Face/Off
Research
Pilots
Ams/SP
(Un)planned: How City and Large Infrastructure Meet

Graduation research: Jan Loerakker
Tutor: Wouter Vanstiphout
Explore Lab, TU Delft

this graduation research is part of the TU Delft research for the International Architecture Biennial Rotterdam 2012

spring 2011
<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Title</td>
</tr>
<tr>
<td>6</td>
<td>Summary</td>
</tr>
<tr>
<td>10</td>
<td>Introduction: Amsterdam/São Paulo</td>
</tr>
<tr>
<td>12</td>
<td>Trigger</td>
</tr>
<tr>
<td>18</td>
<td>Problem statement</td>
</tr>
<tr>
<td>20</td>
<td>Research questions: Amsterdam/São Paulo</td>
</tr>
<tr>
<td>24</td>
<td>Method: mirror cities</td>
</tr>
<tr>
<td>28</td>
<td>Theme: ring roads</td>
</tr>
<tr>
<td>34</td>
<td>Chronology: clash of paradigms</td>
</tr>
<tr>
<td>42</td>
<td>Method: hard/soft data</td>
</tr>
<tr>
<td>48</td>
<td>Zoom one: informal ring</td>
</tr>
<tr>
<td>62</td>
<td>Zoom two: intersections</td>
</tr>
<tr>
<td>70</td>
<td>Conclusions</td>
</tr>
<tr>
<td>76</td>
<td>Intervention</td>
</tr>
<tr>
<td>80</td>
<td>Literature</td>
</tr>
<tr>
<td>82</td>
<td>Images</td>
</tr>
</tbody>
</table>
This research wants to show how by the historical overlapping of two thoroughly planned paradigms – 'city' and 'highway' – an unplanned mismatch could come into existence at the intersection of ring roads and city streets. Through a physical analysis of this mismatch and the planned and unplanned reactions in the cases of Amsterdam A10 West and São Paulo Southeast this study discusses possible lessons that can be learned for improving the future interweaving of urban tissue and large scale infrastructure.

In a broader sense the research aims to reflect on the interaction between 'planned' and 'unplanned' and by doing so on how our everyday environment is a continuous – and sometimes very successful – mismatch between past plans and future projections.

Triggered by the historical overlapping of prewar plans and postwar visions this study uses Amsterdam and São Paulo to illustrate how the autonomous planning of city and infrastructure - and the conflict that this resulted in - still causes problems today. By using the method of 'mirror cities' Amsterdam and São Paulo are used to distill on the one hand general problems that arose from a clash of paradigms and on the other hand to research specific alternative solutions for new design initiatives. Working on three scale levels it first points out how – on the scale of the city – the highway plays different roles depending on its planning history: the highway as border, as center, as buffer zone or as entity squeezed into the city tissue. The knowledge of these atmospheres might proof useful in the re-designing of the old ring and in the future planning of new 'super rings' such as the Rodoanel.

Secondly, by zooming in on the 'informal' parts of the ring and looking at the long lines of the city streets crossing it, this study examines how – and if - the ring functions as a border. This is done by using 'streetview elevations' that show how the urban profile changes from inside to outside the ring road. Here the type of intersections proofed crucial. Categorizing these types of intersections at Amsterdam A10 West and São Paulo Southeast and looking at the different ways they combined the city- and infrastructure paradigm show us the different effects of planning decisions. Some types work on the scale of highway and city but have a negative impact on the surrounding neighborhood, others manage to combine the city and highway paradigm in a way that both profit. Here, for example, the São Paulo-case produced an interesting solution with its 'multiple connected'-type (an informal combination of elevated crossings and a direct highway access of secondary roads) that could be very fruitful in Amsterdam.

The findings of the research and in particular the analysis of the junctions between ring road and city streets should be further explored in the architectural design of a museum at one particular intersection in Amsterdam Bos en Lommer.
(Un)Planned: How City and Large Infrastructure Meet
Biking along the ring road of Amsterdam the interplay of city and infrastructure unfolded before me; from the view of the polder landscape in the north to the business hub in the south, from dwellings with the highway as balcony in the west to the cordon sanitaire of sport fields and industry in the east. But what was it that made this relation between infrastructure and the surrounding city so intense? And how could I link it to what I’d seen in the metropolis São Paulo? In this endless city the problems related to infrastructure are of another category: because of traffic jams it takes hours to go from periphery to center, denying access to large parts of the population. Here infrastructure becomes a nightmare: separating city parts, being placed in valleys that are vulnerable for flooding and attracting informal settlements. But at the same time ‘infrastructure’ as dream of the ones that don’t have it: public transport, internet, sewage, water and electricity.

It is in this tension that my research should be placed. Starting as a comparison between the ring roads of the ‘planned’ Amsterdam and ‘unplanned’ São Paulo, shifting towards a study to the overlapping in time of the planning paradigms ‘city’ and ‘highway’. Using two so different cities to show on the one hand general problems that arose from a clash of paradigms and on the other hand to research specific alternative solutions for new design initiatives. Because the focus lays on the interweaving of city and highway there is chosen to look at the informal, most urban parts of the ring: Amsterdam A10 West and São Paulo Southeast. The research will start as a historical analysis on the level of the city, zooming in on the long lines crossing the ring and ending at a detailed
analysis of intersection-types; a scale level where design decisions have a strong influence on the interweaving of urban tissue and infrastructure. This is also the location of the architectural intervention: a public institution at the junction of ring road and city street in Amsterdam Bos en Lommer.

Important to realize is that both cities had the same amount of inhabitants in as late as 1928\(^1\), however diverting their paths where afterwards. It is also in this period that both ring roads – and all early city rings – started to be planned. Ring roads that were comparable in size (~10km diameter). That is exactly why this moment of pre- to postwar is so important and taken as starting point of this study: the transition from cities made of streets to policentral urban fields dominated by infrastructure. Noticing this starting point and seeing the immense growth São Paulo faced, thinking in ‘planned’ and ‘unplanned’ becomes more relative and notions as planning infrastructure ‘before’ or ‘after’ the city is constructed become more relevant.

In a time where big questions are raised around the construction of mega rings that act on the metropolitan and regional scale (Randstad, Rodoanel) it is interesting to look at the old rings. Not only to come up with design proposals that fit their new, more urban role; but also to teach us important lessons for the planning of the relation between city and highway in the construction of new infrastructure. Interesting Dutch examples are A8erna by NL Architects or Leidsche Rijn by MAXWAN; in Brazil we can learn from informal solutions but also planned initiatives as the Poupatempo Itaquera by Mendes da Rocha and the Rodoanel. This graduation research hopes to add to this sequence.

\(^1\) Estimation by author based on data from Dijkstra (1999) and Meyer&Grostein (2003)
In the image to the left we can see the origin of this graduation research: the meeting of city fabric and highway infrastructure. Both thoroughly theorized and planned paradigms but often problematic in their collision. What we see here are the Max Havelaar appartment buildings that were planned before WOII in Van Eesteren his Algemeen Uitbreidingsplan and constructed in the 1950’s. Moreover we see the confrontation of those buildings with the oldest part of the ring road of Amsterdam, the A10 West, that was planned and constructed in the postwar revision of the AUP. We see dwellings that instead of a tree-rich boulevard have a highway as balcony. This is the simple observation – the trigger - of this study: how could a situation like this come into existence?

The starting point of this study is thus what we will call ‘historical overlapping’. Two paradigms that are rationally planned an sich result in an unwanted outcome because of a mismatch in time: the city existed before the highway and thus the highway had to be ‘squeezed in’. On the following pages is shown how this process enrolled in the case of the Bos & Lommer district in Amsterdam and Dom Pedro in São Paulo. In Amsterdam we see the 1930’s Van Eesteren-plan that projects the apartment buildings along a central boulevard in a modern approach to the city using scientific models to calculate traffic-loads but still with a relation of building and street as starting point. After the war these models proof to be an underestimation of the raise of automobility and a revision is needed. Interesting is to see, though, that in 1950 nothing is built yet, and although the highway-planning is being started up by now the buildings are built according to the 1935 plan². When the highway is constructed in the late sixties this leads to problems of proximity, which stay unresolved till design initiatives take off in the 1990’s to improve the conditions around the A10 West.

If we now lay the 1935 plan on top of the aerial photo of 2010 we can conclude two things: one, it is striking how much of the original plan is built exactly as planned; two, everywhere around the highway we see the ‘planning pain’. If we look at our ‘mirror city’ São Paulo we see the same dynamic between pre- and postwar planning. In this case we see that the leading plan, Prestes Maia 1930’s Plano de Avenidas which projects a city and park in relation with its streets, is turned into a infrastructure-dominated no man’s land in the 1960’s³. A problem that is still unresolved.

2, Plankaart “Uitbreidingsplan Bosch en Lommer”, 1935, from: Stadsdeel West
In the areas around ring roads two thoroughly planned design paradigms meet: ‘city’ and ‘infrastructure’. But despite the planned character of both entities we find unplanned and often problematic outcomes. Because of the construction of new ring roads the existing ring roads give the opportunity to re-think the future relation of urban tissue and large infrastructure.

Amsterdam A10 West (“unplanned problems, planned solutions”) and São Paulo south-east (“planned problems, unplanned solutions”) will be presented as cases to study the coming-into-existence of this ‘clash of paradigms’. What lessons can we distill for a future interweaving of city and highway?
Problem Statement
Research Questions
What are the problems resulting from the proximity of urban areas and large infrastructure in Amsterdam and São Paulo?

And how to improve the interweaving of city and highway at the Amsterdam A10 West and São Paulo south-east?
How do different parts of the ring roads of Amsterdam and São Paulo create different atmospheres in their neighboring areas?

Which urban plans and highway designs formed the Amsterdam A10 West and São Paulo south-east area from the 1930's up till now?

Where and how are the ring roads of Amsterdam and São Paulo a ‘border’ between center and periphery?

Which lessons can we distill from the intersection of ring road and city streets at the A10 West and São Paulo south-east?
Method: Mirror Cities
In the IABR-researches of the TU Delft one particular research method is tested: ‘mirror cities’. In this procedure an issue in the Dutch Randstad is linked to a similar problem in one of the partner cities, however different in scale and context. In the case of this research to the ring roads of Amsterdam and São Paulo the method has a twofold effect. On the one hand one can find general problems when planning processes act in similar ways even though both cities are so profoundly different. On the other hand one can find specific alternative solutions one would have never thought of normally exactly because the two cities are so profoundly different. This means that sometimes topics have to be researched parallel and on other occasions one of the two cities has to be studied in full detail.

An instrument often used in this research is the historic sequence, or timeline, where one puts the most important events of both cities together and consciously searches for similarities. For example with the prewar plans in the 1930s (AUP/Plano de Avenidas), the importance of the mismatch between city and highway in the postwar period and the global character of certain planning issues as described in detail in the chapter ‘Clash of Paradigms’.

Another tool that proved fruitful was categorization. By analyzing ring atmospheres, long lines and intersections in both cities certain situations appeared in both cases and seemed to have similar effects. So are – for example - the categories ‘city before highway’, ‘highway as border’, ‘highway as center’, etc. (see chapter ‘Atmospheres’) useful in planning new ring roads such as the Rodoanel. The same goes for the analysis of the changes caused by the highway in the streetview elevations or the functioning of intersection-types.

In this analysis a third important aspect became clear: the ‘alternative solution’. By looking at a totally different historical, socio-economic, physical and cultural context, planned and unplanned solutions appear that might be normal in the one case but proof radical in the other. Firstly this puts the clichés of the ‘planned’ Dutch and ‘unplanned’ São Paulo situation in perspective but more importantly it shows that there is a lot to learn from each other. A good example is the ‘multiple connected’-variant found at the São Paulo ring (p.68). Here a situation that is common in São Paulo – the direct accessibility of the ring road from secondary city streets – has been a futurist utopia for the A10 West for decades; but by studying the São Paulo case and with the speed limits lowered to 80km/h in Amsterdam, it might be more realistic than we think.
Theme:
Ring Roads
Within the IABR-theme of infrastructure this research focusses specifically on ring roads. Because of the planning of new outer ring roads the role of the older inner highways will change. Furthermore, by studying the older ring lessons can be drawn for the design of the new mega-rings such as the Rodoanel. One of the topics discussed in the forthcoming shows this adequately: the ‘highway as border of the city’. In the north part of the Amsterdam ring the highway functions as a boundary: the city ends and the – cultivated – nature starts. In the discussion around the Rodoanel this image is used as well: in the north and south of São Paulo it should become a frontier where the urban sprawl stops spreading. A method used to ensure this is the very limited use of highway-exits. But will this work? And how to prevent the highway of becoming a pole of attraction in a city where accessibility is key? In Amsterdam North it seems to work because of the strong environmental laws in The Netherlands and the less-attractive location of the North area up till now. But will this hold? And is this the right vision to follow?

These are important questions that this research took as a starting point; but at a more basic level the ring roads have another strong role: they tell the story of the city. To show this I made the movie ‘Rondje Ring’, biking and filming the full 40km ring road of Amsterdam and its passages. What proofed interesting were the different atmospheres created by the ring, strongly connected to their planning history and to the ways of interweaving city and highway. In Amsterdam four types could be distilled: ‘city before highway’ (A10 West/SP South) where the highway had to be squeezed into the existing city. This let on the one hand to problems of noise, pollution and deterioration but often kept the strong urban fabric intact and resulted in a dense interweaving of tunnels, passages and accesses. This atmosphere also gives a lot of possibilities when the ring road becomes less intensively used. The opposite of this atmosphere is that of ‘highway before city’ (A10 East/SP North) where the city grew to the highway, resulting in planned buffer zones of industry, recreational areas and a discontinuous urban fabric with only a few main crossings. In this way the highway is neutralized as a problem of proximity but it also creates a strong border-function that will make it a greater challenge for future interweaving with the city.

The other dichotomy – discussed before – is ‘highway as border’ (A10 North/Rodoanel) versus ‘highway as center’ (A10 South/SP West), the latest with recent ‘integral planning’ developments as Zuidas and Pinheiros as exponents. Here the highway should either serve as a limitation or as its opposite: the masterplanned melting pot of business, city and infrastructure in a global city. Here should also be mentioned one negative aspect seen often in São Paulo: ‘bundled infrastructure’. The bundling of waterways, highways and elevated public transport in the valleys of the city creating strong borders and being extremely vulnerable for flooding.
highway as border?
rodoanel
Chronology:
Clash of paradigms
Looking at Amsterdam and São Paulo today it is startling to realize that both cities had the same amount of inhabitants in as late as 1928\(^4\). But if we look at historical parallels it is important to know that the two leading prewar plans in both cities, *Algemeen Uitbreidingsplan* and *Plano de Avenidas*, were made in cities of comparable size. Although they depart from a different point considering urban form – Van Eesteren as exponent of the open ‘modern city’, loosening the relation between building and street and Prestes Maia as a follower of a more Haussmann-inspired closed ‘geometric city’ – in both plans building and street are of the same domain; using boulevards and city streets. We will call this the ‘European paradigm’.

While prewar tendencies such as Le Corbusier’s *Plan Voisin* and Wright’s *Broadacre City* and the visions of *Autobahn* and *Parkway* already are visible in prewar years\(^5\); the functionalist approach becomes dominant after WOII. And, shifting more towards an ‘American paradigm’, infrastructure starts to become a domain on itself while the automobile becomes more and more present. This is clearly seen in the *Expressway plan* Robert Moses made for São Paulo (1950)\(^6\) and also in the revision of the AUP by the *Commissie Verkeer en Vervoer and Afdeling Stadsontwikkeling*\(^7\). Here city and infrastructure are in conflict and when the highway has to be inserted in the existing city this leads to problems of proximity. It becomes even more problematic when plans arise to lead the highways through historic city centers in - for example - Jokinen’s *Geef de stad een kans*\(^8\) and Maluf’s *Minhocão*.

Thus also being the moment counter movements start. Already in the 1950s we see publications such as *Alarm in Amsterdam*\(^9\) and those by the SAGMACS-movement in São Paulo\(^10\) but in Amsterdam the Jacobs-inspired movement really flourishes in the 1970’s. The Nieuwmarkt-riots in 1975 are a protest against the demolitions for the construction of the metro and advocate the dominance of the neighborhood and the existing city structure. Interesting to see is that the democratic process that this movement started in Amsterdam was impossible in Brazil because of the military dictatorship.

In the meantime other parallel processes can be seen: ‘decentralisation’ in the 1970s with a flee from the city to the low-income Almere and the high-income Alphaville; leading to problems of commuting both cities still face today. This anti-city sentiment even grew by the deterioration of inner cities because of drug abuse and squatting in the 1980s; a process that took an extreme form in São Paulo with its endless favelas and numerous cortiço. But while both cities are incomparable in scale by now, they still have similar aspirations: the global city masterplanning of business districts (Zuidas/Pinheiros)\(^11\) and transport hubs acting on a regional scale (Randstad/SP Metropole). Of particular interest to this study is the development of ‘second rings’ (*Westrandweg* and *Groene Hart* developments in The Netherlands and the *Rodoanel* in São Paulo), developments that will make us re-think our inner ring roads and makes a historical analysis of ‘planned’ and ‘unplanned’ - of a clash of city- and infrastructure paradigms - important.

---

5. Pompeo Martins, 2009, pp.44-51
6. da Silva Leme, 2010
7. De Hoog, 2005, p.50
8. Jokinen 1967
10. ARCH+ 190, 2008, p.114
11. Rocco, 2008
Figure 3. Expressway system proposed for São Paulo. Source: IBEC – Programa de Melhoramentos Publicos Program of Public Improvements, Prefeitura Municipal São Paulo (1950), 32.

Figure 4. Expressway proposed showing the possibilities for future rapid traffic in center and station and bridge. Source: IBEC – Programa de Melhoramentos Publicos Program of Public Improvements, Prefeitura Municipal São Paulo (1950), 44.
Fig.: New Metropolitan Beltway, around the main agglomeration. Completion is expected in 2020. PITU Integrated Urban Transport Plan. The State of São Paulo, 2006.

Amsterdam/São Paulo - timeline analysis - 37
van eesteren
AUP
1934
Ams
commissie v&v
revision AUP
1950
Ams
jokinen
geef de stad een kans
1967
Ams
alarm in amsterdam
1955
nieuwmartrellen
1975
Ams
european paradigm
Ams
american paradigm
Ams
counter paradigms
counter paradigms
prestes maia
plano de avenidas
1935
SP
robert moses
expressway plan
1950
SP
maluf
minhocao
1971
SP
sagmacs
military dictatorship
1964-1985
SP
european paradigm
SP
american paradigm
SP
counter paradigms
counter paradigms
“The first generation of highways is to a large extend designed and built in the postwar period. They were perceived as non-urban objects and implemented as an independent network. Because of the densification of The Netherlands into one continuous built environment that changed. Retrospectively we should see the highways as urban elements.

When designing new roads the proximity of architecture and urbanism is an inevitable fact; the time of the traffic network as an autonomous project is over. This involuntary and irrevocable advancing of car and architecture creates an exciting situation: the most interesting new buildings and districts come into existence by the interweaving of traffic and architecture, not by its separation.” (Provoost 1996:7)
Method:
Hard/Soft Data
One of the attempts to answer the questions raised in this research was by analyzing the effect of the ring road in quantitative data. Using data from the municipalities of Amsterdam and São Paulo and making 'datamaps' with ArchMap all kinds of variables where analyzed. Some provisionary conclusions could be drawn: people with children lived mostly outside the ring in Amsterdam, creative enterprises on the other hand were almost exclusively situated inside the ring, also in São Paulo one could see that most jobs where inside the ring and that the inhabitants where younger outside. But the question is: is this caused by the ring? Everybody can sense the difference of living 'inside' or 'outside', in 'center' or 'periphery', but do those terms hold in a modern decentralized city and aren't there other dynamics, histories and conditions more important?

One strong determinant we looked at is the distribution of income and here we see clearly in the data that the ring isn’t decisive. Or better said: not everywhere. In both Amsterdam and São Paulo the wealthiest neighborhoods are positioned towards the southwest. In Amsterdam those areas are positioned between the Schinkel and Amstel river in the Grachtengordel (which is not completed in the east), Berlage's Plan Zuid and in Buitenveldert/Amstelveen; in São Paulo the rich center moved towards the higher areas of Avenida Paulista and later Faria Lima, Pinheiros and Morumbi. These movements don’t seem the product of the ring but more likely of variables such as the landscape and earlier planning operations, the same goes for high percentages of immigrants in certain neighborhoods. We also see this in the border-function of, for example, the IJ-lake in Amsterdam North and the Tamandatei-river in São Paulo East. Good to remember here is that the ring roads are of very recent date, see the 1982 map of Amsterdam on the page before.

But still, when experiencing the city we all feel the difference between 'inside' and 'outside'; isn’t this then visible in the data at all? Of course it is. In the north part of São Paulo for instance, where highway and the Tiete-river are combined and surrounded by large industrial areas (“highway before city”), the ring has a strong border-function seen in for instance the income distribution and other data. Moreover the ring is a symbol for the general feeling of a rich center and poor – and poorly accessible - outskirts. In Amsterdam we see this aspect in the settlement policy of creative industries or housing prices just in- or outside the ring.

An adequate image of these speculations are what I call 'ring politics': the influence of the ring on the voting for different political parties and the – cliché – groups they stand for. On the next page we see that the ring has a certain effect: in Amsterdam green, left and liberal Groenlinks- and D’66-voters all live inside the ring, anti-urban christian-democrats all outside. But what do these hard – statistical - data tell? Shouldn’t we look on the smaller scale of the neighborhood and the city street and to more soft – subjective – analyses to judge the influence of the ring and its causes adequately?

---

12. Data survey 2010, O+S, Gemeente Amsterdam
13. Infocidade 2010, SEMPLA, Prefeitura de São Paulo
15. Infocidade 2010, SEMPLA, Prefeitura de São Paulo
16. Data survey 2010, O+S, Gemeente Amsterdam
17. Dutch elections 2010, O+S, Gemeente Amsterdam
pvda
immigrants
Ams

vvd
high incomes
Ams

pvv
anti-immigrants
Ams

cda
anti-urban
Ams

d66
high culture
Ams

gl
green and creative
Ams

dutch elections 2010
blue highest decile
yellow lowest decile
brazilian elections 2010
blue psdb majority
red pt majority
Zoom one:  
Informal Ring
After a global survey of the ring roads of Amsterdam and São Paulo was decided to focus on the ‘informal’ parts of the ring: Amsterdam A10 West and São Paulo Southeast. The term ‘informal’ is chosen to indicate the parts of the ring road that are most directly confronted with the city tissue. Here the city often existed before the highway. At the A10 West the buildings are very close to the highway, the maximum speed is low (80 km/h) and the highway has a very urban character. With the diversity of exits, crossings and the new Westrandweg that will absorb a lot of regional traffic this part is most fertile to be integrated in the city. In São Paulo the term ‘informal’ is even more justifiable: the north and west part - the Marginal - are real highways but in the southeast there is not one clear ring road. At some places there are multiple highway-routes possible, in other parts the junctions are at-grade. Still there is a more-or-less official ‘ring’ that surrounds the expanded center and will be taken as object of this study. Just as in Amsterdam this part has the most diverse interaction with the surrounding city streets.

To study the effect of the ring roads on its surroundings, and in particular the change in urban structure the different types of intersections provoked, a series of representative long lines was analyzed: important city streets crossing the highway. In Amsterdam eight streets where analyzed, in São Paulo four. Starting inside the ring and crossing the highway a series of pictures was taken of street facades in Google Streetview. Each sequence consists of hundreds of pictures that were formed into a collage of a couple of meters and analyzed.

At the Wiltzanghlaan the two sides of the highway were almost identical and only after the elevated metro it changed into a more green environment. However, the tunnel was a ‘gap’ in the street causing very little activity in the plinth. The Bos en Lommerweg in contrast – with its programmed bridge – was a very vibrant shopping street were the highway was hardly an interruption. Also the Jan van Galenstraat crosses the highway by a bridge but because of the long take-off this leads to a big scale jump. Here and at the Heemstedestraat the highway is a border between pre- and postwar city scape.

In the cases of Av. Cursino (highway in tunnel) and Av. Ibirapuera (open bridge) the highway doesn’t change the urban tissue much but – as with Jan van Galen – at Ibirapuera it gives way for large scale functions. In the other two São Paulo-streets the changes caused by the highway are bigger. At Av. Delamare the highway is a boundary – in spite of the bridges – between a well-to-do district and the favela Higienópolis. In the case of Av. President Wilson the influence of the infrastructure is even worse: because of the bundling of highway, elevated public transport and the canalized river it becomes a huge border that deteriorates its surroundings. Here the influence of the type of intersection proofed crucial and will be further discussed in the next chapter.

18. Structuurvisie 2040, Gemeente Amsterdam
Amsterdam/São Paulo - zoom one: informal ring - 60
Zoom two:
Intersections
When looking at the ways cars, public transport, bikes and pedestrians crossed the highway, the twenty-six junctions of the A10 West were categorized and linked to four relevant cases in São Paulo Southeast. In the dense west part of Amsterdam at first sight a richness of solutions seemed to appear but taking a closer look the designs could be brought down to four basic types: ‘closed tunnel’ (a narrow tunnel, sometimes programmed), ‘closed bridge’ (a programmed, build-on bridge), ‘open tunnel’ (a wide, semi-covered, non-programmed tunnel) and ‘open bridge’ (a wide, non-programmed bridge). In São Paulo some alternative types were added, some conventional: ‘tunneled’ (the highway in a tunnel under an existing neighborhood) or ‘bridged’ (like ‘open bridge’, but then a series of separated car- and foot bridges); others more specific: the potentially valuable ‘multiple connected’ (main streets crossing the highway elevated, secondary roads connect directly at-grade to the ring) and the often harmful ‘bundled infrastructure’ (the highway in the valley combined with elevated public transport and canalized waterways).

From these categories of intersections we can try to draw conclusions on the influence they have on the city streets and the possible chances they incorporate for the future. If we compare for instance the ‘closed’ and ‘open’ bridge we see that the closed bridge masquerades the highway and the city street has a continuous plinth that functions on the neighborhood scale but also benefits from the higher city-scale of the highway; it combines the city and highway paradigm. The open variant on the other hand creates dead corners because of its long take-off and creates a discontinuous cityscape that only functions on the highway scale of hotels and hospitals. In a sense we see the same with the ‘bridged’-type in São Paulo where the bridges only connect the city parts on an infrastructural level but don’t offer a continuation of city tissue. It bridges the ring functionally but remains a separation. Comparable as well is the ‘open tunnel’ which mainly focuses on the continuation of the landscape and makes this dominant over urban structure.

Lastly we can discuss the ‘closed tunnel’ and ‘multiple connected’-type. The closed tunnel often acts as a ‘gap’ in the street plinth resulting in an interrupted and thereby less active street. However, this could be improved by adding program to the tunnel; the city street continues autonomous from the highway. The problem here is that the paradigms don’t harm each other now, but they are still separated. This is where the ‘multiple connected’ in São Paulo can play a role. At certain parts of the São Paulo ring the primary routes pass elevated, but from small streets people can park in their front yard straight from the ring and city functions are accessible directly from the highway. Of course this has a lot of negative traffic-regulating consequences, but it also is exactly what Amsterdam dreams of when they talk about ‘downgrading’ the A10 West. That is the reason that those last two opportunities will be further explored in the chapter ‘Intervention’.
Conclusions
Looking at the results of this study we can conclude that the ring roads of Amsterdam and São Paulo have a major impact on their direct surroundings. Moreover we see that the method of ‘mirror cities’ has produced interesting results but is in danger of staying too much on the surface. By linking the ‘planned’ Amsterdam-case to the ‘unplanned’ São Paulo-case it produced on the one hand insight in general problems caused by a clash of the city- and highway paradigm and it highlighted specific alternative solutions for new design initiatives; on the other hand it couldn’t always go in-depth into city-specific problems. In general the research showed that the categories ‘planned’ and ‘unplanned’ are too narrow since the planning processes observed are a continuous overlapping in time of planned actions and unplanned reactions. Moreover, in planned systems the combination of two planned paradigms showed unplanned outcomes. However, still lessons can be learned for future design tasks.

The two factors that proofed most influential for the impact of the ring road are the planning history and the type of intersection. When we look at the planning history we see that the influence of the transition from pre- to postwar is problematic and often still unresolved. The problems this leads to depend on the role the highway plays: in ‘city before highway’ the paradigms of city and highway collide where in ‘highway before city’ the paradigms are kept separated; in ‘highway as border’ there is a tension between the untouched nature and the attraction of a ‘highway as center’. The knowledge of these atmospheres can be useful in both the re-designing of the old ring and in the future planning of new ‘super rings’ such as the Rodoanel.

Within those atmospheres there is a constant struggle between domination of the city- and infrastructure domain. This process is simultaneously influenced by international economic, political and planning trends just as we see the effect of local political differences. The cases that seemed most fruitful were the ones that managed to serve both the highway- and the city paradigm.

Furthermore, when we look at the border-function of the ring road we can conclude that its effect is visible in statistical data but can’t be used in a productive way. The analysis of the streetview elevations has a more workable outcome. Here scale is essential. If we look at the change from inside to outside the ring we see that some streets only seem to function on the city scale and others only locally. A successful combination of different scale levels at an intersection of highway and city streets proofed to be determined by the type of intersection. Where the ‘open bridge’, ‘open tunnel’ and ‘bundled infrastructure’ had a negative effect on the continuous city scape, the ‘closed bridge’ had a positive influence. Special attention should go to the types of ‘closed tunnel’ and ‘multiple connected’. These types seemed to have the potential of interweaving highway and city adequately. This potential could be explored further in an architectural design.
After the research of the intersections of ring roads and city streets in the cases of Amsterdam and São Paulo the design project will focus on improving one specific intersection at the Amsterdam A10 West by an architectural intervention. As location the area around the Wiltzanghlaan-junction is chosen with as program a large public institution: MASA, ‘Museum Aan de Snelweg Amsterdam’. The Wiltzanghlaan-junction is located between the Bos en Lommerplein and Sloterdijk Station with two highway-exits close by and an excellent accessibility by public transport. Up to now there haven’t been any big design initiatives in this area although the situation is problematic: the emblematic Max Havelaarflats are placed directly at the highway and the passages are dark and desolate. The municipality started a renovation project recently but that leaves both the apartment buildings and the intersection untouched.

Starting point of the architectural exploration should be the interweaving of highway and city street: the direct accessibility of the museum from the ring road, the programming of the passages and the relation of the public space with the highway. In this way the museum should knit together city and infrastructure by a program that triggers gathering, interaction and discussion.

Amsterdam/São Paulo by Jan Loerakker

Brinkgreve, G. (1955) *Alarm in Amsterdam of Het lot der oude Binnensteden*, Uitgeverij Elsevier: Amsterdam


‘Algemeen Uitbreidingsplan. Bijlagen. Grondslagen voor de stedenbouwkundige ontwikkeling van Amsterdam’ (1935), Gemeente Amsterdam

‘Een plek om te groeien! Vernieuwingsplan Bosleeuw Midden’ (2009), Stadsdeel Bos en Lommer/Stadgenoot

‘Stadsplan Amsterdam. Toekomstvisies op de ruimtelijke ontwikkeling van de stad 1928-2003’ (2003), Dienst Ruimtelijke Ordening, Gemeente Amsterdam, NAi Uitgevers: Rotterdam

‘Structuurvisie Amsterdam 2040. Economisch sterk en duurzaam’ (2011), Gemeente Amsterdam

Literature
Amsterdam/São Paulo by Jan Loerakker

p.8/9  Google, 2010, by author
p.12  Google, 2010, by author
2. Kaart 1:25000 Bos en Lommer, 1950, Kaartenkamer TU Delft
6. Google, 2010
7. by author
8. by author
9. Beeldbank Stadsarchief Gemeente Amsterdam, datum onbekend
10. Beeldbank Stadsarchief Gemeente Amsterdam, 1961
11. Beeldbank Stadsarchief Gemeente Amsterdam, 1980
12. Google, 2010
18. Google, 2010, by author
19. by author
20. by author
22. Google, 2010
p. 20 A8erna, NL Architects
p.26  by author
p.27  by author
p.30  Google, 2010, by author
p.31  by author
p.36  1. Algemeen Uitbreidingsplan, 1935, Stadsarchief Gemeente Amsterdam
2. Rijkswegenplan 1958, from: www.wegenwiki.nl
3. Geef de stad een kans, Jokinen, 1967, Stadsarchief Gemeente Amsterdam
4. Nieuwmarktrellen, 1975, Stadsarchief Gemeente Amsterdam
5. Almere, 1967, Stadsarchief Gemeente Amsterdam
6. Krakersrelen Vondelstraat, Stadsarchief Gemeente Amsterdam
7. Zuidas, Projectbureau Zuidas
8. Structuurvisie 2040, Gemeente Amsterdam
10. Stadsarchief Gemeente Amsterdam
14. Minhocao, from: teparita.blogspot.com
15. SAGMACS, 1956, from: cronologiadourbanismo.ufba.br
18. Pinheiros, from: elt0n.wordpress.com
22. Boxing ring, from: ARCH+ 190, 2008
p.41  Kaart Amsterdam 1982, Kaartenkamer TU Delft
p.44  Dutch elections 2010, by author
p.45  Brazilian elections 2010, from: MMBB
p.50-55  Google 2010, by author
p.56  by author
p.57  by author
p.58  Google 2010, by author
p.60  Google 2010, by author
p.64  by author
p.65  by author
p.66  Google 2010, by author
p.68  Google 2010, by author
p.72-73  by author
p.74-75  by author
p.76  by author
p.78-79  Wiltzanghlaan, from: www.flickr.com
p.82  Amsterdam/São Paulo - images -
Images