Cultural Industries in the Netherlands – Path-Dependent Patterns and Institutional Contexts:
The Case of Architecture in Rotterdam

1. The Koolhaas effect

In April 2000, Rem Koolhaas became the first Dutchman to win the prestigious Pritzker Architecture Prize. Although the award was, of course, primarily for his fascinating oeuvre, Koolhaas was also explicitly honoured for his influence on an entirely new generation of Dutch architects who emerged onto the national and international scene after 1985 (Lootsma 2000). According to the chairman of the jury of the Pritzker Prize, J. Carter Brown, Koolhaas is "the leader of a spectacularly irrelevant generation of Dutch architects" (Architecture Week 2000, see also Lampugnani 1989, p. 245). A large number of those revolutionary architects had worked at Koolhaas’ Office for Metropolitan Architecture (OMA) in Rotterdam. The “OMA reference” turned out to be extremely important for architects such as Kees Christiaanse, Winy Maas, Jacob van Rijs, Chris van der Ham and Willems Jan Neutelings. They themselves, in the meantime, have acquired international fame (Coolsbrand 1995). The home base of a lot of the Nachwuchs of OMA is still Rotterdam and it seems that we are witnessing the emergence of a

We would like to thank our colleagues Bart Lamberts and Merijn van der Werff for their help and comments.
spatial concentration of internationally renowned architectural firms there.

Cultural industries, to which architectural firms belong, generally display a notable tendency towards spatial clustering (Scott 2000, p. 2004). In the cultural industries, we typically find relatively small companies which are very dependent on extremely specific high-quality knowledge and which, in addition, have to deal with rapidly fluctuating demand. They are, hence, dependent on a localized labour pool that enables them to find the specific labour they need at the right time. In cultural industries, we also find the other two Marshallian forces of economies of agglomeration at work (cf. Phelps & Ozawa, 2003): the development of dedicated suppliers and the creation of an “atmosphere” conducive to particular economic activities. This latter driver of spatial clustering is especially important when dynamic economies of agglomeration, which are geared towards continuous innovation and aimed at competing on unique qualities of products, are more important than static economies of agglomeration, which are aimed at cost reduction to get the edge in markets dominated by price competition (Capello 2001). The creation of the rather elusive atmosphere (“it’s in the air”) is contingent on the development of locally-rooted institutions which, for example, contribute to the reproduction of high-quality work, stimulate knowledge transfer or spill-over or help to articulate a critical question as in the case of competitions or specialist journals. The development of such a set of interdependent dedicated and localized institutions can be understood as a path-dependent process whereby the competitive position of a certain local cultural industry is continuously being reproduced, sometimes for a very long time. The centuries-long dominance of haute couture from Paris is one example (Storper 1997).

Are we now witnessing, in a similar way, the creation of a cluster of internationally renowned architectural firms in Rotterdam? This research question forms part of the research project entitled “Spatial Footprints of Path Creation and Path Reproduction. Mapping Processes of Globalisation and Localisation in Cultural Industries in the Dutch Delta Metropolis.” Below, we offer a tentative and positive answer to this question. Our analysis consists of the following components. First, we give an indication of the quantitative importance of architectural services in Rotterdam in terms of employment. Secondly, we try to ascertain whether the surprisingly strong position that Rotterdam has in the Netherlands with regard to employment in architectural services is also linked to innovative capacity. After all, from an economic point of view, it is crucial that local cultural industries are able to innovate in order to cope with the competition. Thirdly, we provide a brief analysis of the (local) trajectory of institutional embedding from the theoretical perspective of path-dependency (Pierson 2000, Mahoney 2000). We conclude by hypothesizing that a contingent combination of, on the one hand, the development of strategic local institutions and, on the other, the appearance of a crucial actor, namely Rem Koolhaas, has laid the foundation for a cluster of trend-setting architectural firms in Rotterdam.

2. Rotterdam as a centre of contemporary architecture

To assess the economic importance of cultural industries – certainly at a lower spatial scale level – is rather hard. Cultural industries are difficult to define and, moreover, the standard classifications used in socio-economic statistics are not sufficiently geared to this new approach. In a first exploration, we selected eight separate industries which were evidently focused on producing goods and services with a high symbolic or aesthetic content (Kloosterman 2004). These eight industries are: publishers; architectural services; advertising; movie and video production; radio and television programme production; performing arts; news agencies and journalists; and libraries, museums and nature protection.

Figure 1 shows the extent of the total combined number of jobs in these industries in each of the four largest cities in the Netherlands (G4). Amsterdam is without any doubt the cultural capital of the Netherlands. In 2001, fewer people (27,100) were employed in the selected industries in the three other cities together than in the capital Amsterdam (28,200). If the numbers are divided according to the individual industries, we see that this applies to almost all industries (Kloosterman 2004). This pattern, whereby one city dominates the national cultural landscape can also be found in the United Kingdom (Pratt 1997). This dominance by one city seems to point in the direction of interlocking mechanisms between several cultural industries. These mechanisms might consist of being part of the same value chain, de-
dependent on the same set of customers, looking for the same sort of *milieu* where high-skilled creative labour wants to work (ZUKIN 1995, FLORIDA 2002), and thriving on the same institutions (educational, informational, infrastructural, and socio-cultural).

Having one dominant cultural capital, however, does not stand in the way of the possibility that other places may excel in one particular cultural industry. In the Netherlands, the glaring proof of this point is architectural services in Rotterdam. In this cultural industry, Rotterdam is clearly the frontrunner with no less than 5,600 employees in 2001 or 1.6% of the total Rotterdam working population (Fig. 2).

However, the economic significance of a cultural industry cannot be specified purely in terms of employment. The importance of a specific industry, cultural industries included, is determined to a considerable degree by its innovative capacity. This certainly applies to a sector such as architectural services where innovative concepts play a crucial role in creating a competitive profile. In all kinds of manufacturing, one can measure the innovative capacity by looking at the number of patents. This is not feasible in the case of architecture since innovations there are only very rarely translated into patents. Fortunately, architectural services is an economic activity in which those involved are rather occupied with presentation (including self-presentation). They are part and parcel of a wider environment, which includes a wide range of architectural critics and experts, where continuous discussion on the latest architectural designs is highly institutionalized. This institutionalized (and, to a large extent, publicized) reflexive capacity helps us to identify innovative architectural firms. Specialist architecture magazines can, therefore, give us a peer-review opinion on which firms are innovative. This indicator is, of course, not without its shortcomings. Other selection mechanisms (related to such factors as affinity, proximity, and accessibility) than sheer innovativeness partly determine which firms will be discussed and which not. We also expect that the "Matthew-effect" will come into play and this will benefit already famous architects instead of newcomers. Notwithstanding these shortcomings, we do think that the fact that a certain architectural firm surfaces in these architecture journals gives some reflection of its innovative capacities. In addition, we are making use of a number of (international) journals so that some of the biases of individual journals (and journalists) are cancelled out. By looking at which architectural firms are written about in leading publications we, hence, gain insight into the innovative power of the various architectural firms. Some of the work has already been done as rankings of architectural firms are already published on a regular basis.

Strategic rankings of international architectural firms can be found on the (German) website of BauNetz (2004). These are based on references to architectural firms in a number of journals in the field of architecture and design. We assume that a reference is related to a particular design and therefore innovation. For the construction of these rankings several German journals are used (Bauwelt, Baumeister, DBZ, db, Detail, Wettbewerbe Aktuell), as well as some important foreign ones (*architecture, Architectural Review, a+u, Werk Bauen und Wohnen, domus*). To construct the BauNetz rankings, specific rules are applied. First, only architectural designs less than ten years old are taken into account. Secondly, the score of points of firms is related to the number of pages devoted to those firms. More pages mean a higher a score, but this score is calculated in a way that resembles the law of diminishing returns: the higher the number of pages the less they contribute to the score. Thirdly, the final number of points is also related to the
“information thickness” or status of the journals: a multiplication factor 1 is awarded to publications in Wettbewerbe Aktuell, a factor 2 to publications in Bauwelt, Baumeister, DBZ, db, Detail and, finally, a factor 3 to references in architecture, Architectural Review, a+u, domus and Werk Bauen und Wohnen.

Most of the rankings constructed by BauNetz are focused on German architectural firms. The most useful ranking for our purpose, however, is the so-called International Top 100. We have classified the firms in the January/February and the March/April 2004 ranking to the country of location (Fig. 3).

Figure 3 shows, first of all, the remarkably large share of German firms. This is to a considerable extent the reflection of the German origin of BauNetz. Six of the eleven journals of which the ranking is constituted, are of German origin. Chauvinistic as well as practical reasons might clarify the relative large share of Germany. Secondly, the Netherlands are (both in January/February and March/April) ranked fifth, a relatively high position given the size of the country—though even here we should be aware of a proximity (this time cross-border) bias as other neighbours of Germany (Switzerland and Austria) also show high rankings. Still, being a neighbour of Germany is apparently not sufficient, as the ranking of Belgium and the absence of Denmark attest. We conclude, therefore, that the BauNetz rankings further underpin the notion that Dutch architectural firms are significant players in the international arena.

Here, we are mainly interested in architects from Rotterdam. Using the BauNetz ranking as a point of departure, we have mapped location pattern of the architectural firms within the Netherlands (Fig. 4). In January/February 2004, seven Dutch firms can be found on the top. Those firms are located in three cities. Rotterdam and Amsterdam make the largest contribution with three firms each, and Hilversum is home to one firm of the ranking. In March/April 2004 the number of Dutch architectural firms on the Top 100 has grown to eight. The newcomer is located in Maastricht whereas the other cities retain the same number of firms included in the BauNetz ranking.

We have also, on the basis of the BauNetz ranking, created a weighted distribution of the importance of the locations within the Netherlands. This weighting takes the importance of the firms cited into account by using the number of pages per publication devoted to an architectural firm. Figure 4 shows the share of locations of Dutch architectural firms in the total amount of points awarded to Dutch firms. Judging by the relative importance of the firms, Rotterdam clearly stands out in the BauNetz ranking. Firms located in Rotterdam generate no less than 63% (in January/February) and 64% in March/April of the total points awarded to Dutch firms in the BauNetz rankings. The other cities are less relevant in the weighted distribution, and Amsterdam comes second with 29% in January/February and 21% in March/April. The BauNetz Top-100 rankings, hence, not only show the international significance of Dutch architectural firms in general but of those in Rotterdam in particular.

We also possess Dutch rankings that are highly similar to the BauNetz rankings. The website Architecuenwerk has, since 1997, published a Top 40 of the (firms of) architects that are referred to most frequently in the magazines Archis, De Architect, Bouw and Detail in Architecture.

We have ascertained the place of business (in so far as this is located in the Netherlands) of each of the chosen architectural firms in order to determine the relative innovative power of the various locations. The distribution over the ‘place of business’ variable in the different years is shown as a percentage of the total number of references. Towns with two or more firms are then pro-

![Fig. 4 Distribution of architectural firms (Architecuenwerk Top 40: years 1997, 2000 and 2002) across 8 selected cities (2 or more firms) and the rest of the Netherlands (Source: Architecuenwerk 2002, edited by the authors)](image)

![Fig. 5 Distribution of architectural firms (Architecuenwerk Top 40: years 1997, 2000 and 2002) across 8 selected cities (2 or more firms) and the rest of the Netherlands (Source: Architecuenwerk 2003, edited by the authors)](image)
Amsterdam and Rotterdam are head and shoulders above the other cities as the locations of innovative (firms) of architects. Despite the relatively small number of employees in Amsterdam, the capital is therefore just as innovative as Rotterdam. Another striking aspect is that the two other G4 cities, Utrecht and The Hague, barely reached separately in the graph, together with a residual category (Fig. 5).

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The Hague is very well represented as regards employment (Fig. 2), but not when it comes to innovative capacity. The extremely strong spatial concentration is also remarkable. In the period 1997–2002 there were a minimum of three and a maximum of five cities with two or more selected architectural firms in the Top 40.

The distribution over the different locations was also analysed for an average of six years. The number of firms per location was divided by the total number of firms that year, aggregated for the various years and then divided by the number of years. This reveals the share per location (in percentages of the total number of firms referred to in the Top 40) of the architectural firms established there during all years (Fig. 6). A similar analysis can be made of the number of times that the firm in question is quoted in the magazines referred to. Here a weighting has been applied as a correction for the number of pages on which a certain architect is referred to per article. The total number of weighted points due to publications on firms in a certain city is then expressed as a proportion of the total number of (points due to) publications on firms in the Top 40.

In addition, if one looks in this manner at the importance of the places of business, Amsterdam and Rotterdam appear to be very dominant with three-quarters of the total number of publications. Given the close proximity and the strong links between the Faculty of Architecture at the TU Delft (Technical University Delft) and the Rotterdam architects, one could make a case for including Delft in the Rotterdam data. Doing so would put the two cities more or less on an equal footing. Figure 7 shows the dominance of Amsterdam and Rotterdam architectural firms in the rankings of the Architectenwerk Top 40.

Despite employing fewer people in the architectural services than Rotterdam, Amsterdam still manages to hold its own in the field of innovative, controversial architecture. It may be the case that the general climate in the Dutch cultural capital contributes to the innovative power of the architects located there. Rotterdam misses this broad cultural embedding but this isolation also turns out to have a rather splendid side. In the wake of Rem Koolhaas, an ambitious generation of architects has emerged. The other cities – with the exception of modest roles for Delft (Mecanoo) and Maastricht (Wiel Arets) – do not amount to much. The considerable level of employment in the architectural services in The Hague and Utrecht is apparently not, or scarcely, being translated into eye-catching, innovative designs.

### 3. The architectural firms cluster

The above elaboration of rankings makes clear that Rotterdam is not only the most important centre for architecture as regards employment, but also that this port city can be regarded, alongside Amsterdam, as a centre for innovative architecture in the Netherlands. However, more is required to create a real cluster than just...
the spatial concentration of innovative employment. A spatial cluster also means that the different companies are linked with each other and other actors by specific functional relationships, which constitute the basis of agglomeration benefits. Those benefits may relate to the possibility of creating a very sophisticated division of labour which leads to increased productivity, a local employment pool of highly-skilled specialized work, a continual exchange of high-quality knowledge which facilitates innovation (spill-over) and the presence of a specific set of local institutions which reinforce the matching between supply and demand on sales and purchasing markets and which also contribute to the reproduction and exchange of knowledge and conventions relating to, in this case, innovative architecture (STORPER 1997, SIMMIE 2001, BATHELT et al. 2004). The current research focuses on exposing these interdependencies and their dynamism in Rotterdam (and Amsterdam) by interviewing the key actors, i.e. the architects themselves.

Here, we confine ourselves by showing that spatial concentration is not just an inter-urban phenomenon, but also highly salient on an intra-urban level. The intra-urban distribution of innovative architectural firms (those that have been mentioned in the Top 40 of Architectenwerk) in Amsterdam and Rotterdam are shown respectively in Figure 8 and Figure 9. In both cities, the significant architectural firms are clearly concentrated in a small number of neighbourhoods, especially centrally located ones. In Rotterdam, this pattern is even more pronounced than in Amsterdam. Although we do not have any clear view of the implications of this proximity yet, it is clear that these patterns at least allow meaningful interactions and (un)intended meetings on a frequent base.

On the institutional embeddedness of these architectural firms we already have more concrete indications. In the first place, one can refer to the presence in Rotterdam of three national institutions dedicated to architecture. The Nederlands Architectuurinstituut (Netherlands Architecture Institute, NAI; established in 1989), the Stimuleringsfonds voor Architectuur (Architecture Promotion Fund; established in 1992) and the Berlage Institute (first established in Amsterdam, but located in Rotterdam since 2000) form an important triad of institutions that primarily ensure the reproduction of knowledge (archive- and institutional memory function, as well as Master’s courses), the exchange of knowledge (exhibitions, lectures, competitions, publishers of books and magazines such as 10 Publishers and the NAi Uitgeverij, promotion abroad) and fundraising (Stimuleringsfonds voor Architectuur). Local clustering of these institutes may facilitate and reinforce networks within architecture because, after all, proximity significantly increases the chance of face-to-face contacts.

This wave of institutional innovation is, incidentally, the direct effect of central government policy. At the end of the Eighties of the previous century, the central government attempted to boost Dutch architecture (see the policy documents entitled “Ruimte voor Architectuur; nota voor architectuurbeleid” [Space for Architecture, policy document on architectural policy] 1991 and the “Architectuur van de Ruimte” [Architecture of Space] 1997). Instrumental contributors to this new policy were national architecture institutes (LOOTSMA 2000). A decision was taken at that time to establish the above-mentioned institutes in the city because of the earlier initiatives in Rotterdam in the field of architecture, in combination with a strong focus on Rotterdam by the governments of the period (under the then prime minister LUBBERS who also hailed from Rotterdam).

The local desire in Rotterdam for architectural innovation was the result of sheer physical emptiness (due to the war-time bombardment), but also a deeper-rooted positive attitude to experimenting. The predilection for daring architecture goes back further into history, further even than the Second World War and the bombardment. In 1929, Rotterdam was referred to as “the most...
American city on the Continent” due to such eye-catching, daring examples of architecture as the café De Unie (1924) by J. J. P. Oud and the world-famous Van Nelle factory (1925 to 1931) by the Rotterdam firm of architects BRINKMAN and VAN DER VLUGT (HALBERTSMA & VAN ULZEN 2001, S. 17). Unlike in many other cities, people in Rotterdam dared even then to provide space for modern-looking constructions. There were certainly opportunities for progressive architects after the Second World War when the centre of Rotterdam was a dramatic slate wiped clean. The Lijnbaan (1951 – 1953) by the Rotterdam-looking constructions. There were certainly opportunities for progressive architects after the Second World War when the centre of Rotterdam was a dramatic slate wiped clean. The Lijnbaan (1951 – 1953) by the Rotterdam firm Van den Broek & Bakema is just one example. However, this continuity should not be overestimated. From an international perspective, fewer “milestones” were realized in the Netherlands and also in Rotterdam in the period 1945 – 1980 than in the period between the wars (IBELINGS 1995, S. 92). It was only in the Eighties of the previous century that this situation changed. The break had a more internal aesthetic reason, namely the dissatisfaction with the movement that prevailed at the time whereby the human dimension was central (with the focal figures being HERMAN HERTZBERGER and ALDO VAN EYCK). No one put the criticism of this into words more succinctly than REM KOOLHAAS, who really came from outside the Dutch world of architecture. Originally he built up a mainly verbal and pictorial vocabulary in the field of architecture (for example Delirious New York from 1978), but in the Eighties he succeeded in acquiring assignments (albeit primarily outside the Netherlands in the beginning) and therefore in building up his own vocabulary of realised buildings as well. The standing of REM KOOLHAAS can also be gauged from the BauNetz Top 100. The amount of attention that he is able to generate literally towers over that of his Dutch competitors (Fig. 10).

His role as initiator and innovator is crucial to an understanding of the creation of an architecture cluster in Rotterdam. The fact that KOOLHAAS was able to play that role not only has to do with his intrinsic innovations but also with the organization of his firm. The OMA has more of the open structure of a laboratory with which young architects are associated for varying periods of time before seeking employment elsewhere and/or setting up their own firms (often in Rotterdam).3

KOOLHAAS’ OMA has, through that open structure and clearing house function, therefore made a real contribution to creating and distributing a very specific habitus for relatively large numbers of architects. According to HANS IBELINGS (1995, S. 162) it is partly as a result of this that REM KOOLHAAS “... developed into a mouthpiece and point of reference of Dutch architecture”. To quote BART LOOTSMA (2000), KOOLHAAS’ presence signalled “The Second Modernity” of Dutch architecture with which the Netherlands, and Rotterdam in particular, have created distinct profiles of themselves since the beginning of the Nineties of the last century (see also LAUWEN 2003).

4. Path creation and path reproduction

The architecture cluster in Rotterdam is partly an unintentional consequence of a central government policy that was aimed primarily at improving the aesthetic quality of the built environment not just in Rotterdam, but also in the whole of the Netherlands. This policy was partly prompted by local aldermen, mostly from the Social-Democratic party, who, after the first phase of urban renewal had run its course, were looking for new challenges. In an era of city marketing, these challenges were sought in iconic buildings. To this end, institutions were established which were focused specifically on architecture and these had their places of business in Rotterdam. Such initiatives by the government – in cooperation with the Faculty of Architecture at the TU Delft – considerably enlarged the web of possible relationships via which innovative knowledge can be created and transferred. In addition, it is via those social relationships that both partnerships and competitiveness can be deepened and broadened. This has increased the extent to which innovative architecture puts down roots in the Rotterdam environment and also enhanced its viability in the long term.

However, it is certainly not just a question of a lucky and partly unintentional intervention by the national government that has caused the emergence in Rotterdam of a group of innovative architects. The formation of the cluster cannot be properly understood without referring to one highly contingent factor, namely REM KOOLHAAS.

3 Interview JANNY RODERMOND (Stimuleringsfonds voor Architectuur)
Path-dependent processes tend to move along trajectories where structures – “sunk costs” – are very strong forces as Boschma & Lambooy (1999) have observed. Before a sufficient critical mass is reached and a path-dependent process is set in motion, there is a relatively open window that allows for contingent factors and, hence, also for significant actors who are able to initiate such a process and, partly at least, determine its course in the formative stage. After this window of path-creation, dedicated institutions are formed and path-reproduction becomes possible (Mahoney 2000). The creation of a cluster of famous architectural firms in Rotterdam is inherently linked to Rem Koolhaas who directly – and above all indirectly though publications and the setting up of the OMA as a training institute – gave form to and distributed innovative architecture.

Our research focuses on analysing the economic importance of cultural industries for urban economies. For Dutch cities in particular it is a source of prosperity and employment. Innovations are not only related to nanotechnology, software or biotechnology. Conceptual innovations in the cultural industries are certainly just as important and, to date, little is known about them. The Rotterdam case offers an insight into the strategic moment of creation of a cluster within the cultural industries. We would like to unravel this moment of path creation and the role of the public and private actors further. In addition, we would like to ascertain to what extent the path reproduction is still taking place. In other words, does this promising cluster in Rotterdam have sufficient critical mass in the sense of numbers of designers and supportive institutions to remain an international trend setting activity in the long term, just as the fashion industry in Paris or the film industry in Los Angeles? The answer to this question will far transcend the borders of architecture and those of Rotterdam. 

References


Manuskriptannahme: 14. Mai 2004

Prof. Dr. Robert Kloosterman, Eva Stegmeijer, University of Amsterdam, Amsterdam Institute of Metropolitan and International Development Studies, Nieuwe Prinsengracht 130, 1018 VZ Amsterdam, The Netherlands
E-Mail: r.c.kloosterman@uva.nl
E-Mail: eva.stegmeijer@student.uva.nl

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