Rotterdam Zuidplein
bridging the gap between the local and the regional

Reflection report.

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October, 2013
Problem Statement

The Rotterdam Zuidplein is a clash of functions. The municipality designated this as a city core for the locals; a place for them to live, meet, interact, recreate, etc. At the same time, the area functions on a larger scale, the scale of the region, as a transport hub, with an average of 70,000 visitors to the hub every day. These two aspects, the centre for locals and the transport hub for the regionals, seem to exist parallel to each other, without interacting with each other; they do not profit from each others potentials.

A physical barrier, a gap, exists between the transport hub and the neighbourhoods around it, separating the locals from the regionals and preventing them from interacting and benefit from each other’s potential.

Analysis showed that this gap between the transport hub and the neighbourhoods is not so much due to strictly functional problems, but is mostly a result of morphological and perceptual problems. Earlier studies have concluded that people do not use the public space around the transport hub, as they perceived the space as ‘unsafe, messy, and ugly’. This is a language that as an architect you’d like to refrain from using, since it has no scientific backing, but it did indicate where problems were to be found.

Goal

The ultimate goal of the project was to bring these two aspects (the area as a city core, and the area as a transport hub) together; to design an intervention that bridges the gap between the local and the regional, tying them together and have them benefit each other.

This was a rather conceptual manner of speaking. More specifically, it meant I tried to instigate a pedestrian flow between the Zuidplein area and the surrounding neighbourhoods, physically connecting the two and bringing together both local residents and people coming from further away. On an urban level, a restructuring of the public space was required to solve problems in the way people perceive the area.

Architecturally and programmatically, the goal was to balance a mix of both local program (such as residential units, small-scale shops) and more regionally interesting program (such as a theatre, a restaurant/cafe catering to the Ahoy visitors), and to have the traffic flows of both target groups intertwine and lead them alongside each other.

Relevance in a wider context

Although the city of Rotterdam has a large potential, and is considered a great city by many, its public space is severely lacking. The city is rather monofunctional, it shows predictable and only necessary activity patterns, and pedestrian traffic is low outside a few dedicated busy shopping streets.

In order to make the city attractive to everyone, and to turn it into a highly liveable world class city, it needs to develop its public environment, and the relationship between program and public outdoor activity. Rather than attempting to redevelop large areas from the ground up, like it has done in the past, it needs to revitalize the public space by means of small interventions respecting already present potentials and tying in with properties of the urban fabric, rather than counteracting it. This makes for a much more sustainable and economically viable urban planning, and increases its chances of success.

This project used the case of Rotterdam Zuidplein to investigate how relatively small architectural interventions can achieve big results on an urban level. It researched on relation between architectural form, programmatic planning and public outdoor activity, and it shows an example of how it can be done in the Rotterdam Zuidplein area.
Analysis approach

In order to bridge this gap, and come up with an intervention that was relatively small in scale but large in impact, I needed to rely on what was already present in the area.

In the past, the area has been subjected to many top-down urban planning approaches, neither of which have seemed to fulfill its goals. My main approach was to do as little urban planning as possible, and try to rely on what was already there: using the location’s properties in my advantage. Even some of the bad ones, I should try to embrace them and accept them, rather than try to counteract them.

The result of this approach has been two-sided. In hindsight I must admit that I have not been able to fully implement this approach. The proposed urban plan is much larger than initially intended, and requires quite a lot of restructuring and even demolishing of parts of the existing urban fabric. This goes against the initial idea of ‘an intervention that was relatively small in scale but large in impact’

However, I am still convinced this was the best option. An intervention smaller in scale would certainly have been possible, and would have had an impact on the area, but I believe its impact on the area would have been too small to achieve the goals set in the paragraph above. The decision to slightly stray from the ‘small scale, large impact’-approach was a conscious one, and not an accidental one.

Despite its large scale, I still have been able to maintain important aspects of this approach. The urban plan is based largely on existing patterns in the area of Zuidplein and the surrounding neighbourhoods. It ties together pedestrian routes, programmatic centres of gravity and morphological properties. Because of this approach, its chances of success are substantial and plausible. It finds its roots in existing urban, social and historical development, albeit on a fairly large scale.

During the process of forming a new urban plan, not only was it relevant to understand existing patterns and potential, but present problems as well. However, truly understanding the problems that exist in the way perceive the urban space is a study in its own, not to say considerably subjective and personal. To find the underlying basis for these problems, I’ve done an extensive research on public space and the perception of space, including architectural, morphological and psychological characteristics. The results of this research, based on many theories by Jane Jacobs, Jan Gehl, Kevin Lynch, David Canter and others, have been formulated in my text ‘Urban analysis through the understanding of environmental perception and preference’ and can be found as an appendix to this reflection.

This research has been tremendously helpful in understanding why visitors to the Zuidplein area consider the place as uncomfortable and ‘ugly’. It is one thing to realize the ugliness of a space (you don’t even need an architect for that), but a whole other thing to appreciate its causes and psychological relevance.

However, one could argue that such a research, carried out in three months is not nearly enough to truly ‘get it’. After the research I certainly felt I had a substantial basis for an intervention, but at the same time my research hadn’t even begun to scratch the surface of the way people perceive spaces. It’s an entirely field of study on its own.
Urban and Architectural Design Approach

The following diagram visualises my typical design process:

It starts out on a large scale, moving deeper and deeper into the process into the smallest scale. Each phase exists of similar ‘actions’: deciding what the design hopes to achieve, developing concepts and variations of design, analysing the variants and testing them on the set of requirements and deciding which one to choose. Each phase ends with a feedback to the larger scale, making sure it remains intact, and splitting it into separate, smaller segments on which I can repeat the actions.

A very thorough and pragmatic design approach, which ensures me I have considered most (or at least many) possibilities. It also allows to the explore how certain variants offer new potentials and options, other than those set by the requirements.

An example of this approach on the urban level, exploring possibilities of masses in the urban context:
During my design process, I have routinely applied this to the various elements of the design, including the volume, floor plans, library construction, façade construction, materialization, among other things. It has helped me to explore many options. However, while applying this technocratic and supremely pragmatic approach I have encountered some severe drawbacks.

The first is the element of time: exploring options for every aspect of design is extremely time-consuming, especially in a project as large as mine. The deeper I delved into the small scale, the more elements required the exploring of options (as can be clearly seen in the diagram above).

Secondly, it can be difficult to maintain a good overview on such a big project while splitting it into small elements. To maintain this overview, zooming in and out quickly takes more and more time while diving deeper into the small scale.

The third problem is that such an approach does not necessarily make it easier to settle on matters. Weighing the pro’s and con’s of all variants is difficult, due to not knowing the exact weight of arguments. If anything, this has certainly slowed me down at times, rendering me indecisive and blocking me in my progress.

Therefore, it can be argued that such an approach does not automatically yield better results. It definitely rules out intuitive design, which in itself can be massively productive.

During the later stages of my design process, when I began to stumble upon the drawbacks of my initial approach, I have somewhat shifted to a more intuitive way of designing, a matter of ‘draw first, ask questions later’.
Appendice A

Urban analysis through the understanding of environmental perception and preference

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The Rotterdam Zuidplein area is a clash of functions. The municipality designates this as a city core for the locals for Rotterdam Zuid; a place for them to live, meet, interact, recreate, etc. At the same time, the area functions on a larger scale, the scale of the region, as a transport hub, with an average of 70,000 visitors to the hub every day. These two aspects, the centre for locals and the transport hub for the regionals, seem to exist parallel to each other, without interacting with each other; they do not profit from each other’s potentials. A physical barrier, a gap, seems to exist between the transport hub and the neighbourhoods around it, separating the locals from the regionals and preventing them from interacting and benefiting from each other’s potential.

Bringing these two aspects (the area as a city core, and the area as a transport hub) together is desirable; to do so, an intervention is required that bridges the gap between the local and the regional, tying them together and have them benefit each other. This is a rather conceptual manner of speaking. More specifically, the goal would be to instigate a pedestrian flow between the Zuidplein area and the surrounding neighbourhoods, physically connecting the two and bringing together both local residents and people coming from further away.

To comprehend this ‘gap’, and to understand why hardly any pedestrian route is found between the transport hub and the surrounding neighbourhoods, it is imperative to understand what draws people to certain places, or what drives them away. It is my believe that this gap between the transport hub and the neighbourhoods is not so much due to strictly functional problems, but is mostly a result of morphological and perceptual issues.

This article explores methods of understanding the perceptual and sensory experience of place, and discusses a method of analysis that is general enough to be applied to other similar situations. It touches upon the early stages of the actual analysis, although the full results of it are beyond the scope of this article.

The relevance of the research in a wider scientific context is obvious. Although the city of Rotterdam has a large potential, and is considered a great city by many, its public space is severely lacking. The city is rather monofunctional, it shows predictable and only necessary activity patterns, and pedestrian traffic is low outside a few dedicated busy shopping streets. Post-war modernist urban planning with its grand gestures has left its marks. In order to make the city attractive to everyone, and to turn it into a highly liveable world class city, it needs to develop its public environment, and the relationship between program and public outdoor activity. Rather than attempting to redevelop large areas from the ground up, like it has done in the past, it needs to revitalize the public space by means of small interventions respecting already present potentials and tying in with properties of the urban fabric, rather than counteracting it. This makes for a much more sustainable and economically viable urban planning, and increases its chances of success. This article uses the case of Rotterdam Zuidplein as a backdrop, to investigate how relatively small architectural interventions can achieve big results on an urban level. It researches on relation between architectural form, programmatic planning and public outdoor activity.
Earlier studies regarding the use of the Rotterdam Zuidplein area have concluded that people do not use the public space around the transport hub, as they perceive the space as ‘unsafe, messy, and ugly’\(^1\). This is a language that as an architect you’d like to refrain from using, since it has no scientific backing, but it does indicate where problems are to be found.

In the chapter “The Uses of Sidewalks: Safety” of her book The Death and Life of Great American Cities, Jane Jacobs outlines her ideas on what makes a city liveable, attractive and and, particularly, safe. She acknowledges the importance of feeling safe and secure on the street among strangers in regard to overall appreciation of a city, and considers it to be ‘the bedrock attribute of a successful city district\(^2\)’. In this light, she discusses to what extent a well-used street plays a role in the safety. After a series of statements and examples, she makes the argument that it is the single most important, if not the only, factor influencing the sense of safety, and justifiably considers it to be common knowledge: ‘This is something everyone already knows: a well-used city street is apt to be a safe street’\(^3\).

This obviously raises the question if, and in what way, city planners and architects are able to influence to what degree a city street is likely to be used. She considers three conditions to be basic requisites: a clear demarcation between what is public and private, a sufficient number of so-called eyes upon the streets (primarily by buildings being oriented towards the street), and a fairly continuous amount of users on the streets.

It seems the Rotterdam Zuidplein area meets the first two conditions. The open spaces are almost without exception public, and private spaces have been clearly separated by obvious (unwelcoming and unattractive even) fences, walls and automatic gates. A fair amount of buildings seem to have their backs turned towards the streets, but these are largely compensated by a café, a large and open bus terminal, residential balconies and open store fronts, ensuring a good amount of ‘eyes upon the streets’.

The third condition appears to be more complicated. The amount of users on the streets drops at the start of the evening, but only slightly, thus effectively warranting a fairly continuous amount of users. The problem here is that this amount is continuously relatively low, regardless of the time of day. Jacobs specifies the relevance and influence of a high amount of users on the street as follows: ‘The activity generated by people […] is itself an attraction to still people. […] People’s love of watching activity and other people is constantly evident in cities everywhere\(^4\). It appears only true when the amount of users is above a certain threshold, with the numbers of many urban places below this threshold.

But with the first two conditions met and the third condition only half met, we have created a logical fallacy for this specific case, amount of people or user-thresholds notwithstanding. Attracting other people by already present users in order to attract other people, is obvious circular reasoning and therefore the three conditions set by Jane Jacobs seem to cover not every important aspect of a lively and well-used city core; a different and complementary set is required to fill in the gap.

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\(^1\) Veldacademie, ‘Naar een kloppend hart – Gebruik en Waardering van de buitenruimte in Hart van Zuid’, (2011)
\(^2\) Jane Jacobs, ‘The Death and Life of Great American Cities’ (1961)
\(^3\) Jane Jacobs, ‘The Death and Life of Great American Cities’ (1961),
\(^4\) Ibid.
Jan Gehl supports Jacobs’ argument on people attracting other people in his book Life Between Buildings, as he cites the old Scandinavian proverb ‘People come where people are’. In this book, Jan Gehl discusses the experience of everyday life in the public realm and how the design of buildings and spaces can enhance that experience. He looks deep into the relation between the urban environmental quality and the amount and type for outdoor activities. Gehl distinguishes three types of activities: necessary activities, optional activities and social activities.

Necessary activities include activities such as running errands, waiting on a bus or biking to work. Gehl states these activities are influenced only slightly by the physical framework. Not surprisingly, these are the main activities you will find in many problematic urban spaces; people waiting on the bus, or doing some quick grocery shopping.

Optional activities, on the other hand, always appear to be far more scarce. These activities include sitting and watching other people, walking around to get some fresh air or sunbathing. Gehl states these activities primarily take place when exterior conditions are optimal, and as such are ‘especially dependent on exterior physical conditions’.

The third type, social activities, includes children playing, conversations on the street and even ‘passive contacts, that is, simply seeing and hearing other people’. This type of activity is usually supported when both necessary and optional activities take place, so it should not be the primary concern.

To attract more people and to increase the number of activities taking place at urban spaces such as Rotterdam Zuidplein, it is important to understand exactly what makes exterior physical conditions optimal for optional activities to take place. What is it that makes an urban space attractive? Gehl does provide us with some practical suggestions, but does not go deep into the underlying basis for those practical suggestions, making it hard to judge beforehand whether such suggestions will suffice in any particular case.

John Montgomery delves deeper into this question in this article ‘Making a City: Urbanity, vitality and urban design’. Hoping to understand what makes an urban place a successful place, and what factors influences ones sense of place, he cites the following diagram by psychologist David Canter to represent what makes a place:

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The sense of place (exactly that what Gehl was referring to when talking about exterior conditions for optional activities) is a result of three essential elements: the physical space, the sensory experience and activity.

However, as both Jacobs and Gehl have pointed out, activity is in many ways as much a resultant of the urban space as it is part of it, so again we encounter the logical fallacy of circular reasoning. To avoid this fallacy, I’d like to suggest the following diagram:

This diagram avoids the problem of having outdoor public activity as an active element in creating a pleasant urban space in order to achieve outdoor public activity.

Although I believe Canter was right when he stated that all three types have an equal impact on the sense of the urban place, it is now obvious that for many places, and especially Rotterdam Zuidplein, the physical conditions and the sensory experience are more elementary to its success than the activities. When these two factors are taken care of by thorough and at the same time delicate urban planning, and when enough attention to detail is paid, the third factor will most likely follow.
The perception of the physical attributes is something which can be difficult to scientifically and quantitatively assess. It deals with personal preference and individual interpretation of the built environment, and 'does not depend on conscious calculation or even on calculation of any kind of the usual sense of the term'. However, despite its individual nature, people seem to have a way of building cognitive maps of places that is universal, or at least somewhat overlapping with others. These cognitive maps, which serve as a way of identifying with the city and finding your way around, can then in turn be used to assess certain problems with the physical qualities of the urban place.

Elements used in the cognitive maps differ from person to person, but there is ‘a public image of any given city which is the overlap of many individual images’, and as a result the public image can be classified into five basic elements, as introduced by American urban planner Kevin Lynch in his book ‘The Image of the City’. Although these five elements - paths, edges, districts, nodes and landmarks – are useful tools for identifying and quantifying the physical conditions of an urban place, Lynch fails to uncover a method of putting this quantitative abstraction to use as a means of addressing the qualities of a place.

The qualities of a place are of course, again, open to individual interpretation and preference. Some might argue this aesthetic preference of environment is largely or even completely a learned, cultural pattern. However, psychological studies have shown an ‘evolutionary bias in humans favouring preference for certain kinds of environments’ and even that this evolutionary preference acts as a predictor to behaviour: ‘preference came to look like an expression of an intuitive guide to behaviour, an inclination to make choices that would lead the individual away from the inappropriate environments and toward desirable ones’. Stephen Kaplan, a professor in psychology specialized in environmental psychology, has conducted extensive research regarding the environmental preference of humans. In his article ‘Aesthetics, Affect and Cognition; Environmental Preference from an Evolutionary Perspective’, Kaplan discusses his results of his long-term research and uncovers three variables as predictors to preference - complexity, mystery and coherence – drawing parallels to Montgomery’s concepts of unity and diversity and Lynch’s notion of legibility. These three qualitative predictors, combined with Lynch’s quantitative elements of urban space, form a powerful tool in identifying and assessing potentially problematic aspects of an urban place.

In the case of Rotterdam Zuidplein, using the theories of Jacobs, Gehl, Montgomery, Lynch and Kaplan combined, three key issues were identified as problematic: an abundance of blank facades and introvert program (relating to Jacobs’ theories of eyes on the streets and Gehl’s ideas about interaction), the overly fragmented urban space and the lack of visual coherence (as stated by Kaplan, scenes that are ‘[…] in fact difficult to organize and interpret were not only rated low in preference; they were actually resented’ and

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4 Ibid.
7 Ibid.
the introvert city block, functioning as an island within the rest of the city (excessively present edges and
nodes resulting in a lack of comprehension and identity, and a lack of continuous paths tying it in with
the surrounding neighbourhoods, and as such failing to act serve as a city core).15

Properly addressing these three issues would most likely benefit much of the Rotterdam Zuidplein area
and its use of public space – if not on short term than definitely on the long term. Granted, to fully
comprehend the sensory experience of a public space, and to what extend certain alterations affect this
experience, a large-scale psychological survey would be appropriate. Whenever such a survey appears not
feasible, a proper understanding of the aforementioned theories and their interrelations will suffice, and
will provide the urban planner with a solid foundation for any future planning. In that case, solid results
may not be seen in the immediate future, but maybe that’s not what an urban planner should be aiming
for; a strong foundation for sustainable growth is naturally to be preferred over quick results.

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The presence of other people, activities, events, inspiration, and stimulation comprise one of the most
important qualities of public spaces altogether, allowing everyone to feel safe, at rest and at home in their
own city. It is exactly this in which many city cores find themselves in trouble.

Understanding what draws people to certain urban places and what drives them away from others, is the
key to developing a successful and vibrant urban lifestyle. Jacobs and Gehl both outline their ideas on
what makes a city liveable and attractive, both of them providing suggestions to urban planners.

Needless to say, neither of these theories is waterproof. They do not provide planners with blueprints
or a formula to the perfect city, nor does each of them individually cover every important aspect.
However, with authors from different backgrounds, these theories appear to be perfectly compatible and
complementary to each other, altogether forming a solid basis to the understanding of the perception of
the urban space.

As stated, even when properly applied, a long breath might be required. The vibrant, attractive and vital
Rome wasn’t built in a day. However, big chances are it provides the area with the necessary critical mass
needed to sustainably continue developing in the future, growing into a vibrant, highly liveable public
space. After all, people come where people go.

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15 F. Morel, J. Van der Veer, M. Setjadiningrat, ‘Life and space; a functional and phenomenological analysis of the Rotterdam
Zuidplein area’, (2012)
Consulted literature


J. Gehl, Cities for People, (Washington, D.C., Island Press, 2010)


Veldacademie, Naar een kloppend hart – Gebruik en Waardering van de buitenruimte in Hart van Zuid, TU Delft, (Rotterdam: Gemeente Rotterdam, 2011)