thank you to my friends and family for their support, gentle pushing, and fun distractions.

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introduction

fig. 0.1: Vacancies in Delft

introduction

It's a sunny Saturday afternoon in March. Walking around the Delft city center, I notice there are more and less crowded shopping areas. People seem to be moving quickly through a shopping street, not stopping, lingering, watching. The street is lined with gated doors, bikes are scattered all around and there are more 'for rent' signs than interesting shop windows. A glimpse through an alley shows a lively shopping street at the other end, with people hanging around having fun. How can these two experiences be so close together, yet so different?

In 2017 the total vacancy of Dutch retail floor area is 9.15% (CBS, PBL & WUR, 2017). Throughout the entire country cities and towns are dealing with vacancies in shopping areas, although not all at the same rate. Regions with shrinking populations, such as the North-East of the Netherlands, have a higher vacancy rate than more populated areas (CBS, PBL & WUR, 2017), and popular shopping areas in bigger cities are better at maintaining and attracting new (international) retail chains than local shopping areas in smaller towns (Ossokina, Sviták, Teulings & Zwaneveld, 2016, p. 11).

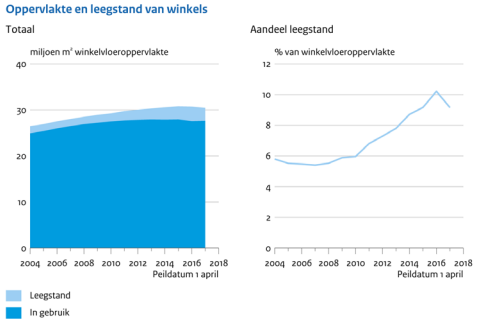


fig 0.2: Total floor area and vacancy rate of Dutch retail

The high vacancy rate in retail floor area has been caused by multiple factors. Up until 2005 the amount of retail area created was monitored and regulated by the government, but under pressure from the real estate market these rules were relaxed. This caused a major growth in the amount of retail floor area. (INretail, 2014, p. 3) At the same time, other events and developments influenced the retail market. The financial crisis of 2008 caused a big drop in consumption of goods (Ossokina et al., 2016, p. 4). This had a direct impact on the retail property market; rents had to drop, and vacancy increased (Ossokina et al., 2016, p. 4). Despite the economy stabilizing and consumer spending increasing again, vacancy rates are still high (Ossokina et al., 2016, p. 4). This is likely due to a change in consumer behavior that occurred at the same time. People have become more mobile than before, and the internet has impacted the way people consume. The internet provides consumers with more options than before and the opportunity to inform and orient themselves online before deciding if, what, and where to buy (Molenaar, 2011, p. 15).

The combination of these factors has made for a shift in the way physical shopping areas in their current form meet the needs of the consumer, resulting in a shift in the market and a high rate of vacancies.

It is important to find a solution for these problems. High vacancy rates not only influence the retail (property) market, it also has a direct impact on the experience of the shopping area. Shopping streets, which may unite in larger shopping areas, are an important feature for the attractiveness, vitality and livability of towns and cities (Rijksoverheid, 2015, p. 3). These areas often consist of not just shops, but a combination of different commercial services, like restaurants, and public amenities. Vacancy within a shopping street or area impacts the direct surroundings negatively; lack of activity, visitors and passersby, as well as physical decay of buildings and their direct surroundings (Ossokina et al., 2016, p. 14) influence the safety and experience of the area (Evers, Kooijman & Van der Krabben, 2011, p. 90).

Several strategies have been developed to deal with the problems vacancy causes. Multiple actors, like local and higher governments, real estate investors and developers, and shopkeepers are collaborating in platforms like ‘De Nieuwe Winkelstraat’ and produce reports like ‘Shopping 2020’ and ‘Retailagenda’ to find solutions. (INretail, 2014, p. 2; Rijksoverheid, 2015, p. 41) While these reports generally agree that these issues need to be approached in a multidisciplinary way (INretail, 2014, p. 16), many of the proposed solutions are still focused on the ‘market’ side of the problem, introducing changes in policies, visions, retail specific financial changes, and regulation of (transformation of) shopping areas (Ossokina et al., 2016, p. 11; Rijksoverheid, 2015, pp. 3-5, 22). All these proposed changes have (indirect) spatial consequences, but the spatial characteristics of retail areas are not the direct focus. There are visions of what the physical space should be and do, but not how these effects can be created (INretail, 2014, p. 5).
In addition, these platforms agree that physical retail is becoming part of the ‘experience economy’, in which not the purchase of products, but the shopping experience is the main focus of a shopping trip (Ossokina et al., 2016, p. 15). These shopping areas should thus be designed to fulfill the needs associated with this experience. The exploration of spatial solutions to cope with vacancy in shopping areas and at the same time restoring and/or improving the experience of these areas is a task for architects and urban designers, and the main focus of this research.

research

goal

The goal of this paper is to explore the relation between space and experience in Dutch shopping areas. The main focus lies on the experience of city center shopping areas, areas that have traditionally been more focused on recreational shopping (Everts et al., 2011, p. 90), and thus should contain more aspects related to experientiality instead of mainly functionality. The results of this research will be implemented in the spatial design of a transformation of a Dutch shopping area.

research question

As stated in the introduction, experience is becoming an important factor for the survival of physical retail. Existing shopping areas need to be transformed in order to facilitate the changing demand from functional shopping for products to recreational 'shopping' for experiences. But what does this change mean spatially? How can the design facilitate these experiences? This leads to the main question of this research:

Which spatial aspects of Dutch inner city shopping areas influence the shopping/leisure experience?

sub-questions

The different components of the research question will be explored and the main question answered by using the following sub-questions:

> What is experience?

> What (spatial) aspects can influence experience and how can this be measured?

> What spatial aspects are found in shopping areas in representative Dutch cities?

> What public behavior is found in these shopping areas?

> What is leisure?

> What public behavior relates to leisure experience?

> What spatial aspects are known to be involved in leisure?

> How do the behavior and spatial aspects found in literature relate to the aspects found in the observations?

methodology

The methodology used for this research consists of three parts. The first part is a literature study to discover the basics of environmental experience and how this is influenced and measured. The second part focuses on a series of observations of environmental behavior in shopping areas. Finally, the results of the observations will be analyzed and compared to existing literature on space, behavior and experience.

literature study

Using literature from different research fields, such as environmental psychology, consumer behavior, sociology, and anthropology, the sub-questions *'what is experience?'* and *'what (spatial) aspects can influence experience and how can this be measured?'* will be answered. This study provides a basis for the aspects that are taken into account during the observations.

observations

The second method used during this research is observation of environmental behavior. The observations have been done in the natural setting of the shopping area, to be able to find the relationship between the environment and the behavior taking place in this specific setting (Ittelson, Proshansky, Rivlin & Winkel, 1974, p. 95). The observer has participated as a marginal participant, observing from within the observed setting, but not actively engaging in the environmental behavior taking place in the setting (Zeisel, 2006, p. 198).

Observations have been used to answer the questions *'what spatial aspects are found in shopping areas in representative Dutch cities?'* and *'what public behavior is found in these shopping areas?'*. The following six steps have been taken to get to the results:

1. Choose shopping areas

   A small, informal survey has been held to discover which shopping areas could be interesting to observe. The questions *'where did you last go shopping?'* and *'what is your favorite place to go shopping?'* have provided multiple locations to explore. The criterion 'city center shopping area', related to the fact that these are more focused on recreational shopping (Everts et al., 2011, p. 90) has also been applied to the choice of shopping area to observe.

Three locations have been chosen for this research: The Hague, Rotterdam, and Delft.

2. Choose a setting within shopping areas

Entire (city center) shopping areas are too large to fully observe for the scope of this research. Within each of the chosen shopping areas, one setting has been picked to observe. The location of this setting is based on the availability of two factors: seating and the presence of people. In order to observe as a marginal participant and to not influence the setting too much by being present, seating provided a discrete place to observe from. The presence of people was both necessary for discreteness of the observer and to provide subjects to observe.

3. Document setting - plan drawing

After choosing a place to observe from, the spatial setting of the observation was drawn. A plan was made of the observable area including at least the following aspects: walls, doors, windows, infill of buildings, seating objects, greenery (trees, bushes, grass), permanent and temporary objects, and height differences within the built environment.
This drawing also includes notes on other (intangible) environmental aspects such as the time, day, weather, and temperature at the time of the observation.

4. Document setting - photographs

Photos have been taken to supplement the plan drawing of the observable area. Whilst the plan is sufficient for certain aspects of behavior, the vertical element of the environment may also play a role in the behavior observed. The photographs are used to analyze this behavior in relation to the setting.

5. Observe

There are multiple elements that play a role in environmental experience & behavior, which will be explained in chapter one. Because the physical setting has already been observed and documented in the previous steps, the timed observations have been focused on people and their behavior. With regard to the characteristics of people, their gender and approximate age have been documented. Behaviorally, trajectories (mode of transport, rhythm, stops, pauses, orientation, entries), seated behavior (location, spacing), interaction with other people, and direction of gaze have been observed.
The observations have each been carried out from a set spot within the setting, with a duration of 45 minutes, in which the different actors and their behaviors have been mapped.

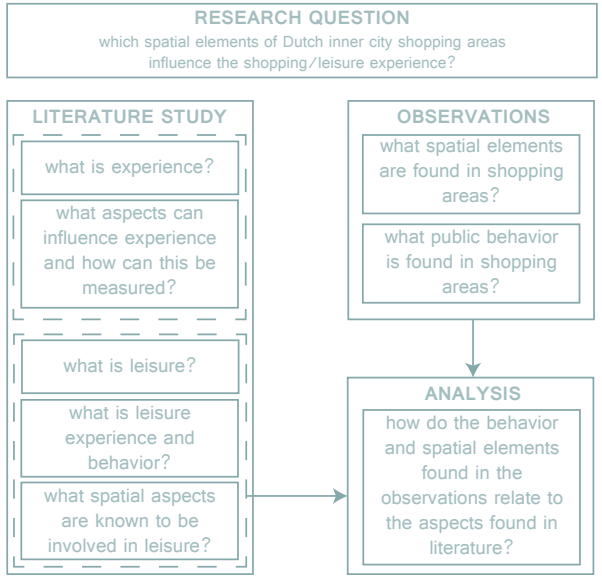
6. Inventory of context

Ittelson et al. (1974) state that "it is the city as a total reality which explains the functioning of each of its specific settings." (p. 68). In this case, the observable settings are only small parts of the entire shopping area. To give context to the observations within the setting, afterwards a walk through the surrounding area has been done. During this walk notes have been made on general behaviors and settings that could be used to explain the behaviors found within the observed setting. The aim of this step is to later help interpret and analyze the observed behavior.

analysis of observations

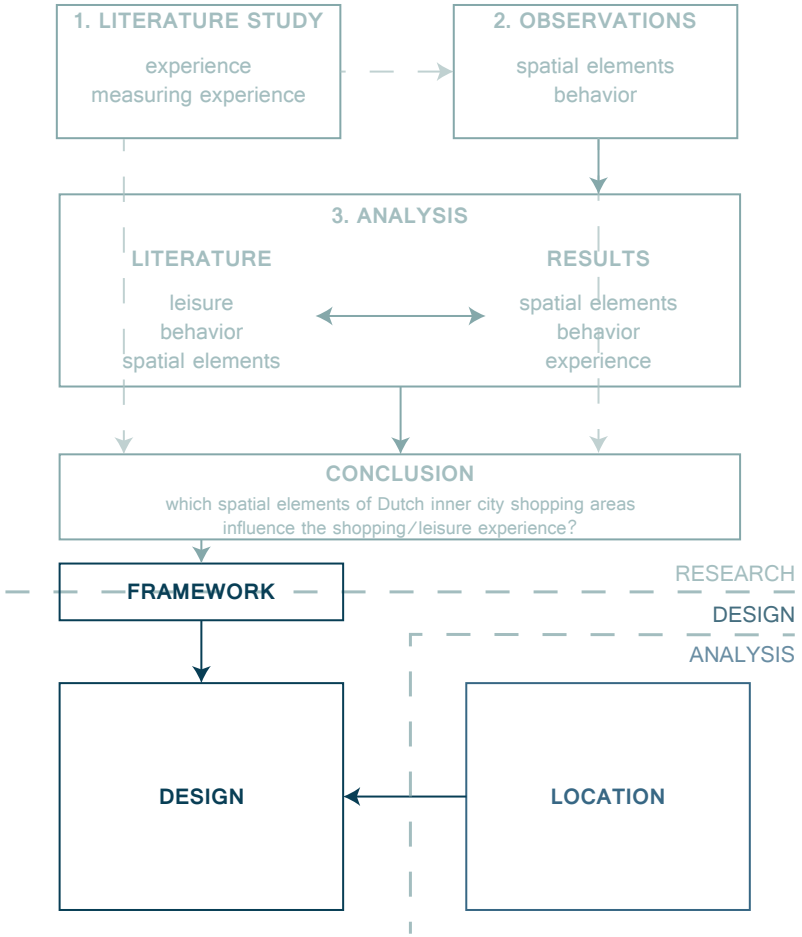
The results of the observations have been analyzed using existing literature on (social) behavior, leisure, and spatial aspects involved.

To be able to analyze the results of the observations, a literature study has been done to answer the sub-questions *'what is leisure?'*, *'what public behavior relates to leisure experience?'*, and *'what spatial aspects are known to be involved in leisure?'*. The results from the observations and the literature study have been used to answer the sub-question *'how do the behavior and spatial aspects found in literature relate to the aspects found in the observations?'*



thesis outline

This research can be divided in three parts. A literature study on experience and aspects influencing experience forms the basis of the research and is found in chapter one. The second chapter includes results of observations of environmental behavior and spatial aspects in shopping areas. An analysis of the observation results and a comparison to existing literature on leisure behavior and spatial aspects involved can be found in chapter three.



1

experience & behavior

fig. 1.1: Saturday market at Brabantse Turfmarkt, Delft

experience & behavior

As stated in the introduction, a focus on the purchase of products shifts to a focus on (the purchase of) experiences. This change calls for a different approach to shopping areas, which are often designed and managed with a focus on the (rational) purchase of goods. It calls for a new focus on experience, as a 'product' that can be purchased within the area, but also in a broader context of a shopping/leisure experience in which products may still be acquired. In this situation the purchase of a product is not the main goal of the shopping trip, but the shopping/leisure experience is. As such, it becomes a spatial design concern. To understand how a shopping/leisure experience can be designed, it is important to know what experience is and what factors influence it.

experience

Experience can be defined in multiple ways, depending on the context in which it is used. Schmitt (1999) defines it as "private events that occur in response to some stimulation" (p. 60). Driver (2003) describes it as "a psychological or physiological response to encountering something" (p. 168). Both definitions imply that experience can also be seen as an activity in relation to an object, which can also be found in the dictionary and is defined as "to encounter or undergo (an event or occurrence)" and more specifically "to feel (an emotion or sensation)" ("Experience," 2018). More abstract Pallasmaa (2014) calls experience "essentially an exchange and fusion of the object and the subject"(p. 20). Whilst these definitions come from different fields of expertise, they have one thing in common: an experience is a personal response to the environment. This implies that both the environment and the person having the experience play a role in the formation of the experience, but also that the experience in turn can influence the environment in which it is taking place (Ittelson et al., 1974, p. 12).

It is important to recognize the distinction between a lived experience and the memory of an experience. Whilst Pine II & Gilmore (2001) recognize that experiences, opposed

to goods or services, draw their value from their memorability, the enjoyment of the experience in the moment also proves to be important in the (recall of the) memory of the experience (pp. xxi & 17).

aspects influencing experience

The fields of environmental psychology, consumer behavior, urban sociology, cultural anthropology, and more, focus their research amongst other things on experience and behavior. Much of the research done by these fields focuses on behavior in relation to different aspects of the environment. Over the years, multiple theories and methods have been developed to measure and explain behavior. One of these is the stimulus - organism - response (S-O-R) model (Kleiber, Walker & Mannell, 2011, p. 23).The S-O-R model is used by researchers to explain the relationship between multiple environmental stimuli and a behavioral response (Kleiber et al., 2011, p. 23). Simply said, the S-O-R model implies that behavior is the response of an organism to a stimulus, but not a passive response (Ittelson et al., 1974, p. 12). The organism, its characteristics, and internal processes play a role in the way the objective environment influences the organism's behavior (Ittelson et al., 1974, p. 69; Kleiber et al., 2011, p. 23). Multiple stimuli, organism attributes, and types of responses can be included in the model, and may differ depending on the focus and field of research (Ittelson et al., 1974, p. 92). The amount of influence the different aspects have will also differ in various situations (Kleiber, et al., 2011, p. 25).

For this research, multiple inputs in this model have been combined, resulting in a version of the model that encompasses knowledge from environmental psychology, consumer behavior, and sociology. The multifaceted environment of the shopping area and the behavior and experience related to activity in this environment, calls for the inclusion of knowledge from all these areas. An overview of the aspects involved in this can be found in figure 1.3.

The name and setup of the stimulus-organism-response model imply a linearity in the order of aspects influencing each other. This is, however, a simplified model of reality that can be used to explain and analyze certain aspects in research (Ittelson et al., 1974, p. 92). The fact that the elements of this model are all part of one whole has to be kept in mind. Environmental stimuli are processed by the organism (person) and elicit behavior and experience as a response, but at the same time the behavior can be seen as an aspect and influence of the environmental stimuli (Bell et al., 2001, p. 7). This influence, combined with the experience of a person, also provides learning and feedback that will (subconsciously) be taken into account by the organism in subsequent processing of stimuli. (Ittelson et al., 1974, pp. 12, 13, 78 & 103)

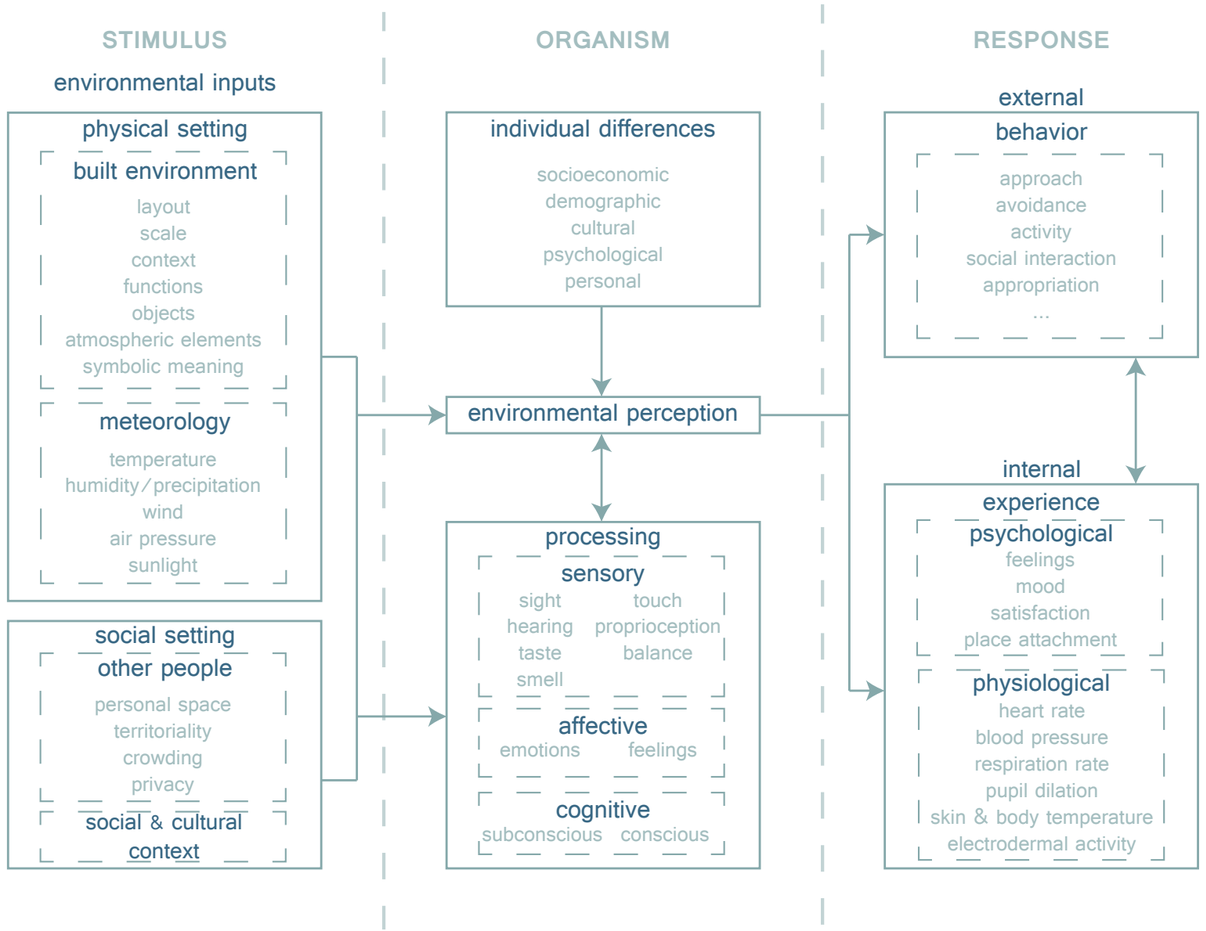


fig. 1.3: The relationships between different environmental stimuli, organism attributes, and possible responses

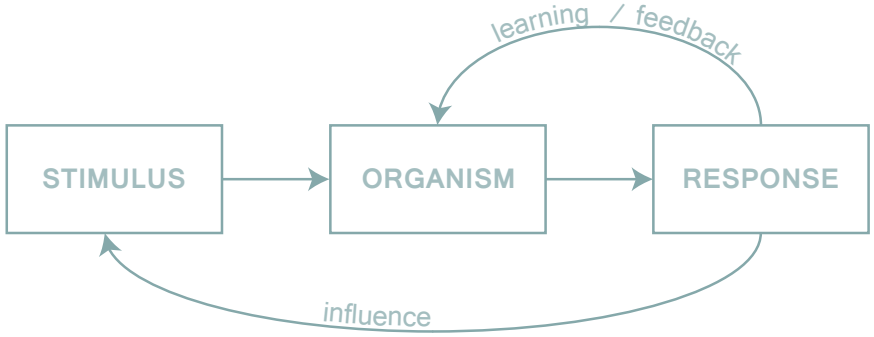


fig. 1.2: S-O-R model

In short, the presence of a person in a certain situation, and their interaction with the environment, results in a certain behavioral and experiential response, which in turn provides feedback and learning to the individual, and a change to the environment in which the behavior takes place. (Kleiber et al., 2011, p. 24; Ryan, 2003, p. 30)
Taking this into account, in the following sections the different elements and (spatial) aspects of interest in this research will be explained further in order to gain an understanding of their influence on behavior and experience (in shopping areas), using the S-O-R model as a guideline.

stimulus

Within the S-O-R model, environmental stimuli are seen as the 'input' in the experience of space. Bell et al. (2001) state that the environment consist of both a physical setting and a social setting (p. 51). This differentiation is echoed by Ittelson et al. (1974, p. 127). They, along with others, attest that the social setting, which consists of other individuals that are present in an environmental setting, as well as the social and cultural context consisting of internalized social rules, influences behavior (Canter & Kenny, 1975, p. 142; Ittelson et al., 1974, p. 71; Michaud Trévinal, 2014, pp. 16 & 20). They mention that there are several factors, related to the physical and social setting, that (subconsciously) influence people's behavior (Ittelson et al., 1974, pp. 85 & 130). Personal space and interpersonal distancing, territoriality, crowding, and privacy are seen as factors related to both the social and the physical setting that affect people's behavior and experience (Carter & Kenny, 1975, p. 146; Ittelson et al., 1974, p. 130). This entire social setting, but especially the presence and behavior of other people in the setting, is commonly seen as a large influencer of behavioral responses, especially due to our role as social beings (Canter & Kenny, 1975, p. 152; Ittelson et al., 1974, p. 13).

Besides the social setting, aspects of the physical setting play a role in the behavior and experience of the environment. The physical setting can be divided into two parts, the built environment and climate. Bell et al. (2001) state that the weather and other meteorological factors are aspects that shape behavior and experience of an environment (p. 168). Factors such as temperature, humidity, wind, air pressure, and sunlight have an effect on the way people respond to the environment (Bell et al., 2001, p. 170). Particularly in an outdoor environment this will be important, but these factors may also play a role in the experience of indoor environments, e.g., a building may be experienced as warmer if it is cold outside, or more pleasant if it can also be used as shelter from the rain.

The built environment consists of man-made structures, features, and facilities ("Built Environment," 2018). Different aspects of this environment shape the behavior and experience of a person within the environment. Multiple features of the environment, such as layout, scale, context, functions, objects, atmospheric elements, and symbolic meaning play a role

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The built environment consists of man-made structures, features, and facilities ("Built Environment," 2018). Different aspects of this environment shape the behavior and experience of a person within the environment. Multiple features of the environment, such as layout, scale, context, functions, objects, atmospheric elements, and symbolic meaning play a role in the experience of an environment (Bitner, 1992, pp. 65-66; Ittelson et al., 1974, pp. 85 & 90).

The multiple aspects of the built environment are both visual and non-visual. When designing spaces, the visual aspects, such as space, form, structure, scale, detail, and light, are often the main focus (Pallasmaa, 2014, p. 19). But atmospheric, non-visual, elements, like sounds, smells, temperature, and haptic qualities also play an important role in the experience of an environment (Borch, 2014, p. 7). Pallasmaa (2014) argues that these elements, and the multisensory processing and experience that they trigger, lead to the first impression people get from a space (p. 21). Berčík, Horská, Gálová, and Margianti (2016) add that these elements also directly trigger an emotional response (p. 96).

A close relation exists between the physical setting and the social setting, especially regarding the symbolic meaning of spaces (Ittelson et al., 1974, p. 90). The spatial aspects of an environment, combined with the intended and often implicit purpose of the setting and its users, usually have a symbolic meaning within a culture or social setting that influences the behavioral response (Ittelson et al., 1974, pp. 71 & 91; Michaud Trévinal, 2014, p. 20). In this, architecture as an object is part of the common language of a culture, conveying meaning through its specific design and history (Harteveld, 2014, pp. 539-540). These symbolic meanings also impact the expectations and evaluations people have of a space (Ittelson et al., 1974, p. 14). A library space is expected to be quiet, a bar is seen a place for people to socialize, also with strangers.

Together the environmental stimuli, especially the physical setting, can be seen as an objective or 'outer' world (Ittelson et al., 1974, p. 85; Kleiber et al., 2011, p. 23). These stimuli are the same for all people within the setting, although, as will be explained in the next paragraph, they are not all processed in the same way.

organism

The objective environmental world, as explained, consists of a wide range of stimuli. Most of these stimuli exist outside of our awareness, but all influence how we perceive, behave in, and experience the environment (Ittelson et al., 1974, p. 94). The stimuli are received and processed by organisms, in this case people, and integrated into a personal constructed, or perceived, environment (Ittelson et al., 1974, pp. 78 & 94). The construction of this perceived environment is influenced by different types of processing, and individual and collective differences.

First of all, it is important to realize that the processing of environmental stimuli is not a linear temporal process. Processing of stimuli happens on different levels at the same time. Complex flows of information from both the environment and within the person are pro-

cessed simultaneously and cause direct and delayed responses (Ittelson et al., 1974, p. 97; Krch, 2011). A distinction, however, can be made between different types of processing. Murray, Elms, and Teller (2015) speak of sensory, affective, and cognitive processing of environments (pp. 476 & 484).

Sensory processing is the direct processing of environmental stimuli picked up simultaneously by the familiar sense organs, eyes, ears, nose, tongue, and skin, but also the registration of body position, and movement. (Ittelson et al., 1974, p. 73; Mendoza, 2011; Pallasmaa, 2014, p. 34)

The second form of processing is affective processing. Affective processing concerns the emotions and feelings experienced in response to internal or external stimuli, and works very quickly (Holbrook & Hirschman, 1982, p. 133; Hughes, 2011).

Ittelson et al. (1974) call cognitive processing the most critical form of processing in relation to the structuring of the objective environment into the perceived one (p. 98). This processing consists of the conscious and subconscious ordering of external and internal information, and is most commonly linked to memory, learning, and thought generation. (Holbrook & Hirschman, 1982, pp. 133; Krch, 2011) When focusing on experience (both as knowledge from previous encounters, as well as the current encounter), especially the subconscious part of cognitive processing is thought to play an important role (Holbrook & Hirschman, 1982, p. 136).

The result of the selection, organization, integration, and interpretation of the different environmental stimuli, influenced by the interplay of the previously described sensory, affective, and cognitive processes, as well as multiple individual characteristics of people, is called environmental perception. (Berčík et al., 2016, p. 97; Bell et al., 2001, p. 57)

The individual characteristics of people differ from person to person. These differences can roughly be categorized as socioeconomic, demographic, cultural, psychological and personal, and encompass factors such as gender, age, occupation and income, lifestyle, different social roles, personality traits, previous experience, and memory. (Holbrook & Hirschman, 1982, p. 133; Ittelson et al., 1974, pp. 10 & 89; Reynolds & Wells, 1977, pp. 28 & 34)
Other important personal factors that are often taken into account in behavioral research in shopping are emotions and moods, which play a large role in the perception and experience of space (Babin et al., 1994, p. 647; Ittelson et al., 1974, p. 88; Jones, Reynolds & Arnold, 2006, p. 976), and motives and goals, that —together with the memory of previous experiences— prompt expectations, responsible for the regulation of behavior, and the evaluation and experience of spaces. (Bell et al., 2001, p. 59; Everts et al., 2011, p. 54; Inalhan & Finch, 2004, p. 123; Ittelson et al., 1974, p. 13; Kesari & Atulkar, 2016, p. 25; Reynolds & Wells, 1977, p. 28)

A distinction in motives often made within shopping research that highly affects spatial requirements, and behavior and experience, is between utilitarian and hedonic shopping motives. When shopping with a utilitarian motive, convenience and task completion are the most important goals. These people are thought to be driven by rationality and purpose, and accomplishment of their task, often the purchase of a product, is the main goal (Babin et al., 1994, p. 654; Kesari & Atulkar, 2016, p. 23). Babin et al. (1994) describe the behavior resulting from this motive as "shopping with a goal" (p. 647). In contrast, the hedonic shopping motive results in "shopping as a goal" behavior (Babin et al., 1994, p. 647). Entertainment, enjoyment, and recreation are important factors involved in this motive, which may also be satisfied by other services within shopping areas, like cafes or cultural events, and multisensory and affective stimuli and processes take the upper hand over rational cognitive processes. (Babin et al., 1994, p. 646; Kesari & Atulkar, 2016, p. 24)

In line with the distinction between utilitarian and hedonic shopping motives, but more closely related to shopping in Dutch shopping areas, Everts et al. (2011) make the distinction between three types of shopping motives: run (daily, convenient), fun (recreational), and goal oriented (specific product) shopping (p. 55). These different motives are directly tied to the spatial setup of traditional Dutch shopping areas, and show how intimately motive, behavior, and spatial setup can be tied together.

In short, objective environmental stimuli are received and processed by organisms, in this case people. The resulting perceived environment is subjective and influenced by individual differences in processing and personal characteristics. This perceived environment is the basis for response.

response

Responses are the 'output' of the processing of environmental stimuli by people. Ittelson et al. (1974) state that behavior and experience are the consequences of this process, and emphasize the close connection between the two responses (p. 83). In essence, behavior is the external (spatial) response, and experience the internal reaction to the environment (Buttimer, 1980, p. 96; Schmitt, 1999, p. 60).

Kleiber et al. (2011) define behavior as "those actions of the person that researchers can see and observe," emphasizing the externality of behavior (p. 26). Ittelson et al. (1974) stress the role of external stimuli and individual differences in characteristics and processing, stating that activities that constitute behavior are the result of interactions between these factors (p. 69). For the purpose of research, spatial behavior is often labeled as approach or avoidance behavior, categorized into specific activities, defined as a type of social interaction, or interpreted as appropriation of space. (Canter & Kenny, 1975, p. 143; Inalhan & Finch,

2004, p. 125; Murray et al., 2015, p. 476; Pallasmaa, 2014, p. 19) These different types of behavior are closely related to the experience of space. Itteson et al. (1974) state that emotional responses can initiate and guide behavior (p. 88), which is confirmed by Jones et al. (2006) who agree that "affective experiences can be important antecedents of approach or avoidance" (p. 976). Vice versa, behavior within a setting influences the emotional bonds with, and the experience of a place (Inalhan & Finch, 2004, p. 124).

Experience manifests itself in both physiological and psychological responses (Driver, 2003, p. 168). Physiological responses are bodily responses, such as changes in heart rate, blood pressure, breathing rate, pupil dilation, body temperature and sweating (Bell et al., 2001, p. 103; Berčík et al., 2016, p. 98; Bitner, 1992, p. 62). These responses are closely connected to psychological responses, such as emotions and feelings, and the measuring of physiological responses can be used to investigate people's experience (Berčík et al., 2016, p. 96).

When researching people's experience, which has earlier been defined as "to feel (an emotion or sensation)" ("Experience," 2018), their psychological response is often the main focus. Feelings and moods caused by stimuli, perception, and actions in a space give meaning to the space and the behavior displayed (Bell et al., 2001, p. 52; Ittelson et al., 1974, p. 88; Williams, 2003, pp. 5-6). These feelings, especially the positive ones, such as enjoyment, pleasure, and satisfaction, are important elements of shopping and leisure experience, and are caused by the fulfillment of different types of goals and expectations (Holbrook & Hirschman, 1982, p. 133; Kesari & Atulkar, 2016, p. 26; McIntyre, 2003, p. 144). If a place is able to repeatedly facilitate expected and desired behavior, an emotional bond is formed between the person and the environment, causing place attachment (Bell et al., 2001, pp. 51-52; Inalhan & Finch, 2004, p. 124).

Bell et al. (2001) emphasize the importance of the psychological response in the experience of space, stating that one often "can describe place in emotional terms" (pp. 35-36).

measuring experience

There are multiple ways of measuring spatial experience. Due to its internal nature, experience per se is hard to measure, but not impossible. The physiological responses that result from stimulus processing can be measured through different types of instruments, such as heart rate monitors, electrodermal activity sensors, close video recordings of pupil dilation and eye tracking, and even brain scanners (Berčík et al., 2016, pp. 96 & 98). These types of measurements are, however, usually tied to controlled environments and set up as part of fixed experiments. Another way of measuring internal responses is through surveys, directly asking people about their experience. This method can be very subjective and can easily yield unreliable results, due to the discrepancy between what people may say and what they may actually feel. The different types of processing of stimuli and the thinking needed to formulate answers to questions, may produce rationalized and unreliable results (Berčík et al., 2016, p. 96).

Michaud Trévinal (2014) states that behavior can be an indication and representation of lived experience (pp. 15 & 31). Researchers in, amongst others, the fields of environmental psychology, and urban sociology, use the observation of environmental behavior as a research method. Ittelson et al. (1974) state that "man-environment relationships will have to be studied in their natural ongoing settings in the context of everyday life" in order to gain an understanding of the spatial experience of that person in that place (p. 95). To gain a full understanding of the experience of a place a combination method measuring all three types of responses would be most inclusive, but is —depending on the research goal and scope— not always possible.

2

space & behavior

fig. 2.1: Korte Lijnbaan, Rotterdam

space & behavior

The behavior and experience of a person in an environment are closely linked to the physical setting in which a person is present. As stated in the previous chapter, environmental inputs —stimuli— are processed by people —organisms. Because of a wide variety of individual characteristics, environmental perception is highly subjective, yet often the response to an environment, expressed in behavior and experiences, can contain similarities. In order to gain an understanding of the spatial elements involved in the experience of shopping areas observations of behavior can be used. The interaction of people with their environment in a natural setting —not a controlled experiment— can provide information on how people experience the area.

Observation of behavior in a natural setting as a research method has previously been used by researchers like William Whyte in the 1970s and Jan Gehl in more recent years. Their use of observation of behavior in the built environment as a measure for experience, as opposed to questioning people about their experience, can be motivated in multiple ways. For one, as explained in chapter one, the (subconscious) experience of an environment is processed on a different level than the conscious understanding needed to answer questions about it. Whyte (1980) attests to this, mentioning that people's responses to questionnaires did not always match the observed behavior carried out (p. 19). The feelings that are inherent to experience cannot easily be justified in connection to aspects of the built environment. Using behavior as an external response closely related to experience, this need for personal rationalization is avoided. This method also leaves room for the analysis of behavioral similarities in response to the built environment, which may indicate an intersubjectivity of perception and experience of a setting.

For this research, three observations have been carried out in inner city shopping areas. Shopping areas in The Hague, Rotterdam, and Delft are used as sites to explore the interaction between people and their environment. In this chapter, the three observation sites will be described in terms of space and observed behavior.

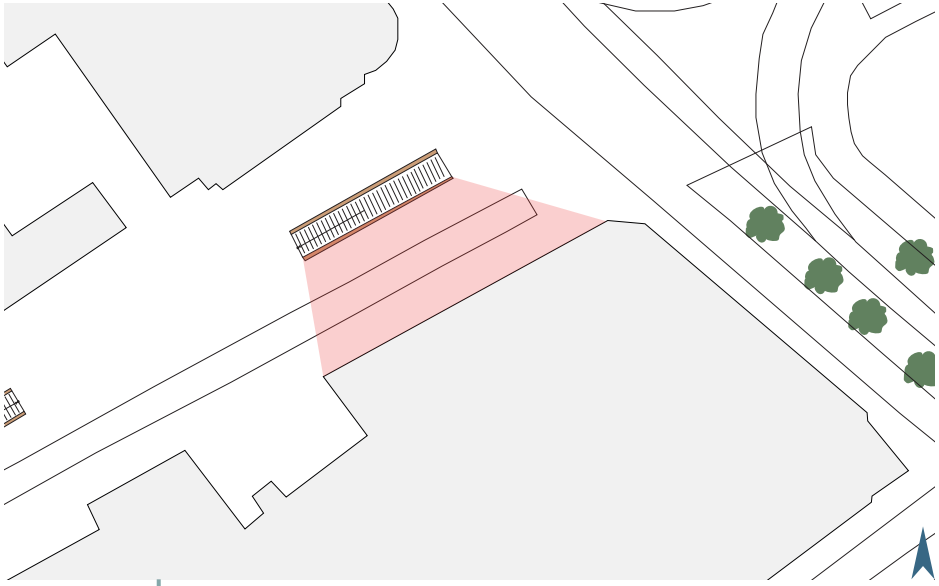


fig. 2.2: Observed area of Grote Marktstraat, The Hague 1:1000

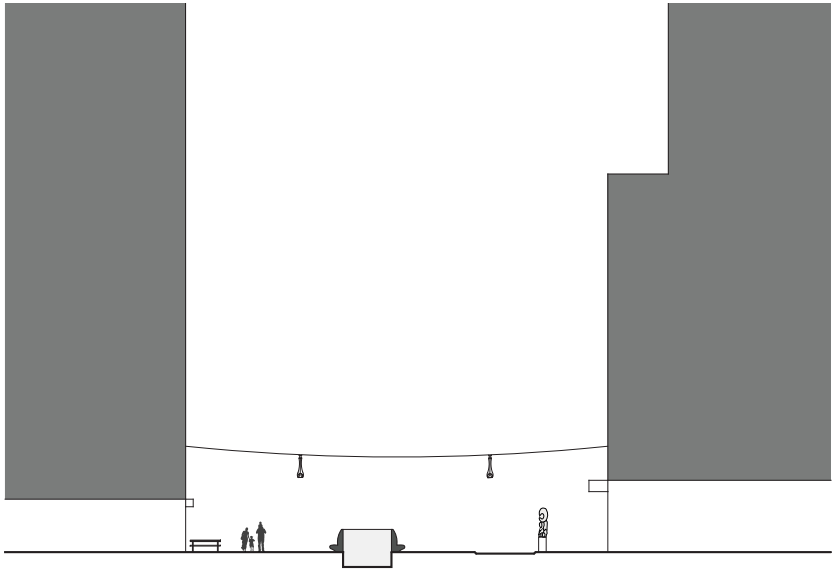


fig. 2.3: Section of the observed area Grote Marktstraat, The Hague 1:500

The Hague

Grote Marktstraat

The Grote Marktstraat is a shopping street located in the city center of The Hague, one of the biggest cities of the Netherlands. Surrounded on all sides by shopping streets, the Grote Marktstraat is located a bit on the edge of the main shopping area of the city, which also performs a regional function. Some housing can be found in the direct vicinity, but public functions, such as stores, the public library, and the city hall, as well as government buildings, form the main focus of the area.

The area is well connected, and accessible by car, bike, foot, and public transport. Parking garages can be found nearby, and a metro runs and stops directly under the street. On street level there are tram stops a few minutes away on the Spui and the Kalvermarkt. It is only a ten minute walk to The Hague central train station, and a few minutes longer to Hollands Spoor train station.

space & behavior

The Grote Marktstraat, a 28 meter wide street lined with stores and other amenities on both sides, fits its place in one of the largest cities in the country. The scale of the street and adjacent buildings provides ample space for shopping and leisure activities. Along the length of the street a variety of building blocks can be found, the border often opening up to large side streets. The wide space of the street is separated into three parts, a four meter wide bike lane cutting through the pedestrian zone, consequently creating a five meter wide sidewalk on one side, and a nineteen meter wide walking zone on the other side.

The observed area of the street stretches from the intersection of the Spui and the Grote Marktstraat up to the stairs leading to the Pathé movie theater. At this spot, the street is bordered by 30 meter high buildings, housing, amongst other things, McDonalds on one side, and TK Maxx and ONLY on the other side. At street level, the facades are rhythmically structured and open, with large glass shop fronts only separated by small strips of brick. The vastness of space both on the horizontal and vertical planes, is reduced by the placement of different objects. On the street, a staircase leading down to the underground metro station is located in the middle of the space, a metal bench wrapped around the two long sides. The hard material of the bench is offset by a more organic shape, curved lines form the seat and back, and cut out circles allow for a lighter appearance. Trashcans are integrated into the design, forming one element in the space. Above the bench, in lieu of lampposts lining the streets, at a height of about six meters, lamps are hung from wires spanning between the buildings on either side of the street, creating an upper boundary for the space.

Along the entire length of the bench, people are seated and carrying out different activities in small groups or alone. The bench is used for talking, eating, smoking, and just resting the feet before carrying on with other activities. Its placement directly in front of the TK Maxx and ONLY entrances also causes people use it as a spot to wait until friends are done shopping, or to pack bags.

The many people seated on the bench have a dynamic view. The slower pace of pedestrians using the sidewalk along the buildings is offset by cyclists —and the occasional emergency services vehicle— speeding along the bike lane. The glass shop fronts of TK Maxx and ONLY reflect the colors of the buildings on the other side of the street, and the people on the other side of the bench, whilst also providing a view into the stores. An extra window above the ground level store fronts provides room for signage, allowing for a more open shop window at eye level, displaying some products, but mostly providing a view deeper into the store.

In contrast, the materialization of the street is more homogeneous. Hard materials cover both the street surface and the facade. The wide pedestrian zone of the street is paved with large grey stones, a smaller grey stone covers the bike lane, and the sidewalk is paved with bricks. Different sizes, angles, and a small height difference for the bike lane break up the repetitiveness. This is also the case in the facade. A difference in angles of windows and a dynamic pattern in the brickwork counteract the homogeneity of the largely closed surface of the facade starting from the first floor.

Besides sight, other senses are also activated during a visit to the area. As the weather is nice, the outdoor terrace at McDonalds provides a background noise of chatting people, and the occasional tram bell rings from the intersection with the Spui.

In general, most pedestrians use the sidewalk in front of TK Maxx, walking at different speeds, glancing into the windows of TK Maxx and ONLY. The bike lane is busy with people going in both directions.

observations

Thursday June 8th, 2017
15.45-16.30

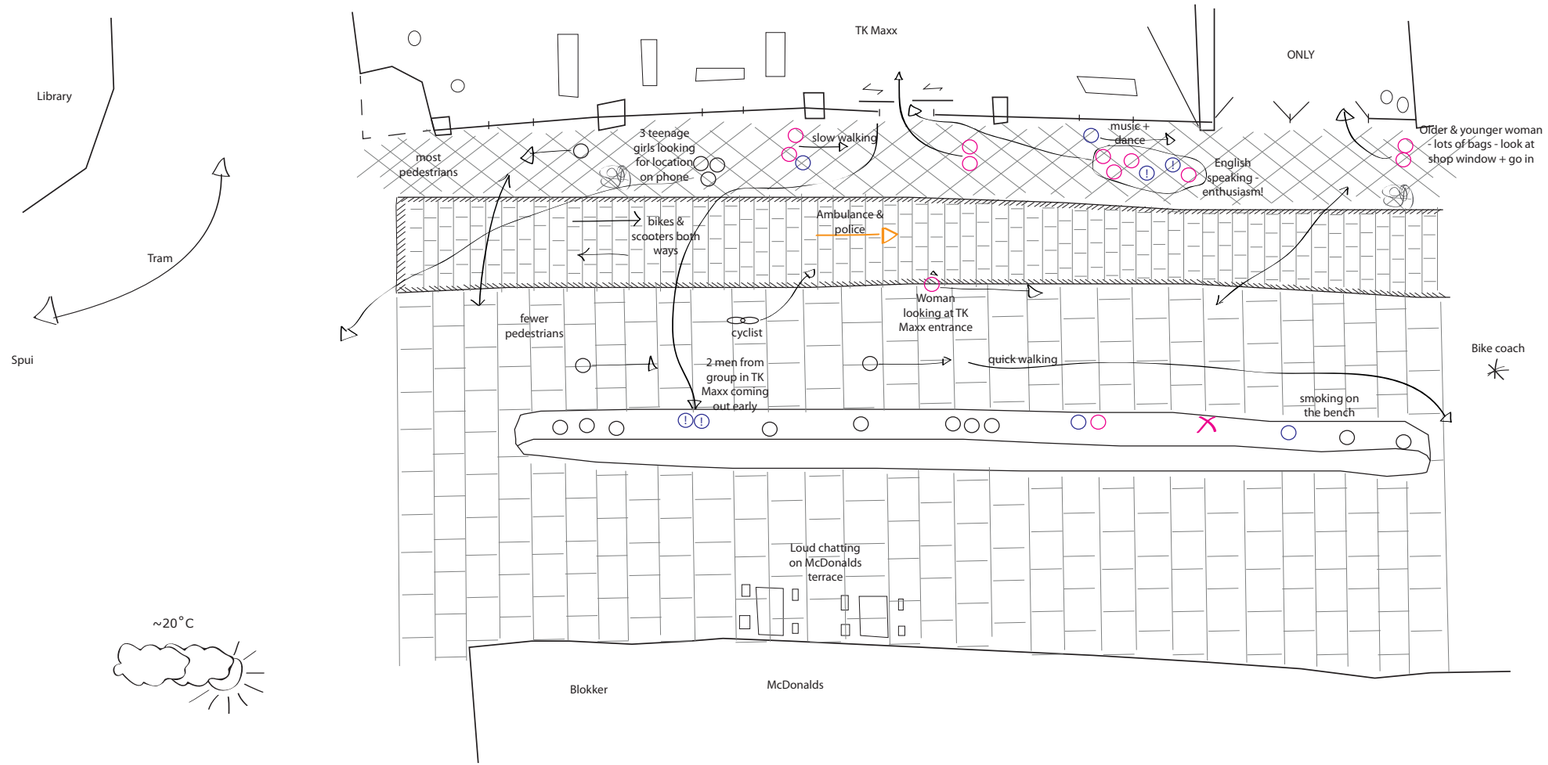


fig. 2.4 : Notes taken during observation in The Hague

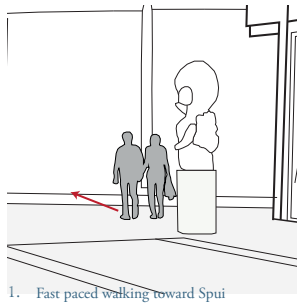
fig. 2.5: People in the observed area of the Grote Marktstraat, The Hague

fig. 2.6: People in the observed area of the Grote Marktstraat, The Hague

fig. 2.6: People in the observed area of the Grote Marktstraat, The Hague

fig. 2.7: Behavior in context, The Hague

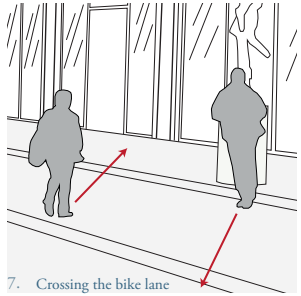
fig. 2.8: Photo taken during observation in the Grote Markstraat, The Hague



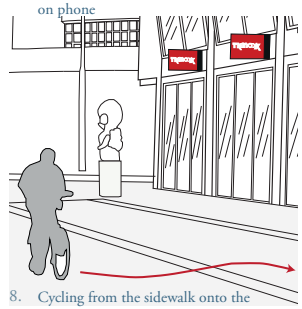
1. Fast paced walking toward Spui

2. Stopping to search for a specific location on phone

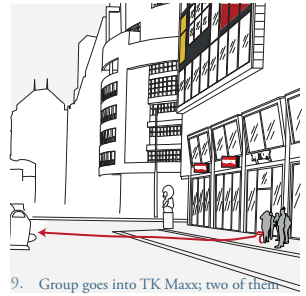
3. Restyling hair



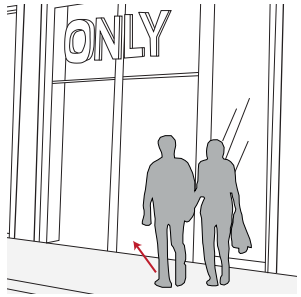
7. Crossing the bike lane



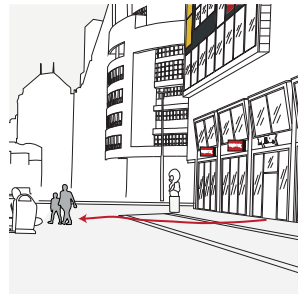
8. Cycling from the sidewalk onto the bike lane



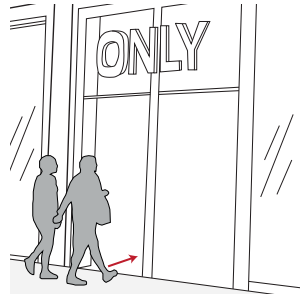
9. Group goes into TK Maxx; two of them come back out and wait on bench



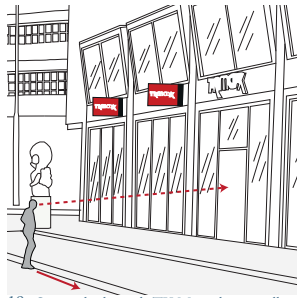
13. Look into ONLY shop window and go in



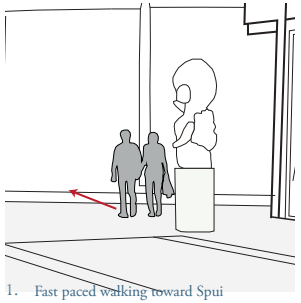
14. Walk out of TK Maxx toward bench carrying clothes; bagging at bench



15. Look at TK Maxx shop window; go into ONLY



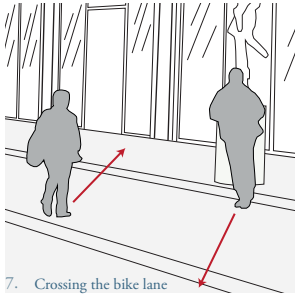
19. Stop to look inside TK Maxx doors; walk on



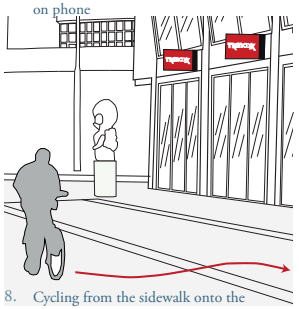
1. Fast paced walking toward Spui

2. Stopping to search for a specific location on phone

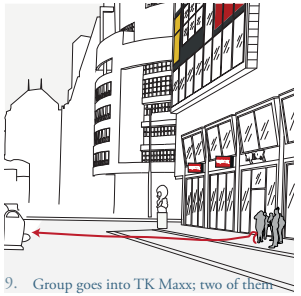
3. Restyling hair



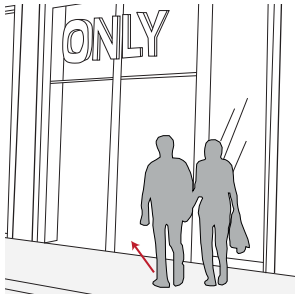
7. Crossing the bike lane



8. Cycling from the sidewalk onto the bike lane



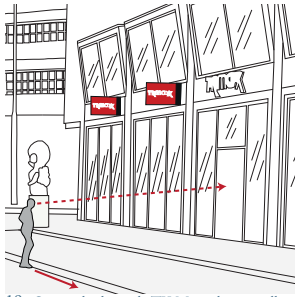
9. Group goes into TK Maxx; two of them come back out and wait on bench



13. Look into ONLY shop window and go in

14. Walk out of TK Maxx toward bench carrying clothes; bagging at bench

15. Look at TK Maxx shop window; go into ONLY

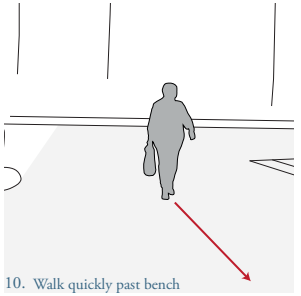


19. Stop to look inside TK Maxx doors; walk on

4. Slowly walking past TK Maxx doors

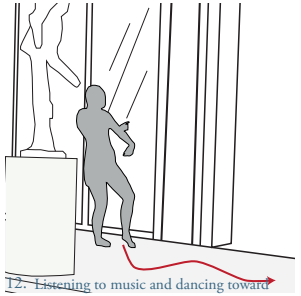
5. Walking into TK Maxx

6. Going into TK Maxx

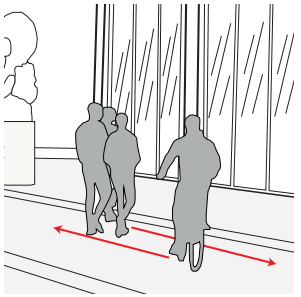


10. Walk quickly past bench

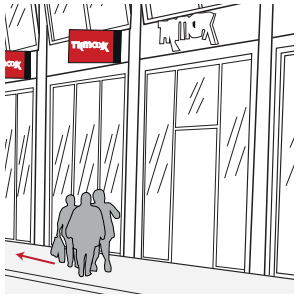
11. Sitting on bench, smoking



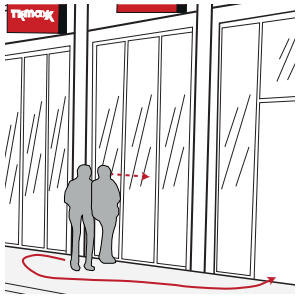
12. Listening to music and dancing toward Grote Marktstraat



16. Walking on bike lane; scooter honks horn



17. Stopping in front of TK Maxx; continue walking toward Spui



18. Look into TK Maxx window; continue walking toward Spui; back up and go in

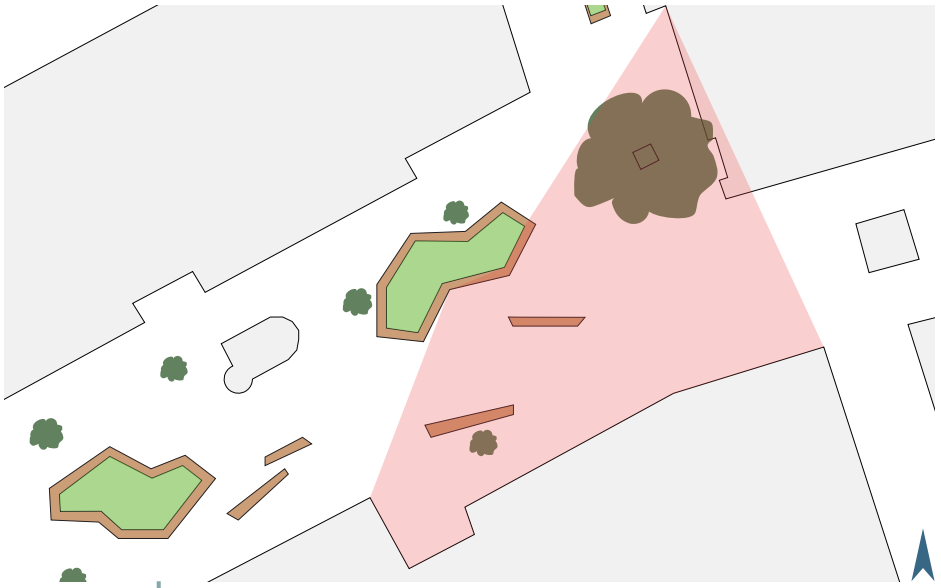


fig. 2.9: Observed area of Binnenwegplein, Rotterdam 1:1000

fig. 2.10 & 2.11: Sections of the observed area Binnenwegplein, Rotterdam 1:500

Rotterdam

Binnenwegplein

Binnenwegplein is a wide shopping street with a square located in the city center of Rotterdam, the second biggest city of the Netherlands. The shopping area of which the street and square are part is largely a pedestrian zone, of which Binnenwegplein is located on the south edge. Multiple different leisure functions, like casinos, museums, movie theaters, restaurants, and the Markthal can be found close by, as well as buildings important for the city, such as the city hall, Rotterdam tourist information, the public library, offices, and educational institutes.

Just outside of this main shopping area are some of the main traffic routes through the city, for cars and bikes, as well as public transport. The extensive metro network of Rotterdam has a main junction just a few minutes away, and for regional shoppers both Rotterdam Central and Blaak train stations are located at a walk that takes less than fifteen minutes, and one can find multiple parking garages even closer by.

space & behavior

At the intersection of the Lijnbaan and Binnenwegplein a square, measuring approximately 30 by 50 meters, is formed. It is lined with shops on all sides, just like the adjacent streets. Buildings directly surrounding the square measure from seven to sixteen meters, a variety in their appearance caused both by these height differences, their materialization and the use of awnings and setbacks in the facade.

The observed part of the square bridges the area from MSCH to Sevenply, and the bench from which the observations have taken place. Surveying this area from one side to the other, a variety of buildings, space, and objects can be found. The building which houses the MSCH and Urban Outfitters, both clothing stores, is the lowest of the buildings surrounding the square, and the facade above the first floor is set back a few meters, making it appear even smaller. A large tree provides shade directly in front of the stores. Following the stretching pavement to the right, a small food stand is located a small distance further along the Binnenwegplein, its fruits and vegetables displayed in crates in front of the little building, and signs advertising the different bargains are placed near.

Along the southern edge of the square, a building with a variety of stores on different levels is located. On the ground floor large windows provide a view at the window displays of Kruidvat, and the ANWB store. The views into stores are interrupted by the escalators up to the Bristol and Zeeman stores on the first floor, as well as the windows of Fogan that have been covered by colorful posters advertising their one euro sale. The Sevenply entrance is set

back a little from the main line of the facade and less visible from the bench.

Overall, the area fits the size of the city, with its stretching stone pavement and the large buildings filled with big chain stores. Despite this, there is a variety in the streetviews provided by the different building blocks which vary in materialization and height, the use of multiple benches, differing in size and shape, the use of green, the addition of a small 'messy' market stand, and multiple objects like trashcans, lampposts, advertisements, and greenery. Store signage provides pops of color contrasting the grey tones of the facades and pavement.

There is also a diverse use of space. Different activities are taking place in the area, with people walking across the square in different places, but also along the store facades before going in. One of the benches has been built around a large planter, housing small trees that provide shading from the sun, which many people take advantage of, since the sun is high and hot in the sky. The other benches are left mostly unoccupied.

observations

Wednesday, June 14th, 2017
15.25 - 16.10

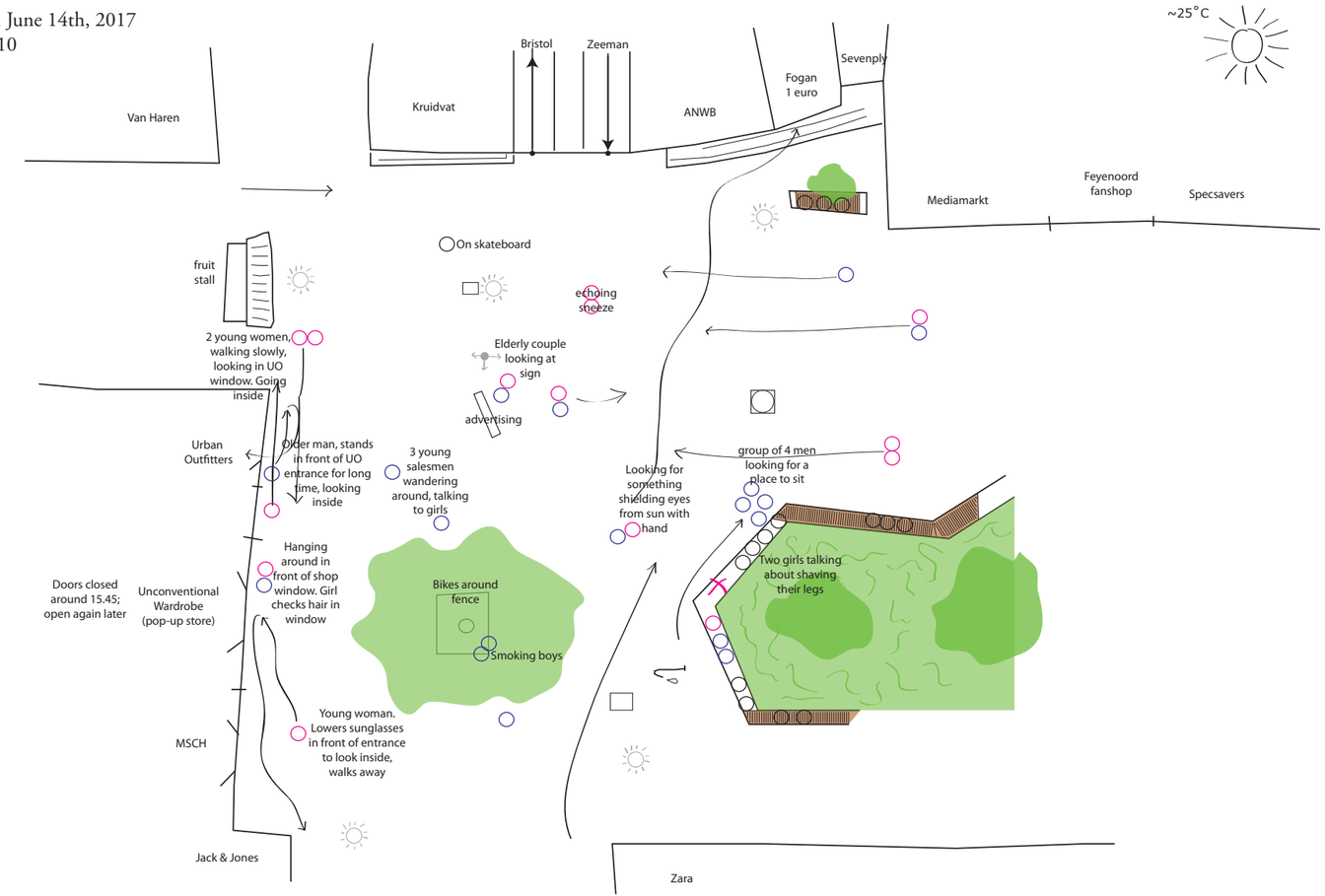


fig. 2.12: Notes taken during observation in Rotterdam

fig. 2.13: Photo taken during observation at Binnenwegplein, Rotterdam

fig. 2.14: Part of the observed area of Binnenwegplein, Rotterdam

fig. 2.14: Part of the observed area of Binnenwegplein, Rotterdam

fig. 2.15: Behavior in context, Rotterdam

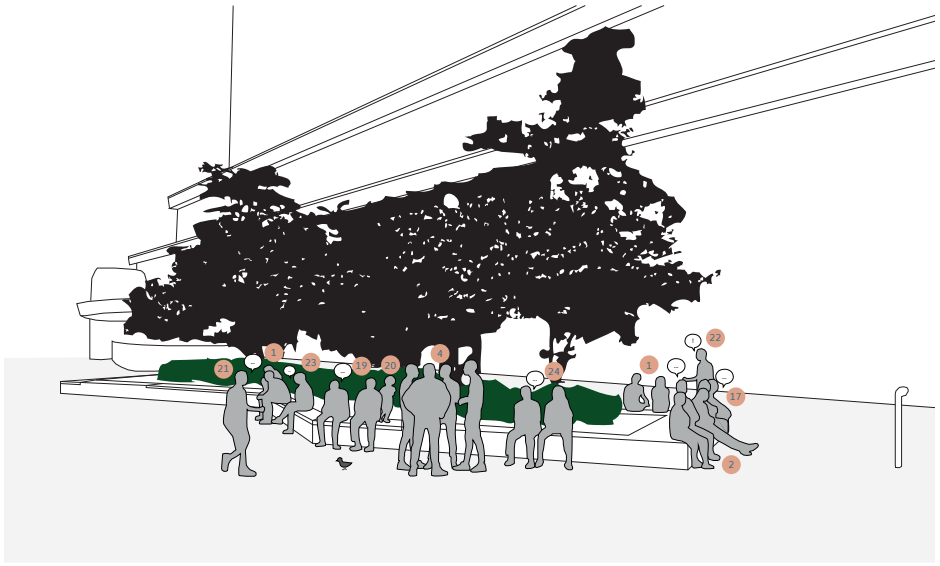
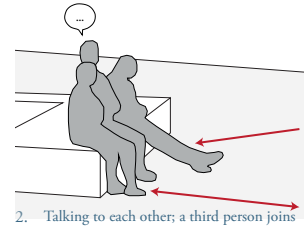
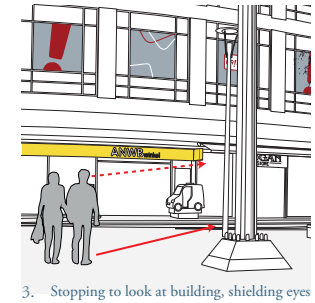


fig. 2.16: Behavior in context, Rotterdam

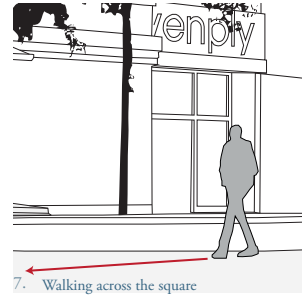
1. Sitting on bench



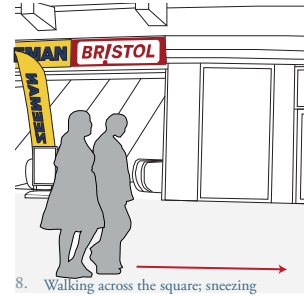
2. Talking to each other; a third person joins in on the conversation



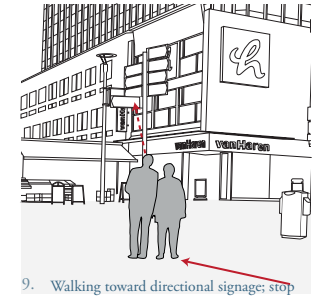
3. Stopping to look at building, shielding eyes from sun; go into Fogan



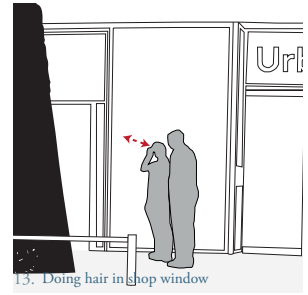
7. Walking across the square



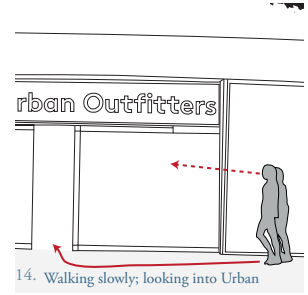
8. Walking across the square; sneezing



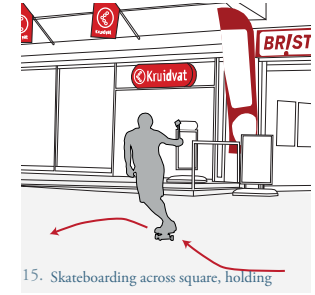
9. Walking toward directional signage; stop and look up at sign



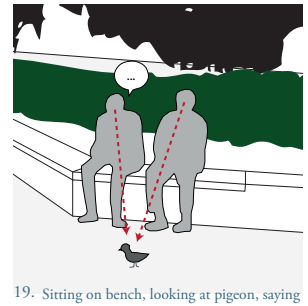
13. Doing hair in shop window



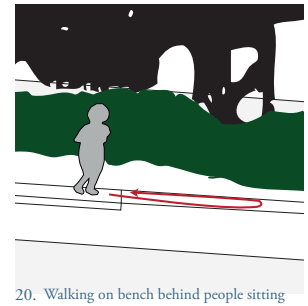
14. Walking slowly; looking into Urban Outfitters; go in



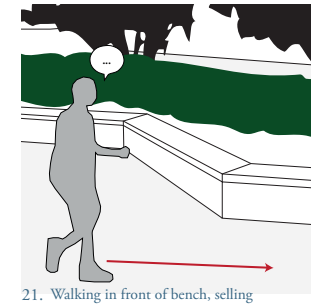
15. Skateboarding across square, holding selfie stick



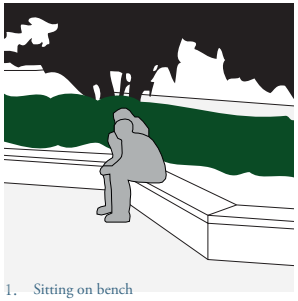
19. Sitting on bench, looking at pigeon, saying 'kutvogels'



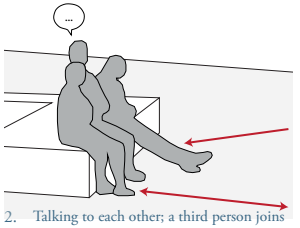
20. Walking on bench behind people sitting on bench



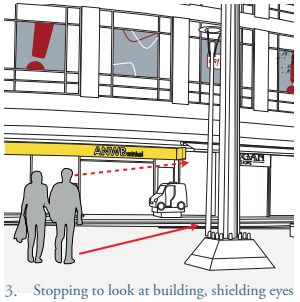
21. Walking in front of bench, selling 'Straatkrant'



1. Sitting on bench

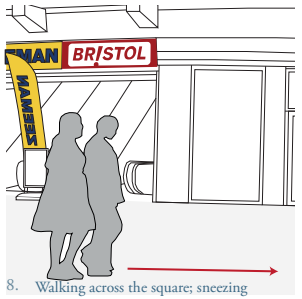


2. Talking to each other; a third person joins in on the conversation

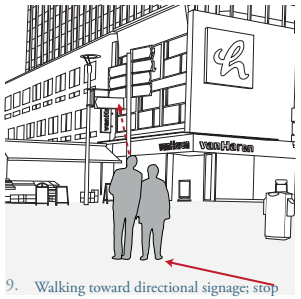


3. Stopping to look at building, shielding eyes from sun; go into Fogan

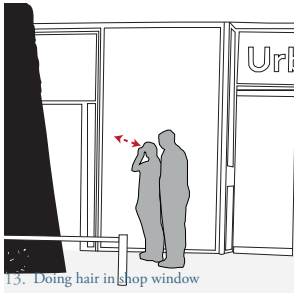
7. Walking across the square



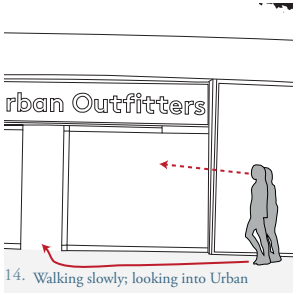
8. Walking across the square; sneezing



9. Walking toward directional signage; stop and look up at sign

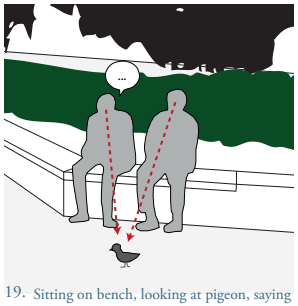


13. Doing hair in shop window

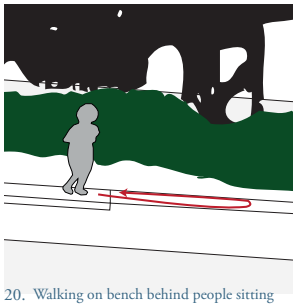


14. Walking slowly; looking into Urban Outfitters; go in

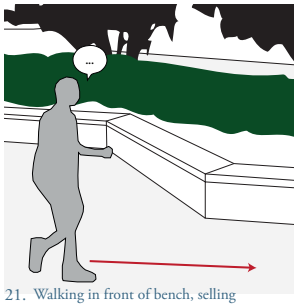
15. Skateboarding across square, holding selfie stick



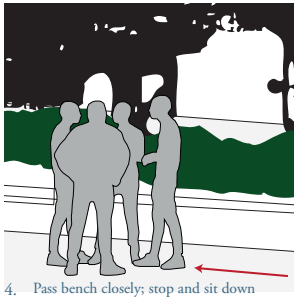
19. Sitting on bench, looking at pigeon, saying 'kutvogels'



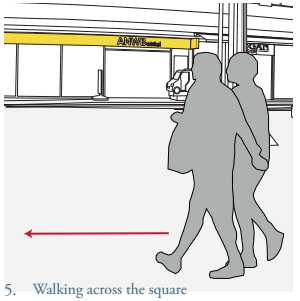
20. Walking on bench behind people sitting on bench



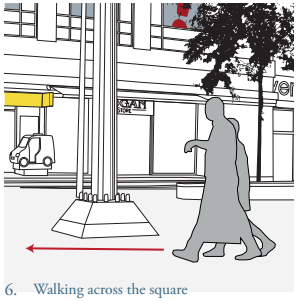
21. Walking in front of bench, selling 'Straatkrant'



4. Pass bench closely; stop and sit down on bench

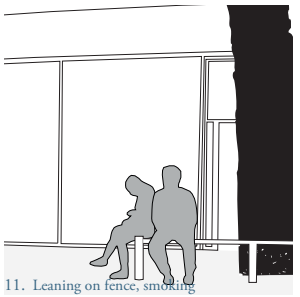


5. Walking across the square

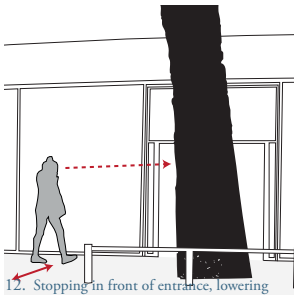


6. Walking across the square

10. Wandering around between tree & sign, talking to girls

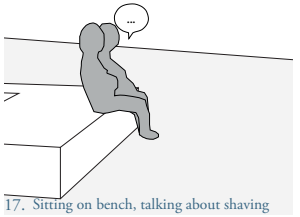


11. Leaning on fence, smoking

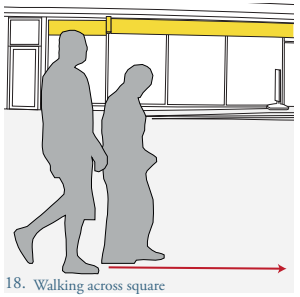


12. Stopping in front of entrance, lowering sunglasses; walk away

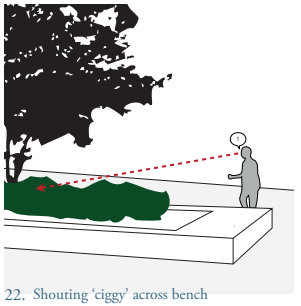
16. Standing in front of UO entrance, looking in; walking away; turn back



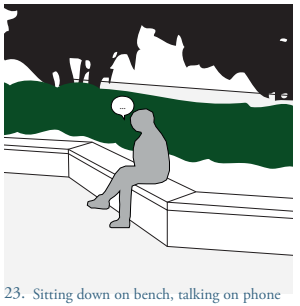
17. Sitting on bench, talking about shaving legs



18. Walking across square



22. Shouting 'ciggy' across bench



23. Sitting down on bench, talking on phone

24. Sitting on bench, talking about shopping, money, and personal things

fig. 2.17: Observed area of Bastiaansplein, Delft 1:1000

fig. 2.18: Section of the observed area Bastiaansplein, Delft 1:500

Delft

Bastiaansplein

Bastiaansplein is a square located on the south edge of the city center of Delft. The shopping area of Delft stretches out over a large part of the small city center, and consists mostly of pedestrian zones. A diversity of housing, shops, restaurants, and schools can be found in the city center, in which the different functions are often mixed in the same areas. Due to its location on the edge of the city center, Bastiaansplein is surrounded by different areas on all sides. On the west side more public functions can be found, such as the public library, a theater, and a movie theater. On the east it is bordered by housing. Towards the north, stretching into the city center, shopping streets connect the square to the rest of the shopping area. The south border of the city center is made up of one of the main traffic routes of the city.

Bastiaansplein is well connected. Just off the main traffic route a parking garage is located under the square, with stairways and elevators directly connecting to the square. A bus stop is located just outside the south border of the square, and people traveling by train can reach the square by foot in less than ten minutes, a route which takes one through the rest of the shopping area. Both pedestrians and cyclists can easily reach the square from all sides.

space & behavior

Bastiaansplein measures approximately 50 by 70 meters, but this space is broken up by the placement of escalators leading to the parking garage beneath the square, and a small restaurant placed between the escalators. A roof structure, partly covered in glass, partly in greenery, covers these escalators. The size and placement of these structures divide the square into a small street leading along the north side, and a smaller square, measuring about 30 by 70 meters, on the south side. Three large metal planters with large trees and partly lined with wooden benches have been placed on the square, breaking up the space even more. Their organic shapes form a contrast to the orthogonality of the square, and break up the stretching surface of brick paving, which covers not only the square, but stretches into the side streets and rest of the city center as well.

Buildings surround Bastiaansplein on all four sides, ranging in height from nine to twenty meters. A mix of functions can be found in these buildings, the lower two floors are reserved for stores, whilst the upper floors house dwellings.

Taking a closer look at the observed area, which stretches from The Sting to H&M, the buildings lining the square are very homogeneous. The same materials and grid have been used for both buildings, although there is a variation in height, placement of balconies and roof

terraces. On the ground floor level, different sized stores are located, presenting themselves to the square in different ways. The transparent store fronts all follow the same grid, but one cannot look all the way into The Sting, H&M, and Athlete's foot. Their store fronts have been partially closed off to the store, making room for window displays and more product space inside. The interiors of Amac and Esprit are fully open to the view of passersby, and the Xenos ground floor is only used as an entrance area —with some product display and storage— housing stairs, escalators, and an elevator leading up to the first floor store.

The closed off parts of the facade on the first floor, where windows follow the grid but are not used as such, provide pops of color in the form of advertisements and signage. A perspective street drawing of the old university library does the same, and also adds interest to the surface of the square.

Multiple objects are placed around the square, most notably planters with benches, directional signage, and lots of bicycles. Small zones around the square have been marked with purple lines indicating bicycle parking areas, but all edges of the square with closed facades are used as bicycle parking, and when it starts to rain they also appear along the edge of the planters.

The square is used in multiple different ways. Crossing the square from one side to the other is a common activity, and so is standing and talking along the edges of the square, near the benches, and being seated on the benches. When it starts raining, one of the main activities is taking shelter. People find their way to entrance areas of stores, like the Xenos and H&M, and take cover under the roof structures covering the parking garage entrances.

observations

Friday, September 29th, 2017
17.20 - 17.40

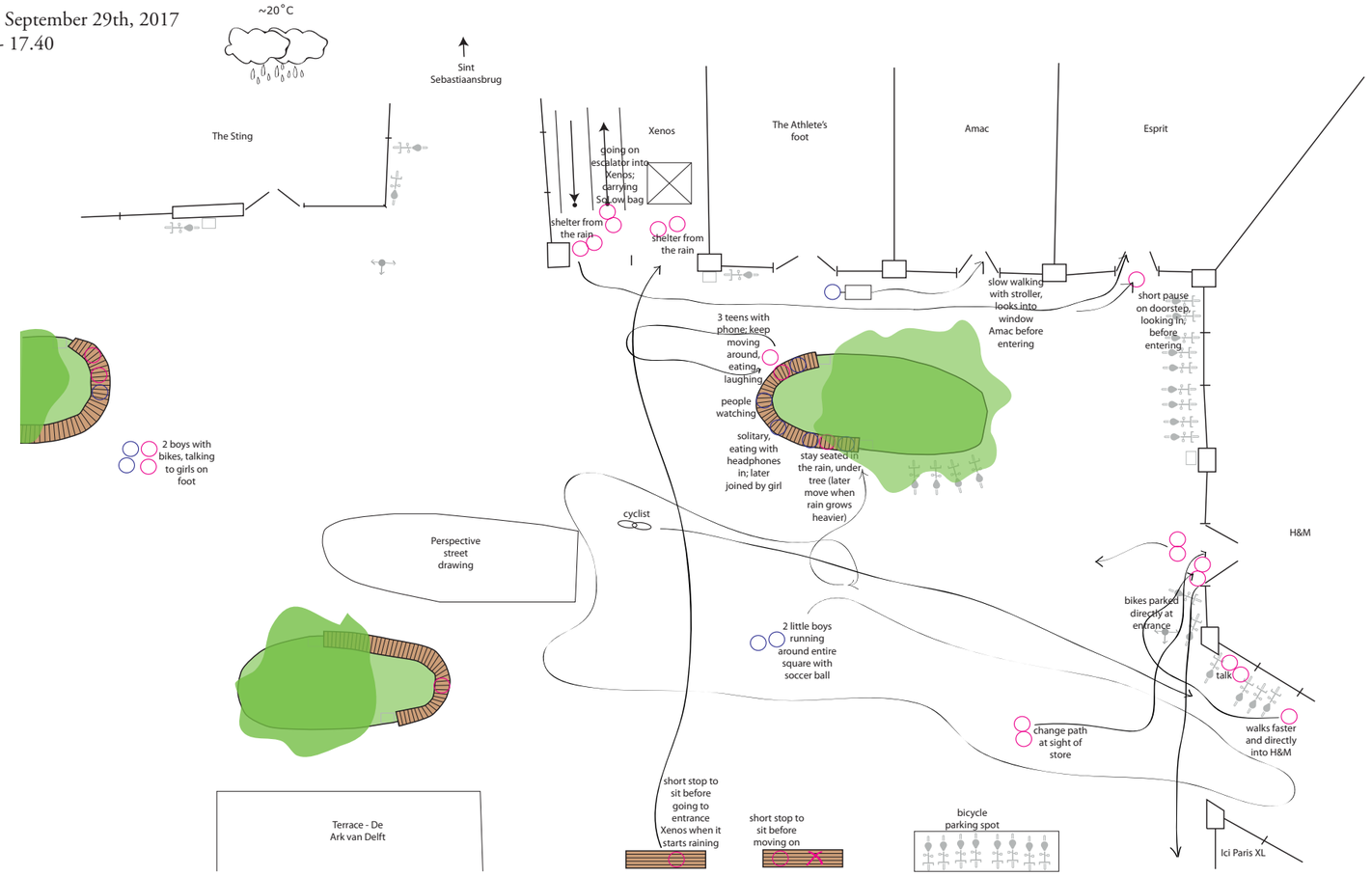


fig. 2.19: Notes taken during observation in Delft

fig. 2.20: A corner of Bastiaansplein, Delft

fig. 2.21: Bastiaansplein, Delft during observation

fig. 2.21: Bastiaansplein, Delft during observation

fig. 2.22: Behavior in context, Delft

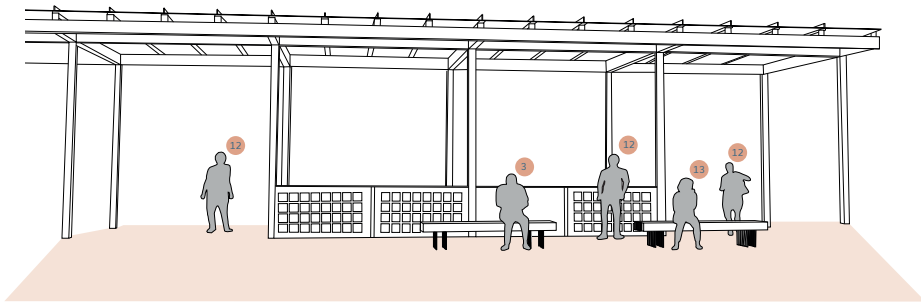
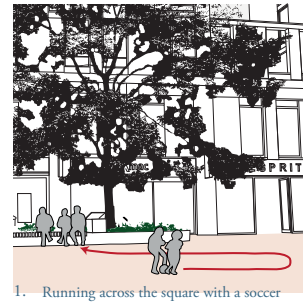
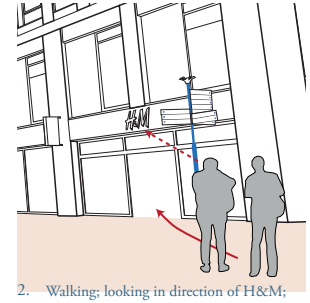


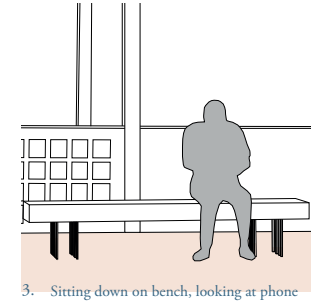
fig. 2.23: Behavior in context, Delft



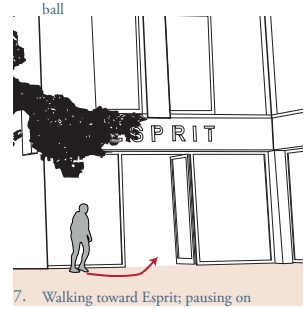
1. Running across the square with a soccer ball



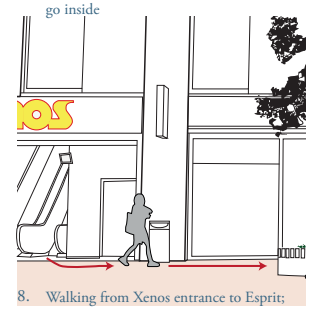
2. Walking; looking in direction of H&M; go inside



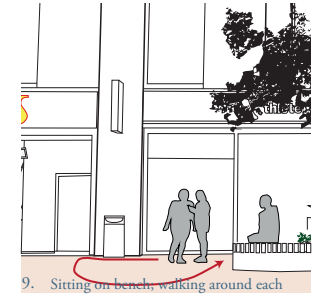
3. Sitting down on bench, looking at phone



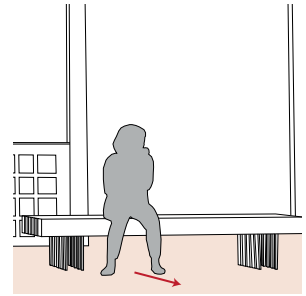
7. Walking toward Esprit; pausing on doorstep; go inside



8. Walking from Xenos entrance to Esprit; go inside



9. Sitting on bench, walking around each other, eating, talking, laughing

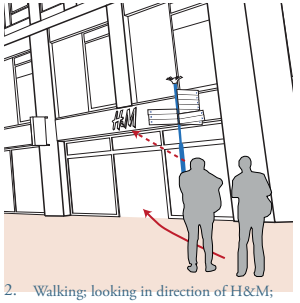


13. Sitting on bench; walking toward Xenos when it starts to rain

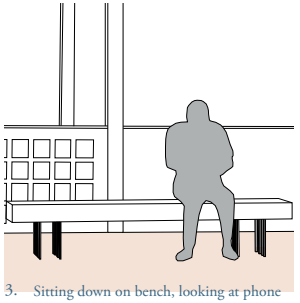
14. Standing on doorstep of H&M, watching the rain

15. Standing near window, talking

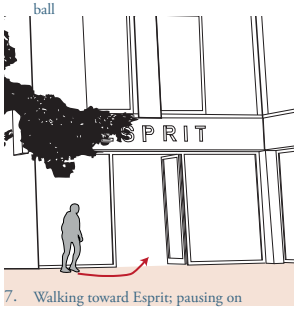
1. Running across the square with a soccer ball



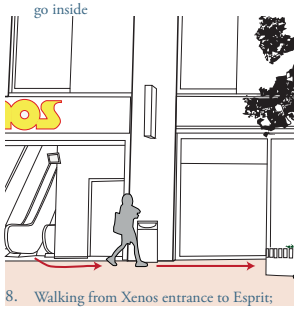
2. Walking; looking in direction of H&M; go inside



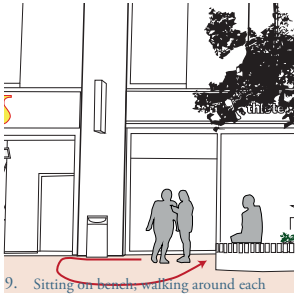
3. Sitting down on bench, looking at phone



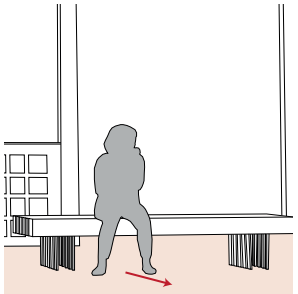
7. Walking toward Esprit; pausing on doorstep; go inside



8. Walking from Xenos entrance to Esprit; go inside

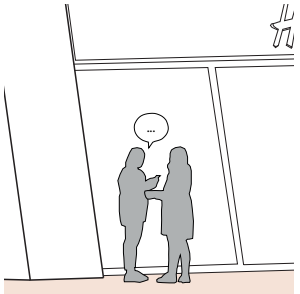


9. Sitting on bench, walking around each other, eating, talking, laughing



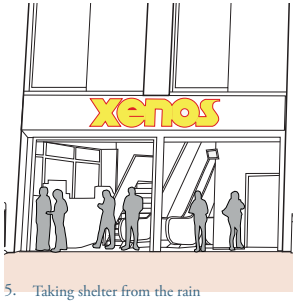
13. Sitting on bench; walking toward Xenos when it starts to rain

14. Standing on doorstep of H&M, watching the rain

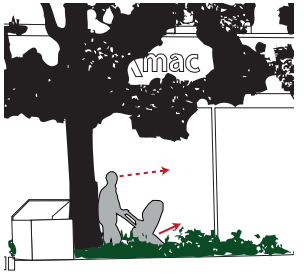


15. Standing near window, talking

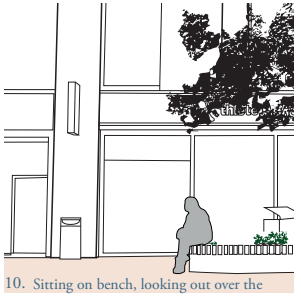
4. Standing near bench, talking



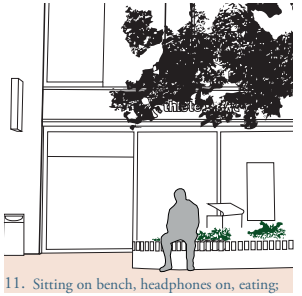
5. Taking shelter from the rain



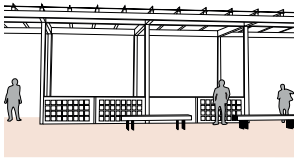
6. Walking slowly in front of ~~stores, looking~~ in; go into Amac



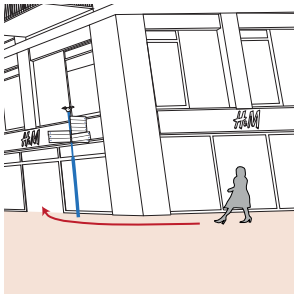
10. Sitting on bench, looking out over the square



11. Sitting on bench, headphones on, eating; walking away with someone else



12. Moving away from the rain



16. Walking toward H&M; go inside

3

space & experience

fig. 3.1: Vestpoort, Delft

space & experience

Experience is influenced by both environmental stimuli present in a certain setting, as well as the individual characteristics of the person having the experience. As stated in chapter one, environmental stimuli consist of both the physical setting and the social setting, whilst the processing and perception of these stimuli are influenced by individual differences. The subsequent experience, expressed in behavior, is thus highly subjective. The observations in chapter two, as well as previous research, show that despite the existence of individual differences and their effect on perception, experience, and behavior, similarities in behavior within an environment can be found. This implies that the environmental stimuli themselves also play a significant role in the response to a setting.

Whilst the significance of the wholeness and interplay of the physical setting, the social setting, and individual characteristics cannot be neglected, focusing on analysis of behavior in relation to environmental stimuli —more specifically, the analysis of leisure behavior in relation to different spatial aspects of the built environment— is necessary to acquire knowledge on the role of these aspects in the experience of space.

This chapter focuses on the analysis of the observed behavior, as described in chapter two, in relation to the spatial aspects of the different shopping areas. To be able to explore the relationship between different spatial aspects and their influence on leisure behavior and experience, first the concepts leisure behavior and experience are defined. After framing what consists of leisure behavior, the observed behavior will be filtered, and then categorized according to the spatial elements that elicit this behavior. Further analysis of the spatial elements and their specific properties, as well as the different behaviors directly related to these properties, will be carried out. Examinations of previous research on spatial characteristics of leisure space will be used to verify and expand these findings.

leisure

Leisure can be defined as “uncoerced activity undertaken during free time” (Stebbins, 2013, p. 4). In essence, all voluntary activities one engages in outside of work or other obligations can be classified as leisure activities, and a distinction can be made between casual and serious leisure (Stebbins, 2013, p. 6). This leaves a very wide range of behavior that can be classified as ‘leisure behavior’.

When taking a closer look at leisure experience, however, this range can be narrowed down, as other factors besides time and attitude also become important. As stated in chapter one, experience can be defined as feelings or mood as a response to encountering something. Leisure experience is closely related to feelings of satisfaction, pleasure, and enjoyment as a result of the fulfillment of a certain desire or need through recreational engagements (Driver, 2003, p. 168; McIntyre, 2003, p. 144; Stebbins, 2013, p. 6)

But other criteria than just need fulfillment can also play a role. Leisure experience is also closely connected to feelings of freedom, of having a choice, of not being bound by time, money, or other restrictions (Driver, 2003, p. 168). Loss of self, separation, or escape can also be tied to leisure (McIntyre, 2003, p. 144). Ryan (2003) mentions that leisure behavior can also be mindless or spontaneous (p. 29). He states that certain situations involve a more automatic response to various aspects of a setting, which one does not have to think about (Ryan, 2003, p. 29)

Rational thought does not play a role in leisure behavior and experiences, instead, affective processing and feelings take the upper hand in influencing behavior.

Most commonly, leisure is related to activities related to play, relaxation, entertainment, social interactions, and sensory stimulation (Stebbins, 2013, p. 10). Shopping also falls into these categories, albeit only the specific form of ‘recreational shopping’ that does not call for rational thinking, but feeling and spontaneity (Kooijman, 1999, p. 12).

Environmental factors also play a role in the enabling of leisure behavior and experience. When acting upon the motive to fulfill certain needs or desires, the environment should have the suitable components to achieve this fulfillment. If the environment is not suitable, behavior is inhibited (Ryan, 2003, p. 29). On the other hand, the environment can also elicit spontaneous behaviors, and provoke feelings of freedom, choice, and escape.

fig. 3.2: Paradijspoort, Delft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xenos
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analysis of observations

An analysis of the observed behaviors with the definition and characteristics of leisure behavior and experience mentioned previously, indicates that not all observed behavior can be categorized as leisure. Due to the location of the observations in inner city shopping areas, as well as the mix of functions present in the areas, not all people present in the area are there for leisure purposes. People may just be passing through the area with a different intent, or may be shopping with a different purpose than recreation.

Following from the previous section, the following criteria have been determined to be characteristics of leisure behavior, and have been used to test the observed behaviors:

1. Satisfactory need fulfillment (related to play/relaxation/entertainment/sensory stimulation/pleasure)
2. Spontaneity
3. Mindlessness
4. Taking time
5. Freedom of choice
6. Social interaction

Testing the observed behaviors to these criteria, similarities in leisure activities in all observed shopping areas can be found. Slow walking and sitting on benches imply relaxation, and not being pressured by time constraints. Looking into shop windows and subsequently visiting the store signify a spontaneity, and a freedom of choice. People moving in groups are taking part in social interactions.

Due to the restrictions of observation some behaviors, such as taking shelter from the rain in Delft, have been excluded from the list of leisure activities. They may very well be part of a leisure activity spanning over a longer period of time, but at the moment of observation did not meet the set criteria for leisure behavior.

After establishing which of the observed behaviors constitute as leisure, they have been analyzed in relation to the more generic behavioral terms of approach, avoidance, activity, social interaction, and appropriation, mentioned in chapter one. The relationship between these behaviors and their interaction with different spatial elements forms the basis of the framework of spatial aspects influencing the shopping/leisure experience.


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spatial elements

Taking a closer look at the spatial elements involved in the behavioral responses mentioned in chapter one —approach, avoidance, activity, social interaction, and appropriation— and the observed behavior described in chapter two, the spatial elements can be categorized as: facade, space, and objects.

These elements and their properties all play a role in leisure behavior in these shopping areas, albeit different roles. An overview of the observed behaviors and the spatial elements they interact with can be found on the previous page and under the foldout.
When comparing the behaviors not only to general behavioral responses, but also to the criteria for leisure experience mentioned in the previous section, conclusions can be drawn about the influence of the different spatial elements and the role they play in shopping/leisure experience.

In general, the facade and its different properties can be seen to play a role in need fulfillment and spontaneity. People approach the facade and go into the stores after looking into the shop windows or at the signage, also when they have been walking into a different direction. Some people even walk past and then back up to approach. This implies that the decision to approach is spontaneous and triggered by something seen. People that approach more purposefully suggest to have a certain need to fulfill, and the signage on the facade shows that it can be done here.

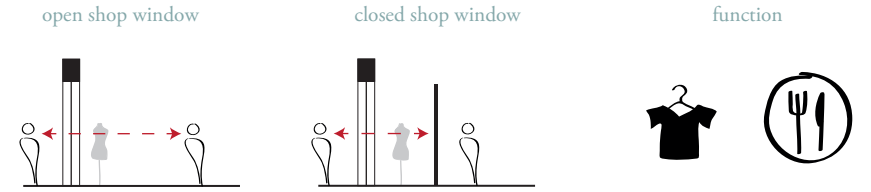
Space plays a different role in leisure behavior. Depending on its dimensions, and proportions it provides room for people to take their time walking around, a freedom to follow different trajectories, and also to stop and talk to other people.

The final category of spatial elements, objects, can, depending on their specific properties, meet all the criteria of leisure experience. Benches can just fulfill the need to sit down, but can also play a role in social interaction. Directional signage can inspire people to spontaneously go somewhere.

In the following sections, these spatial elements, their properties, and the corresponding observed general behaviors will be described, linked to, and, if necessary, supplemented by existing literature.

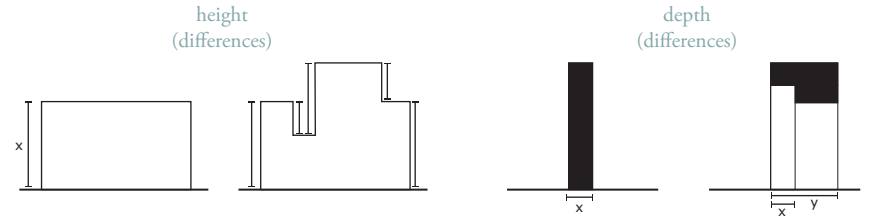
Openness

Behind facade

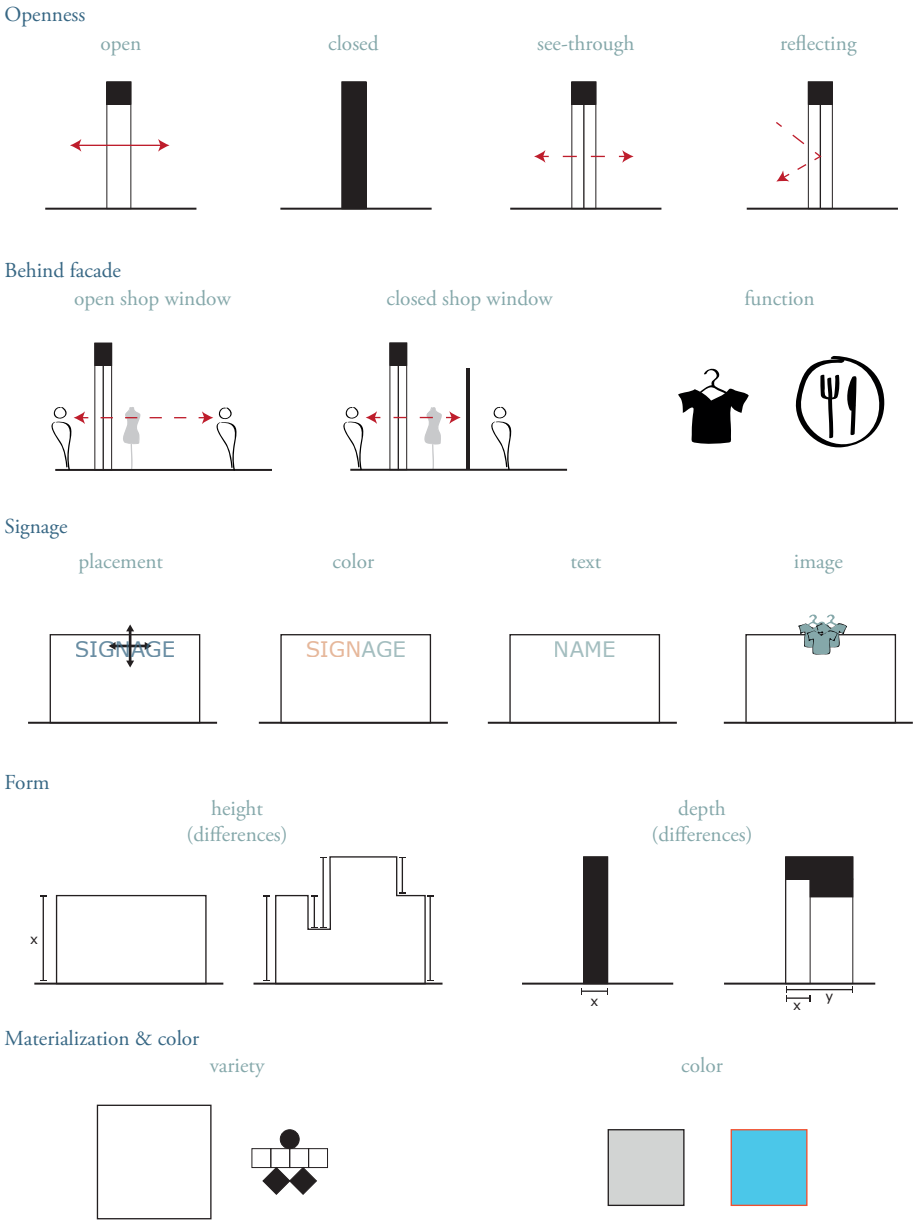


Signage

Form



Materialization & color



facade

observed

The facade plays an important role in different types of behavioral interactions in the observed behaviors in the shopping areas. The most common behaviors connected to this spatial element are approach, avoidance, and activity. Multiple people look into shop windows before approaching stores and going inside, and on two occasions people were fixing their hair in the window reflection.

These behaviors, amongst others, imply that different properties of the facade influence people's behavior. Different levels of openness of the facade facilitate the actions of looking in and going in, whilst without the reflective property of the windows, one would not be able to use it to fix their hair.

Not only the openness of the facade, but also what is behind the facade plays a role in this behavior. Attractive visible store interiors or shop windows may cause people to approach, as well as the type of function the building houses.

Signage on the facade also plays a role. It communicates both function and suitability of the function to people from a further distance and can thus elicit both approach and avoidance behaviors.

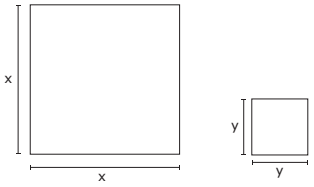
literature

These findings from the observations are also supported by previous research. Whyte (1980) mentions transparency and types of facade openings as influencers of behavior and experience (pp. 79-80). The tight connection between properties of the exterior and interior, like signage and function, is acknowledged by Kooijman (1999), who states that signage is an important clue to the function of the building and the way it may fulfill the need of the person looking at it (p. 15).

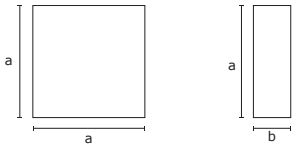
Additionally, Harteveld (2006) mentions the use of awnings and colonnades as ways to soften the transition from outside to inside, implying that the form of the facade is also an influential property (p. 130). Gehl & Koch (2011) confirm this, stating that "good cities for staying out in have irregular facades" (p. 153). As opposed to just the depth of a facade, the height also plays a role in experience. The human scale is an important factor in the relationship between building and person, implying that facades that differ too much from this may be avoided (Kooijman, 1999, p. 131).

Spatiality

dimensions

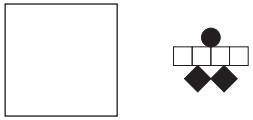


proportions



Materialization & color

variety



hardness

color

Boundaries

structure

height difference

object

Function

bike lane

pedestrian zone

street

space

observed

The role of space and its properties is less obviously observable than the interaction with the facade. Space is everywhere, so interacting with it is inevitable. However, different behaviors can be linked to use of space. Multiple types of activities, appropriation and social interaction depend on the properties of the space in which they are taking place. Streets and squares have specific dimensions and materializations that inhibit or enable certain types of activities, and the boundaries by which the space is formed are important factors in approach and avoidance behavior. These boundaries can be found in all planes of space, as seen in the observations in Delft, where the roofing structure and trees provided cover from the rain.

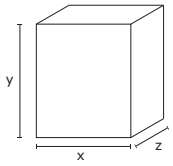
When space is divided into zones for different users, boundaries like small height differences, together with the function of the different zones, also elicit certain behaviors, like the bike lane in The Hague, which most people avoided walking on in favor of the sidewalk and pedestrian zone on either side.

literature

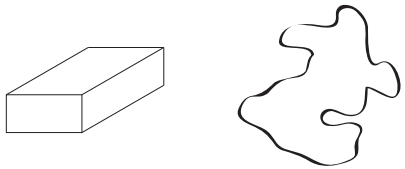
Previously done research confirms the influence of these properties of space. Although Whyte (1980, pp. 26-27) states that the shape and amount of space do not play the largest role in use of space, Kooijman (1999) mentions the importance of the width and length of a street in the experience of space (p. 143). The influence of (partial) enclosure of space by means of different types of boundaries in all planes, is acknowledged by Whyte (1980), who states that “a sense of enclosure contributes to the enjoyment of space”(p. 26) and that certain boundaries can provide shelter from different elements, such as sun, wind, and rain (pp. 44 & 100). This is confirmed by Gehl & Koch (2011), who also mention height differences as a potential space edge (pp. 142 & 173). Materialization of surfaces, and the direction and variety of the materials, is mentioned by Kooijman (1999) in relation to shopping areas (p. 141).

Spatiality

dimensions

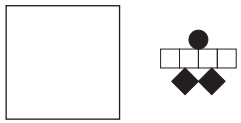


form



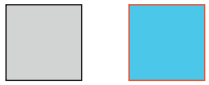
Materialization & color

variety



hardness

color



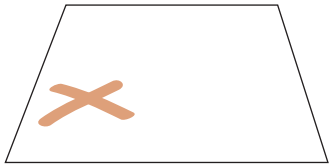
Function

bench

tree

directional signage

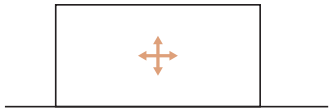
Placement



Adaptability

immovable

movable



objects

observed

Different objects found in shopping areas also play a role in leisure behavior. Most notably, benches placed in these areas are observed to be good places to perform different leisure activities. People eat, drink, smoke, talk, and wait on benches, either alone or in groups. Their specific dimensions, materialization and combinations with other objects, such as trees, make them fit for spending time in all types of weather. Other objects, such as directional signage, trash cans, lampposts and other street furniture can also be part of the leisure experience, by fulfilling different needs that may otherwise be distracting from this experience. Placement of objects is important. A bench situated with a nice view is more attractive than a spot with a view of a closed facade. Objects play a role both in the direct interaction of people with the object, as well as provide an interesting scene to look at, especially if the objects are not fixed to their spot.

literature

Literature confirms the influence of different objects on leisure experience. Gehl & Koch (2011) and Whyte (1980, pp. 32 & 100) both extensively discuss the importance of seating in public leisure space, stressing the importance of the right dimensions and materials for comfortable social and leisure experiences. Placement of this seating is also mentioned by both, indicating that it is an important factor for their use and experience, and specific to the setting in which they are placed (Gehl & Koch, 2011, p. 157; Whyte, 1980, p. 28).

The use of greenery, water, and sculptures as objects in leisure space is mentioned by Kooijman (1999, p. 141). These objects are interesting to look or talk about, and the natural changes in greenery throughout the year provide a fresh experience every time. Lastly, adaptability, and especially movability of objects to fulfill people's needs is mentioned by Whyte (1980), who acknowledges people's desire for freedom and choice when, for example, one is trying to find the best place to sit (pp. 34-35). If the object is movable, one can freely choose the right placement for their purpose.

designing for experience

research conclusion

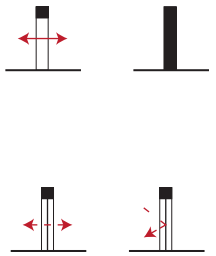
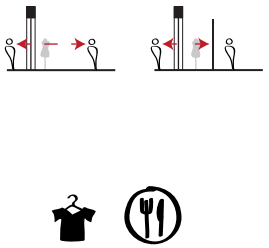
Inner city shopping areas have an important role in the attractiveness, vitality and livability of the city. A high vacancy rate in these areas negatively impacts its surroundings, in which safety and experience are compromised by lack of activity and passersby, as well as physical decay of buildings and their direct surroundings.

Different aspects of the built environment play an important role in experience. As stated in chapter one, experience is an internal response to environmental stimuli, which can be perceived in different ways by different people. The external response to these stimuli, in close relation to the experience, is behavior. Observed behavior can thus be used as a measurement of experience.

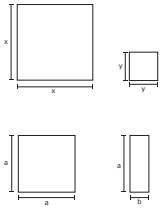
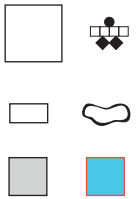
Analysis of observations of people's interaction with their spatial surroundings in Dutch inner city shopping areas on the basis of general behavioral responses and specific leisure experience criteria, show that different spatial aspects are directly involved in eliciting leisure behavior.

Answering the research question 'which spatial aspects of Dutch inner city shopping areas influence the shopping/leisure experience?' the following pages contain a design framework of spatial elements and their properties that have been found significant.

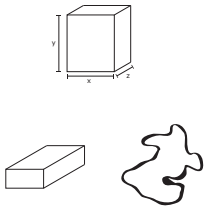
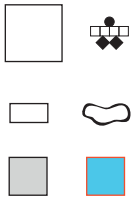
FACADE

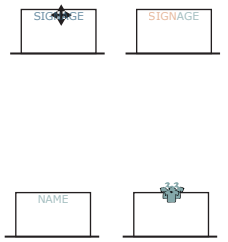
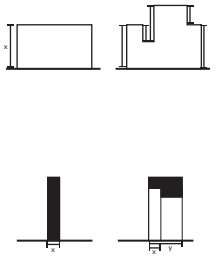
openness	behind facade
	

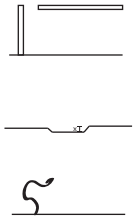
SPACE

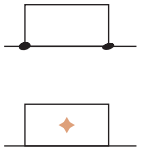
spatiality	materialization&color
	

OBJECTS

spatiality	materialization&color
	

signage	form	materialization&color
		

boundaries	function	
		

function	placement	adaptability
		

design brief

Following from the awareness that a shift from purchase of products to (the purchase of) experiences calls for a different approach to the design of shopping areas, in which a mix of different leisure and entertainment functions come together, a specific design brief can be formed.

In restoring and/or improving the experience of shopping areas, both this emphasis on a mix of leisure functions, as well as location specific conditions form the basis of a new programme.

This knowledge, together with the spatial aspects that have been found to influence shopping/leisure behavior concluded from this research, are both elements that should be implemented in the design process.

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image references

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