

The Airport

Assembled:

Rethinking planning and policy making
of Amsterdam Airport Schiphol by using
the Actor-Network Theory.

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THE AIRPORT ASSEMBLED:
Rethinking planning and policy making of Amsterdam
Airport Schiphol by using the Actor-Network theory.

DE LUCHTHAVEN ALS ASSEMBLAGE:
Het heroverwegen van planning en beleid rondom
Amsterdam Airport Schiphol met behulp van de Actor-
Network theorie.
(met een samenvatting in het Nederlands)

Proefschrift

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Preface

This dissertation is dedicated to the three loves of my life:

My wife Esther, who passed away too early and who I still miss intensely every day, my daughter Sterre, for giving me a reason to wake up every morning, and my new girlfriend Sanne, for showing me that the future can be bright again.

I would like to thank Luuk Boelens, Oedzge Atzema, Gerlach Cerfontaine, Joop Krul, Maurits Schaafsma, Peter de Kruijk, all my former colleagues at Schiphol Group, all my present colleagues at the municipality of Haarlemmermeer and Menno Huys.

Most of all I would like to thank Bart Wissink.

Bart de Jong
Utrecht, 2012

Part I:

Introduction

Chapter 1

Introducing Amsterdam Airport Schiphol: Airport development in a complex reality

A rainy morning on 7 March 2012: in a small conference room at the main office of Schiphol Group – the limited liability company that owns the airport – representatives of the aviation sector, national, regional and local governments and inhabitants have gathered to discuss the forthcoming Alders Table. The Alders Table is a consultative body consisting of members of the public sector, the private sector and civil society, which, from 2006 onwards, has formulated recommendations concerning the future capacity of Schiphol in combination with hindrance-reducing measures. With reference to Schiphol, this was the very first time that such an agreement had been made between the aviation sector, governmental parties and the local inhabitants.

The most important item on the agenda for the next week is the implementation of 'Continuous Descent Approaches' (CDAs) at Amsterdam Airport Schiphol during the day regime.¹

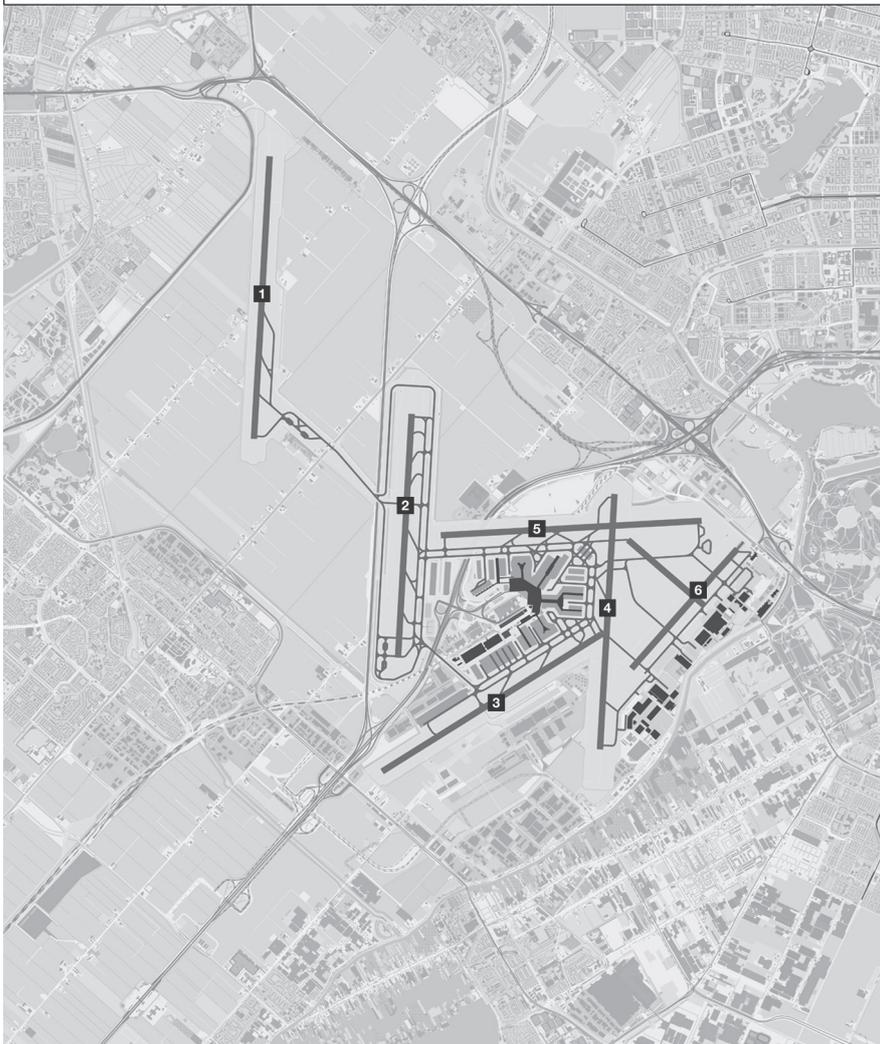
The day regime at Schiphol extends from 07.00 to 23.00. After 23.00, the more stringent night regime comes into operation. During the night, there is a fixed maximum of air transport movements (32,000²), while noise emissions during the night are scored higher than emissions during the day, and CDAs are already compulsory. All representatives have their own reasons for wanting CDAs to be implemented at Schiphol during the day: the aviation sector wants to implement CDAs as part of a new European air traffic management system and a stable operation, the inhabitants believe that a CDA is a great noise abatement technique, and the regional and local governments see CDAs as a means to create more spatial development opportunities on the ground.

However, until that moment, government bodies and inhabitants alike had rejected all suggestions made by the aviation sector concerning the implementation of CDAs. Therefore, an independent consultancy – which does a lot of research within the Schiphol file – was asked to sum up the pros and cons of all three suggestions advanced between 2009 and 2012. The first suggestion stated that the implementation of CDAs between 22.00 and 23.00 would be feasible in 2009. The aim was to start on the Aalsmeerbaan (in Dutch, 'baan' means 'runway') and to extend the use of CDAs to the Zwanenburgbaan and the 'noise-preferential' Kaagbaan and Polderbaan³ (see figure 1.1). The inhabitants rejected this suggestion, as one of the agreements made had been to start with the implementation of CDAs on the noise-preferential runways. Furthermore, this would lead to more air transport movements on the Aalsmeerbaan, which the inhabitants regarded as undesirable. The second suggestion was made in the last quarter of 2011. Within this proposition, 24/7 standard instrument departures (SIDs)⁴ were introduced and the day and night regime, which had been effective until then, would disappear. Discarding the day and night regime meant that the implementation of CDAs on noise-preferential runways would become feasible. However, this option would lead to 7000 extra people having their sleep disturbed, which is, according to the local and regional governments as well as the inhabitants, absolutely

- 1 A CDA is defined as an *aircraft operating technique in which an arriving aircraft descends from an optimal position with minimum thrust and avoids level flight to the extent permitted by the safe operation of the aircraft and compliance with published procedures and air traffic control instructions*. In the absence of an internationally agreed definition of Continuous Descent Approach, this is the definition that has been used by EUROCONTROL since 2008.
- 2 In 2012 there were approximately 29.000 air transport movements during the night.
- 3 The preferential runways are the runways with the least hindrance for inhabitants in the surrounding area.
- 4 A Standard Instrument Departure is an aeronautical chart designed to expedite clearance delivery and to facilitate transition between takeoff and enroute operations.

Figure 1.1: Runway system of Amsterdam Airport Schiphol

<i>Runways</i>			
<i>Name</i>	<i>Location</i>	<i>Length</i>	<i>Width</i>
1 Polder Runway	18R - 36L	3,800 meters	60 meters
2 Zwanenburg Runway	18C - 36C	3,300 meters	45 meters
3 Kaag Runway	06 - 24	3,500 meters	45 meters
4 Aalsmeer Runway	18L - 36R	3,400 meters	45 meters
5 Buitenveldert Runway	09 - 27	3,453 meters	45 meters
6 Schiphol East Runway	04 - 22	2,014 meters	45 meters



Source: Schiphol Group, 2012

unacceptable. The last and most recent proposal dates from January 2012 and resembles the first suggestion: in the context of experimentation, CDAs were to be implemented on the Aalsmeerbaan for three months between 22.00 and 23.00. The local and regional governments and the inhabitants asked the aviation sector why they should accept this proposal when they had not accepted the original proposal in the first place. Hence, a week before a important meeting of the Alders Table, there is still no agreement on the implementation of CDAs.

The chairman opens the meeting on the 7th of March: 'We all know that the most important and by far most delicate issue on the agenda next week is the implementation of CDAs during the day – or actually – *the lack of* CDAs during the day.' When an airplane uses a continuous descent approach, air traffic control has less flexibility to 'vector' aircrafts, which basically means that the air traffic controller aligns aircrafts in front of the runway in order to maximize the total runway capacity.

When using CDAs, the total runway capacity decreases, which is not negotiable according to the aviation sector. However, all delegations present signed a covenant in 2008, which states that, in 2010, CDAs will be implemented at Amsterdam Airport Schiphol from 22.00 to 23.00. The inhabitants back up the chairman: 'The plan was to start with CDAs in 2010 but it is now March 2012 and there are still no CDAs during the day.' The inhabitants continue: 'Now is the time to act; we believe that the implementation of CDAs during the day is one of the cornerstones of the covenant we signed in 2008 and without positive news on CDAs next week we cannot report back to our rank and file, nor be part of this consultative body any longer.' The aviation sector reacts in an agitated way: 'The aerospace above Schiphol is one of the most complex ones in the world, besides the fact that the weather in the Netherlands is very unpredictable, which influences our operation severely. Furthermore we are bound by numerous restrictions to protect the built environment on the ground that has expanded enormously in the last thirty years. All these facts hamper our flexibility in the air to come up with designs in order to implement CDAs.' 'Furthermore it is not easy to fly CDAs, as there is no internationally agreed definition of continuous descent approaches.' The inhabitants retaliate: 'In 2007 the aviation sector said that it would be impossible to fly CDAs at Schiphol. We had to ask an independent consultancy for a second opinion in order to prove that it is indeed possible to fly CDAs at Schiphol.' 'That is not completely true,' responds a civil servant, 'your second opinion concluded that there could be possibilities to implement CDAs at Schiphol.' The aviation sector continues: 'But we did formulate three proposals for the implementation of CDAs in the last four years.' 'All three of these proposals are technically feasible so we did live up to our end of the bargain.' Another civil servant

remarks: 'But one proposal created 7000 extra people who would suffer from sleep disturbance, and the other two proposals were about extra air transport movements on the non-preferential Aalsmeerbaan.'

The chairman steps in: 'This discussion is leading nowhere! We have to find a solution to this problem.' Everyone remains silent. The chairman addresses the two representatives of the independent consultancy: 'Let us forget about a "day" and "night" regime for a minute. Is it feasible to fly the day SIDs for departing planes from the Polderbaan while using CDAs for landing aircrafts on the Kaagbaan?' The aviation sector responds: 'But that would imply a third operational system for the air traffic controllers and we agreed with each other that, for the sake of safety and stability, a maximum of two operation systems would be allowed.' 'But that is not the answer I am looking for,' states the chairman, seemingly annoyed: 'Is it possible?' He turns to the independent consultancy again. 'Actually, no,' begins one of the employees of the consultancy firm. 'When departing planes are using the day SIDs and the arriving planes are using CDAs, the vertical separation between crossing aircrafts will be lower than allowed according to international standards.' The chairman sighs. One of the inhabitants says: 'It would be an absolute pity if the impossibility of the CDAs were to lead to the fall of this consultative body and the historical covenant we signed in 2008.' The aviation sector reacts: 'The reality is that this consultative body, which originally had to operate as an expert table, is increasingly turning into a negotiation table.' '...The summit of distrust is when the acceptance of expertise becomes a mere illusion,' mumbles the chairman. He turns around and addresses the independent consultancy once more: 'You have a week to come up with a workable alternative.' And with this abrupt notion he ends the meeting, conspicuously agitated.

The Continuous Descent Approach example reveals why the decision-making process of Amsterdam Airport Schiphol is experienced as incremental and indecisive. There is a multiplicity of stakes associated with one issue while, at the same time, there seems to be a disagreement about values, norms, objectives, research, information and knowledge. And this leads to *complex and unstructured problems* (Hisschemöller and Hoppe, 2001: 50). Consultative bodies are created to tackle these complex and unstructured problems; they consist of involved actors with a certain amount of expertise, as these issues generally have a highly technological character – as described in the CDA example. However, members of this small group of experts all have meanings and values that are fixed and securely anchored in their own histories as well as in the histories of their surroundings. This leads to *situations in which planners, architects, engineers, technology users, or other groups are constrained by fixed ways of thinking and interacting* (Hommels, 2008: 22; Hommels, 2011: 144). Therefore, as the actors disagree on normative and cognitive presumptions

and are constrained by their own fixed ways of thinking and interacting, it becomes difficult to bring about changes that lie beyond the scope of this particular ways of thinking.

This is the central theme of this thesis: Amsterdam Airport Schiphol is perceived as multi-actor, multi-interpretable setting in which the decision-making process of the airport is experienced as incremental and indecisive, and is imbued with social and technical uncertainties. This leads to tensions between what different actors perceive to be the most desirable *perception on* Schiphol and their actual *perception of* Schiphol. Decision-making processes, such as planning or policy making, do not seem able to cope with this tension. Steering and intervening by governments (dictating or forbidding for instance) can trigger unintended negative effects and leave opportunities unutilized. In this sense the decision-making process is unable to react to the most desirable perception on Schiphol. In the first section I discuss the way in which these tensions could come into existence, fed by increasing uncertainty, ambiguity and diverging perceptions concerning the decision-making process, followed by a short introduction to the approach that I develop in this thesis (section 1.2). Goals, added value and research questions are subsequently covered (section 1.3), and the chapter concludes with an outline of the thesis (section 1.4).

1.1

The perceived policy deadlock of Amsterdam Airport Schiphol

Amsterdam Airport Schiphol (Schiphol from now on) is the main international airport of the Netherlands (see figure 1.2). Besides Schiphol there are several regional airports in the Netherlands, the most notable ones being in Eindhoven, Rotterdam, Maastricht and Groningen Eelde.⁵ Originally, Schiphol was founded for military purposes in 1916. Nowadays, Schiphol covers 2,878 hectares in the municipality of the Haarlemmermeer.⁶ In 2011 the airport, which currently operates six runways, handled 49.8 million passengers, a growth of 10 per cent compared to 2010. The number of air transport movements increased by 8.8% to 420,249 and Schiphol had 313 scheduled destinations that year.⁷

5 Eindhoven and Rotterdam are owned by the Schiphol Group.

6 Schiphol Group (2012: 14-15), Traffic Review 2011.

7 169 scheduled destinations in Europe and 144 scheduled intercontinental destinations (Schiphol Group, 2012).

Like other major airports, Schiphol has a home carrier, 61.3 percent of all air transport movements were made by KLM and its partners in 2011. In that same year, 12.6 per cent of the total air transport movements were made by low-cost carriers (see figures 1.3, 1.4, 1.5 and 1.6).⁸

Schiphol is not a private company, but largely owned by Dutch governmental authorities. To encourage an independent organization, the limited liability company NV Luchthaven Schiphol (Schiphol Group from now on) was formed at the end of the fifties to manage the airport. Today, shareholders of Schiphol Group are the Dutch state (69.8 per cent), the city of Amsterdam (20 per cent), the city of Rotterdam (2.2 per cent) and, since 2008, Aéroports de Paris (8 per cent).

The image of Schiphol within the Netherlands has changed drastically over the last twenty years. The airport used to be one of the ‘icons’ of the Dutch welfare state. In general, the Dutch were proud of the fact that a small country like the Netherlands was home to a renowned international airport such as Schiphol. There was a broadly felt feeling, derived from the rich colonial past, that the Netherlands had to be linked to the rest of the world. Whereas at the beginning of the nineties the airport still stood for economic growth and opportunities, today Schiphol is often regarded as a policy problem by concerned actors.

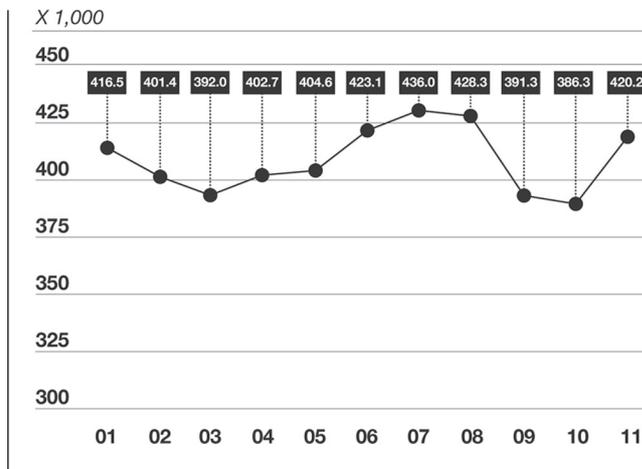
Figure 1.2: Amsterdam Airport Schiphol



Source: Schiphol Group, 2007

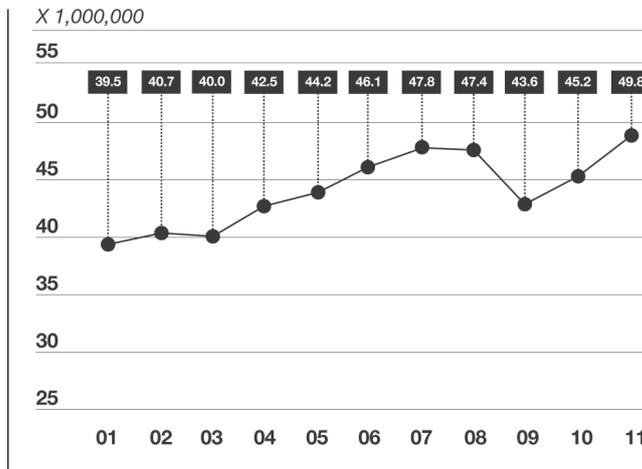
8 Schiphol Group (2012: 25), Traffic Review 2011

Figure 1.3: Air transport movements Schiphol 2001-2011



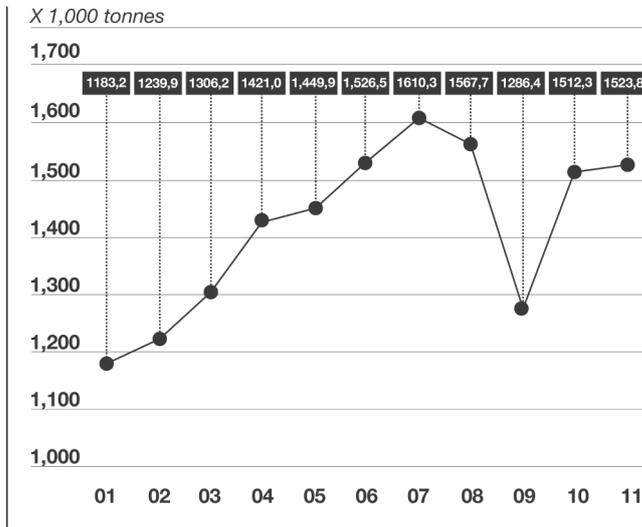
Source: Schiphol Group, 2012

Figure 1.4: Passenger transport Schiphol 2001-2011



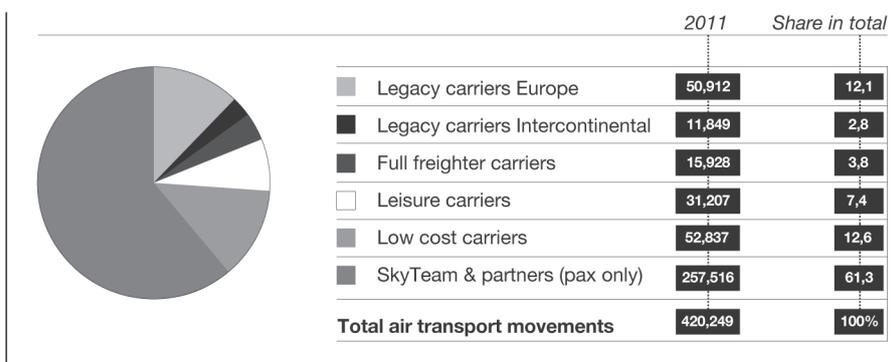
Source: Schiphol Group, 2012

Figure 1.5: Cargo transport Schiphol 2001-2011



Source: Schiphol Group, 2012

Figure 1.6: Air transport movements per airline segment 2011



Source: Schiphol Group, 2012

The most commonly heard criticism is that the airport seems to be unable to find a balance between two policy goals: economic growth and ecological sustainability (Van Duinen, 2004: 61).

Next to the fact that concerned actors find it truly hard to find a balance between above described policy goals, the total amount of involved parties has increased too. Economic and social shifts have entered the domain of the state, politics and administration, elite networks, lobby groups and social movements, stretching between and across cities, regions and even countries. As a result, apart from governments, a growing number of public and private actors have emerged, trying to influence the spatial planning of the Schiphol area to their own advantage. Places – like Schiphol – have become articulated moments in networks of social or economic relations and understandings, rather than areas with specific boundaries. Schiphol is seen as a *glocal*⁹ node, shaping complex socio-spatial relations between-and giving meaning to -place (Brøer, 2006: 9; Dicken, 2004: 20-21; Hakfoort and Schaafsma 2000: 79; Boelens 2005: 11, 2006: 26; Healey, 2007: 2; Graham and Healey, 1999: 11). In this perceived multi-actor setting, the decision making process is often described as a *Gordian knot*. Concerned actors seem not capable of coming to the *bold stroke* in order to break through these “intractable problems”.

Less attention is given to Schiphol perceived as a multi-interpretable setting. Apart from the fact that Schiphol can be defined as an airport, a company, a business park, a region, a network, an urban complex, a polluter and so on, during the decision making process facts and values are defined in different ways. Addressing the growth of the airport in terms other than those involving numbers of air transport movements and the total amount of passengers, such as the expansion of real estate around the airport and negative external effects – noise and air pollution for example – is an example of this process.

Especially the multi-actor interpretation of Amsterdam Airport Schiphol is widely accepted, as shown by several studies, reports, policy documents, manifestos, etc. which were written by the aviation sector, inhabitants of surrounding municipalities, ministries, provincial and regional authorities, municipalities, independent consultancies, scientists, non-governmental organizations, commissions and so on. Even if we only dip at random into the wealth of material produced since 2000, it is evident that the identified difficulties concerning the decision-making process of mainport Schiphol are due to the existence of many different actors with many different norms and values triggered by increasing complexity based upon external factors.

9 The notion of *glocalization* is used in a more sociological manner to explain how the polarity between the global and the local (or the universal and the particular) is inaccurate. The global does not exclude the local; globalization involves the linking of localities (Castells, 1996: 412; Robertson, 1995: 27).

Bijnsdorp Communicatie Projecten (2005) explained how non-transparency and a lack of explicit views lead to a climate of distrust where facts and opinions become confused. The De Grave Committee (2005) used the case of planning new office locations at Schiphol to show how excessive governance¹⁰ can arise because of an increasing number of concerned actors that repeatedly encounter one another in various committees. The committee concluded that there is a lack of central governmental steering and regional perseverance, resulting in compartmentalization and opposing interests. Van Gils et al. (2009) show how several stakeholders, such as the Schiphol Group, KLM, the municipality of Amsterdam and the province of Noord-Holland, believe that an extensive amount of deliberation leads to vacillation concerning the decision-making process. At the same time, they do not seem able to decide exactly which deliberations are unnecessary. The commission *Ruimtelijke Ontwikkeling Luchthavens* (Committee for Spatial Development of Airports; CROL from now on) concluded that developments on airside and developments on landside in the Schiphol area are so important that all concerned actors should work together. However, the realization of this co-operation is the biggest problem in the Schipholregion: there are no shared strategies and there is no zest amongst the actors (CROL, 2009).¹¹ The Randstad 2040 report, formulated by the former Ministry of Housing, Spatial Planning and the Environment (2008),¹² stresses that the airport is important for the Dutch economy as a whole and that only the steering capacities of the central government can make sure that the Schiphol region will function as an entity.¹³ A direct offshoot of the Randstad 2040 report is the *Structuurvisie Mainport Amsterdam Schiphol Haarlemmermeer* (SMASH),¹⁴ a national comprehensive plan that attempts to link several important developments within the Schiphol region (SMASH, 2011). However, De Jong et al. (2008: 3) have shown that prevailing policies seem to be incapable of solving the disturbed relationships. These policies are mostly characterized by *ad hoc* decision-making, typical Not-In-My-Back-Yard behaviour and a lack of collaboration when it comes to spatial development. Thus, whereas Amsterdam Airport Schiphol once stood for economic opportunities, nowadays it stands for conflicts between the actors involved, because of the unrewarding and paradoxical task of finding a resilient

10 Excessive governance means that there is simply too much co-ordination, which is seen as oppressive and obstructive (Cerfontaine 2006: 11).

11 The report by CROL is available for download at <http://www.commissierol.nl/>

12 In 2011, the Ministry of Housing, Spatial Planning and the Environment and the Ministry of Transport, Public Works and Water Management merged into the newly formed Ministry of Infrastructure and the Environment.

13 Randstad 2040 can be downloaded at <https://zoek.officielebekendmakingen.nl/kst-31089-21-b3.html>

14 The original name was 'MASH' but, due to the reference to the Korean war, the name was changed to SMASH.

balance between economic development and environmental sustainability, while also dealing with global and local interests. This leads to increasing complexity and a seemingly widely recognized¹⁵ deadlock in the planning and policy-making process concerning the future development of Amsterdam Airport Schiphol.¹⁶ Policy makers find it increasingly difficult to link the normative interpretations of Schiphol to concrete policy actions.

As was pointed out earlier, I define the Schiphol case as a policy problem. A policy problem arises when a gap between an existing and a normatively valued situation must be bridged by government action. However, policy problems are not objective facts, as not everyone considers the same situation to be undesirable. In this context we can think of more air transport movements at Schiphol versus less noise hindrance in the Schiphol region. And that is why a problem is a social and political construct. What these constructs do is to articulate values as well as facts. The consequence is that what one person considers a matter of fact, another may well consider as a matter of ideology (Hisschemöller and Hoppe, 2001: 50-51). Planning and policy making concerning Amsterdam Airport Schiphol, and all the problems that arise from it, are defined as *well-structured*. This means that involved actors believe that all policy problems that arise can be resolved by the use of specialist knowledge and technical expertise. This results in a decision-making process where one group of people is seen as qualified to make decisions, whereas another much larger group of laypeople are regarded as unqualified and thus de facto excluded from the decision-making process (Hisschemöller and Hoppe, 2001: 54). However, my hypothesis is that, although it is widely believed that planning and policy making concerning Schiphol are defined through well-structured problems, leading to a small group of qualified specialists being allocated the task of solving these problems, the opposite may be true: the complexity of planning and policy making concerning Schiphol is characterized by complex and unstructured problems. This means that reductive solutions are not available. So we might change the planning system as such.

Besides the organisation of the planning system, there is a more epistemological issue. What the changing perceptions on Schiphol as well the CDA example show is that Schiphol is increasingly becoming imbued

- 15 See for example: De Maar (1976), Teisman et al. (2008), van Buuren et al. (2012), Broër (2006; 2008), Burghouwt (2005), De Jong et al. (2008), Huys (2011), Boelens and De Jong (2006), Berkhout (2003), van Boxtel and Huys (2005), Cerfontaine (2006), Van Eeten (1999; 2001), Van Gils et al. (2009), De Jong (2008), Huys and Koppenjan (2010), Van Wijk (2007), Huys and Kroesen, (2009), Van Duinen (2004), Bouwens and Dierikx (1997), De Grave et al. (Andere Overheid - 2005), Weggeman (2003), Tan (2001), Vriesman et al. (CROL- 2009), Daams (2011).
- 16 A situation is considered a deadlock when there is a problematic situation that attracts more and more actors, and the interaction process related to the situation stagnates (Daams, 2011: 13).

with *the scientization of politics/policy and the politicization of science* (Hoppe, 1999: 3). Schiphol's deadlocked situation exists because 'facts' can be interpreted in multiple ways, resulting in a multiplicity of stakes associated with one certain issue. However, complex and unstructured problems are not only characterized by a disagreement about normative elements, but also by a disagreement about cognitive elements and uncertain knowledge. The strict demarcation between facts and values and science and politics has disappeared. On the one hand, science is manipulated for political gain while, on the other hand, political decisions are made scientific. In this case, it no longer makes sense to approach Schiphol as a clear and unambiguous technological object that can be governed by clear-cut planning concepts and approaches, which is exactly what all involved actors have been doing for the last twenty-five years. It becomes necessary to analyse the fuzzy relation between science and politics and the way in which this affects actors and policies. Therefore, this thesis focuses on the series of shared uncertainties (Venturini, 2010: 6) that the planning and policy-making processes concerning Amsterdam Airport Schiphol are undergoing, and on ways in which to deal with these shared uncertainties.

1.2

The approach: Actor-Network theory

Schiphol has been the subject of scientific research for many years now. As far back as 1976, De Maar was researching the difficulties of incorporating a new factor into the decision-making process. He examined the introduction of the jet engine at Amsterdam Airport Schiphol and the way in which this influenced prevailing laws and institutional frameworks, as well as the expansion of Schiphol (De Maar, 1976).

Dutch public administration in particular has paid extensive attention to Schiphol. These studies focus on (rounds of) policy making from an actor-oriented or network perspective.¹⁷ Van Eeten (1999) uses the controversy around the expansion of Schiphol with a fifth runway to show how the boundaries between science and politics are blurred, corroborating the scientization of politics and the politicization of science. Tan (2001) evaluated the decision-making process concerning Schiphol between 1989 and 1991: the so-called *Plan van Aanpak Schiphol en Omgeving* (Policy agreement plan of action for Schiphol and its surrounding area, PASO) round of policy making. He researched the quality standards that decision making on large-scale infrastructure projects—hence Schiphol—has to meet. The perspective he uses is Teisman's pluricentral approach,

¹⁷ See for instance Tan (2001: 17), or more recently Huys (2011: 11) for a list of studies concerning Schiphol.

which states that, in complex decision-making processes, actors become 'entangled' as policy is made by collaboration and contestation. Policy is the outcome of interaction between (a limited amount of) actors (Tan, 2001). Weggeman (2003) also discussed a round of policy making in the Schiphol file. This time, the research topic was the *Tijdelijk Overleg Platform Schiphol* (Interim Debate on Schiphol, TOPS) between 1998 and 1999. Weggeman's book is about controversial decision-making, meaning decision making regarding controversial projects on the one hand, and the decision-making process itself that appears controversial on the other hand. He reconstructs the consultation round, again from an actor-oriented, even pluricentric view. Huys and Koppenjan (2009) evaluated twenty years of Schiphol policy making, and concluded – while applying the Policy Network Approach – that actors failed to reconcile growth ambitions with environmental objectives. Most recently, Riemens (2011) has researched, through a management (steerage) viewpoint, how some sort of extraordinarily productive form of co-operation between local parties involved was necessary for Dutch aviation to bloom. Huys (2011) researched the mechanisms that drive the emergence and ongoing reproduction of the Schiphol policy deadlock, focusing on the dual objective. Daams (2011) also focused his research on the Schiphol policy deadlock. He used five case studies in order to research general aspects of deadlocks and how these can be resolved.¹⁸

But not only the science of public administration has examined Schiphol down through the years; several studies from an urban planning perspective have also been carried out. Burghouwt (2005) researched how airport planning can handle volatility, uncertainty and the risks of the deregulating aviation market. He introduced Flexible Strategic Planning, which is characterized by a continuous oscillation between the long term and the medium term (or the general level and the detailed level), and projects this planning approach on Schiphol. His study mostly focuses on the airport and the airside. The dissertation of Van Wijk (2007), a planning study, does focus on the airport and the landside, or the surrounding area. Van Wijk shows how institutional arrangements and growth coalitions in the case study on Schiphol lead to numerous deliberative bodies through which the decision-making process becomes unclear and intricate. In addition, he states that striving for consensus and pragmatism – a typically Dutch trait – hampers interventionism and spatial ambitions. To conclude, three studies worth mentioning are those by Bröer (2006), the Netherlands Institute for Spatial Research (RPB) (2006), and Kroesen (2011). These studies conclude that political processes such as policy measures influence the perception of noise and thus public support

18 The five case studies are: Convergent approaches outside the Uniform Daylight Period, Just Culture, Departure route at Spaarndam, Parallel Departures, and AMRUFRA (an acronym of Amsterdam, Ruhr and Frankfurt) (see Daams, 2011).

for future developments. For instance, Schiphol generates less noise than London Heathrow and Paris Charles de Gaulle, but the number of complaints is extraordinarily high compared to its British and French counterparts (RPB, 2006: 7).¹⁹

Although the above-mentioned list is far from complete, it gives a good overview of Dutch studies on Schiphol. What all these studies have in common, with the exception of those by Van Eeten (1999), Bröer (2006) and the RPB (2006) and Kroesen (2011) to some extent, is that they either focus on the technical influence on policy-making concerning Schiphol, such as those by De Maar (1976) and Burghouwt (2005), or on the social, more actor-oriented, side of policy-making concerning Schiphol, such as those by Tan (2001), Weggeman (2003), Van Wijk (2007), Huys and Koppenjan (2009), Daams (2011), Riemens (2011), and Huys (2011). The discussion never seems to focus on the correlation between this technical influence and this actor-oriented side of the decision-making process concerning Schiphol. This seems strange when we consider that Schiphol is a rather technical entity with an extensive social component. For instance, a runway has a certain location and this location means that noisy airplanes bother people. So the runway – or even more basically: a strip of asphalt – participates in the relation between the airport and inhabitants of the surrounding area who have to endure noise nuisance. In addition, these people can pick up their phone, or log in to their mail account and register a complaint at the complaints department. A logical question is then: would there be complaints without a complaints department? Another example is all the investments that were necessary for the Airbus A380 to be able to land at Schiphol. And what if airlines decide to skip Europe when flying from New York to Bangkok and land in Dubai instead – or perhaps even not at all? If so, what is the impact of a technical object like an airplane on the Schiphol region or the competitiveness of the Netherlands as a whole? By the way, what would happen to the Netherlands if an actor standing in the wings of the administrative stage, such as Air France, decides to relocate the whole KLM operation to Paris? And while talking about actors that are not locally organized: what would the airport security process look like nowadays if 9/11 had never occurred? And why does something simple, such as liquids for example, leave such a significant mark on airport security? How can geese foul up the whole airport operation? A file like the Schiphol file, where many actors try to transform their interests into facts and where objects play a major role in this struggle, asks for an Actor-Network analysis. And so, this research will focus on the correlation between the technical influence and the actor-oriented side of the decision-making process concerning Schiphol and how this leads to impasses, and

19 The RPB no longer exists and was replaced in 2008 by the Planbureau voor de Leefomgeving (PBL), a merger between the RPB and the Netherlands Environmental Assessment Agency (MNP).

more importantly, solutions for these impasses. Studying the way in which governmental actions could bridge the gap between existing and normatively valued situations cannot be done in its solid state (the stabilized networks) or in its liquid state (the isolated actors). It can only be done by following the processes and the associations involved in planning and policy *in the making* (Latour, 2005b: 159): a controversy (Yaneva, 2012: 2). A controversy is defined as *shared uncertainty* (Venturini, 2010: 6). This thesis will primarily focus on the socio-technical character of controversies, meaning that the social, political and moral uncertainties are rendered more complex, rather than less, by scientific knowledge or established technologies.

This understanding of 'planning and policy in the making' is inspired by the field of Science and Technology Studies (STS) but does more: this thesis does not simply identify the scientific and technological aspects of urban planning and policy making, or follow the way in which scientific and technological networks tangle with urban planning and policy making. I use a method of inquiry that breaks with artificial dichotomies of technologies/humanities, subject/object, and even nature/culture (Yaneva: 2012: 3): the Actor-Network theory (ANT).

In past three decades, ANT has infiltrated a wide range of theories, methods and empirical studies throughout the social sciences by rejecting conventional ontological and epistemological assumptions in exchange for a relational perspective. Founded by Bruno Latour, Michel Callon and John Law (Murdoch, 2006: 57), the Actor-Network theory enables readers to understand how actors construct 'realities' by forming networks of relations, on the basis of controversies.

So ANT does not research already established connections, but follows actors that construct their set of associations: *we follow the actors' own ways and begin our travels by the traces left behind by their activity of forming and dismantling groups* (Latour, 2005: 29). And only when associations have been established and accepted, can a social explanation be convincing; or, as Latour (1986: 273) believes: *society is performed through everyone's effort to define it.*

ANT is a promising theory to come to a better understanding of why governments find it hard to bridge the gap between existing and normatively valued situations of Schiphol, leading to an incremental and indecisive decision-making process, imbued with social and technical uncertainties. Moreover, ANT can help finding solutions to bridge that gap between existing and normatively valued situations of Schiphol. First, ANT provides a radical account of space and time, stating that space and time are not underlying autonomous structures but rather multiple enactments and assemblages. Next, ANT is not interested in the epistemological status of scientific knowledge and delegative politics, but focuses on the production of such knowledge and politics as an ontological achievement

(Fariás, 2010: 6-7). ANT looks at how objects are made and unmade at particular sites of practices (such as an airport). Last but not least, ANT is used because it grasps the multiplicity of processes of becoming, it affixes socio-technical networks, hybrid collectives and alternative topologies (Fariás, 2010: 2): these three central notions show how boundaries between science and the social, values and facts, technologies and politics, and humans and objects, are blurred.

The ANT toolbox shows how Schiphol is not socially constructed, but assembled into being, in networks of materialities, bodies, technologies, objects, natures and humans (Mol, 2002: 22-23). The assemblage of Amsterdam Airport Schiphol is not just social but also material, and involves the *heterogeneous ecologies of entities acting at sites and contexts of practice* (Fariás, 2010: 13). There are multiple enactments of Schiphol and the major challenge is to understand how these multiple geneses are articulated, concealed, exposed and made present or absent.

Of course, one can replace Schiphol with city (Bender and Fariás, 2010), dams in India (Marres, 2005), BSE (Latour, 2004), atherosclerosis (Mol, 2002) or AIDS (Dijstelbloem, 2007). However, the endless list of technologies, the disagreement and uncertainty about these technologies, different norms and values, and the blurred relations between science and politics, make the Schiphol file an extraordinary case, one that is extremely suited to an ANT approach.

1.3

Research objectives, questions and added value

Research objectives

As shown, growing multi-actor and multi-interpretable complexity seems to be the focal core of the seemingly widely recognized impasse in the decision-making process concerning the development of Amsterdam Airport Schiphol. In this thesis the main focus will be on the disposition of this complexity: as a multiplicity of stakes and divergent perceptions arise, disagreements, ambiguities and uncertainties ensure that the decision-making process takes place in an undefined area somewhere between facts and values, where science and politics are mutually intertwined.

As already mentioned in this chapter, the thesis will follow and document socio-technical controversies as they unfold. Human and non-human actors are tracked, as well as their statements, their own interpretations of the world, and the networks of associations they trace (Latour, 1987: 21; Yaneva, 2012: 3). By mapping controversies and rethinking bifurcations, not only does this thesis avoid an isolated focus on relations, communication, textuality and/or discursivity, but also pays attention to the agency of technologies within the entangled networks of sociality

and materiality (Pels et al., 2002: 2; Aibar and Bijker, 1997: 22). By shifting the focus from “studying complexity” to “studying the disposition of complexity”, deadlocks can be understood in a different way, leading to new insights how to break free from them.

As presented, the Actor-Network Theory (ANT) has provided the building blocks for this type of approach. ANT enables readers to understand how actors construct ‘realities’ through the forming of networks of relations, as a result of socio-technical controversies. More specifically, it is especially the political programme of Bruno Latour (2004, 2005a, 2010) that looks very promising for this research as it explains the way in which, proceeding from a specific ontological constellation of a certain practice, democratic articulation can emerge. In other words, it renders the forming of policies traceable through the forming of networks and relations. I must immediately add that there is no adequate blueprint for researching decision-making processes using ANT. Moreover, ANT is renowned for its analytical power and theorists are very reluctant and cautious when it comes to taking a normative stance (Boelens, 2009: 192).²⁰ Some ANT theorists would even say that it is inaccurate to define it as a theory: *it does not aim at providing explanatory theoretical constructs for any particular state of affairs* (Fariás, 2010: 3). Therefore, by relying upon insights provided by ANT, I will eventually form a normative framework to come to conclusions and recommendations.

However, this ‘normative framework’ must first be developed. First step is to use ANT to develop a descriptive grid. Before this is possible, I wish to discuss ninety years of Schiphol policy debate (1906-2006), in order to give more background information concerning everyday practice at Schiphol. The second goal is to apply the descriptive part of the research framework to the Schiphol policy debate between 2006-12 (the so-called Alders Table case, consisting of 7 controversies). The third and final goal is to explore the possibilities of a normative ANT perspective on decision-making to trigger change and break through the impasse in the decision-making process concerning the development of Amsterdam Airport Schiphol.

Research questions

Main Research Question:

To what extent do socio-technical controversies influence the decision-making process concerning the future of Amsterdam Airport Schiphol in an obstructive way, and what lessons could be learned by planners and policy makers?

In order to answer the main research question, three additional research

²⁰ In this perspective, see the interlude in Latour (2005b: 141-56).

questions have been formulated:

1. Why should a descriptive research framework constructed on the basis of the Actor-Network theory contribute to answering the main research question?
2. How can mapping controversies lead to a better understanding of the Alders Table, a consultative body consisting of members of the public sector, the private sector and civil society?
3. How should the Actor-Network theory be implemented by planners and policy makers in such a manner that association-building can be steered and influenced in a normative and proactive way?

Added value

By now it will be clear that the research has both a societal and scientific value. Concerning the societal value, the research describes and explains the continuous tension concerning the decision-making process of Amsterdam Airport Schiphol. It is exactly the development of a proper descriptive and normative Actor-Network framework that might contribute to the creation of the necessary context for inducing change. Moreover, a detailed understanding of the specifics of the Schiphol case may also help to discern intervention strategies that might become effective. This societal argument, primarily focused on the Schiphol case, is also the most important added value this research has to offer.

From a more traditional understanding, the study also holds scientific value beyond this thesis and the Schiphol case. First of all, the research provides us with research framework from an Actor-Network theory perspective, aimed at obtaining a different understanding of the mechanisms at work in a specific socio-technical domain. Second, the specific way that the Actor-Network theory is used to describe and analyse complex decision-making processes certainly holds value beyond this thesis. Finally, there are only a few case studies available that offer in-depth insight into the way in which policy making about large airports in Western democracies takes place.²¹

However, I would like to stress that this thesis cannot and will not develop universal cause-effect relations that explain the emergent and persistent gap between existing and normatively valued situations, nor does it contain universal panaceas for bridging the gap between existing and normatively valued situations. All findings are firmly grounded in the Schiphol file, and all research findings and explanations are context-driven. In the remainder of this chapter, I present a short outline of the thesis.

21 A few examples that do show how policy making about large airports in Western democracies take place, are: Tan (2001), Weggeman (2003), Huys (2011) and Daams (2011).

1.4

How to read this book

First, Chapter 2 will give a historical overview of ninety years of Schiphol policy making in order to come to a better understanding of the increasing complexity around Schiphol as a result of uncertain knowledge, disagreements about normative elements, and disputes about cognitive elements.

In essence, I shall use the Actor-Network theory and the more concrete elaborations of ANT by several others who have applied it to the study of planning and policy making (most notably Healey, Hillier and Boelens) in order to develop a research framework that helps us describe, explain and bridge the gap between existing and normatively valued situations concerning the development of Amsterdam Airport Schiphol through mapping socio-technical controversies. First, a descriptive grid will be presented in Chapter 3, where the Actor-Network theory is introduced, and in Chapter 4, where I form my research framework to describe and understand the case studies. In conjunction, these two chapters form the second part of the thesis, *towards a descriptive grid*, forming the theoretical backbone and answering the first research question.

Next, the Schiphol case is introduced: the *Alders Table*, a consultative body consisting of representatives of Schiphol Group, KLM, Air Traffic Control the Netherlands (LVNL), the Ministry of Spatial Planning, Housing and the Environment, the Ministry of Transport, Public Works and Water Management, the municipalities of Amsterdam, Amstelveen, Uitgeest and Haarlemmermeer, the province of Noord-Holland and local residents, which had the task of formulating a collective view on the future capacity of Amsterdam Airport Schiphol. This resulted in an extensive case description (chapters 5, 6, 7 and the intermezzo) and forms the empirical part (part III which answers research question 2) of the thesis.

Chapter 8 will formulate a normative grid in order to come to recommendations for planning and policy making around Schiphol.

Finally, Chapter 9 will focus on recommendations and conclusions.

These two chapters make up Part IV of the thesis and will answer research question 3, as well as the main research question.

Chapter 2

1906 – 2006: Ninety years of Schiphol policy debate: From airfield to mainport

As we have seen in Chapter 1, planning Amsterdam Airport Schiphol takes place in a complex setting. A changing society has made the decision-making process a difficult one, with many actors concerned and many interests at stake. This increasing complexity is characterized by disagreements about values, norms, objectives, research, information and knowledge. Technological and scientific issues dominate the decision-making processes concerning Schiphol. Furthermore, there is no longer any clear-cut demarcation between science and politics, as technologies and science, instead of providing politics with facts, have become part of the political debate and are open to interpretation and manipulation.

This chapter will explain how the complexity of the situation arose, by focusing on the Schiphol policy debate between 1906 and 2006. The evolution of the

policy debate will be divided into four phases. In the first phase (1916-45) three Dutch aviation pioneers were dominant: Plesman, Dellaert and, albeit to a lesser extent, Fokker. The collaboration between these three pioneers led to a fairly stable development of the airport. In those days, Schiphol was perceived as physical evidence for economic and technological development and astonishment. The second phase (1945-67) started with the post-WWII reconstruction of the airport. After the reconstruction of the airport, the perception on Schiphol changed towards a cosmopolitan one. Schiphol was booming.

However, as a consequence of the introduction of the jet engine at the end of the fifties, a new world was created, consisting of cheaper tickets, noise hindrance, contours, maps, graphs, new airport requirements, a complaints department, reports and institutionalized policies. Because of the introduction of the jet engine, the perception on the airport gradually changed to Schiphol as environmental issue. Science and politics start to mingle. In the third phase (1967-88), a transition from the Dutch Welfare State towards Neoliberal Capitalism can be identified, leading to the fourth phase (1988-2006): Schiphol perceived as a mainport²² or economic engine, triggering accelerated growth. However, because of numerous protests and opposition, a compromise was reached, stating that Schiphol had to find a balance between economic growth and ecological sustainability. This chapter shows, by means of retrospective analysis, how Schiphol is being perceived in even more different ways as time progresses. These different perceptions stress the complexity of the decision-making process concerning the airport as well as the eradication of the demarcation between science and politics.

2.1

The pioneer phase: 1916-1945

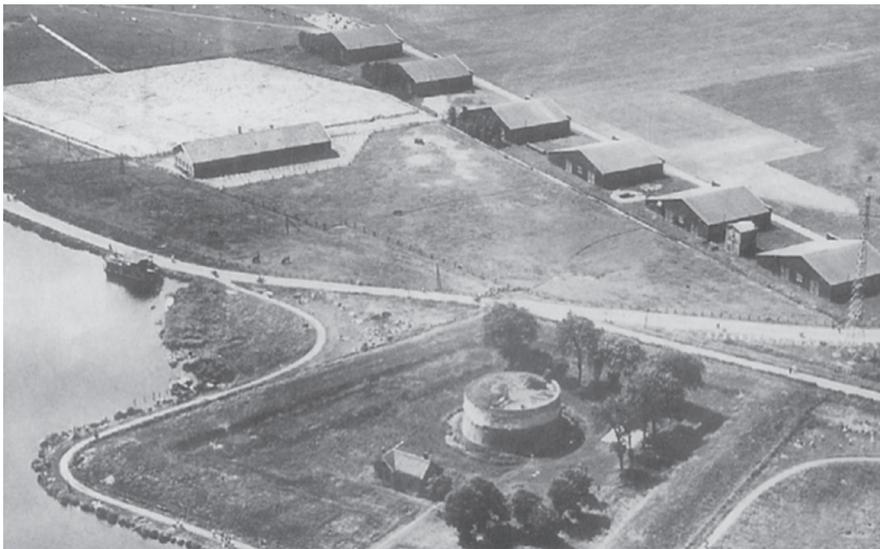
At the beginning of the twentieth century, aviation was an emerging and innovative industry and by consequence an exclusive world. Although industrialization was well under way, the airplane as transport modality was not as obvious as ship, train or truck (Bouwens and Dierikx, 1997: 21). Where aviation was used, it was mostly for military purposes; civil aviation did not yet thrive. Aviation started to move out of the pioneering stage during World

22 *Mainport* is a portmanteau word, founded in the early eighties and consisting of two English terms: *main* and *port*. The term *mainport* itself is thus actually a Dutch word, believed to have been invented by two professors at the University of Rotterdam, Poeth and Van Dongen. Their research at that time was about the future of Rotterdam harbour. The authors observed that transport and transshipment of certain goods was increasingly concentrated in centrally situated harbors. Poeth and Van Dongen used the network metaphor to show that important nodes, or *mainports*, arise in growing networks (Van Duinen, 2004; Bröer, 2006).

War One, and the first commercial airports were inaugurated in the USA, Europe and Australia. In 1916, the newly established armed force *Luchtvaart Afdeling* (Aviation Division, from now on LVA) was frantically searching for an airport to parry a possible attack by the Germans. General Snijders and LVA commander Walaardt Sacré found two parcels of land in the north-eastern corner of the Haarlemmermeer Polder, next to Fort Schiphol where formerly – before the lake was drained – many ships had been wrecked. As a consequence, that area had become known as Ships Hell: ‘Schiphol’ in Dutch. The land was bought from farmer Knibbe and by September 1916 the first three planes had landed. In those early days, the role of Schiphol was only a marginal one as the airport was only used for incidental landings (Bouwens and Dierikx, 1997: 50-2).

While Schiphol was originally no more than a barely used, bumpy meadow in Haarlemmermeer, it did not stop leading Dutch aviation pioneers – Albert Plesman, Anthony Fokker and Jan Dellaert (see figure 2.2) – following in the footsteps of the original military founders, and they began developing the military airfield into an budding and vibrating civil airport (Bouwens and Dierikx, 1997: 53-4).

Figure 2.1: Schiphol around 1916, with Fort Schiphol on the southside



Source: <http://www.urbannebula.nl>

The first pioneer was Albert Plesman, a first lieutenant who had received his military pilot's licence in 1917. As a result of the brochure *het reizen per vliegtuig in de toekomst* (travelling by plane in the future) written by LVA first lieutenant Hofstee, the national government also started to believe that aviation could play an important role for the Dutch economy in the near future.

Therefore the *Koninklijke Nederlandsche Vereeniging voor Luchtvaart* (the Royal Dutch Aviation Department) was ordered to conduct research into the future of Dutch aviation. The report concluded that a private airline should be founded to keep up with the dynamics of the aviation industry.

It was Plesman who convinced the Minister of War to organize the First Airline Exhibition in Amsterdam, ELTA 1918 (Wennekes, 2000: 427). This exhibition – at which Fokker also presented himself – proved to be a big success. Nearly 1 million people attended, all costs were met, and at a stroke the colonial Kingdom of the Netherlands presented itself as a prominent aviation nation. Moreover, in addition to those revenues, Plesman also managed to convince influential Rotterdam harbour barons like Van Beuningen, Fentener van Vlissingen, Kröller and others to invest in the foundation of a Dutch airline. As a result, the Dutch government established the *Koninklijke Luchtvaart maatschappij voor Nederland en Koloniën* (Royal Dutch Airline for the Netherlands and Colonies, KLM from now on). And so it happened that in 1919 Plesman became the first CEO of this Royal Dutch Airline for the Netherlands and Colonies. After the KLM signed a generous contract with the post office to transport airmail between Amsterdam and London, the first KLM flight between both cities was a fact on 17 May 1920 (El Makhloufi and Kaal, 2011: 501).

Figure 2.2: Three Dutch aviation pioneers: Albert Plesman, Anthony Fokker and Jan Dellaert (from left to right)



Source: <http://www.aeropedia.nl>

The second real pioneer, albeit to a lesser extent, was Anthony Fokker – the Flying Dutchman – who became a renowned airplane builder after the First World War. At that time he owned several aircraft maintenance service buildings, with headquarters in Amsterdam, Veere (in the south-western part of the Netherlands) and in the United States of America. In the 1920s and first half of the 1930s, Fokker dominated the European market and captured 40 per cent of the American market. However, Plesman and Fokker had many arguments concerning orders. Fokker convinced the Dutch state to force KLM

to buy Fokker airplanes (Dierikx, 2004: 18). Nevertheless, in 1934, Plesman was the first European airline CEO to break with Fokker. He stated sardonically that Fokker was better off building Douglas airplanes.

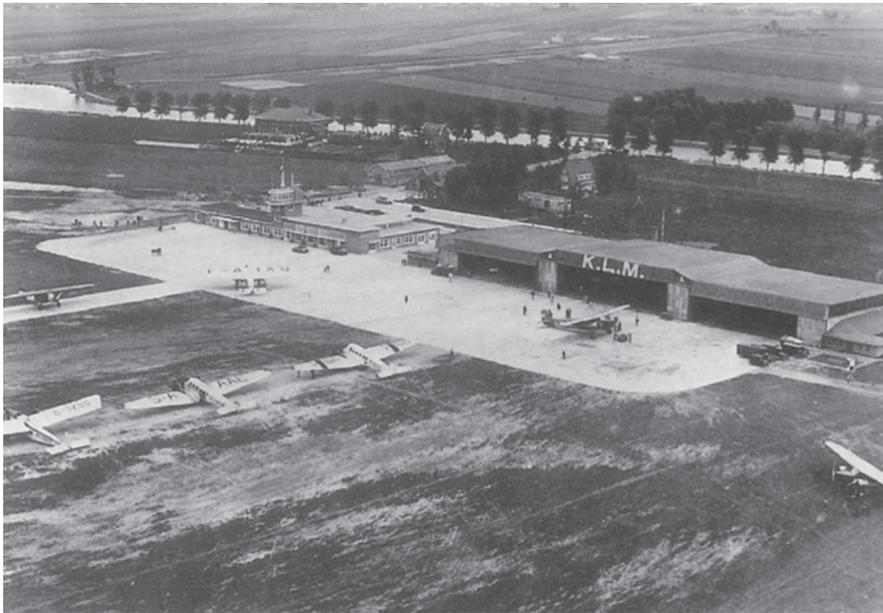
And so Fokker made sure that his company received the right to be the first European representative of the Douglas Aircraft Company, and Plesman still had to do business with Fokker (Dierikx, 2004: 18). In this way, he accomplished a prominent role in the aircraft industry until he died in 1939 (Wennekes, 1993: 414-16).

The third pioneer was Jan Dellaert, a military officer like Albert Plesman. In 1921, when the LVA moved its military operation from Schiphol to the Soesterberg airbase (located in the Province of Utrecht, in the heart of the Netherlands), Plesman convinced Dellaert to become a stationmaster on behalf of KLM. Soon the new station manager started to build a well-equipped service building, an air-control tower, and the second paved landing strip in Europe. Moreover, in the meantime, the municipality of Amsterdam had also become interested in the airport, because it assumed that Schiphol could contribute to the economic growth of the city. As aviation is a costly business, the national government did not mind more investments being made by the capital city. Accordingly, in 1926 Amsterdam became responsible for the maintenance of Schiphol, while the KLM became a customer. In this sense, a functional diversification arose between the airline company KLM and the municipality of Amsterdam. This is emphasized by Dellaert's switch from stationmaster on behalf of KLM to airport manager on behalf of Amsterdam. In turn, due to the 1928 Olympic Games being held in Amsterdam, Dellaert convinced the municipality to invest a great deal of money in Schiphol (Bouwens and Dierikx: 16-17, 1997). And so, in those early days, Dutch aviation realized a civil airport, namely Schiphol, with a landing strip, seven hangars and a hotel exploited by KLM, different airbases throughout the country, several departments responsible for the future of aviation in the Netherlands, and an airline, KLM (see figure 2.3).

As Schiphol grew, so did the fascination for aviation. Every time aviation came up with a monumental performance, the public was overwhelmed. Schiphol had a magical allure and the number of visitors that simply wanted to see the airport in real-life amounted to hundreds of thousands every year. Schiphol became a popular destination for day-trippers (see figure 2.4). That is why, in 1929, the municipality of Amsterdam decided to ask for an entrance fee²³ (Bouwens and Dierikx, 1997: 65-6). People were encouraged to visit the airport and were proud of Amsterdam Airport Schiphol: it became a symbol for the fact that the Netherlands at that time was still a major colonial empire with economic, political and military networks worldwide.

23 The revenues derived from entrance fees, were together with airport charges and rental income, the most important earnings of Schiphol until 1957 (Bouwens & Dierikx, 1997: 456).

Figure 2.3: Schiphol around 1930



Source: <http://www.urbannebula.nl>

Figure 2.4: Schiphol as popular destination for day-trippers (1935)



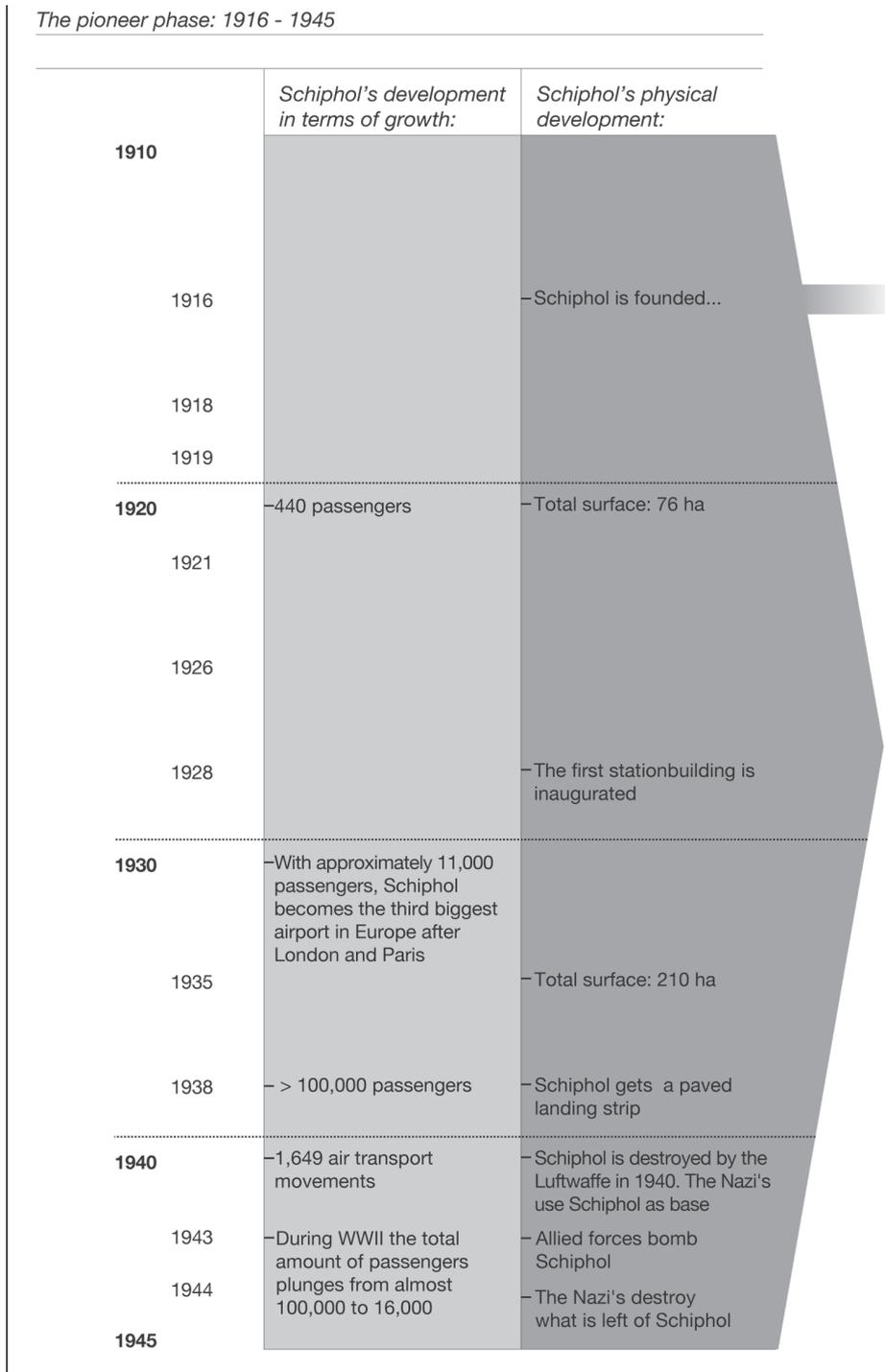
Source: <http://www.urbannebula.nl>

Apart from this, it was precisely this effective relation between an airline company (Plesman), an airport operator (Dellaert) and, to a lesser extent, an airplane builder (Fokker) on the one hand, and the local and national authority, on the other, which made the Dutch aviation sector very prosperous. Of course they had their quarrels and disagreements,²⁴ but they also recognized the mutual benefits of co-operation. During the thirties, Schiphol became one of the best equipped airports in Europe, while the Fokker company forged ahead of its European and American rivals with its airplanes, and KLM became one of the biggest and most reliable airline companies in the world. Before the Second World War, it had already created an extensive intercontinental network, especially on routes between Europe and South-east Asia, because of the ties with Indonesia, a former Dutch colony.

In the pioneering phase of Schiphol, growth seemed inevitable. Not only politicians glamorized the airport, but the public also spoke highly of the developments. Growth was obvious and rooted in our rich colonial past. The airport created a national identity. Again, the Dutch could be as powerful as they had been during the Golden Age. A logical yet imperative link was suggested between past, present and future. Growth was presented as a natural process and a necessary trend (Bröer, 2006: 81-2). The question was only how Schiphol should expand, never if. More remarkable Plesman and Dellaert did play the most important roles.²⁵ Plesman seemed to speak on behalf of Dutch aviation and Dellaert on behalf of Schiphol. Nowhere did we read about staff, advisors, assistants, mechanics, pilots, opponents, competitors, losers and so on. These two were portrayed as heroes, and heroes write history. Of course, the role of Plesman and Dellaert did not end after 1940; they both remained important concerning the development of Schiphol, KLM and Dutch aviation in general. After the Second World War, the already rather marginal role of Fokker diminished further. In 1939 Fokker had passed away as a result of medical complications resulting from rhinitis. Although the Fokker company remained in business, it never fully recovered from the financial blow dealt by World War II (Wennekes, 2000: 417-21, Dierikx 2004: 16). Fokker remained in financial trouble until the bankruptcy in 1996.

24 To illustrate this: in 1937 Rotterdam Airport Waalhaven convinced the municipality of The Hague to invest in a new and better-equipped airport near Rotterdam. For economic reasons, Plesman did not want to fly from both Schiphol and Rotterdam, as the airports are only 50 kilometers away from each other. He suggested closing down Schiphol and Waalhaven and building a whole new airport near Leiderdorp. His plan resulted in a great deal of commotion; in 1938 people were even protesting to preserve Schiphol! In that same year, the national government decided that Schiphol would be the national airport of the Netherlands. The implementation of these plans, however, was delayed by World War II.

Figure 2.5: The pioneer phase: 1916-1945



Source: Author's own elaboration, derived from the Manchester School of Architecture, 2012²⁶

<i>Development of the governmental stance:</i>	<i>Schiphol's economical development:</i>	<i>Development of opposition and protests:</i>
<p>...as a military airfield</p> <p>– ELTA exhibition is held –</p> <p>– KLM is founded – –Fokker is founded</p>	<p>–First KLM flight</p> <p>– Jan Dellaert becomes Schiphol's first stationmaster on behalf of KLM</p> <p>– KLM is no longer responsible for Schiphol and becomes "customer"</p>	
	<p>–First intercontinental KLM flight</p>	

26 The Manchester School of Architecture developed a similar map for the development of London Heathrow, as part of the MACOSPOL project (Mapping controversies in science and technology for politics). However, they only incorporated three categories: infrastructural development, development of the government stance, and development of the opposition stance.

2.2

The second growth phase: 1945-1967

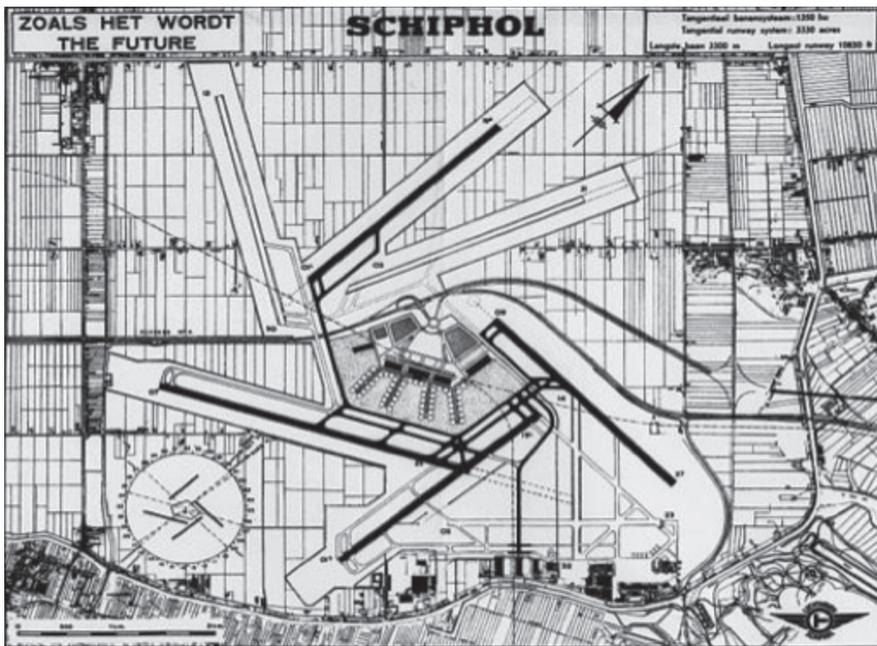
Schiphol was destroyed completely during the Second World War, but was already operational again by the end of 1945. Nevertheless, the decision was taken that a new airport was needed, as the Dutch government had already determined before the Second World War that Schiphol would become the national airport of the Netherlands. Although Amsterdam had been the official owner of Schiphol since 1926, the municipality was convinced, just like the rest of the country, that post-war reconstruction was primarily a matter for the state. Accordingly, the national government took on the reconstruction of the airport. At the same time, involved parties seemed to be incapable of reaching an agreement about the final blueprint, the financial aspects of the new airport, and a new ownership form.

Because of the total destruction of the airport during World War II, Schiphol could start with a clean sheet. American aviation infrastructure was used as source of inspiration. As a result, Dellaert presented the *plan voor de uitbreiding van de luchthaven Schiphol* (Expansion plan for Schiphol Airport) to the national government in 1947. This plan consisted of a central placed terminal with a tangential runway system and six to ten asphalted runways. Dellaert generated support by involving the governmental bodies responsible for aviation, such as the *Rijksluchtvaartdienst* (national civil aviation authority), Amsterdam and even NS, the Dutch railway company. This resulted in an ambitious, comprehensive plan, supported by most actors involved. The national parliament hesitated, because the plan was too expensive in their opinion, but it was eventually KLM that contested the expansion scheme. The plan consisted of a central placed terminal with a tangential runway system and the KLM wondered if this tangential runway was necessary at all. Furthermore, Plesman tried to convince other actors – again (see footnote 16) – to relocate the airport. KLM ordered airport builder NACO to analyze the plan made by Dellaert. Of course the findings of KLM and NACO led to commotion as they systematically summed up all weaknesses of the plan, and *Studiebureau Schiphol* was founded in 1951, under the authority of Amsterdam, to analyze the NACO plan. The commission consisted of KLM, Amsterdam, and the national civil aviation authority (Bouwens and Dierikx, 1997: 160-8). The commission was ordered by the national government to produce a new expansion plan for Schiphol. This time, both Amsterdam and KLM were members of the commission. Dellaert had only an advisory role, but constantly interfered in the plans of the commission. That is why the Mayor and Aldermen of Amsterdam decided to make Dellaert a full member of the commission in 1954. Finally, in 1955 the *grondslagen voor de ontwikkeling van de luchthaven*

Schiphol (Principles for the development of airport Schiphol) report was released (see figure 2.6). The tangential runway system was maintained, but with only four runways (Dierikx et al., 1999: 24). Because of a rigid wind regime, the tangential runway system was needed to be able to operate under all weather conditions. By the end of 1957, the plan was finally approved by the national government (Bouwens & Dierikx, 1997: 171-4).

In addition, a new ownership construction was only formed after laborious efforts. As the government had invested a lot of money in rebuilding Schiphol after WWII, the question arose as to whether or not Schiphol should remain in the hands of Amsterdam. In 1947, the national government created a draft version of the new ownership construction and sent it to Amsterdam. The municipality reacted reserved because it was afraid that the new ownership construction would leave them with no power whatsoever over Schiphol. It took more than ten years before Amsterdam was finally convinced. In 1958, the Schiphol public limited company (Schiphol Group) was founded: a collaboration between the Dutch government and the municipalities of Amsterdam and Rotterdam. With this, Schiphol definitely became the national airport of the Netherlands (Bouwens and Dierikx, 1997: 99, 190).

Figure 2.6: Principles for the development of airport Schiphol



Source: <http://www.urbannebula.nl>

In the meantime, developments in aviation accelerated from the 1950s onwards. Because of rapid economic growth and the increasing prosperity that arose from this, the airplane as a mode of transport became more accessible to more people. The introduction of the jet engine strengthened this trend even further, because this technological innovation triggered cost reductions by means of which the airplane seat trade slowly but steadily became a mass product (Dierikx et al., 1999: 14). Schiphol continued to expand. In 1957 the airport introduced the tax-free shopping concept: as a result, the revenues from concessions doubled in comparison with 1956.²⁷ In 1959, for the first time ever, more people travelled across the ocean by plane than by boat. Between 1950 and 1960, the total air transport movements increased from approximately 20,000 to 50,000, the total amount of intercontinental destinations increased from 31 to 71 and the total amount of cargo increased from 10,637 to 40,344 tonnes. In 1960, the airport operator had a positive operating profit for the first time since its establishment.²⁸

Noise hindrance initially played no role at all, as growth was perceived as obvious. But the introduction of the jet engine gradually changed this. In the case of Schiphol, noise nuisance started to play a role in 1955. Studiebureau Schiphol, under the chairmanship of Dellaert as we saw earlier, had learned that noise hindrance was becoming a big issue at international airports all around the world, especially as a consequence of the introduction of the jet engine. They had stressed their concerns already in the report *Principles for the development of airport Schiphol*. Not only would increasing noise hindrance lead to protests, concluded the report, conflicts would arise between the spatial ambitions of surrounding municipalities and the future development of the airport. A striking fact was that almost no one in the Netherlands had ever heard a jet engine back in 1955! Noise hindrance was believed to be a future risk or problem. Ironically, exactly this uncertainty triggered the need to solve the problem before it even came into existence. A planning approach was believed to be capable of organizing the present while looking to the future to avoid problems or risks. As urban planning still largely operated within the traditional, universally respected concepts of time and space, the future of urban planning was often still presented as a logical continuation of the past (Boelens, 2006: 27). The comprehensive Dutch spatial planning system was based on the general notion that developments and problem-solving could be ‘designed’ or ‘planned’ by governments. The Studiebureau Schiphol commission revealed itself as an objective instrument that wanted to develop a comprehensive vision on how to prevent noise hindrance around Schiphol. By undertaking this investigation, municipalities and the province would not be hampered in their spatial ambitions and the airport could expand while minimizing the total number of people experiencing

27 Annual Report Schiphol Group 1956 (1957: 51).

28 Annual Report Schiphol Group 2003 (2004: 11); Annual Report Schiphol Group 1960 (1961: 33).

hindrance (Bröer, 2006: 84). The only thing other entities had to do was to form an alliance with the commission and admit the proposed research programme. The necessity to prevent noise nuisance was broadly acknowledged and therefore the TNO research institute was called in to measure future noise levels. TNO drew maps and made charts that visualized the expected hindrance and structured communication between scientists, planners and other experts. But more importantly, the maps and charts delineated the actors involved and those not involved (Bröer, 2006: 87-8).

Noise hindrance was thus transformed into charts and maps. Planners and policy-makers raised the issue *before* politicians and citizens began voicing their concerns. Unfortunately, the maps and charts were based on inadequate knowledge and were full of uncertainties, so the ministry of Transport, Public Works and Water Management began to wonder if this planning approach would be adequate. The Minister of Transport, Public Works and Water Management did, however, express the desirability of researching the possibilities to reduce hindrance and the effects it produced. Therefore, in 1961, the *Adviescommissie Geluidshinder door Vliegtuigen* was founded, under the chairmanship of C.W. Kosten, who was a professor of technical physics at the University of Delft (Bouwens and Dierikx, 1997: 200). But the findings and recommendations of the commission counted for nothing, because they were brushed aside time and again. The national government stated...*that the obstacle of noise hindrance – if it appeared – makes no odds against the national interest of the Netherlands to join the international air traffic network via Schiphol* (Bouwens and Dierikx, 1997: 203).²⁹ The members of the commission decided to reconcile themselves with the fact that economic growth and international competitiveness are important to a small country like the Netherlands. Thus growth was inevitable (Bröer, 2006: 89). Nevertheless, the Kosten committee did introduce new noise contours and maps in 1966, and these are still in use today (Dierikx et al., 1999: 25) (see figure 2.7).³⁰ For the first time within the Schiphol file, politics and scientific knowledge became intertwined.

As shown, the planning approach perceived citizens as a passive population, but this all changed during the sixties. The fact that noise hindrance had been converted into charts and maps not only led to the establishment of the Kosten Committee, but it also led to the foundation of the first protest groups in 1960: *Stichting Eigen Woningbezit Tuinstad*

29 Original citation in Dutch: "...dat het bezwaar van de geluidshinder – indien optredend – nog thans niet opweegt tegen het nationale belang voor Nederland via Schiphol op het internationale luchtverkeersnet te zijn aangesloten".

30 It is believed that Professor Kosten made several methodological mistakes and, as a result, the limiting values are arbitrary and vague, steered by political interests. See Bröer (2006) for a comprehensive analysis of the Kosten Committee.

Buitenveldert and Belangengemeenschap Plan Machineweg 1960. Citizens actually used the opportunities the planning approach gave them, because graphic representations and mathematical analyses made the problem tangible. In the political arena, too, noise hindrance gained recognition: it was given a prominent position in the Second Report on Spatial Planning which was published in 1966. In our highly technical developed and strongly mobilized society, noise hindrance is a growing threat to our common well-being.³¹

Figure 2.7: KE Contours



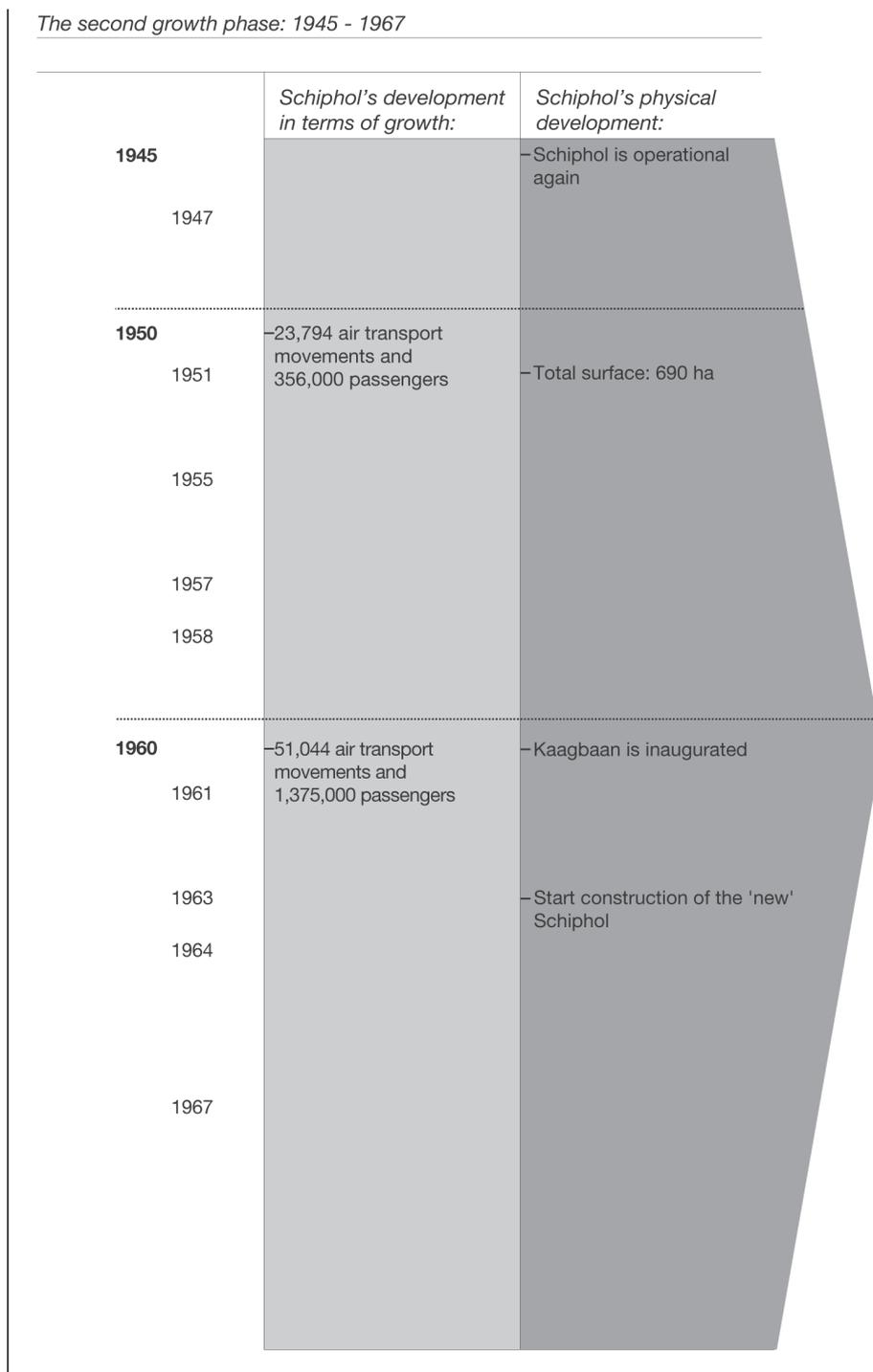
Source: Dierikx et al. (1999: 27)

31 Original citation in Dutch: “In onze technische hoog ontwikkelde en sterk gemotoriseerde samenleving vormt de geluidshinder een groeiende bedreiging van het algemene welzijn” (second report on national planning, 1966: 74).

Furthermore, the national government stressed that the future development of Schiphol and the spatial planning ambitions of surrounding municipalities should be aligned with one another in order to reduce the chance of potential conflict (Bouwens and Dierikx, 1997: 223).³² Citizens and politicians followed the planning syntax, originally developed to deal with noise nuisance around Schiphol (Bröer, 2006: 96). The fact that noise hindrance is actually a problem became institutionalized in the Second Report on Spatial Planning (1966). This led to media coverage, teach-ins on the future of noise hindrance, and more and more – better organized – protest groups.

32 As written down in the second report on national planning (1966: 155)

Figure 2.8: The second growth phase: 1945-67



Source: Author's own elaboration, derived from the Manchester School of Architecture, 2012

<i>Development of the governmental stance:</i>	<i>Schiphol's economical development:</i>	<i>Development of opposition and protests:</i>
<ul style="list-style-type: none"> -Dellaert presents his Expansion plan for Schiphol 		
<ul style="list-style-type: none"> -The Expansion plan for Schiphol gets rejected and the Studiebureau Schiphol is founded in order to design a new plan for the lay out of Schiphol - Studiebureau Schiphol presents – Principles for the development of airport Schiphol 		
<ul style="list-style-type: none"> -The new design is approved by the national government -The public limited company Schiphol is founded 	<ul style="list-style-type: none"> -Schiphol is the first airport in Europe to introduce taxfree shopping 	
<ul style="list-style-type: none"> -Commission Kosten is founded -Commission Kosten conducts questionnaires to construct noise contours 	<ul style="list-style-type: none"> -For the first time ever, Schiphol has a positive operating profit -Amount of jobs at Schiphol: <14,000 	<ul style="list-style-type: none"> -First protest groups emerge: Stichting Eigen Woningbezit Tuinstad Buitenveldert and Belangengemeenschap Plan Machineweg 1960

2.3

The transition phase: 1967-1988

In 1967 the 'new' Schiphol was finally declared open: this marked the beginning of a dividing line between airside and landside and, as a result, a functional diversification gradually occurred (Hakfoort and Schaafsma, 2000: 81). The new airport became one of the most modern and logistically effective airports in the world, with separate passenger flows on separate floors going in and out, central baggage claim areas, airline and custom services in the middle, and flexible airplane slabs at the gates. After the new airport was declared open, Schiphol made a loss of more than three million Euros. This was an all-time low. The limited company had not foreseen that the exploitation of a bigger airport entailed extra costs. In addition, the loss could be attributed to the extra depreciation needed to create extra room for necessary investment. Ironically, the new airport simply did not have enough capacity in its first year of operation (the new terminal would be inaugurated in 1975).

Figure: 2.9: Schiphol 1967



Source: <http://www.urbannebula.nl>

In 1968, the Zwanenburgbaan came into operation. This event led to vehement protests in the municipalities of Zwanenburg and Halfweg. This was not only

because of expected noise hindrance: inhabitants of Zwanenburg and Halfweg were afraid that, with the new runway, Buitenveldert and Amstelveen would be spared at the expense of Zwanenburg and Halfweg. The consternation was the result of a lack of communication between Schiphol, the national government and the surrounding municipalities. The demand for a central point to deal with complaints therefore grew bigger and bigger. As a result, the airport established *Informatiecentrum Geluidshinder Schiphol* (Noise Hindrance Information Centre Schiphol) in 1968 (Bouwens and Dierikx, 1997: 276-277). Noise hindrance was acknowledged and complaints were accepted by this establishment. By the 1970s, governments in several European countries, including the Netherlands, had created requirements for broad, strategic or structural plans as well as for detailed area and topic (facet) plans (Healey, 2007: 181; Wissink, 2000: 86). At that time, governmental planning was at the apex of its influence.

In the meantime, the Schiphol Group admitted that noise pollution was a serious problem. As a solution to this problem, the airport presented plans for a fifth runway in 1970.³³ This proposal backfired, and caused an endless discussion. Was a fifth runway necessary? Surrounding municipalities seemed to disagree. They were furious that the airport had started to hamper municipalities in their spatial ambitions: the first building plans were cancelled (Rozenburg, Hoofddorp Oost II) in 1960 (Gordijn et al., 2006: 20), and the construction of the Buitenveldertbaan in 1961 collided with new building sites in Amstelveen and Amsterdam. Haarlemmermeer, Amsterdam and Amstelveen seemed to have abandoned the original 'growth is inevitable' slogan as the airport endangered their own ambitions all of a sudden. The national government studied whether or not a whole new airport at a new location could be a solution. At the same time, a protest group based in Zwanenburg initiated their own research on a possible new airport (Bouwens and Dierikx, 1997: 278-80; Bröer, 2006: 97). Eventually the national government decided that a new airport or a fifth runway were both financially unfeasible. The airport was allowed to expand, but only minimally. This was institutionalized in the so-called *Structuurschema Burgerluchtvaartterreinen* (Masterplan for Civil Aviation Grounds) published in 1979. The noise contours determined by the Kosten Committee were incorporated into this report in the form of graphics and maps that bound space. Furthermore, the masterplan insisted that the *Informatiecentrum Geluidshinder Schiphol* should be replaced by the *Commissie Geluidshinder Schiphol* (Commission on Noise Hindrance Schiphol, CGS from now on). This commission still handled complaints but was less technocratic than its predecessor and functioned as an advisory body for the Minister of Transport, Public Works and Water Management (Bröer, 2006: 94).

33 Annual Report Schiphol Group 1969 (1970: 6).

Future developments were halted throughout the seventies and Schiphol could not expand any further. The Schiphol Group decided to try and turn things around. The airport wanted to expand to increase its competitiveness. Furthermore, investments in the direct surroundings were necessary because of severe congestion. However, Schiphol was on its own as expansion plans were hampered by national, regional and local policy (Van Duinen, 2004: 61-2). In the eighties, an exogenous factor seemed to offer an opening in this seemingly hopeless situation: the worldwide oil crisis. Firstly, the country fell into an economic recession due to this crisis. The unemployment rate was high and the level of prosperity low. In 1981, the Wagner Committee, appointed by the government, concluded that a new industrial élan was needed. Therefore the Netherlands had to concentrate on successful industries, such as transportation and logistics.

At the same time, the airline deregulation act was enacted in the USA and steadily in Europe during the eighties: the airlines, which had been able to hide behind national governments until that time, suddenly had to deal with a free market system. Another effect of the deregulation act was that airlines were no longer committed to one airport. Therefore, from that day on, airports had to do their best to retain their home carrier. The aim of this act was to trigger competitiveness and, as a result, market position gained in importance. In a system dominated by a free market system, a prominent place was only given to a select set of airports. Schiphol and KLM wanted to be among that select group. Furthermore, the airport operator stated that Schiphol was operating in a different economic entity than the rest of the country, assigning itself a gateway function as a marketing instrument. This phrase is illustrated by the fact that, while the Dutch economy was still in a state of stagnation in 1983, Schiphol had witnessed rapid growth as a result of American economic recovery (Van Duinen, 2004: 68). The economic crisis and the deregulation act showed that there were enough reasons to underline that research into the economical effect of Schiphol was an absolute necessity.

Several documents eventually underlined the economic importance of the airport. In 1980, a broad-based study, the *economische betekenis van Schiphol* (The Economic importance of Schiphol) concluded that Schiphol was of growing importance to the Amsterdam region and the national economy as a whole. On the basis of this report, it was believed that Schiphol could play an important role in creating a new industrial prosperity. In 1985, after this study, the Schiphol Group decided to appoint a committee that would formulate a plan for Schiphol on how to realize and take advantage of the opportunities Schiphol airport offered for the Dutch economy (Van Duinen, 2004: 72). A year later, the Van der Zwan Committee presented the report entitled *Schiphol naar het jaar 2000* (Schiphol towards the year 2000). The Committee stressed the importance of the airport in terms of jobs and added value. Next, the Committee recognized the gateway or hub function of Schiphol, but at the same time some threats were also identified. It was

no longer self-evident that KLM – home carrier of Schiphol – would be linked to the airport. Financial-economic factors and slot capacity became more important. The small domestic market and the dependence on transfer passengers also made the airport vulnerable. The Committee concluded that if Schiphol wanted to contribute to the Dutch economy, the airport had to present itself as the *Rotterdam of the air*. The extension of intercontinental transport to an increasing number of primary and secondary destinations was considered essential: possibilities to expand are mainly positioned on an international level. To achieve this, Schiphol should work on its attractiveness; after all, the airport was no longer a monopolist (Van Duinen, 2004: 73-4). Facilities and interconnectivity gained in importance, just as the exploitation of locational advantages. Furthermore, the report stated that Schiphol should capitalize on the economic spin-off generated by the airport, by conducting an active acquisition policy. Until then, Schiphol Group had not been interested in commercial area development at all: the airport operator focused solely on protecting the site; hence pursuing strategic zoning policies in order to secure land for future developments. This meant that land was only bought if the airport operator assumed it would be necessary for future spatial investment. In order to conduct an active acquisitions policy, the Van der Zwan Committee advised the establishment of a *Schiphol Project Ontwikkelingsmaatschappij* (Schiphol Project Development Company). To increase the decisiveness of this type of project development company, a public limited company would be the most desirable legal form, the committee concluded.³⁴

This led to the ‘Schiphol covenant’, which was signed by the Province of Noord-Holland, the municipality of Amsterdam, the municipality of Haarlemmermeer and the Schiphol Group in 1987.³⁵ As a result of this covenant, the parties concerned established two new legislative bodies: the Bestuursforum Schiphol (BFS from now on) on the one hand, and a land development company in the form of a limited company, on the other. This limited company was termed Schiphol Area Development Company (SADC from now on). Shareholders of this public private partnership were the BFS parties, including the Schiphol Group, and the Nationale Investeringsbank (NIB) until 2003 (Schaafsma, 2008: 71; Van Wijk, 2007: 156). The BFS, chaired by the Province of Noord-Holland, was the political-administrative platform responsible for outlining the policies, while the SADC was responsible for policy implementation. SADC was responsible for land supply and planning business parks around the airport in accordance with the *Schiphol to the Year 2000* report: the land development company mainly focused on airport-related European distribution facilities and European headquarters, just as the Van der Zwan committee had stressed. SADC upheld BFS policies that stated that only ‘high quality business parks’ were allowed to be developed in the Schiphol area, mostly motivated by the consideration of using the scarce land around

34 Van der Zwan Committee (1986: 37); Annual Report of the Schiphol Group 1986 (1987: 1).

35 BFS Memorandum (1986: 1).

Schiphol effectively and preventing unnecessary congestion at the landside of the airport. It remains rather vague as to what was meant by 'high quality business park', as no clear definition was given. However, this mystification seemed to hold ground as it was the foundation on which the strict spatial-economic zoning regulations based on criteria of 'Schiphol-relatedness' were founded (Schaafsma, 2008: 71; Warffemius, 2008: 35; Van Wijk, 2008: 2). According to the original covenant, Schiphol-related companies are: *companies for which, on the basis of their position in the transportation chain, it is of great importance from a business economical point of view, that they are established near Schiphol and/or whose establishment is of strategic importance for the business economical operation of the airport.*³⁶

The Van der Zwan report highlighted the importance of Schiphol for economic development and employment both regionally and nationally. As the national government struggled with an economic recession and made the creation of jobs one of its top priorities, the report was well received and made the benefits and necessity of the expansion of Schiphol evident (Van Duinen, 2004: 74). It even led to the formation of the BFS, SADC and the Schiphol-related selectivity criteria. In this way, Van der Zwan succeeded in creating a sense of urgency: 'Schiphol is of great importance for the recovery of our national economy, but concerned actors have to react fast as competition is fierce' (Bröer, 2006: 100). Although the Van der Zwan committee was ordered by the aviation sector to write this report, it was still presented as an objective and independent document (Bröer, 2006: 99).

In that same year, the Dutch logistics sector released a report similar to that of the Van der Zwan committee for both airport and seaport. From 1985 onward, organizations in the logistics sector began to realize that the position of the Netherlands as a transportation and distribution gateway to Europe needed the installation of a forum to promote these interests. This initiative led to the formalization of *Nederland Distributieland* (Holland International Distribution Council). With members taken from the governmental and the corporate world, it became a powerful lobby group (Van Duinen, 2004: 74). The Holland International Distribution Council and the Van der Zwan committee both stressed the same message: Amsterdam Airport Schiphol is an important engine of the Dutch economy.

Spatial planning in the Netherlands was also plagued by a general crisis in the 1980s. A wide-ranging, rationally based form of spatial planning had emerged to dictate post-war reconstruction. But by the end of the eighties, Dutch society believed that the Netherlands had been completed in terms of

36 Original citation in Dutch: "bedrijven waarvoor het, op grond van hun plaats in een vervoersketen, bedrijfsseconomisch van groot belang is dat zij nabij Schiphol gevestigd zijn en/of waarvan vestiging van strategisch belang is voor het bedrijfsseconomisch functioneren van de luchthaven" (Gemeenten Haarlemmermeer en Amsterdam, provincie Noord-Holland & de N.V. Luchthaven Schiphol, 1986: 2).

spatial development. The national planning agency (RPD) was afraid that it would become superfluous and therefore had to reconsider its organizational position and re-define spatial planning in the Netherlands. To do so, it wrote a report in 1986 called *ruimtelijke verkenningen hoofdinfrastructuur* (spatial reconnaissance in main infrastructure, RUVEIN from now on)). This report was highly innovative as this was the very first time that the spatial distribution of economic activities had been linked to infrastructure and transport development. Furthermore, the international dimension of traffic and transportation was also taken into consideration for the first time. Finally, this report introduced the mainport concept into the spatial planning arena, although it was only applied to the harbour of Rotterdam at that time (Van Duinen, 2004: 78).

Also in 1986, three months after the RUVEIN report and only just after the Van der Zwan and the Holland International Distribution Council reports, the RPD released the *notitie ruimtelijke perspectieven* (spatial perspectives report). This report was intended to start a nationwide discussion on future spatial planning. Moreover, this report had to convince the public that spatial planning in the Netherlands was not superfluous. The new message was that spatial planning could play an important role in enhancing the competitive position of the Netherlands. More important, with regard to this research, was that for the first time ever the mainport concept was applied to both seaport and airport. The Dutch mainports were described as traffic nodes of significance for the Dutch economy, but also as spatial structures for the business climate in the Netherlands as a whole (Van Duinen, 2004: 83). These two reports by the RPD made sure that that the mainport concept was also recognized within Dutch politics. Three general discursive practices that characterized the mainport concept can be identified. First, the economic importance of Schiphol was being enhanced. Schiphol was seen as an economic engine, creating employment and, by doing so, it became important to the country as a whole. Second, growth was seen as natural, organic and inevitable. Finally, globalization played an important role. *If we don't want to miss the economic boat, we better expand Schiphol*: global processes trigger fierce competition, so you better act fast (Bröer, 2006: 105-6).

In 1988 the mainport concept was adopted as one of the cornerstones of the Fourth Report on Spatial Planning, thus the mainport concept became institutionalized. The government emphasized that the significance of the most important gateways, the mainport, and the significance of their connections with the hinterland were critical for the further development of the country. Economic growth should be promoted through strengthening the competitive position of the Netherlands in Europe. To that end, the mainports and the international transport possibilities should be reinforced. Extensive attention was paid to the growth potential of Schiphol. By the end of the eighties, Schiphol was back on the map.

Figure 2.10: The transition phase: 1967-88

Transition phase: 1967 - 1988

	<i>Schiphol's development in terms of growth:</i>	<i>Schiphol's physical development:</i>
1967		- Inauguration of 'new' Schiphol with the Buitenveldertbaan and extended Aalsmeerbaan - Zwanenburgbaan is inaugurated
1968		
1969		
1970	-105,466 air transport movements and 5,172,000 passengers	- Total surface: 1700 ha
1975		- Expansion of the Schiphol terminal with 120%
1978		- Schiphol raillink is completed, linking Schiphol and Amsterdam South
1979		
1980	-143,779 air transport movements and 9,715,000 passengers	
1984		
1985		
1986		- Schiphol raillink is expanded: Schiphol is now linked to Amsterdam Central Station
1987		
1988		

Source: Author's own elaboration, derived from the Manchester School of Architecture, 2012

<i>Development of the governmental stance:</i>	<i>Schiphol's economical development:</i>	<i>Development of opposition and protests:</i>
<ul style="list-style-type: none"> - Professor Kosten presents his final report and the Kosten Contours are founded 		<ul style="list-style-type: none"> - Birth of the Lastige Zwanenburger
	<ul style="list-style-type: none"> - Amount of jobs at Schiphol: 16,410 	<ul style="list-style-type: none"> - Total amount of registered complaints: 1,425 - Total amount of people complaining: 821
<ul style="list-style-type: none"> - Presentation Masterplan Civil aviation territory 	<ul style="list-style-type: none"> - Airline Deregulation Act becomes effective 	
<ul style="list-style-type: none"> - Noise hindrance Information center Schiphol is replaced by Commission Noise Hindrance Schiphol 	<ul style="list-style-type: none"> - Amount of jobs at Schiphol: 23,168 	<ul style="list-style-type: none"> - Total amount of registered complaints: 5,366 - Total amount of people complaining: 2,266
<ul style="list-style-type: none"> - Spatial reconnaissance in main infrastructure and spatial perspectives report are published - Mainport concept is introduced 	<ul style="list-style-type: none"> - Committee van der Zwan is founded - Schiphol to the year 2000 is published - BFS and SADC founded 	<ul style="list-style-type: none"> - The Lastige Zwanenburger announces seven "plagues": they release mice and deploy smoke-bombs in the terminal and set fire to car tyres underneath runways

2.4

Rise and fall of the Dual Objective: 1988-2006

2.4.1. *Formulating a new Schiphol law*

Although the mainport concept was eventually institutionalized as an economic concept, there was still more than enough room for spatial planners to negotiate. Just after the formulation of the fourth report on national planning (VINO from now on) there was a change in the political composition of the national government. The left-wing social democratic party succeeded the right-wing liberal party. As a result, the focus on spatial planning at national level changed. In this sense, an ecological twist occurred when the VINO introduced a double orientation. Economic growth had to be stimulated, but simultaneous improvement and sustainment of the quality of space and the environment were just as important: the *dual objective* was born.³⁷ The VINO ordered a plan of action for the Schiphol region to deal with this dual objective. The ministry of Spatial Planning, Housing and the Environment could be seen as initiator. It was the Minister himself who asked the Schiphol Group if they were interested in joining the policy-making process. Other crucial actors were the province of Noord Holland, the municipalities of Haarlemmermeer and Amsterdam, the Ministry of Economic Affairs and the Ministry of Transport, Public Works and Water Management (Van Boxtel and Huys, 2005: 10). The KLM was also involved but was not perceived as a crucial actor. The VINO created a sense of urgency as all involved actors acknowledged that measures were needed to secure future economic growth and avoid ecological deterioration. The actors concerned formed a stable network as they set up a shared research agenda, and managed to draw up an agreement to which all concerned actors committed themselves (Tan, 2001: 67).

This resulted in the *Plan van Aanpak Schiphol en Omgeving* (Policy agreement plan of action for Schiphol and its surrounding area, PASO from now on) in 1991. PASO had major consequences for the future developments of the airport. Not only did the plan lead to the creation of the dual objective, several planning agreements and new housing insulation programmes, but it also led to approving the construction of a fifth runway. Of course, this approval had to be converted into policy measures. This had to be done in *Project Mainport en Milieu Schiphol* (Project Mainport and Environment Schiphol, PMMS from now on)³⁸. PMMS researched options for a fifth runway to facilitate extra growth, and researched how ecological deterioration could be minimized. After the Bijlmer disaster in 1992, where an airplane from El-Al crashed into an apartment building in Amsterdam Bijlmer, killing 43 people, extra attention

37 See the Nota Ruimte, the sixth report on national planning (2001: 9).

38 PKB (1995: 1)

was given to the issue of third-party risk (Riemens, 2011: 276).

In 1994 PMMS presented the most preferable 5th runway option, paving the way for the formation of the new *Planologische Kernbeslissing Schiphol en Omgeving* (National Spatial Planning Key Decision on Schiphol and the surrounding area, PKB from now on). The initiators were the Ministry of Spatial Planning, Housing and the Environment, Ministry of Transport, Public Works and Water Management, and Ministry of Economic Affairs. Growth was institutionalized in the PKB: Schiphol was allowed to expand to a maximum of 44 million passengers in 2015, and the PKB demanded that the Polderbaan should be operational in 2003. The main topic was undoubtedly the dual objective: *the national parliament chooses to strengthen the mainport function of the airport and improve the quality of the environment in the surroundings of the airport.*³⁹ Bröer (2006: 97) calls this dual objective ecological modernization: it is believed that economic growth and ecological sustainability are feasible at the same time. Even opponents did not question the mainport concept. They all believed that economic growth was inevitable and necessary. But, ecological sustainability should not become a supposititious child (Bouwens and Dierikx, 1997: 386). At the same time, environmental groups were taken seriously by both the aviation sector and the national government.

But the PKB did more. As a result of the PKB, national plans had to be revised because of changes in the runway system, flight paths and noise contours (as a result of the Polderbaan). The PKB decision also had an impact at regional and local levels: the regional spatial plan of the Province of Noord-Holland (*Streekplan* in Dutch) as well as the local plans of affected municipalities needed partial revision. To co-ordinate actions and decisions related to the implementation of the PKB and its impact, CORUS (*Coördinatie Regionale Uitvoering Schiphol Besluiten*, Co-ordination of Regional Implementation of Schiphol decisions) was founded. The platform consisted of the BFS, the Water Management Board and Air Traffic Control. CORUS covered all types of policy areas, such as infrastructure, green areas, water and environmental protection, but not housing. The platform also played a role when it came to compensation issues, leading to a committee especially established for that task in 1998: *Schadeschap Schiphol* (Damage Compensation Committee Schiphol). The Damage Compensation Committee Schiphol served those who requested compensation for damage incurred as a result of mainport developments (because of noise pollution, for instance) and was initiated by the Province of North Holland, the Ministry of Transport, Public Works and Water Management, and the Water Control Board, and consisted of 28 surrounding municipalities (Huys, 2011: 564).

The decision-making process around the fifth runway sparked a more

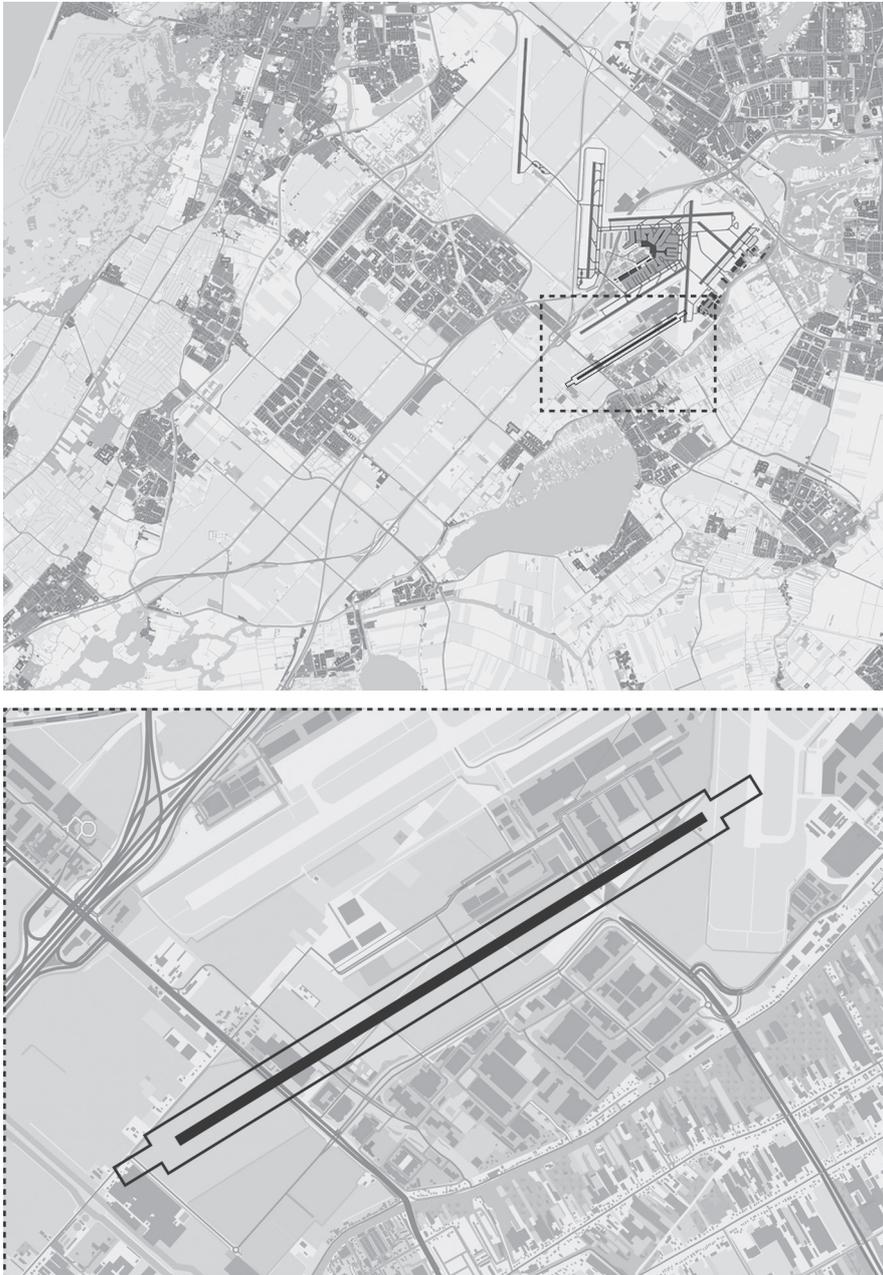
39 Original citation in Dutch: “Het kabinet kiest voor een versterking van de mainportfunctie van de luchthaven Schiphol en de verbetering van de kwaliteit van het leefmilieu in de omgeving van de luchthaven” (PKB, 1995: 6).

fundamental discussion about the long-term future of aviation in the Netherlands and the kind of aviation infrastructure that was deemed necessary in order to facilitate the emergence of this desired future. For this purpose, the Ministry of Transport, Public Works and Water Management established yet another deliberative body in 1995: *Toekomst Nederlandse Luchtvaart Infrastructuur* (Project Group Future of Dutch Aerospace Infrastructure (TNLI from now on) (Riemens, 2011: 275). Next to the main responsible actor, the Ministry of Transport, Public Works and Water Management, the Ministries of Housing, Spatial Planning and the Environment and Economic Affairs (EZ) made up TNLI. The assignment of TNLI was *to develop a publicly and politically accepted vision about the future of airport infrastructure in the Netherlands, against the background of fast-growing passenger numbers and the political ambition to maximize economic spin-offs and minimize environmental effects* (Huys, 2011: 174).

Outcomes seemed to be rather focused on the already dominant adagio 'Amsterdam Airport Schiphol as important engine for the Dutch economy': hence, growth was not questioned, it was not an issue. Schiphol remained a mainport, but in a selective way, referring to hub-related traffic (e.g., mostly KLM traffic). At the same time, research was conducted into possible new locations for future airport infrastructure, leading to fewer people suffering from noise nuisance. After originally introducing nine locations, including the current location,⁴⁰ only the current location and a location off the coast in the North Sea remained over after several research documents had been reviewed. The Schiphol option became more important as the traffic volume at Schiphol grew explosively during 1996-97, resulting in imminent capacity problems. It was therefore likely that, in order to facilitate mainport development, modifications to the existing Schiphol airport would be needed. And so the idea of having a fully operational sixth runway in 2025 was broached as the Parallel Kaagbaan was introduced (Huys, 2011: 180) (see figure 2.11). During the two years after the PKB had been formulated, Schiphol and aviation in general grew faster than foreseen. According to the PKB, Schiphol was allowed to grow towards 44 million passengers in 2015. However, by 2004 the total amount of passengers handled at Schiphol had already grown to almost 43 million (De Jong, 2006: 8). Thus, the PKB turned out to be unworkable when it came to the ambition of the national government to develop the international competitiveness of Schiphol any further, because the noise contours, as laid down by the PKB in 1995, had already been exceeded on several occasions in 1997. Therefore, the Ministry of Infrastructure and the Environment decided to establish a new independent committee to assess the effectiveness of the current noise system and to come up with recommendations for improvement (Huys, 2011: 201).

40 North Groningen, East Axis, De Peel, Flevoland, Markermeer, Tweede Maasvlakte, South Axis (Brabant), North Sea.

Figure 2.11: Parallel Kaagbaan



Source: Municipality of Haarlemmermeer, 2009

This committee – called the In ‘t Veld Committee⁴¹ – advised the government that air traffic could only grow as fast in percentages as noise levels decrease in percentages, without the deterioration of other ecological components such as third-party risk. The committee believed that such a system would stimulate the need to reduce noise levels. This was presented as a win-win situation: selective growth of Schiphol was feasible and noise hindrance would diminish. Furthermore, the committee stated that a consultative body consisting of all stakeholders was needed to realize this goal. This last recommendation led to the installation of yet another policy network: *Tijdelijk Platform Overleg Schiphol* (Interim Debate on Schiphol (TOPS from now on))(Weggeman, 2003: 185-6). In the PKB of 1995, not only improvement with regard to noise, but also a standstill with regard to third-party risk, local air pollution and stench was promised for the five-runway system. This had to be translated into a new aviation act. However, as had already occurred in 1996 and 1997, Schiphol grew much faster than expected, and as the Cabinet was willing to facilitate this growth, several environmental parties⁴² and local residents began to doubt the feasibility of the environmental objectives as set in the PKB. They started a legal procedure which they won in 1998 when the Council of the State rejected the new act on the basis of the fact that the environmental norms, as presented in the PKB concerning third-party risk, stench and local emissions, had not been sufficiently taken into account (Huys, 2011: 212). Further delays because of juridical struggles were unacceptable and so the Cabinet decided to apply a new governance arrangement: TOPS was the first attempt to give environmental and nature conservation groups a formal place in an early stage of political decision-making concerning Schiphol, alongside other public interest groups and private interest groups⁴³ (Weggeman, 2003: 190). The assignment given to TOPS was to formulate the conditions under which a relationship between Schiphol and its stakeholders could be possible and the way in which Schiphol could develop while taking into account the noise contours as laid down by the PKB in 1995.

At the same time, to research the two remaining locations for future airport infrastructure – Schiphol and the North Sea – the TNLI organization was replaced by a new project organization, because the decision-making process was regarded as a new project. Parallel to TOPS, *Onderzoek Nederlandse Luchtvaart* (Programme Direction Research Dutch Aviation, ONL from now on) was founded. The main difference with the TNLI organization was that the ONL organization was not an interdepartmental organization but only consisted of policy makers of the Ministry of Transport, Public Works

41 Named after its chairman Roel in ‘t Veld.

42 Stichting Natuur en Milieu (Nature and Environment, SNM) and Milieudefensie (Friends of the Earth)

43 Members of TOPS were: Schiphol Group, KLM, Martinair, BARIN, Friends of the Earth, SNM, Environmental Federation Noord-Holland, Platform Leefmilieu Regio Schiphol, FNV, VNO-NCW, Haarlemmermeer, Amsterdam, Aalsmeer, Noord-Holland, CGS (Weggeman, 2003: 191).

and Water Management.⁴⁴ ONL had the task of further investigating the two remaining options for future airport infrastructure: Schiphol and the North Sea. The Schiphol Group played an important role in this research as Schiphol was in charge of exploring the operational, logistical and financial effects of different options of an airport in the North Sea. The Schiphol Group concluded that the North Sea alternative contained very high financial risks. The ONL team adopted these conclusions and stated that the creation of a North Sea island in order to facilitate a new airport was too risky.⁴⁵ Furthermore, ONL was formally in charge of the development of the new regulative system for the five-runway system. ONL developed four alternatives and initiated bilateral appointments with all TOPS members. The aviation sector, however, rejected all alternatives and stated that it only wished to negotiate with ONL (hence the Ministry) about a revised system. As a matter of compromise, the other members of TOPS were asked to give advice on the new regulative system before the final advice was sent to the House of Representatives for political ratification. This never happened as the final advice was severely delayed and there was no time left to discuss the results in TOPS before the report was sent to the Lower House of Parliament (Huys, 2011: 220). This meant the end of TOPS, as the environmental parties decided to leave the consultative body at the end of 1999, believing that they have been sidelined and not taken seriously (Weggeman, 2003: 219).

Nevertheless, preparation of the new Aviation Act continued, with a new regulative system for noise. However, as the Lower House repeatedly expressed its doubts about whether or not the new Act offered protection against noise pollution equal to that provided by the PKB of 1995, the Cabinet installed a new independent committee of noise experts, chaired by Professor Berkhout in 2000 (*Commissie Deskundigen Vliegtuiggeluid*, Committee of Noise Experts, CDV from now on) (Huys, 2011: 229). After the failed experiment with TOPS, the Cabinet decided to create a committee of independent experts to create support for the new regulative system. The assignment given to the CDV was, first, to advise about the transition from Ke to Lden (Level: day-evening-night) noise level notation and, second, to advise on the transition from calculating to measuring noise, something environmental parties and inhabitants had been requesting for some time. The Lower House added a third assignment in 2001: to create protection for the areas in between the 35 and 20 Ke contour. The CDV was very critical about the proposed new regulatory system by ONL and presented its own alternative (see figure 2.12). The CDV was convinced that the new system did not offer adequate protection against noise pollution.

44 Thus, the Ministries of Housing, Spatial Planning and the Environment and Economic Affairs that had participated in the TNLI project team were no longer formally included (Huys, 2011: 180).

45 However, to investigate the potential of an offshore island in 2025/2030, the Cabinet had announced the establishment of a research programme about the North Sea island alternative: Flyland. In 2003, three years after the research programme had started, the Ministry of Public Works decided to stop the project and dismantle the programme bureau (Huys, 2011: 192-3).

Of course, this was not the assignment the Cabinet had given the committee, and after several escalations the committee handed back the assignment in December 2001.⁴⁶ The Ministry of Transport, Public Works and Water Management that a *new* committee of noise experts was to be established, with new people and a new and clear assignment (Huys, 2011: 231). This new committee became the Eversdijk Commission.

Figure 2.12: On the left, the new regulative system as presented by the Cabinet, and on the right the alternative as presented by CDV.



Source: Berkhout, 2003: 22, 31.

Finally, after years of discussion, chapter eight of the Aviation Act – better known as the Schiphol law – was accepted by the government in 2002. The act consists of the ‘airport planning decree’ (*luchthavenindelingsbesluit* in Dutch, LIB from now on) and the ‘airport traffic ruling’ (*luchthavenverkeersbesluit* in Dutch, LVB from now on). The former regulates spatial developments around the airport, with regard to the organization of the limited space available due to safety norms and noise contours. The LVB regulates air traffic around Schiphol. These are mostly rules for the aviation sector (airport, airlines, and Air Traffic Control the Netherlands, LVNL from now on) to limit the adverse consequences of air traffic.⁴⁷ Furthermore, the Aviation Act stipulates the function, tasks and powers of enforcement agencies such as the ministerial inspectorates, the responsibilities of Air Traffic Control the Netherlands (LVNL) and the duties of the Regional Schiphol Airport Consultation Committee (CROS), which replaced the CGS.⁴⁸ The difference between CGS and CROS is that the former was more of an advisory body for the Ministry of Transport, Public Works and Water Management, while CROS is a deliberative

46 See Huys (2011: 230-1) for a detailed account.

47 Ministerie van Verkeer en Waterstaat (2004: 145) *Luchthavenverkeersbesluit Schiphol en Luchthavenindelingbesluit Schiphol*. 's-Gravenhage: Ministerie van Verkeer en Waterstaat

48 Aviation Act, 2002: 9

body between the aviation sector and the airport region.⁴⁹ The bottom line of the Schiphol Law is that Schiphol is allocated an environmental permit and can decide how it wants to facilitate future developments, just as long as these developments do not exceed the environmental criteria that are specified (De Jong, 2006: 11). This is measured by introducing the enforcement points.

2.4.2. *Landside developments: the airport city and the region*

Parallel to the developments described in the last section, the Schiphol Group and KLM rolled out their corporate strategies. Triggered by the ongoing regulation of the European aviation market, KLM optimized its hub operation by introducing a wave system to facilitate fast and smooth transfers. Furthermore, KLM and Northwest Airlines signed a joint venture in 1993, enabling KLM to dominate the trans-Atlantic market. Eventually KLM would merge with Air France in 2003, making Skyteam one of the biggest airline alliances in the world.

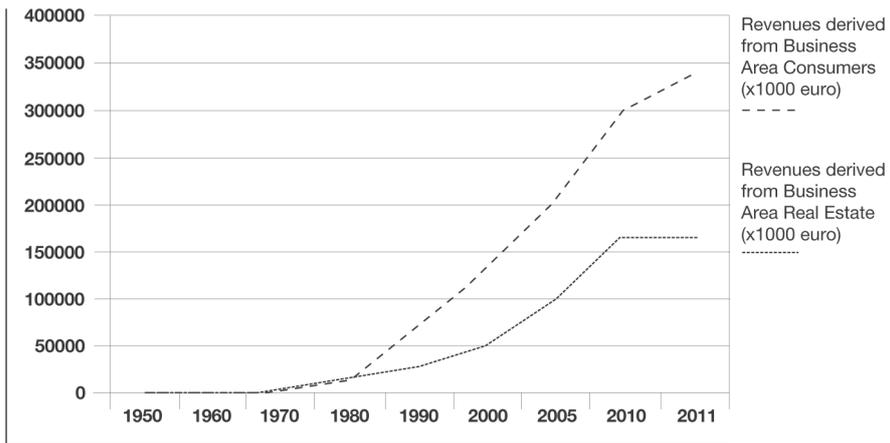
At the same time, a further commercialization of Schiphol took place. In order to realize the hefty investment needed according to the Masterplan Schiphol, which had already been published in 1988, more non-aviation revenues were needed. Therefore the Schiphol Group developed a scheme in which non-aviation revenues gained in importance. In this respect Schiphol was one of the first airports to implement the so-called 'Airport city Concept' in 1997. The Schiphol Group defined the airport city as: *a dynamic hub integrating people and businesses, logistics and shops, information and entertainment. It is an efficient, multimodal hub for air, rail and road transport. It is a location offering its visitors and locally based international businesses all the services they require on a 24/7 basis.* In this concept the airport was viewed as a city and a perfect stopover while travelling, as it offers shops, restaurants, casinos, a museum and conference facilities. Another cornerstone of the concept was the development of commercial real estate on airport land (Schaafsma 2008: 71).

Schiphol began to offer more and more of these 'urban' services. The airport became so effective at it that nowadays it earns more money with this so-called 'derivative landside function' than with its original airside core business. Thus, landside revenues and their actors gained importance precisely because these became the most profitable businesses for Schiphol (Schaafsma et al., 2008: 117) (see figure 2.13). Due to the airportcity strategy, Schiphol could distribute the risks of global competition and greatly reduce its dependence on aeronautical revenues. This was especially beneficial in periods that painfully demonstrated just how vulnerable the aviation industry is, such as 9-11 and the SARS outbreak. In this respect, Schiphol proved to have a major advantage due to its inauguration of the Schiphol Plaza in 1995: a shopping mall accessible to all inhabitants of the region. Furthermore, Schiphol Real

49 Commissie Regionaal Overleg luchthaven Schiphol (2003: 1-2), Vaarwel CGS, welkom CROS!

Estate (SRE from now on) was established in 1998, a quasi-independent real estate company fully owned by Schiphol Group. Moreover, Schiphol also rolled out this airport city formula internationally, having shares in JFK International New York, Brisbane Airport, Vienna International Airport, Tradeport Hong Kong, Aruba Airport, Angkasa Pura Jakarta, Stockholm, and Milan Malpensa (Schaafsma, 2008: 71).

Figure 2.13: landside revenues Schiphol Group (1950 – 2011)



Source: Schiphol Group Annual Reports 1951, 1961, 1971, 1981, 1991, 2001, 2006, 2011 and 2012

Figure 2.14: Schiphol Plaza, 1994



Source: <http://www.urbannebula.nl>

In order to increase their influence on the airport planning of Schiphol Group⁵⁰ and the political decision making of the national government, the regional and local authorities initiated a new regional co-ordination platform in 2001: the *Bestuurlijke Regie groep Schiphol* (Managerial Directing Group Schiphol, BRS from now on). The BRS consists of a small core group (the Province of Noord-Holland and the municipalities of Haarlemmermeer and Amsterdam) and a large advisory group (members of the small core group plus the provinces of Zuid-Holland and Utrecht, as well as 36 municipalities affected by airplanes) (Huys, 2011: 230).

In that same year, the BFS produced a co-ordinated strategic spatial plan for the region as a whole. This plan is called the *Ruimtelijk-economische visie Schipholregio* (Spatial Economic Vision on the Schiphol Region, REVS from now on) and there were two reasons for the three governmental parties and the airport operator to realize such a comprehensive and co-ordinated strategic effort. First, in the wake of new strategic spatial plans being developed by Noord-Holland, Amsterdam and Haarlemmermeer, and future developments at national level – such as the development of the fifth national report on spatial planning – it was decided that the four BFS partners should produce a strategic vision on the regional entrenchment of Amsterdam Airport Schiphol and the economic spin-offs created as a result of this regional entrenchment. Furthermore, the actors concerned stated that although the presence of the airport was crucial for the image of the region, the quality of life should not be forgotten. Therefore, restrained growth of the airport should be facilitated by consolidating the rigid selectivity criteria that had existed since 1987 (Schaafsma, 2008: 75).⁵¹ These assumptions led to the REVS 2001.

The REVS underlined that Amsterdam Airport Schiphol is an important economic engine for the airport region, and that the concerned governmental parties wished to consolidate and strengthen the economic prosperity of the region, with due regard for high standards of liveability, accessibility and a qualitative spatial structure, while keeping in mind the global trends that will influence the airport region.⁵² The REVS formed the basis of a coherent development of the Schiphol region. This region was defined in terms of two corridors: the first corridor starts at Hoofddorp, and continues via Schiphol to the Zuidas ('south axis' of Amsterdam), while the second corridor also starts at Hoofddorp but runs via Schiphol to Amsterdam's western harbour area. The two corridors jointly resembled the letter 'Y' and are therefore called the *Y-structure* (see figure 2.14).⁵³ And so the two corridors acted as connecting

50 Local governments believed that SRE surpassed SADC, the local governments and project developers when it came to developments in the surroundings of the airport in order to make more profit. See in this respect the 20 year quarrel between Schiphol Group and project developers Jan and Peter Poot on <http://www.schipholwanbeleid.nl>

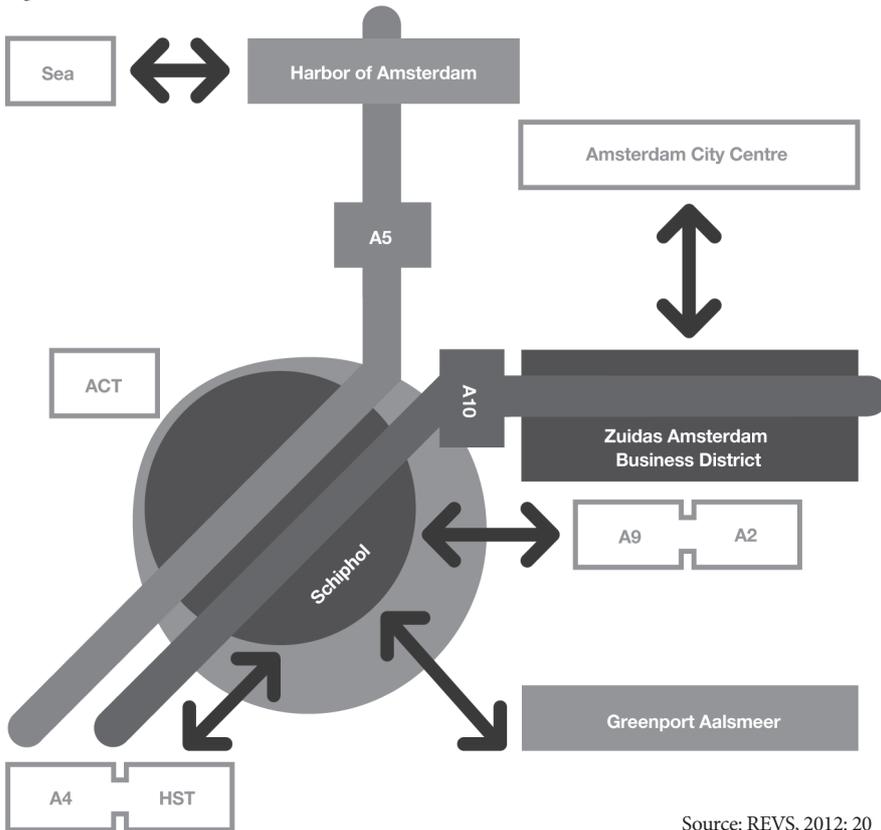
51 BFS (2001: 11), Spatial Economic Vision on the Schiphol Region

52 BFS (2001: 11), Spatial Economic Vision on the Schiphol Region

53 BFS (2001: 6), Spatial Economic Vision on the Schiphol Region

narratives as they aligned the interests of at least the BFS parties, which became institutionalized through the REVS. However, although the REVS seemed to form the basis for a coherent development of the Schiphol region, there is more to it than meets the eye. The Schiphol Group wanted to become a company quoted on the stock exchange. This issue was thrust onto the political agenda by late 2000; the Dutch government announced that it was planning a phased sell-off of its Schiphol Group shares. The City of Rotterdam announced that, should the state indeed sell its shares, it would follow suit. But Amsterdam was not planning to sell its shares. Years of discussion and debating followed. However, the Schiphol Group was preparing itself for the proposed stock market listing in the meantime, and started to neglect the surrounding administrators and inhabitants. Schiphol Real Estate took on an aggressive stance by trying to outdo SADC, the established joint development company. SRE actually started to compete with SADC. This led to several conflicts and lawsuits with both private and public parties. Eventually, in 2007, a year after Amsterdam used its veto to block the stock-market listing of the airport, the national government decided that the stock-market listing of Schiphol Group was to be cancelled.

Figure 2.15: Y-structure as defined in REVS



Source: REVS, 2012: 20

2.4.3. *The Polderbaan and beyond*

On 1 February 2003 the Polderbaan came into operation. Cerfontaine, the erstwhile CEO of the Schiphol Group, Schultz van Haegen, the erstwhile state secretary for the Ministry of Transport, Public Works and Water Management and responsible for the Schiphol file, and van Wijk, at that time CEO of KLM were among the first to land on the new fifth runway. As the actors departed the airplane, Cerfontaine knelt down and kissed the Polderbaan (see figures 2.15 and 2.16). It seemed an act of relief as well as a discharge of frustration, as the airport had waited 36 years for the realization of the runway on the exact spot that the Schiphol Group had had in mind in 1967 (Bröer, 2006: 104). Before the fifth runway came into operation, the actors concerned had actually created a win-win situation by translating the dual objective to the new runway. First, the new runway was promoted as a *Milieubaan* (environment-friendly runway). Even the name, *Polderbaan* (Polder runway) radiated neutrality, as the first four runways severely hindered the municipalities they were named after.⁵⁴ But a *polder* resembles emptiness and wideness. These factors changed the definition of the runway. First it was seen as a threat, but now, thanks to the *Milieubaan* and *Polderbaan* designations, the new runway had been defined as a panacea against hindrance (Bröer, 2006: 106). At the same time, due to the Polderbaan, Amsterdam Airport Schiphol could increase its total capacity. Hence, the Polderbaan linked economic growth and ecological sustainability.

However, everything turned out completely differently in real-life practice. First, the total number of complaints recorded by CROS rose immediately after the Polderbaan came into operation, mostly because people complained in areas where they were confronted with airplane noise for the first time ever.⁵⁵ Second, the impact of noise produced by taxiing airplanes increased, mainly because it takes airplanes a fair amount of time to taxi to the Polderbaan. As a result of rigid Dutch norms, there is much vacant space in between the Polderbaan and the Zwanenburgbaan, mainly for security reasons. This seems unnecessary, as a current alternative to increase capacity for the future is to construct a runway between the Polderbaan and Zwanenburgbaan. Finally, the Schiphol Group lost quite some respect due to the consternation following an input mistake and the debacle concerning simultaneous take-offs. Just after the Polderbaan came into operation the so-called *invoerfout* (input mistake) came to light. A crucial mistake was made in the environmental impact assessment, on the basis of which the limiting values for the enforcement points for noise had been determined: the calculation model estimated a more abundant use of the Polderbaan than was feasible in reality. To make matters worse, LVNL reported two weeks after the runway came into operation that simultaneous take-offs from the Polderbaan and the

54 The cities of Buitenveldert, De Kaag, Zwanenburg and Aalsmeer

55 Annual Report Schiphol Group 2003 (2004: 4).

Zwanenburgbaan were not possible, even dangerous. Initially, LVNL promised that this would be possible, but eventually this turned out to involve potentially fatal risks. KLM complained that, at other airports where two runways are situated even closer to each other, simultaneous take-offs are not a problem at all. The Ministry of Transport, Public Works and Water Management replied by saying that at those airports airplanes have the possibility to fan out in different directions. At Schiphol this is impossible because of the rigid environmental norms (De Jong 2006: 12).

After the Polderbaan was created, and the new Schiphol law was adopted, it was decided that an evaluation of the new law should take place before February 2006. In this way, one could be sure that the new law offered the same protection as the prevailing norms before February 2003. More than thirty reports were written in three years and in February 2006 the conclusion was drawn that the Schiphol Law offered the same protection as the law it replaced.⁵⁶ Therefore, as a direct result of this evaluation, the national government published the *Kabinetsstandpunt Schiphol* (cabinet position concerning Schiphol) in 2006, and decided to opt for more growth and extend the quantity and quality of the airport. Schiphol was allowed to grow towards 600,000 airplane movements per year.⁵⁷ The government emphasized the importance of mainport Schiphol. Furthermore, the input mistake was rectified and the airport operator constructed an additional northern taxi lane. To top this, the total amount of complaints recorded by CROS decreased.⁵⁸

56 Kabinetsstandpunt, 2006: 5.

57 Kabinetsstandpunt, 2006: 8

58 Schiphol Group annual report 2003 (2004: 19), Schiphol Group annual report 2004 (2005: 9), Schiphol Group annual report 2005 (2006: 9)

Figure 2.16: Gerlach Cerfontaine kisses the Polderbaan



Source: <http://www.schipholwanbeleid.nl>

Figure 2.17: Polderbaan



Source: Schiphol Group Beeldbank, 2008

Figure 2.18: Rise and fall of the Dual Objective: 1988-2006

Rise and fall of the Dual Objective: 1988 - 2006

	<i>Schiphol's development in terms of growth:</i>	<i>Schiphol's physical development:</i>
1988		
1990	-202,347 air transport movements and 16,471,000 passengers	
1991		- New air traffic control tower is completed and Pier G opens
1992		
1993		- West wing of the terminal opens
1994		- Airport City concept introduced
1995		- Schiphol Plaza opens
1996		
1997		
1998		- SRE founded
2000	-414,928 air transport movements and 39,067,000 passengers	- Expansion and renovation of Departure lounge 2 is completed
2001		
2002		- Polderbaan is inaugurated
2003		- Total surface: 2787 ha
2004		- Extension of Departure Lounge 1. Departure Hall 3 and Arrival Hall 4 completed
2005	-404,594 air transport movements and 44,163,000 passengers	
2006		- Pier H completed.

Source: Author's own elaboration, derived from the Manchester School of Architecture, 2012

<i>Development of the governmental stance:</i>	<i>Schiphol's economical development:</i>	<i>Development of opposition and protests:</i>
<ul style="list-style-type: none"> - Professor Kosten presents his final report and the Kosten Contours are founded 		
<ul style="list-style-type: none"> - PASO published - PMMS founded - National Spatial Planning Key Decision Schiphol and surrounding area published - CORUS and TNLI founded - Committee in 't Veld founded - TOPS, ONL and Damage Compensation Committee Schiphol founded 	<ul style="list-style-type: none"> - Amount of jobs at Schiphol: 35,904 - Open Skies agreement - KLM and North West sign Joint Venture - Amsterdam Airport Area founded 	<ul style="list-style-type: none"> - Total amount of registered complaints: 55,157 - Total amount of people complaining: 3,695 - NGO Friends of the Earth buy land and plant trees where the fifth runway is planned in order to delay the completion of the Polderbaan
<ul style="list-style-type: none"> - CDC founded - BRS founded - Flyland terminated - Schiphol law evaluated, cabinet position concerning Schiphol published, and Alders Table founded 	<ul style="list-style-type: none"> - Amount of jobs at Schiphol: 54,579 - AAA founded - - REVS released - - Air France and KLM merge 	<ul style="list-style-type: none"> - Total amount of registered complaints: 177,227 - Total amount of people complaining: 11,374 - Total amount of registered complaints: 710,507 - Total amount of people complaining: 8,610

2.5

Conclusions

Schiphol evolved into a complex entity made up of multiple perceptions. At first, Amsterdam Airport Schiphol was just a *facilitating company*: a transport node where different modalities meet. The company made sure these modalities could carry on with their operations untroubled. But the world evolved, and the perception on airports changed with it. During the sixties, Schiphol became an *environmental issue*, as it became clear that an airport generates, besides positive spill-over effects such as employment, also negative spill-over effects like noise nuisance. Developments were hampered, but this changed during the 1980s when Schiphol became a *mainport*: an airport with a worldwide network that functions as a unit of companies and activities that strengthen each other. In conjunction, they ensure that an international node arises where flows of people, cargo, money, information, knowledge and culture meet. In recent years, mainly because of a further commercialization of the airport, Schiphol has evolved into an *airport city*. Nowadays the airport is an urban entity that can be described as a driver of urbanization, economic activities and infrastructural developments. These four dominant perceptions have not replaced each other throughout the years; they have co-existed and provide an explanation of how Schiphol could develop into a complex entity. Basically there are four causes that led to these four general perceptions.

1. Economic globalisation: the position of Schiphol changed at local, regional and international scale

In the beginning, aviation had an almost mythical status. During the First World War, aviators were seen as modern knights. After the war ended and civil aviation came into development, the days of Columbus, Dias, Magellan and so forth seemed to have been revived. Again, a global race began, with the discovery of the world at stake, but by air this time. The first KLM flight to Indonesia, still a colony in those days, was celebrated throughout the country. At the time, the main task of Schiphol was facilitative. The airport made sure that KLM – ‘our Dutch pride’ – could take off and land. Since 1919 nation states had full control over their airspace. That’s why many countries were intensely associated with the development of national and international aviation networks. Honest competition or a free market system did not exist (Burghouwt 2005: 21). This changed in 1978, when the United States of America enacted the *Airline Deregulation Act* on the 24th of October (Bouwens & Dierikx, 1997: 254). The aim of this act was to trigger competitiveness. All of a sudden, the airlines, which until that time hid behind the national governments, got to deal with a free market system. Another effect of the deregulation

act was that airlines were no longer committed to one airport. So from that day on airports had to do their best to retain their home carrier. Thanks to the deregulation of the American aviation sector and the positive outcomes which resulted from this, Europe also decided to deregulate the market gradually. This happens from 1987 until April 1997. Slowly but surely international competitiveness emerged within the aviation sector (Hakfoort & Schaafsma 2000: 81, Burghouwt & Huys 2003: 40).

In terms of network configuration the deregulation introduced the hub-and-spoke principle. This means that direct flights from and to smaller airports were more and more replaced by indirect flights through a central bigger airport, otherwise known as the hub. At the same time because of a free market system, airlines emerge that are less spatially concentrated at the hubs: the so-called low cost carriers. Because of these no frills airlines the full service airlines experience cutthroat competition on their non-intercontinental origin destination network. To conclude the deregulation led to many new alliances. Nowadays there are three major alliances: Skyteam, Oneworld and Staralliance.

Next, Continuous globalizing forces have formed a new reality. A reality that is characterized by an increasing and paradoxical worldwide interdependency, blurring and redefined boundaries and flows of people, products, services, capital and information that gain independence. This means that traditionally fixed and geographical regularities become less and less relevant. Spatial contiguity is no longer an exclusive precondition for social and economic interaction. Activities become footloose and are no longer bound to specific places. But it is wrong to think that we live in a borderless world. Instead we live in a world of increasing complexity, interconnectedness and volatility, where boundaries are permeable. The space of places and the space of flows co-exist in harmony as well as disharmony (Castells, 1996: 424).

[i]n the global competition of locations the physical connection of city regions among each other is of increasing strategic importance and is highly determined by the position within global airline networks (Schaafsma, 2008: 70). In this way, airports seem to be fragmented into the material organization of time-sharing practices that work through flows on the one hand, and ecologically and historically rooted spatial organizations that dominate bounded geographic spaces on the other: and Amsterdam Airport Schiphol is no exception. Airports – discovering the advantages of being hot-spots in metropolitan regions and triggered by the volatile disposition of the aviation industry – began to operate more and more like private companies by offering “urban services” such as shopping, entertainment and real-estate. Today this (organic) spatial development is quite a common phenomenon, referred to as Airport City, Aerropolis, Airport Corridor, Aviopolis, or Skycity.

2. *From government to governance: a growing number of parties are involved in the decision-making process*

Since 1945 the parties involved had great difficulties reaching agreements concerning the future development of Schiphol, mostly due to financial arguments or power struggles. This has never changed. Schiphol is an emotionally charged, national topic. And as time has passed, more and more actors have become involved. Today, next to traditional governmental parties such as the Ministry of Transport, Public Works and Water Management and the Ministry of Housing, Spatial Planning and the Environment, provinces, municipalities, inhabitants and private actors are organized within numerous (temporal), (in)formal deliberative bodies that all try to influence the decision making process of Schiphol. This has resulted in congested governance, which means that there is simply too much co-ordination that is seen as oppressive and obstructive (Cerfontaine, 2006: 11). The committee for Administrative Co-ordination defines congested governance as *excessive administrative effort and co-ordination in a complex administrative constellation that is not in proportion to the ultimate effect* (Andere Overheid, 2005: 15, English translation by Cerfontaine, 2006). In its report, the committee discussed the congested governance surrounding site developments in the Schiphol area. Commercial development in the Schiphol area involves one regional municipal collaborative body, two municipalities, three provincial authorities and four ministries. This excludes the dozens of other parties, institutions and government bodies involved in the growth of the airport. It is remarkable that the same parties keep meeting one another in various committees and none of them seem to be able to decide which committee is really relevant and which one is not (Andere Overheid, 2005). Actors are confronted with a governance dilemma: to achieve their interests actors see no other way than to participate in the numerous deliberative bodies while this participation reproduces congested governance (van Gils et al, 2009: 20).

Furthermore, the committee points out that effective leadership on the part of the national government is lacking. An interesting element here is the principle of subsidiarity, which states that decisions should be made at the lowest administrative level possible. The ministries concerned prefer to limit their efforts to general issues (e.g., creating a level playing field or setting the limiting conditions in terms of environmental [noise] pollution). But, at the same time, parties concerned complain that a clear-cut vision or consistent implementation strategy is not in place (Cerfontaine, 2006, Huys and Van Boxtel, 2005: 8). All in all next to the national government a growing number of public and private actors emerged that try to influence the decision-making process to their advantage, fragmenting and disintegrating it along the way. Established policy discourses are challenged, traditional arenas and government

networks questioned, and actors search for new relations with actors in economic and socio-cultural spheres (Healey, 2007: 172-173).

3. *Normative disagreements: different parties have different interests, norms and values, that can also be subject to change*

Closely related to the growing number of parties involved in the decision-making process is the fact that different parties have different interests that can also be subject to change. Congested governance leads to dissent as different parties have different interests and, even more importantly, different agendas to promote their own interests. This was probably always the case, but nowadays with actors having more means (money, power) and becoming increasingly more assertive, it becomes a phenomenon that stands out. This has several consequences. First, there seems to be a disagreement when it comes to defining concepts. Take for instance the mainport concept. The Dutch government seems to emphasize that the mainport is an important economic engine for the Netherlands. The Schiphol Group states that the mainport is a hub for global transport flows between the world's major economic regions. Actors annoyed by noise pollution believe that the mainport concept is a tactical trick to justify economic growth. In this sense, the mainport concept can be used to one's own advantage. Second, opinions are constructed and reconstructed in interaction between different actors and are institutionally embedded. This means that actors base their opinions on things they hear, read and see in their direct surroundings and through social relationships. Lack of trust and inadequate communication make sure that the general consensus about Schiphol is a negative one.

'Schiphol feeds a climate of distrust on a daily basis', 'Noise nuisance from Schiphol is primarily subjective', 'State and Amsterdam battle over Schiphol', 'Schiphol has to choose: more growth and less hindrance are an illusion', 'Distrust is the weakness of Schiphol', 'Majority in parliament want growth of Schiphol', 'Schiphol terror', 'A smaller Schiphol is necessary', 'Criticism on the role of Schiphol as developer'... These are just a few randomly chosen headlines in national papers concerning Schiphol, showing that the airport had become a touchy subject. The fact that Schiphol is a delicate matter becomes evident every time the future capacity of the airport, on the ground as well as in the air, and spatial-economic planning policies in the regional area of the airport, are being considered.

4. *Scientific cause: the scientization of politics and the politicization of science*

Ever since the Kosten Commission was founded in 1960, politics and science have become increasingly fused in the Schiphol file. The final

report by the Kosten Commission was brushed aside by the government as the growth of Schiphol was far more important than noise hindrance. This changed when civil society started to organize itself, and protests became the rule rather than the exception. The fact that noise hindrance was put on the public agenda in the first place, was a result of the politicization of science. However, during the crisis of the 1980s, an 'independent commission' introduced Schiphol as mainport, again making growth more important than noise hindrance. Here, the manipulation of science and 'facts' was used for political gain: the economic recession was utilized for the scientization of politics. Politics and science blended together to an even greater degree in the nineties: the introduction of the dual objective triggered an endless stream of media utterances, stating that economic growth and ecological sustainability was possible, countered by an endless stream of other media expressions stating that this was impossible: Schiphol opponents even claim that the Cabinet has manipulated scientific outcomes on several occasions in favour of more growth for Schiphol in terms of air transport movements. Disagreement on cognitive and normative elements of the decision-making process concerning Schiphol has led to numerous conflicts, protests and consultations between the actors concerned.

Chapter 2 has shown how, within a span of 90 years of policy making, Amsterdam Airport Schiphol evolved from a rather straightforward entity (Schiphol as facilitative company) into a multi-actor and multi-interpretable structure (Schiphol as facilitative company *and* environmental issue *and* mainport *and* airport city) in which the decision-making process is experienced as incremental and indecisive. At first glance, it seems as if these events occurred suddenly, maybe as a logical outcome of social or economic processes. This is not the case. The history of Schiphol is rather enacted and assembled from a multitude of components. Actors and objects have produced this history and have tried to influence the decision-making process, the actors concerned, scientific knowledge, media, culture, networks and processes in order to come to a constructed world that suits their interests. Through recent socio-economic processes, the battle to construct the world has only become fiercer. Complexity is increasing, governments are being brushed aside, different notions of space are coming into existence, and traditional decision-making processes do not know how to deal with this new order. A theory which enables us to understand how the world that you and I perceive is enacted through the forming of networks of relations, as a result of socio-technical controversies, is the Actor-Network Theory (ANT). Formed in the field of the sociology of science and technology, ANT – or *the sociology of associations* (Latour, 2005b: 5), or *the sociology of translation that is concerned with the mechanics of power* (Law, 1992: 380) – is especially promising *in understanding how actors actively mould*

the physical fabric of objects and social relations (Wissink, forthcoming: 3). The next chapter will explain why ANT is a useful theory to understand the spatial-administrative complexity at Schiphol in a better way and why this leads to impasses. More importantly, eventually ANT will provide solutions to break free from these impasses.

Part II:

Towards a descriptive grid

Chapter 3

Introducing the Actor-Network Theory

The last chapter showed how throughout history economic globalisation, the shift from government to governance, and normative disagreements as well as cognitive disagreements, influenced the *making of* Amsterdam Airport Schiphol. The airport is enacted and assembled from a multitude of components, and traditional decision-making processes do not know how to deal with this new order. As already mentioned in the last two chapters, the theoretical backbone of this thesis will be formed by the Actor-Network Theory. ANT shifts the focus from “studying complexity” to “studying the disposition of complexity” so impasses will be understood in a different way, leading to new insights how to break through them. ANT seems not interested in the epistemological status of knowledge and policies, but wants to describe the production of such knowledge and politics as an ontological achievement. Thus, the ANT toolbox shows how the multiple assemblages of Schiphol are articulated, concealed, exposed and made present or absent

in networks of human and non-human actors. Therefore, the upcoming chapters will focus on policy being made and unmade by human and non-human actors through socio-technical controversies. Such approach does not analyse *why* dominant syntaxes and impasses come into existence, but *how* those discourses and deadlocks could come into existence. The next chapter will form a research framework from an ANT point of view, in order to describe the case studies. Eventually normative recommendations for an ANT-inspired planning and policy-making methodology will be formed. But first, this chapter introduces the Actor-Network Theory. The first paragraph introduces the fundamentals of ANT. Then, the process of translation will be considered. Third, some criticism will be discussed. And finally, before the concluding paragraph, the politicization of associations will be presented.

3.1

The Actor-Network Theory

ANT was developed over approximately the last twenty-five years (Murdoch, 2006: 57). Bruno Latour, Michel Callon and John Law are seen as the founders of ANT (Latour, 2005b: 10).

In the 1970s sociologists began to study scientists at work. These laboratory studies criticized the realistic interpretations of science and the ease and casualness with which scientific results were publicly accepted as politically neutral and objective descriptions of phenomena. The studies state that scientific knowledge is first and foremost the outcome of interactions and fabrications. Science describes no isolated reality, but is involved in the construction of this reality. That is why science is constructive rather than descriptive, and can be analysed as the outcome of social processes (Hagendijk, 1998: 93). The studies concluded that science is not objective; it works through power, interest, gender, class and norm (Murdoch, 2006: 59). Theories are formed within their social and political context.

One of these laboratory studies was conducted by Latour and Woolgar (1979). It was Latour who took these findings to a higher level by asking himself: *If nothing scientific is happening in laboratories, why are there laboratories to begin with and why, strangely enough, is the society surrounding them paying for these places where nothing special is happening?* (Latour, 1983: 141-2, cited in Murdoch, 2006: 59). This 'higher level' led to the birth of Actor-Network Theory. ANT sees the laboratory as *the crucial citadel of power in the modern world* (Murdoch, 2006: 57). ANT tries to understand the relationship between the laboratory and its external environment: a focus on the laboratory itself is not enough. We have to focus on the *construction of the laboratory and its position in the societal milieu* (Latour, 1999a: 258).

During the last twenty years, ANT has evolved into a much-discussed, highly appreciated and utilized social theory,⁵⁹ and has at the same time been criticized by many scientists from different fields for not being pragmatic and coherent enough.⁶⁰ Still, it remains a promising theory to understand the construction of dominant networks. The following sections will present the fundamental notions of ANT.

3.1.1. *First Notion: a priori definitions are obsolete*

[W]hen social scientists add the adjective 'social' to some phenomenon, they designate a stabilized state of affairs, a bundle of ties that, later, may be mobilized to account for some other phenomenon. There is nothing wrong with the use of the word as long as it designates what is already assembled together, without making any superfluous assumption about the nature of what is assembled. Problems arise, however, when 'social' begins to mean a type of material, as if the adjective was roughly comparable to other terms like 'wooden', 'steely', 'biological', 'economical', 'mental', 'organizational', or 'linguistic'. At that point, the meaning of the word breaks down, since it now designates two entirely different things: first a movement during a process of assembling; and second, a specific type of ingredient that is supposed to differ from other materials (Latour, 2005b: 1).

In *reassembling the social, an introduction to Actor-Network Theory* (2005b), Bruno Latour begins his book with perhaps the most important notion of ANT: we cannot define in advance 'actors', 'groups', 'methods' and 'domains' already taken as members of the social realm (Latour, 2005b: 22). We have to follow actors that make up their set of associations. In general, sociology (although not exclusively sociology!) begins by setting up several types of groupings, before defending why this arbitrary limitation is necessary. Instead of taking a stance, ANT believes that the task of defining and ordering 'the social' should be left to the actors themselves: we must follow the actors because there is no social to begin with (Latour, 2005b: 23). Callon and Latour (1981: 283) elaborate in a semiotic manner⁶¹ why the social is a construction: *the word 'social' derives, we know, from 'socius', which is akin to 'sequi', to follow. First of all to follow, then to form an alliance or to enlist, then to have something in common, to share. Several act like a single entity, the social link is there.* So, actors are constantly creating sets of association, they are forming groups. The traces these group formations leave behind are the ones ANT follows, instead of researching already established connections: *what we have lost – a fixed list of groups – we have regained because groupings*

59 See for instance Mol, 2002; Amin and Thrift, 2002; Murdoch, 2006; Thrift, 2007; Hillier, 2007; Boelens, 2009; Farias and Bender, 2010; Yaneva, 2012

60 See for instance Amsterdamska, 1990; Collins and Yearley, 1992; Bloor, 1999

61 ANT uses semiotics in a non-linguistic way to describe the production of different meanings in the process of creating networks from an agnostic point of view.

have constantly to be made, or re-made, and during this creation or recreation the group-makers leave behind many traces that can be used as data by the informer (Latour, 2005b: 34). Every group has spokespeople that speak for the group existence. The spokespeople look constantly for ways to defend the group, redefine the group, and mark their boundaries because for every group a set of *anti-groups* exists, which threaten to dissolve the group (Latour, 2005b: 30-4). So, to sociologists of associations, chaos, decay, change or creation are the rule rather than the exception.

The last chapter showed how during ninety years of Schiphol debate, groups are constantly being made and unmade. A good example is the role of citizens, who throughout the years have redefined their roles. When looking at social connections left by the controversies of group formations, it is shown how citizens at first had no voice at all apart from pride and enjoying Schiphol. However, in the sixties they slowly seem to emerge into an anti-group as they started to oppose Schiphol. All of a sudden, the spokespersons speaking in favor of the development of Schiphol, had to account for opponents. Slowly but steadily the group of citizens as protestors evolved into a group that was allowed to become part of deliberations and a group that remained a protest group. So also within the “group” of citizens, roles and functions have been defined thought-out the years.

3.1.2. *Second Notion: all actors are equal*

This brings us to the second important notion of ANT: all actors are equal: *If actors are larger we should study how this comes about– how, in other words, size, power, or organization are generated* (Law, 1992: 380). Having power still doesn't mean that you're powerful. A king can sit in his castle with power – *in potentia* – while outside the castle walls the people in his kingdom are behaving as pure anarchists. It is about exerting power – *in actu* – so others are performing the action instead of you. Power is a result and not a cause, it is not yet there but it is composed as a result of collective action and attributed to just one (Latour, 1986: 265-9). No assumption is necessary about whether or not any actor knows more or less than any other actor. Size, psychological make-up and motivations behind actions are not predetermined (Latour, 2005b: 273, Callon, 1997: 2). There are no macro-actors or micro-actors; they are all the same size (Latour and Callon, 1981: 279). But if actors are equal, according to ANT, how come that in real life certain actors are more powerful than others? In other words, how is power distributed? To answer this question, section 3.3 will introduce the ‘process of translation’, but not before the third fundamental notion is considered.

To illustrate this with yet another example of chapter 2: it seemed as if during the crisis of the eighties, the national government appointed Schiphol as one of the economic engines of the Netherlands. In reality, it was Schiphol Group who lobbied frantically to achieve this position. I will elaborate further on

this example when I introduce the process of translation.

3.1.3. *Third Notion: consider networks of heterogeneous materials*

The last fundamental notion is the heterogeneous nature of ingredients that constitute those social ties (Latour, 2005b: 43). According to the theory, nature and society are the constant outcome of interactions. At the same time, Actor-Network theorists abandon the traditional sociological separation of human culture and the material world (Hagendijk, 1998: 95-6). The Actor-Network Theory thus defines an actor as:

Any element which bends space around itself, makes other elements dependent upon itself and translates their will into a language of its own. An actor makes changes in the set of elements and concepts habitually used to describe the social and the natural world (Callon and Latour, 1981: 286)

Law (1992: 380) elaborates this by introducing networks of heterogeneous materials: *a way of suggesting that society, organizations, agents, and machines are all effects generated in patterned networks of diverse (not simply human) materials.* Society is held together instead of it holding us together. The social, then, can be seen as nothing more than patterned networks of heterogeneous materials: it is not some glue that can fix everything; it is just as glued together by many other types of connectors or associations as all other networks (Law, 1992: 381, Latour, 2005b: 276). The bottomline is that various networks participate in the social, they shape:

For instance, I speak to you through a text, even though we will probably never meet. And to do that, I am tapping away at a computer keyboard. At any rate, our communication with one another is mediated by a network of objects – the computer, the paper, the printing press. And it is also mediated by networks of objects-and-people, such as the postal system (Law, 1992: 382).

Another example: the previous chapter described how planners and policy makers raised the noise hindrance issue at Schiphol *before* politicians and citizens began voicing their concerns.⁶² In that sense, noise was transformed from a relatively unknown, abstract phenomenon into tangible research, charts, maps and contours. Eventually this resulted in several policy measures, including a noise hindrance centre. The establishment of this centre was an admission that noise is a problem and that complaints may be justified. People can file a complaint by picking up their phone and calling the noise hindrance centre. Thus the noise hindrance centre participates

62 See also Bröer (2006) for an extensive analysis on this statement.

in the social relations: it helps to define the relationship between noise, complainers and causers. If human beings form a social network, they do so by interacting with human beings and endless other materials too: processes of construction cannot be seen as created by social or human causes alone (Law, 1992: 382, Murdoch, 2006: 67). *In ANT, action arises from collective endeavour and the collective includes both humans and non-humans* (Murdoch, 2006: 66). Action is defined as the establishment of links in networks or as associations. The Actor-Network Theory, then, analyses how social and material processes are closely interwoven within complex sets of association (Murdoch, 1998: 359; 2006: 74). In order to achieve successful networks, material objects are just as important as human beings.

3.2

Process of translation

Actor-Network theorists try to investigate why associations between actors and entities come into existence and how the functions and roles of mediators and intermediaries are ascribed and stabilized. Only at the end of the construction process can a distinction be made between mediators – those that organize the associations or networks – and intermediaries – those that are organized within networks – when the organizer takes credit for the organized. It does not matter how complicated an intermediary may be, it can count for nothing at all because it can be easily forgotten. In contrast, regardless of how apparently simple a mediator may look, it may become very complex while transforming, translating, distorting and modifying the meaning of the elements it carries (Latour, 2005b: 39). However, actors can only grow in size through the efforts of these associated others. Size, then, is primarily at stake in their struggles and hence forms their greatest result (Murdoch, 2006: 69, Callon and Latour, 1981: 279). Being ‘bigger’ (or more powerful) than someone else is not obvious: *an actor defines space and its organization, sizes and their measures, values and standards, the stakes and rules of the game – the very existence of the game itself. Or else it allows another, more powerful than itself, to lay them down* (Callon and Latour, 1981: 286). It is crucial that actors organize their own size, or become more powerful. To understand how they influence their size, ANT uses the process of translation. The most important question behind this process is *[h]ow can men act ‘like one man’?* (Callon and Latour, 1981: 279).

Callon and Latour (1981: 280) see actors as isomorphic. This means that, although actors may differ in size, it is impossible for researchers to make an a priori distinction between macro-social and micro-social actors: *The difference between them is brought about by power relations and the constructions of networks* (Callon and Latour, 1981: 280). This is very important to keep in mind, and something we saw earlier: you cannot tell beforehand which actor

is more powerful. Translation shows us, through different steps, which actors become macro-social and which actors become intermediaries. Before I identify these steps, a definition is appropriate:

By translation we understand all the negotiations, intrigues, calculations, acts of persuasion and violence, thanks to which an actor or force takes, or causes to be conferred on itself, authority to speak or act on behalf of another actor or force: 'Our interests are the same', 'do what I want', 'you cannot succeed without going through me'. Whenever an actor speaks of 'us', s/he is translating other actors into a single will, of which s/he becomes spirit and spokesman. S/he begins to act for several, no longer for one alone (Callon and Latour, 1981: 279).

In order to grow you must first identify what other actors want, then translate their wills, and in the end reify the translation in such a way that your interests are exactly what the others want (Callon and Latour, 1981: 296). The more relations an actor has and the more relations he or she can put in a so-called 'black box', the bigger an actor grows; *a black box contains that which no longer needs to be reconsidered, those things whose contents have become a matter of indifference. The more elements one can place in black boxes – modes of thoughts, habits, forces and objects – the broader the construction one can raise (Callon and Latour, 1981: 284-5)*. A macro-social actor is a micro-actor seated on black boxes. He, she or it has associated so many other humans and non-humans that he, she or it acts like a 'single man' (Callon and Latour, 1981: 299).

According to Callon, the process of translation consists of four phases (problematization, interesement, enrolment and mobilization). During these four phases the *identity of actors*, the *possibility of interaction* and the *margins of manoeuvre* are negotiated and delimited (Callon, 1986: 203).

The process of translation starts from three methodological principles:

- Agnosticism (the observer is impartial, no point of view is privileged and no interpretation is censored);
- Generalized symmetry (nature and the social are equal);
- Equality (observers are not allowed to make any distinction a priori)

Of course, these three methodological principles match the fundamental ideas of the Actor- Network Theory previously mentioned. In the following section, the process of translation will be described while making use of the rise of the mainport concept, as seen in Chapter 2, as an example.

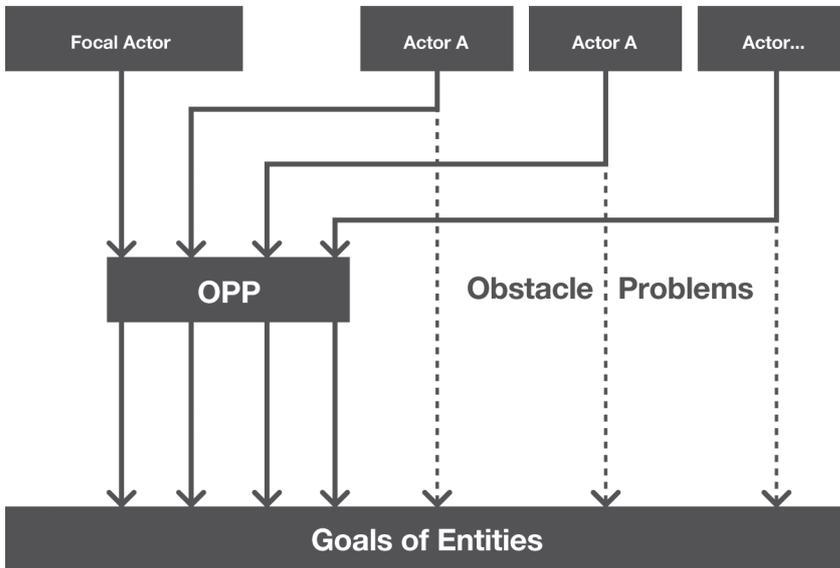
3.2.1. *Problematization*

The first phase is the *problematization* or *how to become indispensable*. In this phase, a focal actor first comes up with a formulation of a problem, research questions and a research programme or plan of action. In the seventies, the expansion of Schiphol was no longer a self-evident option. The airport had more opponents – including the national government – than supporters and future developments were halted as a result. The Schiphol Group decided to try to turn things around. Therefore, the Schiphol Group formulated the following research question: *Is Schiphol of economic importance for the country as a whole?* The focal actor, the Schiphol Group in this example, then determined a set of actors and showed that the interests of the set of actors lay in admitting the proposed research programme or plan of action, and demonstrated that forming an alliance around the research programme or plan of action could benefit each of them. The main research question became an obligatory passage point (OPP) and the focal actor became indispensable. It was no longer possible for elements dominated by the actor to escape in any direction (Callon, 1986: 205-6, Callon and Latour, 1981: 287). The other actors could not obtain what they wanted by themselves, because their path was blocked by obstacle problems. Thus, the actors either had to change direction or recognize the need to study and obtain results, which the focal actor did.

In the Mainport case - *Is Schiphol of economic importance for the country as a whole?* - this issue became an obligatory passage point for three actors. First, KLM, which wanted to develop an optimal network of destinations due to increasing competitiveness; second, the national government, which was tackling a serious economic crisis and wanted to prosper again; and third, the *National Planning Agency* (RPD), which had to regain its footing as spatial planning in the Netherlands was being undermined by a general crisis. After these entities were determined, it became necessary for the Schiphol Group to convince the actors that, in order to reach their goals, they should recognize that the proposed research question had to be answered (see figures 3.1 and 3.2).

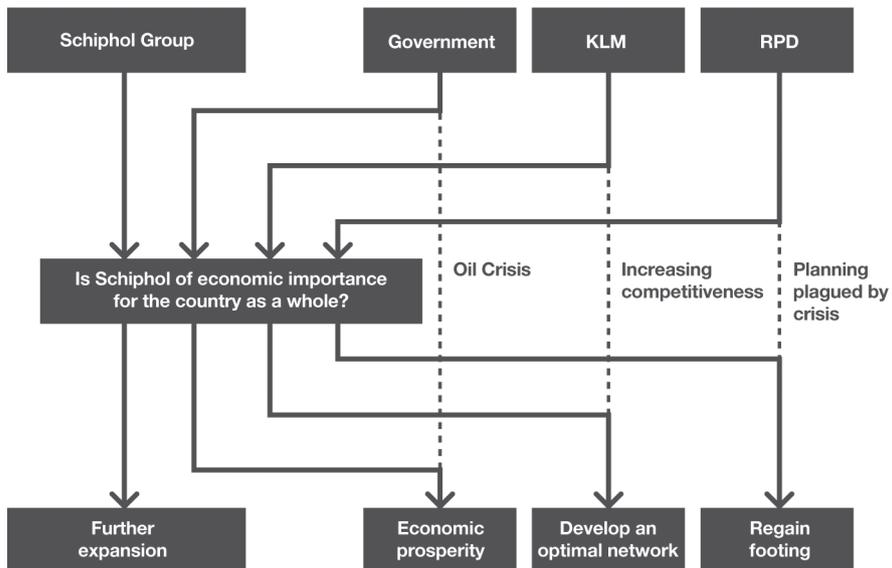
This leads to the second phase, or *how the allies are locked into place*. This is called *interessement*. Each entity can submit to being integrated into the initial plan or do the opposite and refuse the transaction. Even new entities can enter the stage. Unfortunately reality is never this obvious and therefore it would be arrogant for the observer to describe entities by giving them an identity and formulating their goals in an independent manner. It is only during action that they are formed and adjusted.

Figure 3.1: The phase of problematization describes a system of alliances, or associations, between entities defining identities and goals (Callon, 1986: 206).



Source: Callon, 1986: 207

Figure 3.2: Problematization of Schiphol as mainport



Source: Author, 2007

3.2.2. *Interessement*

Interessement is the group of actions by which the focal actor attempts to impose and steady the identity of the other actors defined during the problematization phase. Their goals must somehow be aligned with those of the focal actors, so they are interested in the network (Callon, 1986: 207-11; Murdoch, 2006: 62). In the Mainport case, this phase was a relatively effortless phase. First, the country was in an economic recession due to a worldwide oil crisis, and the conclusion was drawn that the Netherlands had to concentrate on successful industries such as transportation and logistics. At the same time, the airline deregulation act had major consequences for both airports and airlines. Therefore Schiphol and KLM had to reconsider their positions, which led to a further focus on transfer and transit passengers. Finally, with the ending of the Cold War, and the emerging Newly Industrializing Countries,⁶³ there were enough reasons for all actors to be convinced that studying the economical effects of Schiphol was an absolute necessity.

3.2.3. *Enrolment*

But no matter how many devices are built, success is never assured. Interessement does not necessarily lead to alliances or *enrolment*, which is the third stage in the process of translation. When interessement is successful, it achieves enrolment. Therefore, to describe enrolment according to Callon (1986: 211) is *to describe the group of multilateral negotiations, trials of strength and tricks that accompany the interessements and enables them to succeed*. There are many ways in which actors can be enrolled: enticement, transaction, interpretation, consent without discussion, intrigues, propaganda, manipulation, persuasiveness and even physical violence.

In the Mainport case, the actual enrolment took place with help of several documents that underlined the economic importance of the airport. The most notable report was the *Schiphol towards the year 2000* report by the Van der Zwan committee. The committee highlighted the importance of Schiphol for economic development and employment both regionally and nationally. Although the Van der Zwan committee was commissioned by the aviation sector to write this report, it was nevertheless presented as an objective and independent document. More importantly, the report was well received – as the national government struggled with an economic recession and made the creation of jobs one of its top priorities – and made the benefits and necessity of the expansion of Schiphol evident. Furthermore the *Holland International Distribution Council* was founded

63 Hong Kong, Taiwan, Singapore and South Korea.

by the logistics sector to promote the Netherlands as a distribution gateway to Europe. The Holland International Distribution Council also stressed that Amsterdam Airport Schiphol was an important engine for the Dutch economy. Directly after the Van der Zwan and the Holland International Distribution Council reports, the RPD released the *Spatial Perspectives report*. This report had to convince the public that spatial planning in the Netherlands was still necessary, as Dutch society generally believed that the Netherlands had been completed in terms of spatial development because the post-war reconstruction effort had come to an end. The new message was that spatial planning could play an important role in enhancing the competitive position of the Netherlands. More importantly, Schiphol and the harbour of Rotterdam were designated as mainports. The Dutch mainports were described as traffic nodes of significance for the Dutch economy, but also as spatially structuring elements for the business climate in the Netherlands as a whole. And so, slowly but steadily, the mainport concept, and thus the economic importance of Schiphol was also recognized by Dutch politics.

3.2.4. *Mobilization*

This initiates the final phase of the process of translation; the *mobilization* of allies or *are the spokesmen representative?* When the focal actor succeeds in the description of interestment and enrolment, only a few actors have been interested in the name of the masses they (claim to) represent. In other words, the focal actor has formed a relationship with only a few representatives: the chains of intermediaries (e.g., those who do not act but simply transmit the actions of others) have resulted in a sole and macro-social spokesman through progressive mobilization of actors who render the presumed propositions credible and indisputable, and form alliances (Callon, 1986: 214-16). An actor becomes macro-social because other elements behave in accordance with his or her vision of the world. Through this, the actor acquires the means and authority to speak on behalf of the translated elements. An actor becomes truly macro-social when representations and practices are institutionalized and the networks that lie behind and make up an actor, object or institution disappear into a black box, defining the margin for manoeuvre enjoyed by the other actors, their desires, their position, knowledge and abilities (Hagendijk, 1998: 95; Law, 1992: 385; Callon and Latour, 1981: 289). Thus, if successful, *only voices speaking in unison will be heard* (Callon, 1986: 223).

Referring to the Mainport case once more, the concept became black-boxed when, in 1988, it was adapted as one of the cornerstones in the Fourth Report on Spatial Planning. Economic growth had to be promoted by strengthening the competitive position of the Netherlands in Europe. To that end, the mainports and the international transport possibilities had

to be reinforced and extensive attention given to the growth potential of Schiphol. The Schiphol Group became a macro-social actor as its interests became exactly what the others wanted.

At the end of these four phases, a constraining network of relationships has been created. The Actor-Network Theory basically says that truth lies in power and power emerges from within networks. Some issues are organized into politics, while others are organized out (Hajer, 1995: 42; Murdoch, 2006: 62). Or as Law (1992: 386) states: *This is the core of the actor-network approach: a concern with how actors and organizations mobilize, juxtapose, and hold together the bits and pieces out of which they are composed; how they are sometimes able to prevent those bits and pieces from following their own inclinations and making off; and how they manage, as a result, to conceal for a time the process of translation itself and to turn a network from a heterogeneous set of bits and pieces each with its own inclinations, into something that passes as a punctualized actor.* If a network functions correctly, and if all the enrolled entities remain faithful, authority will flow back and the focal actor is interpreted as the cause of the network effects. The focal actor becomes macro-social and all faithful allies that contributed to his power disappear behind his or her greatness, becoming small and provisional in comparison (Murdoch, 2006: 62; Callon and Latour, 1981: 284)

But the process of translation is an ongoing process, a consensus that can be contested at any moment: *no version of the social order, no organization, and no agent is ever complete, autonomous and final* (Law, 1992: 386).

Translation always generates uncertainties, ambivalences, transgressions and resistances. Black boxes never remain fully closed and those they enrol can desert them. Translation can become treason, and maintaining the associations becomes essential (Callon, 1986: 218-19; Callon and Latour, 1981: 285; Murdoch, 2006: 63).

Thus translation can be seen as a systematic way to map the infrastructure behind the so-called black box. We have to keep in mind that, in order to understand certain developments, we need to understand how the networks that lie behind the developments actually act. Not only the actors that make up the network are crucial, but also the material objects through which they are organized, the kind of links the network has with other networks, the way in which they define and redefine the boundaries of the network, and the kind of translations the actors use (Boelens and De Jong, 2006: 89; Latour, 2005b: 32). Translation is necessary in order to enrol actors and entities in network relations. The main target is to persuade an actor to identify with the network, either consensually or coercively, or through a combination of the two. The more actors and entities assembled, the greater the influence of the network. But no matter how powerful a network becomes, maintaining the associations becomes necessary

because a translation is never an end state (Murdoch, 2006: 63-6). Or, as Callon and Latour (1981: 286) put it: *we know that we do not need to be impressed by the relative size of the masters, or to be frightened by the darkness of the black boxes.*

However, the process of translation can be criticized on some points. First, it remains a descriptive analysis. After the mainport concept became black-boxed it was rather easy to show that the national government, KLM and the RPD were the actors whom the Schiphol Group had to convince. At the beginning of the eighties, the link between the expansion of Schiphol and the RPD, for instance, was not so clear-cut, although the process of translation may have presented it in this way.

Another point of criticism was that the process of translation focused on one actor and how this actor could translate his interests into facts. This may seem not so logical when analysing a policy-making process. In fact, when analysing a policy-making process, it would be a very intensive operation to consider all points of view. Therefore, either the process of translation is used and a side is chosen – such as the Schiphol Group or the Municipality of Haarlemmermeer for example – or another method should be formulated.

3.3

ANT and criticism

The last section ended with some criticism of the process of translation. More generally, the Actor-Network Theory has received criticism in several forms throughout the years. Most notable is the polemic between Collins and Yearley (1991), with their *Epistemological Chicken*, and Callon and Latour who responded with *Don't throw the baby out with the Bath school! A reply to Collins and Yearley*, at the beginning of the nineties, and the dispute between David Bloor and Bruno Latour (1999) when, as a response to Bloor's *Anti-Latour*, Latour wrote *For Bloor and beyond – a response to David Bloor's 'Anti-Latour'*. The criticism can be characterized as 1) *Machiavellian* criticism, 2) *relativistic* criticism, and 3) *symmetric* criticism (Dijstelbloem, 2007: 47). The first form of criticism involves the agency of ANT, the second concerns its epistemology, and the third form of criticism refers to the ontology of the Actor-Network Theory. By reviewing criticism, nuances and implications of the mode of thought of ANT can be made more explicit. And although the different forms of criticism were formulated in different contexts at different moments, they resemble themes still present in the ANT oeuvre today.⁶⁴

64 Symmetric criticism in particular remains a vulnerable point. For an overview on ANT, see for example the website of Bruno Latour (<http://www.bruno-latour.fr>) and the website of John Law (<http://www.heterogeneities.net>). For an interesting overview of the use of ANT in urban studies, see Bender and Farias (2010).

3.3.1. *Machiavellian criticism*

There is more than a hint of Machiavelli in the processes of translation (Law, 1992: 387). Hagendijk (1998: 105) notices that ANT and especially Latour have been reproached for being too Machiavellian on several occasions. ANT sees the development of science and technology (and eventually society) as the forming and dismantling of networks. Instead of putting the 'social' first, ANT analyses the construction of the social, a subtle process where humans, non-humans, texts, money and means are interwoven. This method makes it impossible to make a distinction between *describing* and *explaining* the creation of these networks. The only thinkable explanation is that the forming and dismantling of these networks is based on power, as scientific knowledge is an effect, and not a cause. It is all about survival of the fittest. Latour believes that if you describe how networks are formed, an explanation becomes unnecessary. Furthermore, the use of Machiavellian vocabulary seems defensible. Science is a battleground; a scientist is really successful when he not only researches the natural world, but also demonstrates that he can work society in such a way that his research is accepted and appreciated. A scientist has to be a diplomat as well. Besides, Actor-Network theorists do not seem to be impressed by the criticism, as Law (1992: 387) praises the use of Machiavelli and *his merciless analysis of the tactics and strategies of power*.

3.3.2. *Relativistic criticism*

ANT has been accused of preaching relativism by assuming that science is a social process. Opponents even state that Actor- Network theorists are *anti-science* because of their rather radical claim that the correctness of a scientific theory does not determine the success of that same theory. Once again, translation seems more important than actual scientific outcomes. Observations, descriptions, generalizations, and predictions exchange information, step by step. With every step taken, decisions are made, devices are used, and texts are written. Chains of data, information, texts, humans, money and instruments, link different research centres, financiers, corporations, ministries and private funds. ANT tries to find out how these chains last: are they stable or are they weak? The Actor-Network theorists reply by pointing out that it is not a lack of respect for the importance of empirical content of scientific theories; but no, they are just not interested in it. Actor-Network theorists follow the construction of scientific facts by observation and comprehensive text analysis (Dijstelbloem, 2007: 50-1).

3.3.3. *Symmetric criticism*

Even more important to ANT than the process of translation is the principle of symmetry. This fundamental notion of ANT stresses that there is no such thing as a distinction between *subject* and *object*; the traditional sociological separation of human culture and the material world is abandoned. A priori, an Actor-Network theorist makes no distinction, no judgment and no selection. The actors, both human and non-human and their associations are followed. This form of *neutrality* has been heavily criticized by scientists. They wonder if we do not need a realm, such as the social context, in which scientific knowledge can be explained. Furthermore, how can symmetry be explained by the several case studies that Actor-Network theorists conducted throughout the years, where documents and reports, and thus an interpretation of reality, are used to interpret reality? And why, for instance, is Pasteur used as a case study when ANT states that a priori neutrality is fundamental (Bos, 2004: 15)? This third form of criticism has never been fully refuted by ANT. Latour in particular eventually distanced himself from the term symmetry. He believes that this term still implies a certain dichotomy (Dijstelbloem, 2007: 53-4).

In this section I have described the three most notable forms of criticism that ANT has received throughout the years: *Machiavellian* criticism, *relativistic* criticism, and *symmetric* criticism. I will return to these forms of criticism in Chapter 5, where I will state my own opinion about the shortcomings enunciated in this chapter, and present a personal interpretation on ANT in order to form a research framework. But before a framework can be presented, the impact of ANT on policy making must be described.

3.4

ANT and policy making

In more recent years, Latour in particular has tried to understand how Actor-Networks are presented in a democratic manner. Although this political interpretation of the Actor-Network Theory is still in development, Latour actually laid the foundations in *Politics of Nature* (2004), *Reassembling the Social* (2005b) and *Making things public* (2005a) (Dijstelbloem 2007: 70). An association becomes political when innovations that drastically influence *prevailing practice* present themselves. In this sense, the way in which actors are connected to one another becomes rearranged. Therefore, new associations between actors and issues must come into existence. Latour believes that this sort of change in associations should be seen as political: not the kind of politics

we encounter in parliaments, but a form of politics, which consists of creating new durable associations. This is the politicization of associations and is, consistent with Latour's view on science, nothing more than making stronger associations than the others (Dijstelbloem, 2007: 70-3). Thus, for example, the *Schiphol association* becomes politicized (again) when an innovation that influences prevailing practice presents itself.

The invention of the jet engine, for instance, not only led to practical change, or technical improvement, but also rearranged the way in which actors are connected to each other. Technical change leads to social and political change: the urge for new policies is felt, although no one knows beforehand which associations should be formed.

Not surprisingly, the ontology of ANT politics is thus made up by associations of humans and non-humans. Bruno Latour makes a distinction between the social world as a prison, derived from Plato's cave, and the social world as association (Latour, 2004: 37). In the first example, what Latour calls the constitution, hence nature and society, consists of two houses: the assembly of things and the assembly of humans. Only scientists are allowed to travel in- and outside the cave in this model while, in the social world of associations – called 'the collective' – he breaks with this bisection altogether (Latour, 2004: 37-8). Latour believes that this symmetry can be achieved by realizing that matters of fact should be replaced by matters of concern:

We can wait for the science to come up with additional proofs that will put an end to uncertainties, or we can consider uncertainty as the inevitable ingredient of crises in the environment and in public health. The second attitude has the advantage of replacing something that is not open to discussion with something that can be debated, and of binding together the two notions of objective science and controversy: the more realities there are, the more arguments there are. Matters of concern have replaced matters of fact (Latour, 2004: 63).

Matters of concern do not take the slightest notice of the dividing line between science and politics. In addition to his familiar view on symmetry, Latour states that we should discard the constitution by creating a concerted room where facts and values and science and politics can live in unity. This room is what Latour calls *the collective* (Dijstelbloem, 2007: 78). This collective has two sorts of powers of representation: *the power to take into account* (or *how many are we*), consisting of *perplexity* and *consultation* and *the power to arrange in rank order* (or *can we live together*), consisting of *hierarchy* and *institution*. The dynamics of this collective rest on the work of the Upper House, charged with taking into account, and the Lower House, charges with putting in rank order (Latour,

2004: 109) (see table 3.1).

Table 3.1: The two forms of power and the four requirements for the collective

<p>Power to take into account: how many are we?</p> <p><i>First requirement (formerly contained the notion of fact):</i> You shall not simplify the number of propositions to be taken into account in the discussion. <u>Perplexity</u></p> <p><i>Second requirement (formerly contained the notion of value):</i> You shall make sure that the number of voices that participate in the articulation of propositions is not arbitrarily short-circuited. <u>Consultation</u></p> <p>Power to arrange in rank order: can we live together?</p> <p><i>Third requirement (formerly contained the notion of value):</i> You shall discuss the compatibility of new propositions with those which are already instituted, in such a way as to maintain them all in the same common world that will give them their legitimate place. <u>Hierarchization</u></p> <p><i>Fourth requirement (formerly contained the notion of fact):</i> Once the propositions have been instituted, you shall no longer question their legitimate presence at the heart of the collective life. <u>Institution</u></p>

Source: Latour, 2004: 109-11

Let me project this line of reasoning upon the invention of the jet engine once more. When the jet engine was introduced, the Studiebureau Schiphol learned in 1955 that noise nuisance would become a major issue, although almost no one in the Netherlands had ever heard a jet engine back then. It is this uncertainty that triggers requirement number one, perplexity. A controversy is introduced, searching for its place in society. We actually do not exactly know what the problem is but we do feel the need to solve this problem before it even comes into existence. So we move to the second requirement, that of consultation. As the world hasn't a clear-cut idea of what is happening, the search for good spokespeople is complicated, as everyone has to be consulted. *It is clear that the power to take into account is translated into a sort of state of alert imposed on the whole collective* (Latour, 2004: 112). In the Schiphol example, only scientists, planners and other experts initially had any say in the matter, but politicians and citizens soon got involved as the problem became tangible through documents, reports, meetings, maps, graphs, contours and – of course – aircraft noise. The sum of associations

resulted in a colourful and accentuated landscape. Still, we must not jump to conclusions in advance, as this is precisely the distinction between facts and values. But then again, we must arrange an order of importance in a rather heterogeneous list.

This brings Latour to the requirement of publicity of hierarchy. This is not an easy task, unfortunately, but the collective must now take responsibility: *it has to come to terms with this diversity and bring it to an end through a painful series of adjustments and negotiations* (Latour, 2004: 113-14). When the solution is finally negotiated, all human and non-human associations connected to the jet engine and noise hindrance will become stabilized and will become bona fide members of the collective. As their presence, their function and their importance will no longer be subject to discussion, the case is closed for now, and we reach requirement number four: closure of institution (Latour, 2004: 114). Noise hindrance is admitted and becomes durable through policy measures. But more importantly, an ontological rearrangement has occurred as new associations have altered the prevailing practice.

By introducing these four requirements, Latour has replaced the Old Bicameralism of the house of nature and house of society, with the New Bicameralism of the house of 'taking into account' and the house of 'arranging in rank order'.⁶⁵ These four requirements do seem to match the four phases of the process of translation. The main target of the process of translation is, however, for focal actors to persuade other actors to identify with the network, either consensually or coercively, or through a combination of the two. The more actors and entities assembled, the greater the influence of the network. Latour's collective starts from a controversy and shows how we must follow this controversy in order to know which associations eventually emerge. Therefore, the collective is more suitable to analyse policy in the making. Latour even presents a fifth requirement: the separation of powers *to designate the indispensable distinction between the power to take into account and the power to arrange in rank order* (Latour, 2004: 249).⁶⁶

However with this cycle of the collective we're not done yet, as the collective cannot be all embracing. There is still an external body of actors *not considered either consciously or unconsciously at a particular time of iteration, or actors excluded by the lower house when putting in order* (Hillier, 2007: 238). Externalized entities can come back anytime as appellant entities and haunt the collective (Latour, 2004: 123): excluded by the power arranging in rank order, contesting the power taking into account...

65 Latour borrows the notion of bicameralism from the governmental practice of having two legislative or parliamentary chambers. Indeed the Dutch parliament is also an example of a bicameral system.

66 Latour even introduces a sixth and seventh requirement. I shall introduce those in Chapter 8.

3.5

Latour's political programme: some additional comments

One point of criticism concerning Latour's political programme is that it does not provide an adequate understanding of how actors attempt to shape both the subjectivities and behaviours of other actors. In other words: Latour shows how associations are generated but fails to fully consider the *processes* through which such associations are constructed (Routledge, 2007: 199; Aylett and Rytland, 2008: 643): *While strategic arrangements and associations between humans and non-humans are crucial to the of political action ... ANT fails to differentiate between associations and ways of generating associations ... – in particular, the processes of interaction and relationship – through which such associations are made* (Routledge, 2007: 201).

Looking at Latour's political programme, it seems in unison with more traditional perceptions of ANT: an Actor-Network acts as an association of mediators and intermediaries in a continual effort to make actions durable through time, and mobile through space. An Actor-Network is a network of variation and flux, where the various actors continually renegotiate with one another, forming variable, alternative and revisable coalitions, with ever-changing shapes. However, if we try to grasp the processes through which associations are made, a first difference soon emerges. Routledge (2007, 201) first introduced *the construction of mutual solidarities*: in order for a network to act politically in a durable, collective way, the formation of common grounding becomes crucial. The construction of mutual solidarities is needed, as they are part of the ongoing constitution of networks (Featherstone, 2006: 298). But it is not a smooth process: *it involves antagonisms (often born out of the differences between collaborators) as well as agreements: mutual solidarities are always multiple and contested, fraught with political determinations* (Routledge, 2007: 210). Involving antagonisms is very important, as Latour states that disputes are exteriorized from the constitution of collectives. According to *Politics of Nature*, externalized entities are 'dangerous others'. Featherstone believes that we must not exclude these 'dangerous others' as they are just as important for the ongoing formation of heterogeneous associations (Featherstone, 2006: 296). Thus, *mutual solidarities are constituted as (often messy, problematic, always negotiated) embodied interconnections that mediate in the heterogeneous associations between humans and non-humans in actor networks* (Routledge, 2007: 214). The construction of equivalences unsettles fixed identities and produces new political identities (Featherstone, 2006: 296).

While formulating these mutual solidarities, the so-called 'process of circulation' must be considered (Routledge, 2007: 209). This is a sensitive

notion as it contains a demarcation, whereas ANT states that we cannot define actors a priori. Routledge (2007: 201) states that: *[t]here are pronounced differences in physical mobility across space, and access to resources such as money and technology. As a result, certain immutable mobiles (in this case, humans) within an actor network circulate more freely and extensively than others, and are differentially empowered*⁶⁷.

Thus, in contrast to ANT, he states that differences in the distribution of power can be more than just relational effects within the network due to a complex web of political, economic, and cultural determinations. This becomes logical when we consider Routledge's case study concerning the development of grassroots movements in Asian developing countries and their networks: as a peasant living in an Asian developing country, it is easier to become involved in grassroots movements when you are a man, speak English, and have access to the internet (see Routledge, 2007). Thus, I will not go as far as saying that it is possible to define actors a priori but I do state that some actors do get off to a running start because the process of circulation is unequal. Furthermore, actors always have a certain history when we start tracing associations. This history can absolutely influence actor-networks, in a positive or a negative way: it can be regarded as *the influence or tracings of the past flow into new ways of thinking and acting* (Hillier, 2007: 225).

Although Latour's collective does provide readers with a schematic account, in reality the different phases of the collective do seem to neglect any form of regularity. It is sheer chaos, transforming a matter of concern into a matter of fact. Thus analysing the collective is not as unambiguous as the four phases of Latour will have us believe. To generate some order in the chaos, which is very important if eventually a research framework must be made, something else should be added to the collective. However, we do not have to look far; we only have to go back in time, which leads to Latour's (1987) *Science in Action*. In this book, Latour describes how scientists transform their assumptions into facts. This is an intricate process, where scientists are constantly battling for allies, both humans and non-humans, to construct absolute proof. Bruno Latour structures this battle or quest by introducing different methodological rules. The main goal of his book is to show the *backdoor of science in the making* instead of the *more grandiose entrance of ready-made science*. If *science* is substituted for *space* or *policy*, it might become clear, slowly but steadily, that it could emerge into a very useful instrument to study *policy (or space) in the making*. As mentioned earlier in this chapter, Latour introduces

67 According to Latour (1987: 237), immutable mobiles must be seen as the 'transportation' of information (hence mobile) without the possibility of alteration (hence immutable). Maps and charts are prime examples of 'immutable mobiles', as they can be produced on a mass scale, but alteration becomes difficult, leading to asymmetrical power relations between groups in different geographical and social settings. Immutable mobiles can be used to bring about the production of new scientific knowledge and new cognitive powers.

controversies as the essential resource to make the forming of associations traceable. According to the recently EU funded consortium MACOSPOL (Mapping Controversies in Science and technology for POLitics), socio-technical controversies are defined as such:

The word 'controversy' refers here to every bit of science and technology which is not yet stabilized, closed or 'black boxed'; it does not mean that there is a fierce dispute nor that it has been politicized; we use it as a general term to describe shared uncertainty (Venturini, 2010: 6).

Aside from the fact that we have to replace the reference to science and technology with a reference to urban planning and policy making, the definition of controversy is pretty straightforward: controversies are situations where actors agree on their disagreement. Controversies begin when actors discover that it is impossible to ignore each other and controversies end when actors manage to formulate a solid compromise to live together (Venturini, 2010: 6).

And so, the starting point of every case, according to Latour, is to let the actors narrate the full range of controversies in which they are immersed (Latour, 2005: 30). However, *it is all very well to choose controversies as a way in, but we need to follow also* (Latour, 1987: 7). There is a striking difference between the black boxes on the one side, and the open controversies on the other side: *they are as different as the two sides, one lively, the other severe, of a two-faced Janus* (Latour, 1987: 4). In literature, the two-faced Janus metaphor is used to describe the fact that something or someone possesses diverse – often conflicting – characteristics. Latour uses the metaphor to make a distinction between ready-made science, the left side of the two-faced Janus, and science in the making, the right side of the two-faced Janus. Latour shows how content and context fuse together. In the next chapter, I shall use this metaphor to introduce *ready-made policy* and *policy in the making*, based on the same idea as Latour's Janus metaphor, but then applied to planning and policy making.

3.6

Conclusions

This chapter introduced the Actor-Network Theory and gave an overview of the transitions through which the theory has gone. Founded by Latour, Callon and Law, three texts mark the birth of ANT: *The Pasteurization*

of France (Latour, 1984),⁶⁸ *Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay* (Callon, 1986), and *On the methods of long distance control: vessels, navigation, and the Portuguese route to India* (Law, 1986). After the relevance of ANT for this research had been introduced, three fundamental notions were identified. First, a scientist cannot draw any conclusions whatsoever a priori, and cannot define actors, groups, methods and domains. The social realm is blank. Instead, ANT follows the actors, group formations and destructions, and the traces and associations they leave behind in doing so. The second notion is that Actor-Network theorists believe that all actors are equal. And the third notion is the principle of symmetry. ANT states that actors can be both human and non-human as social and material processes are closely interwoven within complex sets of association. The process of translation enables us understand why, in practice, some actors appear to be more powerful than others. Law (1992: 390) states that *the only real differences between the powerful and the wretched are the differences in the methods and materials that they deploy to generate themselves*. Translation offers a systematic way to analyse these methods and materials.

After the process of translation, I then introduced Latour's political programme. In this context, he refers to associations that emerge as a result of controversies arising, even when no organizational form can be detected in advance. The essential question here concerns how, proceeding from a specific ontological constellation of a certain association, democratic articulation can emerge (Dijstelbloem, 2007: 72). In this political programme Latour makes no distinction between facts and values, humans and non-humans, and nature and society. To replace these demarcations, he introduces the term 'collective'. The collective is made up by two powers of representation: the power to take into account, consisting of perplexity and consultation, and the power to arrange in rank order, consisting of hierarchy and institution. The four stages can be linked directly to the process of translation. Only now it is not about translating one's will, but about defining problems, negotiating solutions, and carrying out the search for a common world (Dijstelbloem, 2007: 79). Furthermore, Latour introduced *controversies* as a tool, although thorny and intricate, to observe the social world and its making: *actors are always interfaces among different social collectives as they are both composed and component of networks. Observing controversies is observing the unceasing work of tying and untying connections* (Venturini, 2010: 17). Controversies lead us to the collective through associations.

ANT will be used to transform mere descriptions into detailed accounts of association building as we follow the human and non-human actors and

68 *The Pasteurization of France* was translated to English in 1988, but the original book, *Pasteur: guerre et paix des microbes*, was published in France in 1984.

their strategies to try and achieve closure in their favour. ANT unravels the complexity that is tucked away in the black boxes of plans, policies, covenants, White Papers and all other materials that are presented as collective agreements. Via ANT, the alternative and diverse individual interests will perceive all attention, showing how some actor can become macro-social and others not. In this way, the Actor-Network Theory goes beyond the common analysis of the changing government and governance structures through globalisation, individualization and technological innovations in specific institutional contexts.

Before I am able to analyse the translation of norms and values into specific proposals and policies presented as facts, a research framework must be formed. The next chapter will present this framework, in which the collective will be allocated a prominent role. This research framework will be presented by reconsidering the three fundamental notions of ANT – agnosticism, equality and symmetry – and what they mean for this research.

Chapter 4

Getting the data right:

Translating ANT towards a research framework

Chapter 3 introduced the Actor-Network Theory as a promising theory when it comes to describing and explaining decision-making processes through the forming of networks of relations. Moreover it might link technical influence – like the extension of an airport – on policy-making. According to the ANT approach it also links political influence and scientific knowledge. These two notions are usually considered to be isolated from each other in existing research on Schiphol.⁶⁹ Next, ANT follows the actors, group formations and destruction and the traces and associations they leave behind in doing so, instead of researching already established connections:

69 See Chapter 3.1

the journey from the *cold consensus of reciprocal unawareness* to the *warm consensus of agreement and alliance*, and everything in between (Venturini, 2010: 6).

This thesis follows the ANT perspective on planning and policy in the making by analyzing associations that emerge as the outcome of deliberate contestation in specific historical contexts. However, the former chapter does not give enough pointers to analyse the case study of this thesis: the Alders Table.

The Alders Table is a consultative body consisting of representatives of Schiphol Group, KLM, Air Traffic Control the Netherlands (LVNL), the former Ministry of Spatial Planning, Housing and the Environment (VROM), the former Ministry of Transport, Public Works and Water Management (V&W),⁷⁰ the municipalities of Amsterdam, Amstelveen, Uitgeest, Haarlemmermeer and the Province of Noord-Holland, organized in the *Bestuurlijke Regiegroep Schiphol* (Managerial Directing Group Schiphol, BRS), and local residents organized in the *Commissie Regionaal Overleg luchthaven Schiphol* (Regional Schiphol Airport Consultation Committee, CROS) and the *Vereniging Gezamenlijke Platforms* (United Platforms of Residents against Airport Nuisance, VGP).

The consultative body, chaired by Hans Alders (hence Alders Table), had to formulate advice concerning the possibilities to come to a 'better' utilization of environmental standards and to underpin these suggestions with an environmental impact assessment for both the short term (<2010) and mid-term (<2020). This had to be done in combination with the creation of nuisance-restrictive arrangements and measurements to improve the environment surrounding Schiphol. These arrangements and measurements had to be institutionalized in one or more 'firm' and 'maintainable' covenants⁷¹. In other words, it was about the possibilities to utilize the environmental capacity of the airport in a more efficient way and at the same time secure future capacity and spatial developments. In October 2008 the Alders advise was presented to the former Minister of V&W, Eurlings, who spoke of a historical achievement, since it was never seen before that so many different actors around Schiphol had reached an 'unanimous' agreement. The outcomes of the negotiations were therefore widely perceived to be a success story.

However, this is the conclusion drawn when considering ready-made policy. Aim of the case study is to perceive the Alders Table case from a planning and policy-in-the-making perspective. Using the analytical framework I

70 As already mentioned in Chapter 1, the Ministry of Housing, Spatial Planning and the Environment and the Ministry of Transport, Public Works and Water Management merged into the newly established Ministry of Infrastructure and the Environment in 2011.

71 Alders, H. (2007: 1), Advies van de heer Alders over toekomst Schiphol en de regio tot 2010.

will construct in the following section, I shall analyse the Alders Table in the next two chapters by following controversies and accompanying actors up to the end, demonstrating how particular interests slowly but steadily translated into broad-based support, disappearing in black boxes. In other words: the case study will analyse how a final advice was realized through the rearrangement of numerous heterogeneous associations, involving potentially conflicting ways of representation and prioritization, and the political work needed to define precisely what constitutes the outcome that needs to be governed. Next, a third chapter will describe the implementation of the Alders Table (between 2008 – 2011), again following the controversies. But new controversies emerged from the associations made at the Alders Table. Therefore the third chapter will analyse whether the final Alders advice can be seen as a closed black box or the closure of the collective, or if the measures derived from the final advice, spark renewed rounds of controversies.

The case study was picked because it embraces all points made in the last paragraph of chapter 2. First of all, decisions are made about the future of Schiphol and the international competitiveness of the Netherlands as a whole. But then again, the decision-making process also focused on nuisance-restrictive arrangements and measurements to improve the direct surroundings of the airport. The Alders Table considers the local, regional and international scale of Schiphol. Next, the fact that a growing number of parties are involved in the decision-making process of Schiphol is made clearly apparent by the size and composition of the deliberative body. In addition to this second point, the Alders Table shows how a national government struggles with the design for a more pluralist form of governance and decides that the decision-making process can only be effective if all actors get the right to voice their opinion. And finally, the Alders Table is such a technocratic exercise that it becomes a prime example of the scientization of politics and the politicization of science.

In the remaining part of this chapter I will introduce the *conceptual lens* through which this research looks at all gathered data (Allison and Zelikow, 1999: 2). The three fundamental notions of ANT will be revised in the following paragraphs: *agnosticism* (observers are impartial, no point of view is privileged and no interpretation is censored); *all actors are equal* (observers are not allowed to make any distinction a priori); and, *generalized symmetry* (observers must consider both humans and non-humans). This is done to bridge the gap between the theoretical and operational part of ANT. After this revision of the fundamental notions of ANT, the research framework is described. The chapter ends by describing the way in which data was gathered and organized.

4.1

Reconsidering agnosticism: Introducing the prevailing practice

The previous chapter explained that the first fundamental notion of ANT is that actors cannot be defined a priori. Next, it was shown how Routledge (2007: 201) stated through the process of circulation that differences in the distribution of power can be more than merely relational effects within the network, due to a complex web of political, economic, and cultural determinations. This is a fragile assumption, as ANT states that researchers are not allowed to set up any demarcations. As mentioned earlier this research will consider this process of circulation. First, some actors do circulate more freely and extensively within actor-networks than others, because of access to more information for instance. Second, actors always have a certain joint history, which influences the formulation of associations. For instance if actor A mistrusts actor B, because of something that has happened in the past, it will be much more difficult for actor B to form a stable association with actor A.

So, when an innovation presents itself that causes associations to become rearranged, the *position and interests* of concerned actors already have to be considered: this is the prevailing context – or better, the *prevailing practice* – from which the case studies emerge. Considering this prevailing practice it should become clear that certain actors and truths are privileged while others are marginalized. Although actors not always are fully aware of each other's positions and interests, they do have an idea of these, and tend to be biased, which – correctly or incorrectly – will influence new associations. There are many actors concerned with Schiphol and severe dissension has arisen between these actors. It is remarkable to see how experiences and opinions mingle and a negative image is constructed without actual or complete knowledge, fed by distrust.

The first building block for the research framework is that the starting point of both case studies consists of describing the prevailing practice, as the research does not start from a beginning: it plunges right into existing Schiphol associations. Actors that have to search for new associations already have a history with each other that certainly influences the rearrangements of associations. While ANT states that actors cannot be defined a priori, this research does not endorse this claim, as it is believed that the prevailing practice – referring to both the background of the described situation as the position and interests of the introduced actors – should be considered.

4.2

All actors are equal: The difference between power in potentia and power in actu

The second fundamental notion of ANT is that all actors are equal; therefore, if some actors appear to be more powerful than others, we should research why this is. Chapter three described the difference between power *in potentia* and power *in actu*: power has to be compiled as a result of collective action to attribute it to just one actor.

Callon's process of translation and Latour's political programme of the collective were introduced to show how power is distributed. This demonstrated how four steps should be considered when following actors (see table 4.1). Eventually, the collective was chosen rather than the process of translation, as the politicization of associations seems to fit the scope of this dissertation better: the research is about policy in the making, which of course is imbued with politics. Latour gives readers a framework how chaos is transformed – or translated – into black boxes – or 'the collective' as Latour calls it in his political programme. In this sense we come to closure, as the presence of actors as well as their importance and function are no longer subject to discussion. Fixed boundaries come into existence, at least for now, as the collective can be contested at any moment (Dijstelbloem, 2007: 79; Latour, 2004: 114).

Table 4.1: Callon's Translation and Latour's Collective

<i>Callon's Translation</i>	<i>Latour's Collective</i>
Problematization	Perplexity
Interessement	Consultation
Enrolment	Hierarchy
Mobilization	Closure of Institution

Source: Callon, 1986, Latour, 2004

The second revision of ANT and the second building-block for the research framework is that the research will remain faithful to the original second fundamental notion of ANT. Thus, all actors are considered equal and if one actor is perceived more powerful than another actor it must be investigated how this could be realized. In order to study the distribution of power, the research follows Latour's political programme of the collective. The four steps of perplexity, consultation, hierarchy and closure show how actors translate their will onto others.

4.3

Refining generalized symmetry:

Going beyond symmetric criticism

The last fundamental notion is that of symmetry, which means that Actor-Network theorists believe that social and material processes are closely interwoven within complex sets of association. In order to realize successful networks, non-humans are just as important as humans. As this symmetric stance is the most radical stance of the three fundamental notions, it is useful to elaborate on this symmetry to show how the notion of symmetry will be used in this research. In general, it seems rather counter-intuitive to give non-humans just as much importance as humans. After all, human agency is different from non-human agency, is it not?

ANT believes that non-human actors can also have programmes. This has been demonstrated in the paper by Callon (1986) called *Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay*. Scallops are highly appreciated by French consumers. There are several locations in France where scallops are fished, including St Brieuc Bay. At this location, scallops lose their coral during spring and summer. These characteristics are commercially important because, according to the fishermen, the consumers prefer coralled scallops to those that are not. The case begins when three biologists return from a research trip to Japan where they witnessed a technique that makes it possible to increase the level of the existing stock of scallops at St Brieuc Bay. As they wish to implement this new method, they write a series of reports and articles about the impressions they gained on their trip. At the same time, they convince the fishermen that this project will benefit everyone. The scientists claim to speak on behalf of the scallops; they become indispensable. The scientists, who are now the spokespersons in this association, come up with a collector that will trap the larvae and subsequently the larvae will anchor themselves. The experiment succeeds. The larvae anchor themselves to the collectors. The translation is complete; the three scientists become macro-social actors who speak in the name of the scallops and the fisherman. But the black box does not last. When repeating the experiment, it ends in a catastrophe as the collectors remain empty. The scallops become dissidents. To make matters even worse, the fishermen cannot control themselves although they agreed to co-operate in the restocking programme of the bay. With the holiday season in sight the scallops are shamelessly taken by fishermen satisfying their immediate desires (Callon, 1986). In this case, non-human actors play an important role – namely the scallops – with their own programme.

However, it remains awkward to assign to non-humans the same significance as humans. Considering Latour's recent work, especially the politics of nature, it becomes clear that this symmetrical perspective is actually quite logical. In *Politics of Nature*, Latour made some (necessary) differentiations. By now, Latour has made a subtle distinction in his symmetry by stating that *I do not claim that things speak 'on their own', but always through something or someone else. I have not required human subjects to share the right of speech of which they are so justly proud with galaxies, neurons, cells, viruses, plants and glaciers* (Latour, 2004: 68). He states that we should *stop taking non-humans as objects [because] as soon as we allow them to enter the collective in the form of new entities with uncertain boundaries, entities that hesitate, quake, and induce perplexity, it is not hard to see that we can grant them the designation of actors* (Latour, 2004: 76). By now we can understand that it is not nature or humans who assemble, who speak or who decide: it is *associations made up by humans and non-humans*. So non-humans are not equally important as humans, but ANT believes that humans just do not play a more important role than non-humans, *ANT is not the empty claim that objects do things 'instead' of human actors: it simply says that no science of the social can even begin if the question of who and what participates in the action is not thoroughly explored first of all, even though it might mean letting elements in which, for lack of a better term, we would call non-humans. [...] The project of ANT is simply to extend the list and modify the shapes and figures of those assembled as participants, and to design a way to make them act as a durable whole* (Latour 2005b: 72).⁷² Eventually the relationships and interactions between humans and non-humans are the ones that occupy centre stage.

The final revision of ANT and the final building-block for the research framework is that it is not humans or non-humans that are important but the associations they form. It can occur that the humans have been forgotten in a certain association, making the non-humans more important. But this research does not state that non-human agency is automatically as important (or even more important) as human agency.

72 This becomes even more logical when considering inventions. Most people will know that the Wright brothers were responsible for inventing and building the world's first successful aeroplane and making the first controlled powered and sustained heavier-than-air human flight. However, most people will not know that Dr Hans von Ohain and Sir Frank Whittle both invented, separately, while knowing nothing about each other's work, the jet engine. Alexander Parkes patented the first human-made plastic. John Loud produced the first ballpoint pen. The Uniform Resource Locator (URL) was created by Tim Berners-Lee. And the oldest known archaeological fragments of the immediate precursor to modern paper is ascribed to Cai Lun, a 2nd-century AD Han court eunuch. This list could go on forever. Everyone knows these inventions, but not everyone will probably know the inventors. The original invention becomes tacit knowledge (Latour, 1987: 58): *Who refers to Lavoisier's paper when writing the formula H₂O for water?* (Latour, 1987: 43). So the point that I would like to make is that although these inventions are human inventions, the humans have been forgotten, while the non-humans become the most dominant actors in this association.

As this symmetrical stance is still quite controversial, and the word ‘actor’ is automatically associated with a human being, I shall use from now on the complex noun ‘actant’, which embraces both human actors and non-human objects (Hillier, 2007: 10).

4.4

Describing shared uncertainties:

How to explore controversies with Actor-Network Theory

As the previous sections introduced the three building-blocks for the analytical framework, it is now time to finalize this framework. The collective was introduced as a very useful instrument to examine the case studies. However, it was stated that the different phases of the collective do seem to neglect any form of regularity. Therefore Latour’s book *Science in Action* was discussed, as it shows how science in the making can be analysed. In this thesis, socio-technical controversies are the essential resource to make social connections traceable (Latour, 2005b: 30). In the previous chapter, the following definition for a controversy was given as it refers to every bit of science and technology that is not yet stabilized, closed or ‘black-boxed’; controversy is used as a general term to describe shared uncertainty (Venturini, 2010: 6).

Controversies emerge when a statement is uttered and no agreement is reached. As a result, concerned actants do their best to render the statement either fact or fiction. As a result, the Alders Table is analysed by following controversies as they emerge as *policy in the making* until they disappear as *ready-made policy*. There is a striking difference between the black boxes on one side, ready-made policy, and the open controversies on the other side, policy in the making. By following controversies, associations that eventually form the foundation for closure or ready-made policy can be mapped.

Mapping and interpreting socio-technical controversies is *the exercise of crafting devices to observe and describe social debate especially, but not exclusively, around techno-scientific issues* (Venturini, 2010: 1). It was initiated by Latour and is, like ANT, a *method to live, to know, and to practice in the complexities of tension* (Law, 1999: 12, quoted in: Venturini, 2010: 2).⁷³

73 Mapping and interpreting socio-technical controversies has recently become the object of the EU-funded consortium MACOSPOL (Mapping Controversies in Science and technology for POLitics), which consists of eight European university and research centres: the Fondation Nationale des Sciences Politiques (France); the University of Oslo (Norway); Observa, Vicenza, (Italy); University of Munich (Germany); Université de Liège (Belgium); Ecole Polytechnique Fédérale de Lausanne (Switzerland); University of Amsterdam (The Netherlands); University of Manchester (United Kingdom).

When looking for rules to map controversies in Latour's oeuvre, he states that we must *just describe the state of affairs at hand* (Latour, 2005b: 144). Or – to speak with Latour's own words – *just look at controversies and tell what you see* (Venturini, 2010: 2). However, as always with ANT, 'just' observing and describing controversies is not as straightforward as it seems.

Fortunately, the previous last chapter has already pointed out that Latour (2004) has proposed a scheme for describing controversies: the two powers of representation of the collective. Furthermore, Venturini (2010) suggested several criteria for mapping controversies. Let us start with Venturini. He presents some rules common to all social controversies:

Controversies involve all kind of actants: *not only human beings and human groups, but also natural and biological elements, industrial and artistic products, institutional and economic institutions, scientific and technical artefacts and so on and so forth* (Venturini, 2010: 7). Again, this does not mean that all actants are equal or that all actants act in the same way. Actants can inhabit utterly incommensurable worlds and yet they may end up sharing the same battlefield. Take, for instance, bird strikes on aircrafts. Around Schiphol, geese in particular are a serious danger to aircraft. When geese are sucked into a jet engine and strike a fan blade, engine failure can occur. Therefore, the airport planning decree for Schiphol has explicit rules concerning the maximum size of water surface areas allowed, as well as rules for prohibited flora in order to discourage geese from nesting in the direct surroundings of the airport.

Controversies display the social in its most dynamic form: not only new and surprising alliances emerge, such as the jet engine, flora and water surface areas versus geese, but social entities that seemed indissoluble can suddenly break into conflicting pieces: *in controversies no natural or technical assembly can be taken for granted* (Venturini, 2010: 8). Jet engines are an obvious component of modern aircraft. However, under pressure of carbon footprint awareness, manufacturers are redefining jet engines, retrieving ancient propellers and searching for eco-friendlier alternatives. And so, the global warming controversy has trickled all the way down to the very black box of aircraft design.

Controversies are reduction-resistant: *In controversies, actors tend to disagree on pretty much anything, included their disagreement itself* (Venturini, 2010: 8). Ask a relatively simple question such as 'how can we decrease noise hindrance by aircraft?' and actants will immediately start arguing about *decrease* (On which time scale should variation be

evaluated? What is our target? When is a decrease significant?) and about what noise hindrance means (When is someone hindered by aircraft noise? How is noise hindrance measured? Which instruments are used? How important are non-acoustic elements?). Of course, these questions will lead to even more questions. The difficulty of controversy is not only that actants disagree on answers, but that actants cannot even agree on questions.

Controversies are debated: as mentioned previously, controversies emerge when things that were taken for granted start to be questioned and discussed. Disputes are interesting as they open up black boxes (Venturini, 2010: 9). Before jet engines were linked to noise hindrance, everyone more or less agreed on the desirability of aviation to grow and evolve. Today, there are numerous opposing opinions about the development of aviation. And the jet engine is not only linked to noise hindrance but also to carbon footprint awareness. More and more objects are being discussed by more and more actants.

Controversies are conflicts: *The construction of a shared universe is often accompanied by the clash of conflicting worlds* (Venturini, 2010: 9). That is why, for instance, noise hindrance by jet engines cannot be left to engineers at Boeing, Airbus, and other aircraft manufacturers alone. People may be confronted with serious health problems, local and regional governments can be hampered in their spatial development, and national economies and industrial sectors may even rise or fall because of limits to the total amount of air transport movements as a result of noise-hindrance-reducing measures. Of course, not all controversies concern vital issues, but still should be taken very seriously, as social order and hierarchy are at stake. *Controversies decide and are decided by the distribution of power* (Venturini, 2010: 10).

In the Schiphol file there seems to be a multitude of controversies. The collective gets most complex because there is a large and diverse assortment of actants involved, alliances and opposition are transforming wildly, everyone is shouting and quarrelling, and conflicts are becoming harsher. It is therefore very relevant that Venturini (2010: 264) should suggest five criteria for the selection of controversies:

1. *Avoid cold controversies:* controversies are best observed when they are hotly debated;
2. *Avoid past controversies:* study controversies that take place in present times as they are unresolved;
3. *Avoid boundless controversies:* the more a controversy is restricted to a specific subject, the easier its analysis will be;
4. *Avoid underground controversies:* for a controversy to be

observable it has to be open to public debates, at least partially;

5. *Favour controversies concerning scientific or technical issues.*

By now, an analytical tool is starting to take shape that we can use to analyse and understand the Alders Table case study. We shall follow and retrace the dynamics of the controversy in time: the actants (individuals, groups, institutions and objects), their arguments, the different positions and how they change and progress over time, the spaces in which they develop, the many ways of closing and re-opening the debates, the extent of public involvement and participation in the process. This is done through observation and description. When observing controversies, we focus on the power to take into account (the task of unfolding the complexity), and when describing controversies we focus on the power to arrange in rank order (the task of ordering such complexity).

Fortunately, I received the chance to participate in the forming and implementation of the Alders Table between 2006 and 2012. So if we look at the first criterion of Venturini (2010) (avoid cold controversies), I was lucky enough to witness the peak of overheated controversies. Furthermore, the Alders table lives up to the second criterion (avoid past controversies) as almost all research took place while controversies were both salient and unresolved. The third criterion (avoid boundless controversies) was also met, as only studying the Alders Table restricts my thesis to a specific subject. The Alders Table can be seen as being a partially underground controversy. Still, a substantial part of the Alders Table has been open to public debate, thus meeting the fourth criterion (avoid underground controversies). The last recommendation gave a method to choose a good controversy: favour controversies concerning scientific or technical issues. The decision-making process concerning Schiphol is a technical entity with an extensive social component. As will be shown in the next chapters, the Alders Table can be seen as a case study focusing on the correlation between the technical influence and the actor-oriented side of the decision-making process concerning Schiphol.

4.5

Formulating a research framework

With the extensive elaboration of socio-technical controversies in the last section, and the introduction of the slight revision of ANT earlier on in this chapter, the quest for an analytical framework is complete.

The starting point of the case study was to describe the **prevailing practice**,

or the context in which controversies emerge. A controversy does not present itself suddenly. This research does not start from a beginning; it plunges straight into existing Schiphol associations. The research takes change in prevailing practice as its starting point, and has to consider the context in which associations are being rearranged. Actants that have to search for new associations already have a mutual history that will certainly influence the rearrangement of associations. Of course, this is also the case for actants that present themselves throughout the case study. While ANT states that actants cannot be defined a priori, the first building block stated that there are pronounced differences in physical mobility across space, and access to resources such as money, knowledge and technology. It is interesting that Latour seems to endorse this claim. In *Science in Action* he uses the example of chemist A, who prefers the opinions of renowned chemist B to 'facts' straight out of textbooks. Therefore, because of the impressive curriculum vitae, affiliation, discipline and psychological appraisal of his colleague, chemist A doubts the results from various scientific publications (Latour, 1987: 7-8). So here – as said previously – 'context' refers to both the background of the described situation as well as the background of the introduced actants.

After the prevailing practice has been described, the two powers of representation of **the collective** are introduced. First, **the power to take into account** is mapped, consisting of **perplexity** and **consultation**. The controversy is introduced in the phase of perplexity. Issues emerge and seek a place in our society. The issue has not yet been defined. This changes in the phase of consultation; the issue acquires a voice through a colourful and accentuated landscape of spokespersons. Controversies are observed in the first phase, while being described in the next phase.

This next phase is the second power of representation: **the power to arrange in rank order**, consisting of **hierarchy** and **closure of institution**. In the phase of hierarchy, it is time to let the actants arrange an order of importance in the rather heterogeneous list of spokespersons. In other words, it is time to follow the transformation of the controversy from matter of concern to matter of fact. This is done by starting from the simplest of all possible situations: *When someone utters a statement, what happens when the others believe it or don't believe it* (Latour, 1987: 21). If listeners question the statement and take it upstream, towards its original source, a sentence becomes less of a fact. If listeners no longer question the statement, and take it downstream, towards another statement, a sentence becomes more of a fact. The logical conclusion is that if you are immersed in a controversy and you want your stated interests to become stable and durable, you should use as much material as is available to take other actants further downstream, as far away from the original statement as possible. Another notion that should be realized is that the longer controversies exist – which

means that argument after argument is refuted with counterarguments – the more actants are led into *technicalities* (Latour, 1987: 30). More texts, files, documents, reports, researches, calculations, renowned institutes, politicians, scientists and so on are used to force the others to transform an opinion into a fact. Opinions become more credible as facts as new allies are mobilized or disappear. In conclusion, the more *stratified* an opinion becomes, the more chance it has of being transformed into a fact. And if an issue exists over a long time, and more and more actants are becoming involved, an opinion must be increasingly stratificational in order to become a fact.

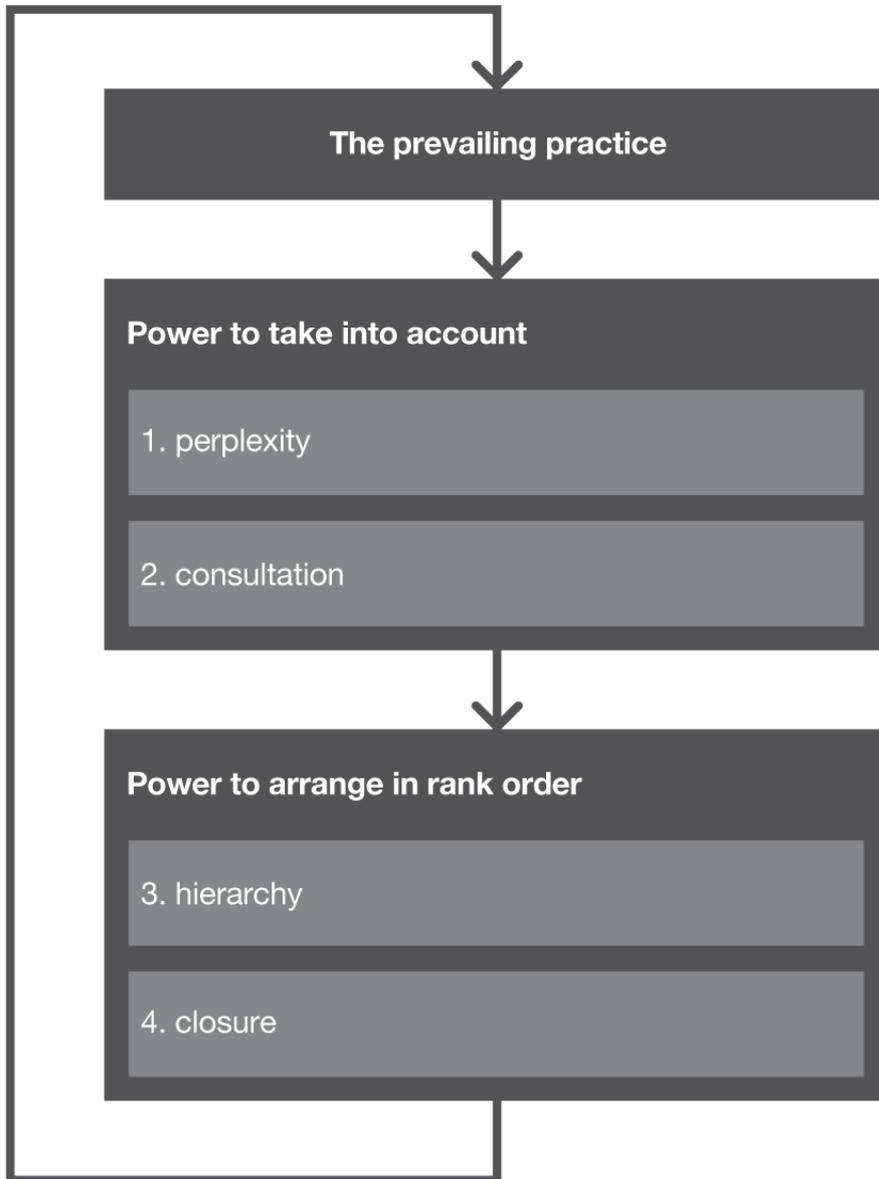
Here, the second and third building-blocks for the research framework are presented. The distribution of power is studied through Latour's political programme of the collective, and non-humans are also considered while humans rearrange associations during the four steps of the collective. In this research, non-humans will be mostly used as tools for humans to take statements either downstream or upstream.

To conclude, when the solution is ultimately negotiated, and a rearrangement has occurred as new associations have altered the original prevailing practice, **closure of institution** is reached. A constraining network of associations, an actor-network – has been created. However, the black box is never completely closed, as the actor-network can be contested at any given time, as closure always generates uncertainties, resistances and ambivalences. In the remaining chapter of this Part II, I shall use 'closure' instead of 'institution', as institution is easily confused with social mechanisms or formal establishments.

The diagram describes the general movement of what I will study in the next three chapters: following controversies and accompanying actants up to the end, being slowly led from policy in the making, as associations disappear in the black box of ready-made policy (see figure 4.1). First, prevailing practice, or the context, is introduced. Then, an innovation emerges that influences prevailing practice. It is clear that associations have been rearranged, but it is not clear which ones and how. Controversies are an essential resource for making associations traceable, and thus following controversies eventually makes clear how this rearrangement of associations takes place through the power to take into account, and the power to arrange in rank order.

However, the research model remains just as descriptive and analytical as ANT itself. That is why this research framework will only be used to analyse the case study and help us understand how actants translate their interests – or parts of their interests – into general interests through a ANT itself. That is why this research framework will only be used to analyse the case study and help us understand how actants translate their interests – or parts of their interests – into general interests through a broad

Figure 4.1: Mapping Controversies



Source: Derived from Latour (2004).

assemblage of associations. The Alders Table case will show how a diverse array of conflicting political interests – controversies – arise and become intertwined in one way or another and how eventually some sort of prioritization is created by the political work involved. After the

three case-study chapters, my concluding chapters (8 and 9) will from recommendations and conclusions derived from the case studies.

4.6

Gathering data

In order to study the case studies a qualitative research method was chosen, aiming to gather a more in-depth understanding of the complex decision-making process surrounding the Alders Table through investigating why and how actants influence this process. In this paragraph I discuss the three – extensively used – methodologies used to gather, organize, validate and analyse the data that I needed for enacting the analytical framework presented in paragraph 4.5. These three methodologies are: analysis of documents and materials, observational techniques and open interviews.

Before elaborating on the three methodologies used to gather data, I have two additional comments. First, researching an intricate decision-making process such as the Alders Table, leads to a colourful and accentuated landscape, inhabiting a polyvalence of voices and detail (Huys, 2011: 70). This holds the danger of a never-ending quest, as there are always beginnings underlying each beginning. So, in order to get the right data, one needs to have at least some idea what to look for. Fortunately, Latour has provided us with the rather heuristic framework of the collective. Unfortunately, analysing the collective is not as unambiguous as the four phases of Latour make us believe to be. I used the research framework as presented in this chapter to produce order in the chaos. Secondly, I gathered as much data as possible by directly observing and participating in the formulation of both the Alders Table advices. Still, I often had to rely on retrospection. It is not hard to understand that the policy making process concerning Schiphol is an extremely comprehensive and fragmented debate. It is impossible to witness the unravelling of all issues and processes, especially when they take place at the same time. Thus at certain moments during the research I had to reconstruct parts of the case afterwards, when controversies were not overheating anymore, but lukewarm at best.

4.6.1. *Analysis of documents and materials*

From the very beginning texts and figures were analysed. Firstly, this was only done to get familiar with the cases, but later documents and materials were also used to follow the identified controversies. In the early stage, mostly existing documents open to the public were analysed. In the

second stage the documents and materials studied mostly consisted of confidential documents, such as minutes and internal reports, which showed how controversies evolved from the phase of perplexity to closure.⁷⁴ Written material was also used to reconstruct events or to validate stories told by the interviewees.

I included as much written material as possible. The documents used include the important and well known White Papers, political decisions, strategic documents of the stakeholders (such as visions, annual reports, strategic guidelines) and major research reports to internal communications, minutes of meetings, internet pages, letters of correspondence between actants, parliamentary protocols and newspaper articles. All these documents articulate a kaleidoscope of different opinions, which influence the rearrangement of associations. Of course, texts are also constructions of reality made by actants. Still, I believe that by combining the analysis of documents and materials, with observational techniques and interviews, a realistic account of occurrences was written down.

One last source of written material that is worth mentioning here are the contributions of several stakeholders to a book that we have edited during 2007 – 2009 (Van Gils et al., 2009). The book was about dealing with the multiplicity of stakeholders in the planning of Schiphol and the port of Rotterdam, and seven of the most important stakeholders of the Schiphol debate have contributed by writing a chapter on personal notice. These chapters can be seen as kind of personal diaries of the stakeholders; they reveal the perceptions of the actants and their intentions, and they elaborate on their strategies to achieve their goals. Most chapters written by stakeholders of the Schiphol debate touched upon the Alders Table as during that period, the consultative body was still in action.

4.6.2. *Observational techniques*

For the case study, I observed meetings and workshops between 2006 and 2012. The goal of these observational techniques was to see how actants operated during meetings and workshops. To what extent were which actants actively involved, how dominant were the actants, how about attempts at conciliation, how fierce were the discussions, could tensions between actants be detected, were all actants taken seriously, what sort of atmosphere would a meeting or workshop exude, and what about body language? With regard to the Alders Table, only

74 During 2004 – 2009 I worked at Schiphol Group. From 2009 onwards I work at the Municipality of Haarlemmermeer. Therefore, I had the privilege that I had access to both archives, presenting me with a vast amount of material that otherwise would be confidential (or at least more difficult to obtain).

four meetings were attended, but all the minutes were available⁷⁵. Nevertheless, I had the opportunity to be *amidst the whirlwind of complexity*, by participating in the network constitution of the Alders Table case. However, I am fully aware that my participation – although varying in intensity – makes me part of the process of generating associations, *a methodological space where theory, practice, and politics converge* (Routledge, 2007: 205). In that position I could ‘influence’ and ‘be influenced’ within the unfolding networks. That does not alter the scientific merits of this research: in order to conduct a good ANT analysis by following the actants, the researcher has to be at the heart of the policy making process, particularly in an opaque file as the Schiphol file.

4.6.3. *Open interviews*

The last method for gathering information used was the method of open interviews. For the Alders Table case, one actant from each organization was interviewed.⁷⁶ The aim was to interview an actant that had also participated at the actual Alders Table. This was achieved with regard to the Schiphol Group, KLM, LVNL, the Province of Noord-Holland, the inhabitants, the Ministry of Transport, Public Works and Water Management, the chairman of the Alders Table, the process director of the Alders Table, and the secretary of the Alders Table. Participants from the Municipality of Haarlemmermeer and Amstelveen reacted in writing. Concerning the municipality of Amsterdam and the Ministry of Housing, Spatial Planning and the Environment, it was only possible to speak to an actant who participated at the Vermeegen level, the weekly consultative body preparing topics to be discussed at the Alders Table. The Municipality of Uitgeest was the only organization not consulted, due to lack of time. Ultimately I conducted 23 interviews, with 4 respondents being interviewed twice for reasons of verification or further clarification. I used 8 interviews to familiar myself with the Alders case and develop my research focus. Those interviews have not been used as empirical data for the case study. In the end, one respondent did not give permission to use the conducted interview. I only used data validated by the respondents.

The open interviews were a very important step in the research because, by conducting interviews, the actants could be followed during their process of defining and ordering the social. First, interviews were held to become acquainted with the context of the case and in order to

⁷⁵ Two meetings in 2008, one meeting in 2010 and one meeting in 2011.

⁷⁶ In the case of the Schiphol Group, we decided that it would be unethical to interview former Schiphol Group CEO Gerlach Cerfontaine, as he was involved in the supervision of this thesis. However I did use his expertise and direct involvement to verify the case study.

discover the dominant controversies in the cases.⁷⁷ After this was done, a questionnaire was formulated to handle the controversies. The actants never got to see the questionnaire; the interviews were deliberately organized as open interviews so the actants had total freedom to tell their story. First they were asked what their interests were before the cases commenced and subsequently whether or not these interests had changed during the process. They were asked to do the same for all other concerned actants. The question was also posed as to which actants they would define as most dominant in the process and why. The remaining questions handled the decision-making process through the identified controversies in a chronological manner. In this sense, different storylines were collected in order to deduce how the case studies transformed from perplexity to closure.

During the interviews I wanted to hear their stories, so I tried to influence the accounts of events as little as possible by avoiding interruptions and by giving neutral responses. Sometimes the narrative style of interviewing did not work out very well, because not all respondents had the ability or willingness to engage in detailed storytelling for example. A pattern could be seen here: the higher up the ladder, the more politically correct the answers became. This trend was tackled by conducting several interviews with one specific group to verify stories. Experience showed that if an Alderman of municipality A, for instance, was unwilling to engage in detailed storytelling, a public servant of municipality A generally would be. Furthermore, during the interviews, I attempted to verify my interpretation of the respondents' answers by repeating their answers and asking if I interpreted their stories correct.⁷⁸ The ideal interview results have largely been interpreted throughout the interview (that is, during the interview itself) (Kvale and Brinkmann, 2009: 143).

All interviews were taped. The advantage of this is that it makes it possible to be more accurate as you have a full transcription of the interview. Furthermore, taping gives the interviewer room to fully concentrate on the respondent, instead of taking notes.⁷⁹ One interview was conducted by phone and two interviews were conducted via e-mail, because the busy schedules of the concerned persons would not allow a face-to-face interview. On the other hand, taping has the disadvantage that it can prevent people from talking more openly, being on their

77 I also engaged in informal talks with experts and stakeholders during lunch meetings, dinners and drinks, at the coffee machine, in-between meetings, conferences, workshops and roundtables. These observations and small talk were especially useful to become familiar with the Alders Table case.

78 This is also known as 'member checking' (Huys, 2011: 83).

79 Although of course notes were taken, emphasizing those events that I defined as being important at that moment.

guards for doing ‘off the record’ statements. Thus, the presence of the tape recorder influenced the interviews, and therefore the data. Also, the politically sensitive context of the Schiphol debate had a great influence on the interviews. Especially those who were still involved in the public policy debate about Schiphol were rather cautious. Huys (2011: 88) concludes that actants who are highly critical of the Schiphol debate were less concerned about the political correctness of their contributions. Again, I tried to tackle this minor flaw in process of gathering information by conducting several interviews with different people from the same organisation.

4.6.4. *Methodological triangulation*

Triangulation is about the constant search for disconfirming and confirming evidence, or the process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation (Huys, 2011: 83).

Moreover, triangulation by means of the inclusion of multiple researchers has played an important role too. I was in the fortunate position to be able to triangulate my findings with those of another researcher (Huys, 2011) who was working on the Alders Table case at the same time. Our research projects were carried out on individual tracks, thus independently of one another. When we had both finished the case description and had developed our own conclusions on this particular episode, we compared both the description and conclusions and found that they were very similar (see the case study and conclusions in Huys, 2011). This was all the more important, as we had interviewed different people who had been involved during this episode. As we have discussed, I was mainly interested in respondents who were actively taking part in the negotiations, while Huys’s approach included a selection of respondents that had been involved in the emergence and marginalization or institutionalization of specific events, which automatically included the marginalized voices. This resulted in a different selection of respondents.

4.7

Methodological Summary

Following both theoretical chapters, this chapter described how ANT is translated into a research framework in order to analyse the case study. In that perspective, a personal interpretation of ANT was given in order to formulate a research framework. The first building-block for the research framework consisted of the prevailing practice. Instead

of remaining agnostic as ANT suggests, the research believes that the prevailing context – referring to both the background of the described situation and the position and interests of the introduced actants – should be considered. The second building-block consisted of Latour's four steps of the collective, as the research remains faithful to the second fundamental notion of ANT: all actants are equal. The third building-block consisted of the fact that the associations formed by actants are important. Furthermore, the symmetrical stance was modified by stating that, in the research, non-humans are mostly used as tools for humans to take statements either downstream or upstream. To conclude, controversies and some common rules and criteria were discussed. Next, the case study was introduced: the Alders Table. This case was chosen as it is considered to be a complex decision-making process, meeting the criteria given for the selection of controversies. Through the research design it was explained how, by means of literature studies, observations and interviews, the actants were enabled to narrate the full range of controversies in which they are immersed. The case study followed the actants in their constant struggle for group formation, as people are compelled to talk on behalf of a group, anti-groups are created and mapped, and new resources and professionals are deployed to make boundaries more durable, in order to conclude how closure eventually emerges as policies are created. At least for the moment.

In the previous two chapters I have set out a descriptive grid, and answered the question as to how a descriptive analysis concerning planning and policy-making could contribute to answering the main question by means of the Actor-Network theory: in order to understand the increasing *scientization of politics* and *politicization of science* concerning Schiphol and the different heterogeneous networks that enact the airport into being, ANT seems to provide the answers as this theory takes politicizing science and scientized politics – through the notion of controversies – as its central point of departure. ANT shows how technologies – and more importantly the enactment of technologies – become part of the shared uncertainties triggering controversies. Therefore, by neglecting the common demarcation between humans and non-humans, ANT provides deeper and more detailed answers than a mere analysis of issues, the human actants and their divergent perceptions on norms and values could give: *Issues have been devised to assemble the relevant parties, to authorize them to contracts, to check their degree of representativity, to discover the ideal speech conditions, to detect the legitimate closure, to write the good institution. But when it comes down to what is at issue, namely the object of concern that brings them together, not a word is uttered (...) Procedures to authorize and legitimize are important, but it's only half of what is needed to assemble. The other half lies in the issues themselves, in the matters that matter* (Latour, 2005a:

16). And now we can turn to the empirical part of our thesis showing how mapping controversies is the only way to study how governmental actions should overcome the bridge between existing and normatively valued situations.

Part III:
Mapping Controversies:
the Alders Table case

Chapter 5

The Alders Table:

Formulating the short-term advice

The new Schiphol law was adopted and the Polderbaan became operational in February 2003.⁸⁰ It was decided by the upper house that the new law should be evaluated before February 2006⁸¹. Politicians wanted to make sure that the new law would offer the same protection against noise nuisance as the old norms dating from before February 2003. More than thirty reports were written in three years' time. In February 2006, the conclusion was drawn that the Schiphol Law offered the same protection as the law it had replaced.⁸² The new law met the requirements,

80 See chapter 2 of this thesis.

81 The Upper House unanimously voted in favour of the Baarda motion in 2001, which stated that in order to find out if inhabitants were equally protected by the new Schiphol law as by the old law, the former should be evaluated.

82 Ministry of Transport, Public Works and Water Management & Ministry of Housing, Spatial Planning and the Environment (2006: 5), Evaluatie Schipholbeleid.

but the evaluation also concluded that improvements could be made. Especially where it concerned the protection of inhabitants further away from Schiphol. This is remarkable, as both inhabitants and aviation sector believed that the new aviation law was too rigid, because the law is neither transparent nor explainable. Furthermore, there is no flexibility in order to experiment with routes and thus attempt to reduce nuisance.⁸³ Still, as a result of this evaluation, the national government published the *Kabinetsstandpunt Schiphol* (Cabinet position concerning Schiphol, also referred to as ‘White Paper Schiphol’) in April 2006.

‘A fairytale: more flights and less noise nuisance’, was the way Het Parool – a Dutch national daily newspaper – summarized the Cabinet position on Schiphol.⁸⁴ Schiphol was allowed to grow,⁸⁵ as the government stressed the significance of the airport to the Dutch economy. However, especially because of the noise pollution, local and regional opinions against the expansion of Schiphol increased remarkably. A climate of distrust arose as inhabitants of the surrounding areas and political opponents stated that the restricted values concerning airport capacity had been stretched over and over again. A similar case had happened most recently in the previously mentioned Cabinet position on Schiphol: the government had decided that the airport would be allowed to grow towards 600,000 air transport movements a year, but measures to reduce noise nuisance had to be made to make this growth possible within the existing limits. However, because the former Ministry of Transport, Public Works and Water Management (V&W)⁸⁶ had the feeling that the Cabinet position lacked broad-based support, the Ministry sought an adequate follow-up to the Cabinet position in the summer of 2006, in order to create support for the future development of the national airport.

This is the prevailing practice that the *Alders Table*, a round-table discussion group, took as its starting point.⁸⁷ It is the context in which the controversies emerged. By conducting an Actor-Network analysis as

83 Ministry of Transport, Public Works and Water Management and the Ministry of Housing, Spatial Planning and the Environment (2006: 37), *Evaluatie Schipholbeleid*.

84 Original article in Dutch: “Schiphol mag fors blijven groeien”, published in Parool, 22 April 2006

85 But within the limits set for noise, air pollution and third-party risk.

86 As said before, since 2010, the Ministry of Transport, Public Works and Water Management (V&W) and the Ministry of Housing, Spatial Planning and the Environment (VROM) merged to form the Ministry of Infrastructure and Environment. However, in the remainder of this chapter I shall use their old names in order to avoid confusion.

87 As already mentioned in chapter four, the Alders table consisted of representatives of the Schiphol Group, KLM Royal Dutch Airlines (KLM), Air Traffic Control the Netherlands (LVNL), the former Ministries of Transport, Public Works and Water Management (V&W), and of Housing, Spatial Planning and the Environment (VROM), local and regional governments – the Province of Noord-Holland, municipalities of Amsterdam, Haarlemmermeer, Amstelveen, Uitgeest – united in the Managerial Directing Group Schiphol (BRS), and local residents organized in Regional Schiphol Airport Consultation Committee (CROS) and United Platforms of Residents against Airport Nuisance (VGP).

presented in the research model, this chapter describes the forming of the Alders Table and the completion of the short-term advice, by following controversies and accompanying actants to the end, demonstrating how particular interests slowly but steadily translated into broad-based support, disappearing into black boxes. Every controversy starts and ends with closure, or the mere description without an ANT point of view. In the sections in between, the policy in the making process is described using ANT, analysing the power struggles, the muddling of science and politics, the stratification of opinions into facts and the usage of immutable mobiles.

5.1

First Controversy:

The difficult formation of the Alders Table.

The Cabinet position on Schiphol concluded that all possibilities to utilize the environmental capacity of the airport in a more efficient way should be investigated while at the same time securing future capacity – 600,000 air transport movements per year during the period 2010-25 – and spatial developments. Accordingly, the Alders Table was founded: a consultative body which had the task of formulating advice on the possibilities of realizing a better utilization of environmental capacity, securing future growth, and underpinning these suggestions with an environmental impact assessment. This had to be done in combination with the creation of nuisance-restrictive arrangements and measures to improve the quality of life in the direct surroundings of Schiphol. These arrangements and measures had to be institutionalized in one or more firm and maintainable covenants.⁸⁸ Hans Alders, Queen's Commissioner in the Province of Groningen, chaired the round table and Theo Vermeegen, a consultant of Boer & Croon, became the process director. In this section, the research framework is used to show how the above-described closure emerged from controversy.

5.1.1. *Taking into account*

Perplexity

The Cabinet position concerning Schiphol, published in April 2006, had two points of departure.⁸⁹ First, the national government wanted to consolidate Schiphol's position as an important hub in a worldwide network. Therefore room for further development had to be given should the government

88 Alders, H. (2007: 1), Advies van de heer Alders over toekomst Schiphol en de regio tot 2010.

89 Schiphol Group & LVNL (2007: 5), Verder werken aan de toekomst van Schiphol en de regio.

decide that Amsterdam Airport Schiphol would be allowed to grow towards 600,000 air transport movements in the period 2010-25. Because Schiphol could not develop as foreseen within the existing regulations, the government believed that *compensatory balancing* (the so-called ‘salderen’ in Dutch) between the enforcement points should be possible. This meant that enforcement points may be exceeded with a maximum of 1 dB(A), provided another enforcement point does the opposite. This is called *onderschrijding*, (actually a non-existent Dutch word, meaning the opposite of *overschrijding* (in English: ‘exceeding’)).⁹⁰ Thus, a new term was created for this purpose. However, in order to realize this ‘compensatory balancing’, the prevailing law had to be adjusted. The Cabinet position stated that this would immediately be initiated by *the procedure for the amendment of the law and by showing the effects of this possible amendment by conducting an environmental impact assessment*.⁹¹

Second, the government acknowledged that air transport causes nuisance. However, they also concluded that the evaluation of the Schiphol Law showed that there were opportunities to reduce nuisance. Notably, the protection in the so-called *buitengebied* (the 48 Lden dB(A) area outside the enforcement points, the outer area) had to improve (see figure 5.1). However the Cabinet did not adopt the proposed implementation of a monitoring system for noise in the outer areas by introducing extra enforcement points and combined measurement and calculations. The national government believed that, in order to make most of the nuisance reduction opportunities, *the government shall frame a covenant in close consultation with the aviation sector, in which firm and maintainable agreement are established by which nuisance can be reduced*.⁹² Reducing nuisance in both the inner area and outer area was believed to be possible. It remained unclear how the policy-making process concerning the environmental impact assessment (EIA) and the covenant ought to be organized.

In the stage of perplexity, the controversy that arose read: ‘What could be the follow-up to the Cabinet position concerning Schiphol?’ It had been stated by national policies that economic growth strategies should be combined with the simultaneous realization of environmental objectives. This corresponded to the quite dominant context of the dual objective at that time.⁹³ The above section shows how intricate this context already

90 Cabinet (2006: 5), White Paper Schiphol Policy

91 Original citation in Dutch: “...procedure voor de wijziging van de regelgeving en in het kader daarvan de effecten in beeld te brengen in een milieueffectrapport”. Cabinet (2006: 5), White Paper Schiphol Policy.

92 Original citation in Dutch: “...zal het kabinet in overleg met de luchtvaartsector een convenant opstellen, waarin harde en handhaafbare maatregelen worden vastgelegd waarmee de hinder wordt terug gedrongen”. Cabinet (2006: 5), White Paper Schiphol Policy.

93 Meaning that economic prosperity should be combined with ecological sustainability. See chapter 2 for a more detailed account of the dual objective.

Figure 5.1: Enforcement points around Schiphol



Source: Cabinet Position concerning Schiphol, 2006: 29

was: compensatory balancing, enforcement points, ‘onderschrijding, versus overschrijding’, the inner area, the outer area, environmental impact assessments... all terms that were used in the context of the dual objective. This shows how following the prevailing practice (in this case the dominant dual objective discourse), numerous immutable mobiles are already created. Based on the Cabinet position and the numerous reports that led to this Cabinet position, knowledge – according to Latour – is not presented but *gained* throughout a cycle of accumulation (Latour, 1987: 220).⁹⁴ More information is piled on top of information, leading to lesser room for negotiation. This does not mean that information is less objective, but that it becomes harder and harder to break free from a dominant discourse. Still, it remained unclear how this context could rearrange associations. So a next step was to give the issue a voice through the colourful and accentuated landscape of spokespersons.

Consultation

After the Cabinet position on Schiphol was published, all actants concerned reacted.⁹⁵ The most remarkable criticism came from within the national government: Secretary of State of the Ministry of VROM, Pieter van Geel, who opposed the fact that the proposed implementation of a monitoring system for noise in the outer areas by introducing extra enforcement points and combined measurement and calculations were not adopted by the Cabinet. However, most actants involved stated that the Ministry of VROM simply lacked the resources to actually influence Schiphol policy. Therefore it was not really expected that the objection by the Ministry would make any difference in the end (Huys, 2011: 326). Local and regional governments were disappointed. Most of them were in favour of the mainport objective, but the one-sided focus on further growth came at the expense of the other side of the dual objective; the ecological sustainability. Furthermore, it surprised all local and regional governments as well as the inhabitants and the environmental parties that the government had decided to permit compensatory balancing instead of implementing additional enforcement points in the outer area. The fact that the aviation sector was ordered to develop a covenant to reduce

94 When an explorer set sail to a far and remote land with a mission to draw a map of the ‘new land’, a ship fully loaded with equipment is used, native people are met, his crew is consulted and eventually he comes back with a map. The next explorer will do everything the same, except this time he already has the map of the previous expedition. In the end, the second explorer comes home with a ‘more accurate’ map. This is what Latour means with the cycle of accumulation (Latour, 1987: 220-25).

95 Municipality of Haarlemmermeer, Municipalities of Haarlemmerliede & Spaarnwoude, Province of South Holland, Inhabitants organized within the CROS, inhabitants organized within the VGP, BRS, Milieu- en Natuurplanbureau (Netherlands Environmental Assessment Agency, MNP), Schiphol Group and Air France/KLM.

noise hindrance was met with great scepticism. Both BRS and the CROS believed that the development of a covenant should be done by all regional actants involved.

The local inhabitants organized within the CROS sent a response directly to the Lower House while the inhabitants, organized within the VGP, staged a large manifestation right in front of the Parliament in The Hague, together with Milieudefensie (Friends of the Earth, an environmental NGO). In the end, local and regional governments, inhabitants and environmental parties stressed that the Cabinet position would lead to a further reduction of trust in the national government (Huys, 2011: 327-8).

Remarkably enough, also the aviation sector was not enthusiastic at all. The Schiphol Group and Air France/KLM responded jointly. They emphasized that they were satisfied with the fact that the government supported the mainport objective, but they had their doubts about the proposed improvement of protection in both the inner and the outer area. The Schiphol Group and Air France/KLM also believed in broadening the discussion arena concerning the formulation of a covenant by including local and regional actants in the negotiations.

To conclude, the Milieu- en Natuurplanbureau (Netherlands Environmental Assessment Agency, MNP) stated that it was impossible to facilitate further growth and improve levels of noise pollution in both the inner and outer areas at the same time. Growth would always come at the expense of the inner area or the outer area. So, the ambitions set in the Cabinet position (growth, improving noise protection of the inner area and improving noise protection of the outer area) could never be achieved all at once. Huys (2011: 331) states that MNP informed the Ministry policy makers about their expected results before the Cabinet position was published, but the Directorate-General for Civil Aviation and Maritime Affairs brushed these assumptions aside.

On the 8th of June 2006, a meeting between the actants concerned was organized to review the Cabinet position. The aviation sector, inhabitants, politicians and experts:⁹⁶ all actants were allowed to have their say during the five-hour hearing concerning Schiphol. Much of the criticism they had already uttered was repeated. Most important points being discussed were:

- whether compensatory balancing could be a solution – yes or no;
- how to protect the outer area;

96 Environmental parties and experts, such as the Nationaal Lucht- en Ruimtevaartlaboratorium (National Aerospace Laboratory, NLR), Milieu- en Natuurplan bureau (Netherlands Environmental Assessment Agency, MNP), Rijksinstituut voor Volksgezondheid en Milieu (National Institute for Public Health and the Environment, RIVM), Stichting Natuur en Milieu (Netherlands Society for Nature and Environment, SNM) and Milieudefensie (Friends of the Earth) also attended the consultation.

- the importance of including the local and regional authorities and local residents in drawing up the covenant;
- questioning legal protection, and;
- how to open up opportunities for selectivity and mutual trust.

Attendant journalists reported on the events of 8 June 2006 and the next day the *Volkskrant*, a Dutch newspaper, published an article on the consultation entitled: *'Game of chess around Schiphol is getting vaguer'*. The article stated that 'the government is allowing Schiphol to grow and is stretching the prevailing standards concerning the total amount of noise allowed. In order to do so, inhabitants in the surrounding area are placated this time by extra protection.'⁹⁷

The environmental parties and the inhabitants criticized the constant stretching of values: *compensatory balancing* would give Schiphol the opportunity to grow at short-term notice, but noise hindrance would increase. According to the inhabitants, the aviation sector was given extra scope for 'abuse'. *De Volkskrant* concluded that 'again it has been shown how distrust dominates the Schiphol file.'⁹⁸ During the session, an interesting role was reserved for Professor Stallen, a professor of Applied Psychology specializing in noise annoyance under situations of collective exposure, speaking on behalf of the RIVM. He did not understand why inhabitants were not involved in the formulation of the noise hindrance covenant. Stallen believed that this only frustrated the citizens: 'Inhabitants should get a hold over the total amount of decibels. Only then will hinder truly decrease.'⁹⁹ He used the example of Vienna, where he had seen with his own eyes how the airport and inhabitants combined forces to formulate firm agreements concerning the future growth of the airport on the one hand and the reduction of hindrance on the other. The forming of a covenant as laid down in the Cabinet position would have been perfect in this case too. *De Volkskrant* concluded that despite the points discussed 'practically nothing becomes clear'¹⁰⁰ with regard to how to formulate this covenant.

Besides this hearing on 8 June, the Cabinet position was discussed by the standing committees of V&W and VROM and the State Secretaries Schultz van Haegen (V&W) and Van Geel (VROM) on 28 June 2006. It became evident that both standing committees also harboured many questions and criticisms, and were strongly influenced by the many reactions and

97 Original citation in Dutch: '...Schaakspel rond Schiphol steeds schimmiger [wordt]': 'het kabinet wil Schiphol verder laten groeien, en rekt daartoe de geluidsnormen op. Dit keer worden de bewoners in de wijde omgeving gepaaid met extra bescherming' (published in *Volkskrant*, 9 June 2006).

98 Original citation in Dutch: '...opnieuw blijkt hoezeer wantrouwen de Schiphol-discussie beheerst' (*Volkskrant*, 2006).

99 Original citation in Dutch: 'bewoners moeten invloed krijgen op de hoeveelheid decibellen. Pas dan zal de hinder daadwerkelijk afnemen' (published in *Volkskrant*, 9 June 2006).

100 Original citation in Dutch: "Vrijwel niets is duidelijk" (published in *Volkskrant*, 9 June 2006).

opinions. Amongst other things, the Cabinet position was not referred to as a position at all, but a discussion paper for two conflicting State Secretaries (VROM and V&W), compensatory balancing was seen as something to facilitate capacity for the aviation sector and should therefore be rejected, and the precise interpretation of the covenant and the protection for the inhabitants of the surrounding area was questioned, although it was agreed that local and regional actants were to be included in the development of the covenant.¹⁰¹

After the consultation phase, the controversy did get a voice, through deliberations between the actants concerned, newspaper articles, experts, and debates within the House of Representatives. It is shown how the national government tried to formulate an advice regarding the international competitiveness of Schiphol, local protection of inhabitants, while asking all concerned actants for input. However, the national government, or even more precise the Ministry of V&W, did not succeed in formulating an obligatory passage point. The cognitive and normative disagreements about the noise measurement system and the mingling of science and politics derived from it, prevented the black box to close. In this sense, the power to take into account was adhered to: the number of voices that participated was not arbitrarily short-circuited. It became clear, in terms of the collective, *with how many we are* (Latour, 2004: 109). But it remains still a long way to closure.

5.1.2. Putting in rank order

Hierarchy

After the hearing of 8 June and the plenary session of 28 June, the Ministry of V&W, in collaboration with the Ministry of VROM, believed that the then-current discussion concerning the Cabinet position on the future of Schiphol would not lead to constructive and durable solutions: *a different policy strategy [is] needed in order to develop constructive and durable solutions as regards further development of Schiphol* (Huys, 2011: 333). They believed that a more apparent framework concerning the completion of the covenant and the environmental impact assessment (EIA) was necessary.

101 TK 29665, Nr.38, 2006. The extensive database of Dutch Parliament contains all political proceedings from 1995 onwards concerning Schiphol (including letters to the Lower and Upper House, detailed reports of debates, votes, motions, etc.). The archive is ordered in the following way. Specific policy processes are brought together under a file number. Those files consist of several documents that are also assigned a number, based on their date of publication. Documents of the Lower House are labelled with TK (= Tweede Kamer = Second Chamber = Lower House), while documents of the Upper House are labeled EK (= Eerste Kamer = First Chamber = Upper House). When drawing on the documents, we refer to their file number that assumes the following form: TK 29665, Nr.38. Typing in this number in the database will bring the reader the document (derived from Huys, 2009: 87).

Jeroen Fukken (former Director of Airports at the Directorate-General for Civil Aviation and Maritime Affairs, Ministry of V&W) remarks that he was astonished by the debate in the Lower House concerning the Cabinet position: ‘It wasn’t about what the future of Schiphol and the economic importance of the airport would be, it was all about enforcement point this and enforcement point that.’¹⁰² The debate was characterized by an enormous amount of detail. Furthermore, it struck Fukken that the tension between ambitious growth strategies and the simultaneous realization of environmental objectives – the dual objective – had risen to an unworkable level. Nevertheless, a follow-up to the Cabinet position concerning Schiphol was already in the making at the Ministry of V&W: one project was called *Covenant* and focused on the previously mentioned covenant to reduce noise hindrance, while the other project was called *Environmental Impact Assessment* (EIA) and focused on the compensatory balancing issue. ‘Researching compensatory balancing was the first thing we were about to do. And compensatory balancing was seen as the biggest magic trick ever: everyone concerned seemed to reject compensatory balancing. The fact that we were planning on launching two different projects independently of one another wasn’t working either. You could never win this as national government: on the one hand, the Ministry was going to negotiate about noise hindrance-reducing measures with the inhabitants and governmental parties in the direct surroundings of the airport, and, on the other, the Ministry was going to negotiate about future developments and growth of Schiphol with the aviation sector... One thing we knew for sure: we could never win as there were always two sides to the same coin, namely economic growth and ecological sustainability.’¹⁰³

‘The Cabinet position concerning Schiphol is exactly what the title implies: the position of the Cabinet’, states Bram du Saar (staff member at the Directorate-General for Spatial Quality and Environment, Ministry of VROM). It was clear that inhabitants, local and regional governments and the aviation sector found the Cabinet position undesirable.¹⁰⁴ Therefore, Jeroen Fukken decided to use the summer of 2006 to shed a different light on the Schiphol file. ‘I remember that I never witnessed a more tranquil summer concerning the Schiphol file than the summer of 2006’, says Du Saar.¹⁰⁵ During this extremely quiet summer, Fukken shut down the two previously mentioned projects (Covenant and EIA) and brainstormed with his staff about the future of Schiphol. Jeroen Fukken called in the help of Theo Vermeegen,¹⁰⁶ an independent consultant, to introduce more

102 Interview with Jeroen Fukken (Ministry of V&W), 2009.

103 Interview with Jeroen Fukken (Ministry of V&W), 2009.

104 Interview with Bram du Saar (Ministry of VROM), 2009.

105 Interview with Bram du Saar (Ministry of VROM), 2009.

106 Interview with Jeroen Fukken (Ministry of V&W), 2009; Interview with Bram du Saar (Ministry of VROM), 2009.

negotiation expertise into the Ministry.¹⁰⁷ Furthermore, Vermeegen had already had experience with the Schiphol file.¹⁰⁸ Joop Krul, the former Director of Airport Development at the Schiphol Group, explains: ‘In around 2000, during the debate on the future of Schiphol (2015-25), the Ministry of V&W started to investigate in more detail the potential of relocating the airport to an offshore island. Within the Schiphol Group we were searching for a project manager to lead this research, but a suitable person could not be found within the ranks of our own organization. Then – and I don’t know why – Hans Smit (former CEO of the Schiphol Group) turned to Boer & Croon (where Vermeegen was working at that time).¹⁰⁹ As a result Theo Vermeegen was put in charge of the project for several years and was subsequently involved, on behalf of the aviation sector, in the formulation of the new Schiphol Law.¹¹⁰

During that summer, Fukken and Vermeegen exchanged thoughts about the EIA and the covenant. Instead of producing both documents, they stepped backward and asked themselves: what exactly is the perceived problem? What is the exact problem between Schiphol and its surrounding area? Why is there a severe climate of distrust? That is how, slowly but steadily, the idea emerged of forming a consultative body consisting of the Schiphol Group, KLM, LVNL, regional governmental parties and inhabitants.¹¹¹ The idea of the Alders Table was born as the Ministry of V&W searched for a new obligatory passage point in order to mobilize all actants concerned.

Eventually Vermeegen was appointed as the designated process manager of the newly formed round-table discussion group. As mentioned previously, he possessed the experience to supervise such intricate decision-making processes and he already knew the players. In addition, he was described as someone with a strong personality who could handle this sort of policy-making processes and was not afraid to enter into a discussion with the likes of former Schiphol Group CEO Gerlach Cerfontaine and KLM CEO Peter Hartman.¹¹² Vermeegen held informal meetings with the Schiphol Group, KLM, LVNL, BRS and the CROS to discuss the desired approach in more detail. Originally, the idea was to use the CROS as a platform to facilitate this roundtable’, says Hans Alders, chairman of the Alders Table.¹¹³ Because all parties were represented at the CROS, this seemed the appropriate platform for drawing up the covenants and formulating

107 Interview with Jeroen Fukken (Ministry of V&W), 2009.

108 Interview with Heidi Boussen (project secretary at the Alders Table), 2009.

109 Interview with Joop Krul (Schiphol Group), 2009.

110 Interview with Joop Krul (Schiphol Group), 2009.

111 Interview with Jeroen Fukken (Ministry of V&W), 2009.

112 Interview with Joop Krul (Schiphol Group), 2009; interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009; interview with Jeroen Fukken (Ministry of V&W), 2009; interview with Paul Riemens (LVNL), 2009; Interview with Bram du Saar (Ministry of VROM), 2009.

113 Interview with Hans Alders (Chairman), 2009.

the most logical solution. This line of reasoning was shared by several members of the CROS, not only because they saw the CROS as indeed the appropriate platform to take on the task, but also because the roundtable would dovetail perfectly with the legally defined task (that was part of the Schiphol Law of 2003): to find solutions to cope with noise hindrance that could count on wide support. Thus, the CROS secretary volunteered to take on the task (Huys, 2011: 333). However, the Ministry of V&W was not convinced that the CROS was up to this task: a recent evaluation of the way the CROS had been functioning was not particularly positive about the achievements of the CROS so far. Next, the aviation sector – who is also part of the CROS – indicated that they thought the CROS platform was too unstable for successful negotiation (Huys, 2011: 333). And finally, the BRS also opposed the idea, as – from their perspective – they were the ones that had to account for the citizens they represented, having the political mandate. The BRS believed that it would be ridiculous to negotiate at the same table with the citizens who had chosen them as representatives of the people at the elections. Therefore, the BRS opted for the installation of an independent consultative body:¹¹⁴ ‘We¹¹⁵ immediately turned to the members of the Lower House in order to exert influence and realize a consultative body which we later on would call the “Alders Table”’, says Willem Kleijn (former project manager of Schiphol at the Province of Noord-Holland). ‘Moreover, as province we were against the CROS as an appropriate platform to set up a round-table.’¹¹⁶

The Ministry of V&W decided not to recruit the CROS for the task. ‘However, the Lower House listened carefully to what the inhabitants had to say about the Schiphol file. Leaving them out of the decision-making process would have been fatal at that time. It was explicitly requested by the Lower House that the inhabitants should be part of the round-table’, according to Peter de Kruijk (staff member at the municipality of Haarlemmermeer)¹¹⁷,¹¹⁸. The BRS definitely lost the discussion concerning the organization of the roundtable. But initially the aviation sector was also more than surprised that inhabitants actually occupied a position at the roundtable¹¹⁹.

Ultimately, four places were granted to the CROS¹²⁰: first, former chairman of the CROS, Hans Ouwerkerk, and former secretary of the CROS, Giap

114 Interview with Theo Geudeke and Kees van Ojik (inhabitants and CROS representatives), 2009; interview with Willem Kleijn (Province of Noord-Holland), 2009.

115 Province of Noord-Holland on behalf of the BRS.

116 Interview with Willem Kleijn (Province of Noord-Holland), 2009.

117 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

118 This was indeed done during subsequent discussion of the Cabinet position in Parliament on 28 June 2006.

119 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009; interview with Michiel van Dorst (KLM), 2009; interview with Paul Riemens (LVNL), 2009; interview with Joop Krul (Schiphol Group), 2009, interview with Heidi Boussen (project secretary at the Alders Table), 2009

120 Although Ouwerkerk and Tan quit the CROS after a few Alders Tables and only van Ojik and van Gijzel remained seated at the Alders Table.

Tan, take a seat. Next, two places were granted to inhabitants, of whom Kees van Ojik, as one of the nine cluster representatives of CROS,¹²¹ was chosen as one of the two delegates. Kees van Ojik had become involved in the Schiphol file in 1967. Furthermore, his historical and technical knowledge of Schiphol was enormous, making him a logical choice to speak on behalf of the inhabitants.¹²²

The inhabitants used the second spot to assign an actant with political experience: Rob van Gijzel, a Dutch politician, who was also already familiar with the Schiphol file.¹²³ Eventually this was not the case, explain Kees van Ojik and Theo Geudeke (inhabitants and CROS representatives): ‘The idea was that Hans [Ouwkerk] and Giap [Tan] would represent CROS at the Alders Table: we – the inhabitants – would receive all information through them. (...) Our positions at the Alders Table were forced via the Lower House.’¹²⁴ Willem Kleijn concludes: ‘You must give the inhabitants credit for cleverly demanding their position at the table.’¹²⁵ On several occasions, KLM advocated more involvement on the part of the Ministry of Economic Affairs. Only the ministries of V&W and VROM were assigned a place at the roundtable. KLM stated that it would be quite logical if the Ministry of Economic Affairs were to be granted a place at the table. The ministries of V&W and VROM, however, stated that they were speaking on behalf of the national government and all ministries.¹²⁶

From an ANT perspective, it becomes clear that the inhabitants cleverly used the Lower House to mobilize their position at the table. The national government overruled the regional and local governments who opposed the involvement of the inhabitants. KLM did not succeed in making the Ministry of Economic Affairs part of the mediation. And so some actants are given a legitimate place while others are not, as the hierarchization unfolds.

Hindrance-restricting arrangements - or to be more precise: compensatory balancing and selectivity - were seen as two important issues that the future discussion had to cover. However, the BRS – or actually the Province of Noord-Holland – believed that, next to hindrance-restricting

121 The more than thirty municipalities seating on the CROS all have one residents’ representative. These municipalities are united in nine clusters. Each cluster has a cluster representative (Interview Kees van Ojik & Theo Geudeke, Inhabitants and CROS representatives, 2009).

122 In a Dutch newspaper Kees van Ojik stated: *Supporters are worried about the time when I will not be here anymore. Without being arrogant I can say that I am the one with the most knowledge of the Schiphol file in the Netherlands.* Original citation in Dutch: “Medestanders maken zich zorgen over de tijd dat ik er niet meer zal zijn. Zonder verwaand te zijn, kan ik stellen dat ik in Nederland degene ben met de meeste dossierkennis van Schiphol” (published in Parool, 4 October 2008).

123 Interview with Heidi Boussen (project secretary at the Alders Table), 2009

124 Interview with Kees van Ojik and Theo Geudeke (Inhabitants and CROS representatives), 2009.

125 Interview with Willem Kleijn (Province of Noord-Holland), 2009.

126 Interview with Michiel van Dorst (KLM), 2009.

arrangements there was much lost ground to be made up concerning the quality of life and spatial developments in the Schiphol region. According to the Province, spatial planning on the ground had to be consistent with spatial planning in the air.¹²⁷ They believed that the contours, as stated in the Airport Planning Decree, were too rigid, and not coherent with spatial and social needs. This led to strange situations, where house A was eligible for insulation measures while house B on the other side of the road was not, only because the line had to be drawn somewhere. Furthermore, some villages were not eligible for insulation measures, but the noise hindrance was such an issue that facilities such as schools disappeared because too few children attended classes.¹²⁸ Thus the actual noise hindrance, which was not in accordance with the administrative and spatial restrictions that resulted from this, made it necessary to strive for more custom-made measures. Noord-Holland also believed that this would result in more space for spatial development.¹²⁹ Noord-Holland negotiated toughly, apparently on behalf of the BRS, to force this issue onto the agenda.¹³⁰ And they succeeded when a second covenant was announced especially for this cause. The Province and the Schiphol Group had already each made 10 million Euros available, but no accord could be reached concerning how to spend the money, so this was left to the actants concerned and the second covenant.¹³¹

It was the BRS, or again Noord-Holland as its presiding organisation, which advised Vermeegen and the Ministry of V&W to appoint Hans Alders, Queen's Commissioner in the Province of Groningen, as the independent chairman. Alders was a prominent politician within his left-wing PvdA party ('Labour party') and former Minister of VROM. Furthermore, he was highly experienced in chairing consultative bodies and commissions.¹³²

The summer of 2006 was also characterized by the resignation of the second Balkenende Cabinet. The third Balkenende Cabinet was inaugurated in July and only acted as an interim Cabinet whose main

127 Interview with Willem Kleijn (Province of Noord-Holland), 2009

128 Interview with Hans Alders (Chairman), 2009, interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009, Interview with Paul Riemens (LVNL), 2009, interview with Remco Pols (Alderman of Amstelveen), 2009.

129 Interview Joop Krul (Schiphol Group), 2009

130 The issue was initiated by the Municipality of Haarlemmermeer, but Noord-Holland took the lead (interview Peter de Kruijk (Municipality of Haarlemmermeer), 2009; interview Willem Kleijn (Province of Noord-Holland), 2009).

131 Interview Hans Alders (Chairman) 2009, interview Peter de Kruijk (Municipality of Haarlemmermeer), 2009, Interview Paul Riemens (LVNL), 2009, Interview Joop Krul (Schiphol Group), 2009.

132 Interview Heidi Boussem (project secretary at the Alders Table), 2009; interview with Paul Riemens (LVNL), 2009.

task was to prepare the early general election in November 2006. When the new interim Cabinet saw a proposal concerning Schiphol in which solutions would be sought by the regional and local parties involved, the national government did not hesitate and gave its approval.¹³³ In this way, the national government could get rid of the intricate Schiphol file, as the Minister was able to tell the Lower House when the Alders advice was published that the advice was in line with the ambitions of the Schiphol region parties, leaving less room for discussion ('the people have spoken, who are we as representatives of the people to question their conclusions?').¹³⁴

And so the Alders Table was founded, consisting of the aviation sector parties (2x Schiphol Group, 2x Air France/KLM, 1x LVNL), the BRS parties (2x Noord-Holland, 1 x Amsterdam, 1x Haarlemmermeer, but also 1x Amstelveen and 1x Uitgeest), the CROS (represented by 4 members), the Ministry of V&W (1x) and VROM (1x), the chairman, an additional process manager and a project secretary.¹³⁵ In this phase, the actants arranged an order of importance in the rather heterogeneous list of spokespersons. The Ministry of V&W took the lead in forming a framework for a follow-up to the Cabinet position, while the province of Noord-Holland introduced a second covenant concerning the quality of life and spatial development in the Schiphol region. Against the will of the BRS, the inhabitants were represented at the Alders Table by CROS.¹³⁶ Appointing Theo Vermeegen and Hans Alders took all actants concerned further downstream, away from the original controversy. In this sense, the contours of the Alders Table were becoming clear.

Closure

On 25 October, the Minister of Transport, Public Works and Water Management of the time, Karla Peijs, presented a letter of the House of Representatives in which the final approach regarding the further elaboration of the Cabinet position was enunciated. The letter explicitly mentioned that the hearing of 8 June and 28 June provided input for the selected approach. Furthermore, extensive deliberation between the Schiphol Group, KLM, LVNL, BRS and other concerned administrators had contributed to the selected approach. To conclude, the Minister

133 The need to strengthen the competitive position of the Randstad also played an important role, as it was within this context that decisions about the future of Schiphol were carried out (Huys, 2009: 336).

134 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009; Interview with Paul Riemens (LVNL), 2009; Interview with Bram du Saar (Ministry of VROM), 2009; Interview with Michiel van Dorst (KLM), 2009; Interview with Joop Krul (Schiphol Group), 2009.

135 Also see Appendix A.

136 For the first time ever, inhabitants were involved in the formal policy-making process concerning Schiphol.

writes that the answers concerning questions from parliament about EIA and covenant procedure, as well as the study of the MNP, can be found under TK 29665, numbers 40 and 41. The most important points of the approach were that initially *the effects of measurements concerning a better utilization of environmental standards and nuisance restrictive arrangements for both the short and mid term (with respect to the EIA procedure) would be researched integrally (simultaneously and collectively).*¹³⁷ Parallel to the environmental impact assessment trajectory, two covenants had to be created: a covenant on nuisance reduction (*covenant hinderbeperking*) and a covenant on spatial quality (*covenant leefomgeving*). The first covenant focused on nuisance-reducing measures while the second focused on the improvement of working conditions, the housing environment and the quality of everyday life in combination with a consolidation of the mainport concept. The covenants for the mid-term were to build upon the covenants for the short-term.

The EIA procedure and the formulation of the two covenants had to be an open and transparent process, including all actants concerned and under the chairmanship of a reliable process director and independent chairman.¹³⁸ The state formed one consultative body, in which the Schiphol Group, KLM, LVNL, BRS, CROS and the ministries of VROM and V&W participated. These parties eventually choose Alders as the independent chairman, as Noord-Holland had suggested.¹³⁹ The original assignment of the Alders Table read: *To formulate an advice concerning the possibilities to come to a better utilization of environmental standards and to underpin these suggestions with an environmental impact assessment. This will be done in combination with the creation of nuisance restrictive arrangements and measurements to improve the environment surrounding Schiphol. These arrangements and measurements must be institutionalized in one or more 'firm' and 'maintainable' covenants.*¹⁴⁰ In other words, it was about the possibilities to utilize the environmental capacity of the airport in a more efficient way and at the same time secure future capacity and spatial developments: that dual objective still serves as a point of departure.

137 Original citation in Dutch: "de effecten van maatregelen voor betere benutting van de milieuruimte en maatregelen voor de hinderbeperking voor zowel de korte als de middellange termijn worden (in het kader van de MER procedure) integraal (gelijktijdig en gezamenlijk) onderzocht"(TK 29665, Nr.39, 2006).

138 TK 29665, Nr.39, 2006.

139 TK 29665, Nr.39, 2006.

140 Alders, H. (2007: 1), Advies van de heer Alders over toekomst Schiphol en de regio tot 2010.

5.2

Second Controversy:

Formulating the Alders advice about the short-term (<2010)

On 14 June 2007, Hans Alders presented his advice on the short-term. On the one hand, the research had examined how the limits could be enhanced through an *actualization* of the enforcement points and, on the other, the research had focused on the question of whether or not the prevailing law ought to be adjusted to allow the previously mentioned *compensatory balancing*. The Cabinet ordered the actants at the Alders Table to repair the regulative system as soon as possible (Huys, 2011: 338). In the end, it was decided that the limits of the enforcement points as taken up in the LVB¹⁴¹ needed to be actualized in order to make sure that 480,000 flights were possible in 2010. Compensatory balancing, however, was rejected, as it was concluded that it did not contribute to the realization of the dual objective. The Alders Table concluded that, in order to realize the desired 480,000 flights, the limits in 13 enforcement points would be increased, 15 decreased and 7 would remain the same. All in all, this would result in a level of protection that matched the protection offered by the old system with updated criteria. Furthermore, those areas that were exposed to higher levels of noise pollution were compensated.

By means of compensation, concrete measures for the short term were laid down in the covenant on nuisance reduction and the covenant on spatial quality, which had to be implemented immediately¹⁴². According to Hans Alders, the decision to facilitate the expansion to 480,000 flights in 2010, under the condition that the actualization of the limiting values of the enforcement points, was unanimously shared by all members of the Alders Table. And thus chairman Alders could present his advice to the Cabinet. Again, the remainder of the section will explore how this described closure emerged from perplexity.

5.2.1. Taking into account

Perplexity

In October 2006, two months before the first Alders Table took place, the government asked the Schiphol Group and the LVNL to come up with an initiative report on how to realize the environmental impact assessment (EIA) for the short and mid-term. Although the Schiphol Group and LVNL were the initiators, there was frequent deliberation behind the scenes between the initiators, the Ministries of V&W and

141 The LVB: the 'airport traffic ruling' (*luchthavenverkeersbesluit* in Dutch)

142 Alders, H. (2007: 1), Advies van de heer Alders over toekomst Schiphol en de regio tot 2010.

VROM and the BRS, CROS and KLM, chaired by the process director.¹⁴³ Indeed, the network of actants formulated a line of reasoning for the EIA document, and every week the initiators distributed a concept version of the EIA document. In December 2006, the initiators formulated the backbone of the EIA document.¹⁴⁴ The starting point was the high quality, reliability and frequency of the competitive worldwide network and a durable development of the surrounding area. Furthermore, the document suggested five alternatives for future development, which would serve as a point of departure for the negotiations.¹⁴⁵ The two most prominent alternatives were based on facilitating further growth to 600,000 flights. The central themes when it came to increasing capacity and decreasing noise annoyance were the formulation of a new operational concept for LVNL and relocation alternatives. And so the negotiations began, as all actants had to come to a unanimously shared advice on the short term, before the negotiations about the precise formulation of a shared ambition for the future development of Schiphol until 2020 could take place.

In this stage of perplexity, it became clear that associations would be rearranged by the initiative report on how to realize the environmental impact assessment. As Schiphol had breached the noise limits in several enforcement points in 2006, there was some urgency to start up the Alders Table and thus carry out the EIA at short notice. A dominant controversy that emerged was concerned with the negotiations concerning the short-term advice. The outcomes of the short-term were not yet known and, therefore, at this point, it was not clear how the negotiations would evolve. Again, the transformation of the controversy had to be followed in order to research which associations would be affected.

Consultation

On 20 December 2006, the Secretary of State of the Ministry of V&W at the time, Melanie Schultz van Haegen, opened the first Alders Table.¹⁴⁶ She stressed that she had confidence in the actants involved and in the quest for good solutions concerning the future of Schiphol. She stated that she knew Hans Alders to be a professional administrator and that she hoped that the participants would reach an agreement under his chairmanship. After this introduction, Hans Alders invited all actants to articulate their expectations concerning the outcomes of the deliberative body.¹⁴⁷

143 Soon this weekly deliberation would be known as the 'Vermeegen Table'

144 Although there is frequent deliberation between the concerned actors, the initiators still have the lead, most notable because of the knowledge they have and material they have to produce as a result of that knowledge (interview with Paul Riemens (LVNL), 2009).

145 Schiphol Group & LVNL (2007), *Verder werken aan de toekomst van Schiphol en de regio*.

146 See Appendix A for an overview of all participants at the Alders Table of September 2006.

147 Alders Table minutes, 20 December 2006.

Gerlach Cerfontaine, at that time CEO of Schiphol Group, was the spokesperson on behalf of the Schiphol Group, KLM and LVNL. He began his entreaty by saying that trust seems to be a recurring theme in the Schipholfile. Of course, particularly the Schiphol Group and LVNL had lost quite some respect after the mistakes that had been made and the lack of communication with regard to the Polderbaan inauguration.¹⁴⁸ According to Cerfontaine, the main challenge was to ensure that the aviation parties were able to come to an agreement with the regional administrators and inhabitants. The ambition was to realize an improved relationship with the surrounding area. In his view, it was crucial to listen to and interact with one another. The Schiphol Group, KLM and LVNL had an interest in the further growth of Schiphol. They were willing to speak about growth based on selectivity. Furthermore, they were willing to discuss nuisance-reducing measures. He continued by stating that there was a desire to reduce the complexity of regulations and make policies explainable. If rules are explainable trust can be gained.¹⁴⁹

The next spokesperson on behalf of the BRS was the at that time member of the Provincial Executive, Ton Hooijmaijers. The BRS stated that it was absolutely necessary that there should be sufficient administrative support for the agreements made about the future of Schiphol and the region. Therefore the Province of Noord-Holland and the Schiphol Group had already each invested ten million Euros in projects to improve the quality of life. Thinking in terms of solutions would automatically lead to regained trust, Hooijmaijers claimed.¹⁵⁰

Hans Ouwerkerk, the then chairman of CROS and a renowned PvdA politician, was the spokesperson on behalf of the CROS, which represented the inhabitants at the Alders Table. The inhabitants of the surrounding area were willing to participate in the discussion in a constructive manner. Ouwerkerk also issued a warning: he stated that communication is a delicate process, and should receive the attention it needs. A lack of communication had resulted in a climate of distrust in the past. Therefore Ouwerkerk also asked if the representatives of the inhabitants would be willing to attend the several study groups established for the Alders Table.¹⁵¹

Alderman Lodewijk Asscher spoke on behalf of the Municipality of Amsterdam and hoped that the discussion would not get bogged down in technical arguments. He believed that the focus should lie on the economic importance of Schiphol and the improvement of the overall quality of life at the same time.¹⁵²

148 See Chapter 2 for an extensive account concerning the inauguration of the Polderbaan.

149 Alders Table minutes, 20 December 2006.

150 Alders Table minutes, 20 December 2006.

151 Alders Table minutes, 20 December, 2006.

152 Alders Table minutes, 20 December, 2006.

Hans Alders concluded that the line of argumentation was clear to him and that technical discussions would be restricted to the study groups as much as possible. He did say that it was impossible to deal with no technical issues at the Alders Table.¹⁵³ Salient detail is, that although Hans Alders stuttered this statement, in the coming years socio-technical issues would characterize the Alders Table. Regardless this promise, the politicization of science and scientization of politics could not be avoided.

The concept EIA document was discussed at the second Alders Table on 17 January 2007. First, Gerlach Cerfontaine explained the difference between a 2+2 and a 2+1 runway configuration. The so-called 2+2 runway configuration focused on:

- A) Deploying an extra fourth runway for a certain amount of time during the inbound and outbound peak (two runways for landing and two runways for take-offs, hence '2+2') besides the normal 2+1 system (which meant that two runways are used simultaneously against one landing-strip and vice versa, depending on whether there is an inbound or an outbound peak), and;
- B) *Flying in tubes*, which means that flights are bundled in 'tubes', causing less nuisance, resulting in more space for spatial development and making the job of the air traffic controller less complex.

He stated that a 2+2 runway configuration not only means more capacity for the aviation sector, but that it is also about a whole new operational concept where flights are bundled in tubes. This leads to less noise nuisance in the outer area, but *maybe* to more noise nuisance in the inner area. He stated that it is necessary to be honest about this.¹⁵⁴

Then, Kees van Ojik – representing the inhabitants – enlarged on the *inhabitants' alternative*.¹⁵⁵ It was becoming clear that the inhabitants of the surrounding area and their representatives organized in CROS opposed the proposed options for development as stated in the concept initiative report. Next to a no-growth option and environmental option – two alternatives that would be tested in the environmental impact assessment – the concept initiative report aimed at a growth towards 600,000 air transport movements.

From the perspective of the inhabitants, the concept initiative report merely aimed to enhance capacity, while hollowing out legal protection against noise pollution even further (Huys, 2011: 338). However, instead

153 Alders Table minutes, 20 December, 2006.

154 Alders Table minutes, 17 January 2007.

155 Alders Table minutes, 17 January 2007.

of protesting, as they had always done, the inhabitants assumed a proactive attitude by formulating an additional alternative. In this additional alternative, which was released in January 2007 and which Van Ojik presented at the second Alders Table, the inhabitants distinguished four points:¹⁵⁶

1. They pleaded for a cap of 500,000 air transport movements at Schiphol and the relocation¹⁵⁷ of 100,000 air transport movements such as cargo¹⁵⁸ and low-cost carriers. At the same time they pleaded for qualitative growth: the focus should be on the hub operation of Air France/KLM.¹⁵⁹
2. Furthermore, they wanted a predominantly 2+1 runway configuration.
3. They wanted no adjustment to the prevailing limiting values concerning aircraft noise.
4. Finally, they wanted no deterioration of the current situation in the inner area concerning noise nuisance and an improvement in the outer area.¹⁶⁰

Jeroen Fukken recalls: 'It was really smart of the inhabitants to take up a proactive stance and focus on the Air France/KLM hub-operation. (...) Because of this they had a strong ally from the beginning onwards: KLM.'¹⁶¹ 'The inhabitants embraced the mainport objective,' states Michiel van Dorst (Head of Flight operations KLM), 'and we all know that the mainport function of Schiphol would cease to exist if KLM relocated its flight operation to another airport.'¹⁶² Furthermore, the inhabitants realized that the Lower House explicitly requested the other parties to include the inhabitants in the decision-making process. So they knew that an alternative proposed by the inhabitants had to be researched in the EIA procedure.¹⁶³

156 The alternative consists of one A4 and was produced in less than two days (Interview Kees van Ojik and Theo Geudeke, Inhabitants and CROS representatives, 2009).

157 Again, a Dutch word was invented: *uitplaatsing*.

158 The inhabitants suggested that the Second Maasvlakte at the harbor of Rotterdam would be perfect for cargo flights.

159 Peter Hartman (CEO KLM) said that the alternative proposed by the inhabitants was co-ordinated in conjunction with KLM (Interview with Peter de Kruijk, Municipality of Haarlemmermeer, 2009). This turned out to be a rather smart strategy of the inhabitants.

160 Bewonersvoorstel, 2007: 1.

161 Interview with Jeroen Fukken (Ministry of V&W), 2009.

162 Interview with Michiel van Dorst (KLM), 2009.

163 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009, Interview with Joop Krul (Schiphol Group), 2009, Interview with Jeroen Fukken (Ministry of V&W), 2009.

At the same Alders Table, the tension between KLM and LVNL (and to a lesser extent the Schiphol Group) became clear for the first time.¹⁶⁴ Hartman, at that time still the acting CEO of the Royal Dutch Airlines, warned that the alternative aiming at a 2+2 runway configuration and ‘flying in tubes’ should not be presented as a panacea, as it was not clear what this alternative would mean for KLM capacity at peak times.¹⁶⁵ Furthermore, he asked himself if the 2+2 runway configuration was actually safe, and did not want Schiphol to be unique in this perspective as Schiphol was already a ‘difficult’ airport for pilots because of the unreliable weather conditions.¹⁶⁶ ‘And this was not the air traffic system KLM had in mind, and they definitely made their point clear during the meeting’, says Jeroen Fukken.¹⁶⁷ The dissension between the aviation sector was obvious: all parties could see that the aviation sector had an enormous conflict,’ describes Willem Kleijn, ‘and therefore the position of the aviation sector weakened.’¹⁶⁸ Joop Krul concludes: ‘By that time we were already 1-0 behind.’¹⁶⁹

By the end of January 2007, the actants concerned were still discussing which alternatives should be researched in the EIA for the short and mid-term. At a Vermeegen Table concerning the content of the EIA document – where the inhabitants were not present – their alternative was discussed. The process director concluded that the inhabitants’ alternative could be researched in the EIA procedure. He advised the initiators to deliberate on the consequences if the alternative was not considered in the EIA: it would most certainly damage relations and the atmosphere at the Alders Table.¹⁷⁰

Concerned spokespersons were given a voice in the consultation phase. By now, the power to take into account had been completed. The first Alders Table had taken place, the contents of the EIA document had been discussed, and the inhabitants had presented an additional alternative to be researched in the EIA. As all spokespersons had been heard, it was now time to find out how associations had been rearranged. Therefore, we turn to the power to arrange in rank order.

164 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009, Interview with Theo Vermeegen (process director), 2009, Interview with Paul Riemens (LVNL), 2009, Interview with Bram du Saar (Ministry of VROM), 2009, Interview with Willem Kleijn (Province of Noord-Holland), 2009, Interview with Joop Krul (Schiphol Group), 2009, Interview with Kees van Ojik and Theo Geudeke (Inhabitants and CROS representatives), 2009.

165 Alders Table minutes, 17 January, 2007.

166 Alders Table minutes, 17 January, 2007.

167 Interview with Jeroen Fukken (Ministry of V&W), 2009.

168 Interview with Willem Kleijn (Province of Noord-Holland), 2009.

169 Interview with Joop Krul (Schiphol Group), 2009.

170 Vermeegen Table Minutes, 26 January 2007.

5.2.2. Putting in rank order

Hierarchy

Eventually Schiphol Group and LVNL published the report entitled *Further improving the future of Schiphol and the region* (Verder werken aan de toekomst van Schiphol en de regio) in April 2007. As the title suggest, the report embroidered on the report entitled *Improving the future of Schiphol and the region* (Werken aan de toekomst van Schiphol en de regio), written by the Schiphol Group, LVNL and KLM in 2004. Although KLM was not a co-author of the 2007 report, they played an important role in this document as the main customer of the airport. The Schiphol Group and LVNL stated that – as they had done in 2004 – the prevailing Schiphol Law hampered sustainable development of Schiphol and the region. They found the aviation law too rigid, because there is no flexibility to experiment with routes to reduce noise annoyance. Furthermore, the current regulations offered KLM and its Skyteam partners few possibilities when it came to expanding their worldwide network and Schiphol as multimodal node. All in all, the Schiphol Group and LVNL believed that the Schiphol Law hampered future growth.¹⁷¹ However, it must not be forgotten that, according to the evaluation of the Schiphol Law, the prevailing law did function excellently in a technical and jurisprudential way: there were fewer people who suffered noise nuisance and the airport could work at total capacity. But in reality, most parties believed that the prevailing law was too technocratic. The law succeeded in giving legal protection, but failed when it came to protection against aircraft noise. For example: when the enforcement points around the most preferable runway were ‘filled’, which means that the total amount of allowed aircraft noise has been reached, a less preferable runway is chosen, exposing more people to noise hindrance.

Therefore Schiphol Group and LVNL presented two objectives in this report. First, the environmental impact assessment had to create space for a further development of the portfolio of destinations of the home carrier KLM and partners, as they were largely responsible for maintaining the extensive portfolio of destinations at Amsterdam Airport Schiphol. It was argued that this was what makes Schiphol a leading multimodal node. Second, they aim to confine nuisance to a minimum and formulate a transparent perspective on sustainable development in the region. Thus, a reliable and durable capacity was essential to facilitate the competitive worldwide network on the one hand, and to diminish nuisance and create public support, on the other. As mentioned previously, this was to be done by conducting an EIA

¹⁷¹ Schiphol Group & LVNL (2007: 5), *Verder werken aan de toekomst van Schiphol en de regio*.

for the short term and an EIA for the mid-term, as well as the creation of two covenants (the covenant for nuisance reduction (*convenant hinderbeperking* in Dutch) and the covenant for spatial quality (*convenant leefomgeving* in Dutch)).¹⁷²

Between April and June 2007, extensive deliberation took place between the defined actants in order to formulate the short-term advice. The discussions dealt with technical as well as social questions. The most important point was the need to repair the existing regulative system: the limits of the enforcement points needed to be changed (actualized) in order to make sure that 480,000 flights would become possible in 2010. The immediate problem was that limits had been transgressed at one crucial enforcement point, and that the actualization was needed to enhance the limits. The local residents had agreed to a maximum increase of 0.7 dBa, which was not sufficient, according to the aviation sector. The local residents composed a unanimous statement concerning the actualization, and articulated this in a letter that they sent to Alders. Moreover, they informed several members of the Lower House.¹⁷³ This implied that the inhabitants were not going to support the Alders advice covering the short term, as the advice proposed a further extension of the limit in this specific enforcement point.

This implied that the Lower House would vote down the actualization (upgrading of the norms) as formulated by the sector because of the lacking unanimity. The only thing that could intervene was unanimous support for the actualization by all Alders Table members. But there was no such unanimity, as the inhabitants opposed the actualization. However, during a debate in Parliament concerning Schiphol, something odd happened.¹⁷⁴ The Minister of V&W, Camiel Eurlings, interrupted the debate to announce that he had just received word that Kees van Ojik had agreed to the actualization on behalf of the other local residents.¹⁷⁵ This implied that all the participants at the Alders Table unanimously supported the actualization. So the main precondition for voting in favour of the Alders advice for the short term had been met, and therefore the advice was accepted. For the first time ever, Schiphol stakeholders had realized a unanimously supported advice¹⁷⁶ and therefore the Cabinet was

172 Schiphol Group & LVNL (2007: 10), *Verder werken aan de toekomst van Schiphol en de regio*.

173 Especially Paul Tang (PvdA) and Wijnand Duyvendak (Groen-Links) (Huys, 2011: 482).

174 Huys (2011: 482) reconstructed what happened by means of interviews with inhabitants and the politicians concerned.

175 The CROS representatives had argued that they had to sacrifice a little fish (supporting the short-term actualization) in order to catch a far bigger one in the negotiations about the mid-term that were about to begin (Huys, 2011: 483).

176 Or so it seemed.

eager to adopt this advice.¹⁷⁷

So, the short-term policy-making process could be completed, and produced four documents: first, the results of the EIA; second, the results of inhabitants' alternative; and finally, the two covenants. The EIA showed the impact on the environment by the expected usage of the airport till 2010 on the basis of three different traffic volumes (480,000, 500,000 and 520,000 air transport movements). Four different policy options were researched: first, actualization of the limiting values within the enforcement points; second, compensatory balancing between limiting values within the enforcement points; third, a proposal by the BRS, namely balancing under the condition that there would be no transgression of the same enforcement point in the next two years; and finally, a combination of actualizing and balancing. Eventually the first research option, actualization of the limiting values within the enforcement points, was the most acceptable to all concerned actants as it left room to grow to 480,000 or 500,000 air transport movements, and met the demand of the surrounding areas with regard to equal protection. To enable the desired 480,000 air transport movements, the limits in 13 enforcement points were increased, 15 were reduced, and 7 remained the same. All in all, this had to result in a level of protection equal to that offered by the old system with updated criteria.¹⁷⁸

Those areas that were exposed to higher levels of noise pollution were compensated. By means of compensation, concrete measures for the short term were laid down in two covenants.

In the covenant on nuisance reduction, agreements were made concerning the reduction of noise nuisance caused by air traffic, as perceived by the inhabitants of the surrounding area. The ministries of V&W and VROM, the municipalities of Haarlemmermeer, Amsterdam, Amstelveen, the Province of Noord-Holland, the Schiphol Group, LVNL and KLM all participated in this covenant. The most important agreements concerning nuisance reduction were:

- All parties should work on the adjustment of several air routes and procedures that could lead to fewer hindered people.
- The Schiphol Group, Haarlemmermeer and CROS were to continue the measures against ground noise.
- LVNL would search, in conjunction with administrators and inhabitants of Aalsmeer, Uithoorn and Amstelveen, for air-technical improvements within the given legal boundaries.
- The Schiphol Group would discourage flights by more noisy aircraft types – especially during the night – by increasing

177 Criticism of the EIA, on which the Alders advice about the short term had been based, hardly played a role during the political debate. What mattered was a unanimous support for the Alders advice (Huys, 2011: 340).

178 Alders, H. (2007: 2-3), Advies van de heer Alders over toekomst Schiphol en de regio tot 2010.

airport charges. This selectivity measurement should lead to approximately 3,000 fewer cases of nuisance and 1,800 fewer in the night.

In the covenant on spatial quality, agreements were made between the Schiphol Group, KLM, LVNL, the municipalities of Haarlemmermeer, Amsterdam, Amstelveen, the Province of Noord-Holland and the ministries of V&W and VROM, concerning activities that could be deployed to improve the overall quality of the (working)environment in the Schiphol region for the short-term (until 2010). The most important agreements concerning the covenant spatial quality were:

- Initiating research in Zwanenburg/Halfweg, Amstelveen, Uithoorn and Aalsmeer concerning location-specific projects aimed at improving the (working)environment.
- Compensating 'extraordinary cases' with extra money.¹⁷⁹

In the hierarchy phase, the actants drew up an order of importance in the rather heterogeneous list of spokespersons. To achieve closure, the statements uttered by the actants were underpinned by heterogeneous factors such as an EIA, the inhabitants' alternative, actualization, compensatory balancing, enforcement points, experts' opinions, several agreements concerning activities that could be deployed to improve the overall quality of the (working)environment in the Schipholregion for the short term, several agreements concerning the reduction of noise nuisance by air traffic, as perceived by the inhabitants of the surrounding area, and eventually a final advice from Hans Alders to the ministers of VROM and V&W on 14 June 2007.

Closure

In this final advice, Alders concluded that: *considering all reflections and deliberations from parties and awareness of all available results*,¹⁸⁰ Schiphol was allowed to grow towards a maximum of 480,000 air transport movements in 2010, taking into account that the limiting values within the enforcement points as stated in the airport traffic ruling – the LVB – were actualized. Those areas that were exposed to higher levels of noise pollution were to be compensated by concrete measures as laid down in the covenant hindrance reduction and the covenant spatial quality. Hans Alders concluded that: *[a]t the end of the deliberations I shared my conclusions with the concerned actors and all actors made notable that they have no principal objection against my conclusions. Therefore I believe that I can present you an advice that can account for sufficient support from the*

179 Alders, H. (2007: 4), Advies van de heer Alders over toekomst Schiphol en de regio tot 2010.

180 Original citation in Dutch: 'gehoord alle overwegingen en beraadslagingen van partijen en de inzichten van de beschikbare resultaten.'

concerned actors.^{181 182}

This chapter has followed the transformation of the formation of the Alders Table to the formulation of the advice for the short term. The chapter described how this transformation took place through controversies. At first, no one had any idea of how to deal with the Cabinet position regarding Schiphol, as all stakeholders concerned seemed to contest the Cabinet position. The former Ministry of V&W tried to formulate a solution during the summer of 2006. Eventually, the Alders Table was founded, a round-table discussion group with representatives of the Schiphol Group, KLM Royal Dutch Airlines (KLM), Air Traffic Control the Netherlands (LVNL), the former ministries of Transport, Public Works and Water Management (V&W) and of Housing, Spatial Planning and the Environment (VROM), local and regional governments – the Province of Noord-Holland, the municipalities of Amsterdam, Haarlemmermeer, Amstelveen, Uitgeest – united in the BRS, and local residents organized in CROS. These stakeholders jointly formulated recommendations concerning the future capacity of Amsterdam Airport Schiphol. First, this was done for the so-called ‘short term’ (the period until 2010). The next chapter describes the formulation of the Alders advice for the mid-term (the period until 2020).

What can be seen during the formation of the short-term advice, is that there are especially two parties at the Alders Table who seemed to function as mediators, or those that organize the associations or networks. KLM could quit effortlessly become a mediator as they used the classic mainport syntax and international competitiveness of the Netherlands as a whole to their advantage. Next, the inhabitants could influence the decision-making process through the fact that the Lower House made them an obligatory passage point. In other words, the other parties at the Alders Table had no other choice than to consider the inhabitants while making decisions. The inhabitants cunningly used this position to take up a proactive stance and formulate an alternative. At the same time, the delicate composition of the inhabitants became clear for the first time as the inhabitants seemed to oppose the final Alders advice, but Kees van Ojik overruled this stance, in order to catch a bigger fish during the formulation of the mid-term advice.

181 Original citation in Dutch: ‘[a]n het slot van de beraadslagingen heb ik mijn conclusies gedeeld met de partijen en ieder der partijen heeft kenbaar gemaakt geen overwegende bezwaren tegen mijn conclusies te hebben. Op grond daarvan meen ik u dit advies te kunnen uitbrengen dat kan rekenen op voldoende draagvlak bij de betrokken partijen.’

182 Alders, H. (2007: 5), Advies van de heer Alders over toekomst Schiphol en de regio tot 2010.

Chapter 6

The Alders Table: Formulating the mid-term advice

In this chapter, we continue with the Alders Table case. Whereas the last chapter showed how the Cabinet's position on Schiphol led to the formulation of the Alders Table and the publication of short-term advice in June 2007, this chapter zooms in on the period between June 2007 and October 2008 when Hans Alders presented his final advice for the mid-term (<2020) to the Cabinet. As in the previous chapter, this will be done by following all the controversies and accompanying actants to the culmination, when facts and opinions disappear in black boxes.

We pick up the Alders Table where we left off: the completion of the short-term advice. As shown, the political debate in the Lower House about the short-term advice ended rather strangely when Kees van Ojik interrupted the Minister of V&W to inform him that the local residents would agree

to the actualization of some enforcement points. In this way, all the participants at the Alders Table unanimously supported the actualization, signifying that the negotiations for the mid-term could commence. As most of the stakeholders regarded the formulation of short-term advice as a mere warming up for the real work (formulating advice for the mid-term),¹⁸³ all stakeholders were ready to continue. However, the debate about the short-term advice was about to stir up some turmoil at the Alders Table.

Not surprisingly, the fact that Van Ojik had agreed with the actualization caused internal unrest amongst the local residents. They were very disappointed with this unexpected turn of affairs. The other inhabitants stated that Van Ojik did not even have a mandate to make such claims (Huys, 2011: 483). Rightly or wrongly, the United Platforms of Residents against Airport Nuisance (VGP) no longer placed their trust in Van Ojik: they did not feel adequately represented by the two local residents of the CROS, as they could not protect all the interests of the inhabitants of the Schiphol region. Furthermore, Erwin von der Meer, chairman of the VGP and inhabitant of noise-troubled Castricum, stated in a national newspaper that *the Alders Table is an unequal fight between professionals and one inhabitant* (Van Ojik).¹⁸⁴ The VGP indicated that they wanted to join the Alders Table and again used their political connections.

After the publication of advice about the short-term period, the House of Representatives organized a debate about the advice, to be held on 26 June 2007. During the debate, it was particularly Paul Tang of the social-democratic PvdA party who stressed that the inhabitants should have more power. He endorsed Von der Meer's opinion about the inhabitants' participation at the Alders Table. He stated that the inhabitants present at the Alders Table are seated on a 'wobbly stool', while other actants are seated in a 'luxurious lounge chair'. Almost every other party, left-wing or right-wing, supported his objectives.¹⁸⁵ Therefore Minister Eurlings promised members of the V&W and VROM standing committees that the short-term period would be evaluated by Hans Alders, in order to find out whether or not all interest had been handled equally.¹⁸⁶

183 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009; interview with Bram du Saar (Ministry of VROM), 2009; interview with Jeroen Fukken (Ministry of VROM), 2009; interview with Willem Kleijn (Province of Noord-Holland), 2009; interview with Hans Alders (chairman), 2009; interview with Joop Krul (Schiphol Group), 2009.

184 Original citation in Dutch: 'De Alderstafel is een oneerlijke wedstrijd tussen professionele experts en één bewoner' (published in NRC, 27 June 2007).

185 Interview with Hans Alders (chairman), 2009; interview with Heidi Boussen (project secretary), 2009; interview with Joop Krul (Schiphol Group), 2009; interview with Jeroen Fukken (Ministry of V&W), 2009; interview with Theo Vermeegen (project manager), 2009; interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009; interview with Remco Pols (Alderman of Amstelveen), 2009.

186 Published in NRC, 27 June 2007.

On 5 October 2007, Hans Alders sent a letter to the Minister of VROM and the Minister of V&W, presenting an evaluation of the short-term period. He stated: *In the evaluation, attention was focused on the representation of different interests at the table and the composition of the delegations thus derived, particularly the delegation of the inhabitants.*¹⁸⁷ The main conclusion of the evaluation was what had already been stated by the VGP: the CROS delegation at the Alders Table could not look after all the interests of the inhabitants of the Schiphol region and therefore the VGP wished to participate directly.¹⁸⁸ Accordingly, it was decided that the VGP would join the Alders Table.¹⁸⁹ However, there was one precondition: the VGP was to abandon its resistance to the actualization, otherwise it would no longer be invited to participate in the discussion (Huys, 2011: 342). Thus a new actant eased to the forefront. This means that the inhabitants at the Alders Table were no longer seen as spokespersons by the group they stated to represent. As such, the seemingly stable association of the inhabitants becomes rearranged. The VGP became a mediator with the task of ‘translating’ and ‘transporting’ the information it obtained.

6.1

First Controversy: 2+2 Runway Configuration

In March 2008, after intensive deliberation, the conclusion was drawn that a continuous 2+2 runway system was impossible. Normally, Schiphol operates a 2+1 system (see figures 6.1 and 6.2). This means that two take-off runways are used simultaneously with one landing strip, and vice versa, depending on whether there is an inbound or outbound peak. A 2+2 runway configuration means that an extra fourth runway is deployed (two runways for landing and two runways for take-off, hence ‘2+2’). LVNL, KLM and Schiphol Group stated that, instead of a continuous 2+2 runway system, they would prefer 2+1 (+1) with a ‘noise preferential’ runway configuration, which means that air traffic is handled via runways that cause the least noise nuisance.

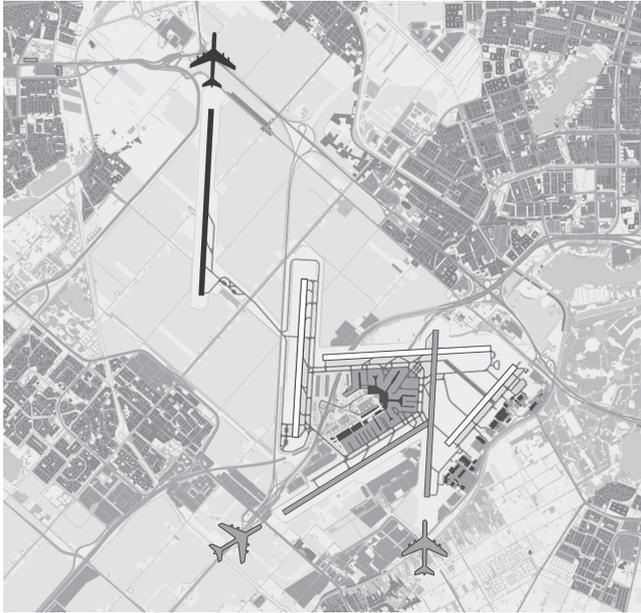
2+1 (+1) means that a fourth runway is deployed for a certain amount of time when it is too busy to handle all air traffic via three runways (as in

187 Original citation in Dutch: ‘Centraal in de evaluatie stond het punt van vertegenwoordiging van de verschillende belangen aan tafel en daarvan afgeleid de samenstelling van de delegaties, meer in het bijzonder de bewonersdelegatie’ TK 29665, No.70:2007.

188 TK 29665, No.70: 2007

189 Interview with Hans Alders (chairman), 2009; interview with Heidi Boussen (project secretary), 2009; interview with Joop Krul (Schiphol Group), 2009; interview with Jeroen Fukken (Ministry of V&W), 2009; interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009, interview with Remco Pols (Alderman of Amstelveen), 2009.

Figure 6.1: Example of a 2+1 Runway configuration



Source: LVNL, 2012

Figure 6.2: Example of a 2+2 Runway configuration



Source: LVNL, 2012

an outbound or inbound peak for instance). The aviation sector arrived at this conclusion because a continuous 2+2 configuration hampers the KLM operation. During a 2+2 configuration, insufficient air transport movements can be deployed to meet the standards of either the KLM inbound peak or the KLM outbound peak. This means that it is impossible to ensure all transfers, and this endangers the hub operation. In this section, the research framework will be again used to demonstrate how the above-described closure arose out of controversy.

6.1.1. *Taking into account*

Perplexity

During the negotiations for the mid-term, six different alternatives for Schiphol 2020 were discussed. Except for the *zero alternative* (the base case) and the alternative developed by the local residents, all scenarios were based on the accommodation of 600,000 air transport movements per year in 2020. The solution to facilitating the 600,000 air transport movements differed per scenario. Therefore, research was conducted and the effects were assessed. During the discussions on the different alternatives, a remarkable letter was published: in November 2007. LVNL notified several municipalities, CROS and the Alders Table of how to deal with the updated criteria that were to be incorporated into the revised Decrees of the Schiphol Act as a consequence of the short-term advice. In order to stay within the new limiting values, LVNL proposed a different runway configuration: *in practice, this meant that air traffic, to a greater extent than in former years, would be handled on four runways at the same time, meaning two landing strips and two runways.*¹⁹⁰

This 2+2 runway configuration would be used for an average of four hours between 07.00 and 23.00. As discussed in the chapter on the short-term advice, the 2+2 runway configuration was a very delicate matter. All parties concerned were extremely 'surprised', to say the least. A stalemate was in the making and concerned actants did not seem to know how to cope with this impasse. A controversy was born.

Consultation

At the Alders Table of 20 November 2007, no inhabitants were present, because they believed that a crisis of confidence had occurred as a result of the LVNL letter. This matter had to be resolved first.¹⁹¹ They believe

¹⁹⁰ Original citation in Dutch: 'in de praktijk betekent dit dat het verkeer vaker dan in vorige gebruiksjaren op vier tegelijk in gebruik zijnde banen, twee start- en twee landingsbanen, zal worden afgehandeld' LVNL Letter, 2007.

¹⁹¹ Alders Table minutes, 20 November 2007.

that using the 2+2 runway configuration for four hours per day was not in line with the short-term advice. Paul Riemens of the LVNL stated that, when the short-term advice was published, the 2+2 configuration was used for an average of 2.3 hours per day. With growth rising towards 480,000 air traffic movements, this meant that the 2+2 runway configuration would be used for four hours a day. The total amount of time that the 2+2 configuration would be in use grew proportionally to the growth of the air transport movements. Eric Kroese, on behalf of the LVNL, admitted that there had been a lack of communication and that there may have been a difference concerning the amount of space the LVNL could freely interpret to favour the operation. As a result, a highly technical discussion unfolded on how to use the 2+2 runway configuration.

Paul Riemens, nowadays CEO of the LVNL, explains: ‘We had a strong vision concerning the 2+2 runway configuration and we did believe that it would be a great solution for all interests at stake.’¹⁹² He continues: ‘Our main responsibility is to run a safe operation and a 2+2 runway configuration is more predictable and safer.’ ‘Many stakeholders simply believed that implementing the 2+2 configuration as the letter of the LVNL concluded was not part of the agreement’, says Peter de Kruijk.¹⁹³ ‘Although the BRS did embrace the 2+2 configuration, especially the Province of Noord-Holland, we, as the Municipality of Haarlemmermeer, were opposed to the new runway configuration as it would lead to more noise nuisance in our municipality.’ ‘It was my first Alders Table’, says Joop Krul. ‘I had to give a presentation about our network strategy concerning selectivity, but the inhabitants never showed up.’¹⁹⁴ The representatives of the local residents left a letter at the door stating that the LVNL letter had created a breach of trust. The local and regional governmental parties, the BRS, believed that if the local residents were not present, they too had no reason to attend the meeting. And so, the BRS parties also quit the Alders Table that evening.¹⁹⁵ The incident indicated that the local residents had already secured a rather strong position at the Alders Table: ‘I don’t believe that the inhabitants would have left the meeting if the situation had been the other way around’, concludes Joop Krul.¹⁹⁶

Of course, the KLM was especially furious. The 2+2 runway configuration did not offer sufficient peak-hour capacity. The KLM needed 80 take offs and 40 landings or vice versa per hour (depending on whether there is an inbound or outbound peak), but the new proposal only offered 60 take-

192 Interview with Paul Riemens (LVNL), 2009.

193 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

194 Interview with Joop Krul (Schiphol Group), 2009.

195 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009; Interview with Joop Krul (Schiphol Group), 2009.

196 Interview with Joop Krul (Schiphol Group), 2009.

offs and 60 landings per hour or vice versa. The KLM would only accept the 2+2 system if it were to lead to 80 take-offs and 80 landings per hour. However, 160 air transport movements per hour led to an enormous pressure on the Air-traffic Control operation, so LVNL concluded that they could only offer 120 (hence 60/60) air transport movements per hour.¹⁹⁷ ‘We told the LVNL: ‘Don’t do this, we won’t give any back-up!’; remembers Michiel van Dorst.¹⁹⁸ It was a Saturday night and the KLM management, LVNL management and the Schiphol Group management all had contact with each other concerning the scheduled LVNL letter. The Schiphol Group and the KLM advised the LVNL not to publish the letter as it would stir up commotion at the Alders Table and the KLM and the Schiphol Group would not back up the LVNL.¹⁹⁹ ‘Isn’t it somewhat illogical when Air-traffic Control decides what the aviation market wants?’, wonders Michiel van Dorst.²⁰⁰ ‘Handling air traffic around Schiphol is a very complex puzzle’, explains Paul Riemens. ‘We believed that a 2+2 runway configuration would eventually lead to more safety, a more transparent and better explainable system and less hindrance... But it would also lead to a decrease in runway capacity.’²⁰¹ ‘Furthermore, the KLM was convinced that the technical implementation of the 2+2 runway configuration was not feasible; it was wishful thinking’, says Joop Krul.²⁰²

The Province of Noord-Holland did really believe in the 2+2 runway configuration: a more predictable and more easily managed air-traffic operation would lead to more possibilities for spatial planning.²⁰³ The local residents believed that 2+2 only represented more room for air transport movements, the LVNL and BRS believed that 2+2 stood for innovation, and the KLM believed that 2+2 would frustrate their hub operation. The local residents and KLM found each other on this issue, and the Schiphol Group eventually sided with the KLM.²⁰⁴

Concerned spokespersons had a say in the consultation phase. By now the power to take into account had been completed. The 2+2 runway configuration did get a voice, through extensive deliberations between all stakeholders concerned. It is also characterized by both cognitive and normative disagreements. As the issues at stake and the differing sides are now clear, it is time to turn to the power to arrange in rank order, following the controversy further downstream.

197 Interview with Joop Krul (Schiphol Group), 2009.

198 Interview with Michiel van Dorst (KLM), 2009.

199 Interview with Michiel van Dorst (KLM), 2009.

200 Interview with Michiel van Dorst (KLM), 2009.

201 Interview with Paul Riemens (LVNL), 2009.

202 Interview with Joop Krul (Schiphol Group), 2009.

203 Interview with Willem Kleijn (Province of Noord-Holland), 2009; Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

204 Interview with Willem Kleijn (Province of Noord-Holland), 2009; Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009; interview with Joop Krul (Schiphol Group), 2009.

6.1.2. Putting in rank order

Hierarchy

Basically, the LVNL was right; the aviation sector had researched the 2+2 runway configuration using several scenarios, and four hours of 2+2 runway utilization proved to be the most robust solution for safety and capacity.²⁰⁵ However, the 2+2 runway configuration was a very delicate matter. Therefore it was not important that the LVNL was right, it was important that a crisis of confidence had been created. The letter of the LVNL was therefore labelled as ‘political folly’ and ‘ludicrous’.²⁰⁶ Hans Alders believes: ‘The risk of consultative processes such as the Alders Table is that, as a result of discussions held at the table, stakeholders start cherry-picking and make their own facts and realities, not even necessarily on purpose. (...) I think this is how you must interpret the LVNL letter, as no such agreements were made at the Alders Table.’²⁰⁷ At the Alders Table of 20 November 2007, the remaining stakeholders²⁰⁸ had formulated the fundament of a solution.²⁰⁹ Furthermore, Hans Alders had decided to meet up with the local residents to discuss the deadlock and come to a solution.²¹⁰

A month later, the inhabitants attended the Alders Table again, and the discussion concerning 2+2 runway configuration was heated. Trust and loyalty were questioned and eventually Alders came up with a compromise text: *After deliberation with the actors concerned, it became clear to me that all parties trust that the fourth runway usage over a period of two months will be limited to an average of 2 to 2.5 hours per day.*²¹¹ Furthermore, he stated that the original LVNL letter had been discarded.²¹² He asked if everyone agreed. Kees van Ojik stated that he still disagreed, but Alders asked him to defend this compromise text in the presence of the inhabitants he represents. And with this, the issue concerning the 2+2 runway configuration was settled (temporarily). ‘This weakened our position at the Alders Table. And that’s a pity, but it

205 Alders Table minutes, 17 March 2008.

206 Interview with Willem Kleijn (Province of Noord-Holland) 2009; interview with Jeroen Fukken (Ministry of V&W); interview with Heidi Boussen (project secretary), 2009.

207 Interview with Hans Alders (chairman), 2009.

208 Thus without the local residents and the BRS parties.

209 Interview with Heidi Boussen (project secretary), 2009.

210 Interview with Hans Alders (chairman), 2009; interview with Heidi Boussen (project secretary), 2009; interview with Kees van Ojik and Theo Geudeke (inhabitants and CROS representatives), 2009.

211 Original citation in Dutch: ‘*Na overleg met verschillende partijen is mij duidelijk geworden dat partijen vertrouwen dat de inzet van de vierde baan over een periode van 2 maanden beperkt zal blijven tot gemiddeld 2 uur tot 2,5 uur per dag*’ (Alders Table minutes, 21 January 2008).

212 Interview with Michiel van Dorst (KLM), 2009; interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

is how it was', concludes Paul Riemens.²¹³

Still, these turbulent times for the Alders Table did not end with the LVNL letter. For the mid-term, one of the alternatives being studied aimed at the previously mentioned continuous 2+2 runway configuration. Although the BRS had stated that they embraced the 2+2 runway configuration, this was not completely true for all BRS actants. This became painfully clear in 27 January 2008, when the Municipality of Haarlemmermeer published a press release entitled 'Limits to the growth of Schiphol'.²¹⁴

Haarlemmermeer knew that certain issues would be unacceptable to both the city council and the inhabitants. The 2+2 runway configuration would yield new building sites, but at the same time caused more nuisance for more people. The council believed that this was unacceptable to the inhabitants,²¹⁵ so they accentuated their viewpoint concerning the future of Schiphol by concluding that Schiphol would not be allowed to grow further than 500,000 air transport movements per year.²¹⁶ The other BRS actants reacted furiously: all the local administrators had agreed that press releases should only be published as BRS messages with one voice.²¹⁷ And so there arose a crisis within the BRS: the Haarlemmermeer press release seriously damaged the credibility of the BRS at the Alders Table. 'It was a regrettable minor flaw', sighs Willem Kleijn. 'The position of the BRS at the Alders Table was significantly weakened because of the Haarlemmermeer press release.'²¹⁸ 'Haarlemmermeer stated: this is what we will bear; how far we will go. This was actually a really smart strategy because in the end it would be much more difficult for Michel (Bezuijen, Alderman of Haarlemmermeer) to obtain a political mandate', says Jeroen Fukken. 'The press release could count on the full support of the council.'²¹⁹ 'For Haarlemmermeer, their Alders Table task was completed. They believed that the BRS perspective was increasingly straying from their objectives, so Haarlemmermeer decided that they would prefer to have a fierce dispute with the other BRS parties and choose for their own inhabitants', according to Willem Kleijn.²²⁰ Publishing the press release was seen as 'opportunistic' but, because

213 Interview with Paul Riemens (LVNL), 2009.

214 Original title: 'Grenzen aan de groei van Schiphol', published 27 Januari 2008.

215 Interview with Peter de Kruijk (Municipality of Haarlemmermeer) 2009.

216 Press release: *Limits to the Growth of Schiphol*, 27 February 2008.

217 Interview with Willem Kleijn (Province of Noord-Holland); interview with Elzeline de Jong (Municipality of Amsterdam), 2009; interview with Michiel van Dorst (KLM), 2009, interview with Heidi Bousen (project secretary), 2009.

218 Interview with Willem Kleijn (Province of Noord-Holland), 2009.

219 Interview with Jeroen Fukken (Ministry of V&W), 2009.

220 Interview with Willem Kleijn (Province of Noord-Holland), 2009.

the city council was increasingly contesting the BRS perspectives, Alderman Michel Bezuijen had no choice.²²¹ 'For the position of the BRS at the table, the press release was disastrous. For the Municipality of Haarlemmermeer it was a really smart move', believes Joop Krul.²²² Peter de Kruijk explains: 'You could say that is was sort of a genuflexion, weak even, but in the end it strengthened our position as we could take a step back and watch the final advice evolve into an advice we could support.'²²³ 'It remained a constant tension when you were negotiating with stakeholders such as the BRS parties, that had to account for their actions within their own democratic bodies', states Hans Alders.²²⁴ 'The city council actually forced Alderman Bezuijen to embrace the alternative developed by the local residents, which we encouraged, as it strengthened our position at the negotiation table', concludes Kees van Ojik.²²⁵

Behind the scenes, the KLM, LVNL and the Schiphol Group were still discussing and researching the new operational concept. The KLM was opposed to a continuous 2+2 system, whereas LVNL was in favour of it. The Schiphol Group was somewhat stuck in the middle. However, after extensive internal deliberations and, more importantly, pressure from the KLM and local residents, Cerfontaine stated at the Alders Table of 17 March 2008 that the implementation of a continuous 2+2 runway configuration was impossible. The aviation actants preferred 2+1 (+1) with a 'noise preferential' runway configuration, which meant that air traffic would be handled via runways that cause the least noise nuisance. Hans Alders seconded this statement: *The runway configuration has a huge impact on the distribution of airport noise across the region. Therefore the Alders Table discussed several runway configurations. Eventually it was concluded that the best runway configuration is the 2+1 runway configuration, the one already in operation. During the day, three runways are in operation. During the inbound and outbound peaks, four runways will be in operation: the so-called 2+2 runway configuration. Next to this, the actors opted for a 'noise preferential' runway configuration. Because of these agreements, a further development of the airport is possible while reducing noise nuisance in the direct surrounding area.*²²⁶ The controversy seemed settled for the time being.

Closure

221 Interview with Paul Riemens (LVNL), 2009; interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

222 Interview with Joop Krul (Schiphol Group), 2009.

223 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

224 Interview with Hans Alders (chairman), 2009.

225 Interview with Kees van Ojik and Theo Geudeke (inhabitants and CROS representatives), 2009.

226 Alders, H. (2008: 6-7), Advies van de heer Alders over de toekomst van Schiphol en de regio voor de middellange termijn (tot en met 2020).

And so closure emerged. Confronted with the 2+2 runway configuration black box, the inhabitants decided to open it. The LVNL letter triggered shared uncertainties. *The status of a statement depends on later statements* (Latour, 1987: 27) and after an intricate translation process; the 2+2 runway configuration controversy was settled with the conclusion that the best runway configuration was the 2+1 runway configuration. However, a new problem was already emerging, related to the actualization of the noise criteria (Huys, 2011: 344). This problem would give the Alders negotiations on the mid-term a rather different twist.

6.2

Second Controversy: Broadening the assignment

The noise measurement system only became subject to discussion in February 2008, when the House of Representatives dismissed the prevailing regulative system and requested a new system. Of course, there was the issue of compensatory balancing and actualization, but this would only have led to an adjustment of the prevailing noise measurement system. The Minister of VROM and the Minister of V&W ask the Alders Table to formulate an advice concerning a new noise measurement system. And so the Alders Table came up with basic assumptions for a new system in the final advice. The new system would be easier to manage, transparent and explainable and offered at least the same protection. Every year, the aviation sector would be required to produce an operational plan stating where and when aeroplanes would fly. Inhabitants, administrators and the CROS would evaluate this plan. Then, the ministries of VROM and V&W would ratify the plan. This experiment was planned to commence in 2010. Again, the research framework is used to show how this described closure emerged from controversy.

6.2.1. *Taking into account*

Perplexity

As discussed previously, the noise criteria had to be actualized as a result of the short-term advice. Alders concluded that Schiphol should be allowed to grow towards a maximum of 480,000 air transport movements in 2010, with the condition that the limiting value within the enforcement points, as stated in the airport traffic ruling – the LVB – were to be actualized. At the same time, the actualization of the enforcement points had to offer the same protection as that enjoyed prior to actualization. In order to do so, the environmental norms as laid down in the airport planning decree – the LIB – were also actualized (see table 6.1).

Table 6.1: Old and new (actualized) environmental norms for Schiphol

	Old criterion Schiphol Act/ Decreets				Updated criterion
	Housing file 1990	Improved Model	Housing File 2005	Translation Ke to Lden	
Amount of houses within 35Ke	10,000 35 Ke	10,800 35 Ke	14,500 35 Ke	12,300 58dB(A)Lden	

	Old criterion Schiphol Act/ Decreets				Updated criterion
	Housing file 1990	Improved Model	Housing File 2005	Translation Ke to Lden	Broadening area
Amount of people seriously hindered by noise	33,500 20 Ke	40,500 20 Ke	47,500 20 Ke	77,000 52dB(A)Lden	239,500 48dB(A)Lden

	Old criterion Schiphol Act/ Decreets				Updated criterion
	Housing file 1990	Improved Model	Housing File 2005	Translation Laeq to Lnight	
Amount of houses within 26dB(A)Laeq	6,900 26dB(A)Laeq	6,000 26dB(A)Laeq	8,300 26dB(A)Laeq	11,700 26dB(A)Lnight	

	Old criterion Schiphol Act/ Decreets				Updated criterion
	Housing file 1990	Improved Model	Housing File 2005	Translation Laeq to Lnight	Broadening area
Amount of sleep disturbed people	23,000 20dB(A)Laeq	24,500 20dB(A)Laeq	32,000 20dB(A)Laeq	23,500 20dB(A)Lnight	66,500 20dB(A)Lnight

	Old criterion Schiphol Act/ Decreets				Updated criterion
	Housing file 1990	Improved Model	Housing File 2005	Meteoromargin	
Amount of houses within 10-6	781	1,040	2,400	3,000	

Source: TK 29665, Nr. 46, translation Huys (2011: 345)

On 25 May 2007, the actualization of the environmental criteria and norms was presented. The old housing file, dating back to 1990, was updated because many houses had been built or demolished in the Schiphol region in the meantime. The new file reflected the situation in 2005. The new Lden and Lnight measures replaced the Dutch Ke measure for noise. This resulted in new doses-effect relationships, resulting in higher numbers of people whose sleep and other activities were hindered at the same levels of noise pollution, thus increasing the negative effects when exposed to the same dose of noise pollution as previously. Finally, more realistic flight routes were modelled. In the new procedure, the routes were based on the real radar-tracks of 2003-2005, meaning that changes in flight patterns resulted in changed distribution of environmental effects over the area (Huys, 2011: 344).

The effects in the outer areas were also calculated for both noise pollution and sleep disturbance. However, the area for assessing third-party risks remained the same, even though it had been argued during the evaluation process that flying over the outer areas involved considerable risk as well. With regard to third-party risks, the Individual Risk (IR) criterion was reframed. The old procedure for calculating the amount of houses that were exposed to an IR of 10⁻⁶ or more in an average year did not take into account the variance of runway utilization and flight routes that was caused by changing weather conditions. When calculating models for noise pollution and sleep disturbance, the so-called 'meteo-margin' was used, and therefore it was deemed necessary to include it, too, in the procedure for assessing third-party risks. This resulted in a larger area being exposed to potential accidents, including some highly dense areas (Huys, 2011: 346).

The new calculation procedures were used to develop a new set of norms for the criteria that were still part of the environmental objective. For example, concerning the third-party risk, the old criterion was that a maximum of 781 houses were allowed within the IR 10⁻⁶. The improved flight tracks resulted in 1040 houses, the updated housing file resulted in 2400 houses, and the inclusion of the meteo-margin resulted in 3000 houses. This being the case, the old norm of 781 houses was replaced by the new norm of 3000 houses.²²⁷ A similar procedure was applied to the calculation of the updated noise criteria. The higher numbers thus did not mean that the real effects had increased, but only that a more realistic calculation method had been applied. To70, an independent consultancy, was commissioned to carry out the calculations and to assess their equivalence. It concluded that the old and new outcomes did not result in more capacity or environmental deterioration. The research results were validated by discussing them with the sector parties, the CROS, the BRS,

227 TK 29665, Nr. 46

and the Alders Table. Next, the results were discussed with the experts of the MNP; and it was the experts of the MNP who argued that the results were not valid.

According to the MNP, the updated norms did not offer the same level of protection as the ones that they were intended to replace. The MNP criticized the way in which the improved flight routes were dealt with. With regard to aircraft noise, the improved routes resulted in 10,800 houses within the 35Ke (56 Lden) zone, whereas all former decisions had been based on a maximum of 10,000 houses within the 35Ke (56 Lden) zone. The MNP suggested that capacity was therefore to be downscaled to the amount that fitted the norm of 10,000 houses, meaning fewer flights. They believed that the calculation method was imbued with heavy flaws that had biased the outcomes in favour of mainport development. However, the Cabinet had clearly stated that the new calculation method should not lead to a reduction of capacity. From the perspective of the Cabinet, 10,800 houses in the new regulative system offered the same protection as 10,000 in the old regulative system, thus meeting the criterion of equal protection. The MNP experts pointed out the 'conceptual error' involved here: if the real effects had been assessed in the 1990s, then capacity would have been lower when maintaining the 10,000 houses limit. It was because the wrong assumptions had been made that the real effects had not been taken into account, thus resulting in a higher capacity than was actually allowed. The MNP found it rather curious that, instead of enforcing a limit (10,000 houses), which represented a boundary that was clearly going to get exceeded, the limit had been raised to 10,800 houses (so there would be no transgression of the limit) (Huys, 2011: 345).

The criticism caused some political unrest, which increased even further when MNP published an article in the Dutch national newspaper *NRC Handelsblad* on 13 November 2007, stating that the calculation methods used to conclude that the actualization offered the same protection as before were wrong. Thus, they called for the politicians to finally take up their responsibility and decide whether or not Schiphol would be allowed to grow, and whether or not this was to come at the expense of additional noise pollution in the inner and/or outer area. Endless debates about the technological features of models would not be able to provide straightforward answers, as the past 20 years had clearly illustrated. Ernst Cramer sent the Minister of V&W a letter on behalf of the Christen Unie, a Dutch political party in the House of Representatives, in which he asked if the Minister would be willing to request contra expertise with regard to the actualization, on the basis of the findings of the MNP. The Minister replied that he would ask the NLR to do so. However, the NLR did not agree with the MNP criticism.²²⁸ And thus an extraordinary

228 TK 29665, nr.80, 2008

situation was created: two renowned knowledge institutes seemed not to agree upon the validity of the new calculation methods for determining the new limits for the enforcement points, while using the same dataset.

And so trust is being questioned, as a renowned knowledge institute believed that the national government was stretching the limits of Schiphol in favour of the mainport development. At the same time, knowledge is being questioned as two renowned knowledge institutes come to different conclusions using the same dataset. This scientific discussion is being made political as politics question the new calculation procedures. In this stage of perplexity, it became clear that associations would be rearranged by this discrepancy. And at this point, it is totally unclear what ought to be done, and whom to involve. However, it is beyond dispute that associations would be rearranged. This would become apparent as the transformation of the controversy was followed.

Consultation

On the 5 February 2008, Dutch newspaper *De Volkskrant* published an article with the title: ‘The collapse of the noise measurement system at Schiphol.’²²⁹ The article stated that the Lower House was fed up with the complicated noise systematics with its enforcement points around Schiphol. The immediate cause for this remarkable conclusion was the recent conflict between the NLR and MNP. The opaque measurement system had most certainly nourished the climate of distrust over the last few years. Politician Paul Tang had had enough: ‘The measurement system is a failure and must disappear’²³⁰. During a consultation on 6 February 2008 between the standing committee of VROM and V&W, the Minister of VROM and the Minister of V&W, Tang stated that the noise measurement system of Schiphol was so complicated that almost no-one in the Netherlands actually understood it. This led to unnecessary mistrust. The other members of the standing committee agreed, and believed that a new noise measurement system was needed. Both Ministers answered that they had asked Hans Alders to formulate an advice concerning a new measurement system at the Alders Table.²³¹

Thus, the Lower House broadened the assignment of the Alders Table by asking Hans Alders to design a new noise measurement system – one that was understandable, less technical, enforceable and transparent. In this respect, a study group - the study group noise measurement system- was

229 Original title in Dutch: ‘Geluidmeting Schiphol failliet’ (published in *Volkskrant*, 5 February 2008).

230 Original citation in Dutch: ‘Het stelsel is failliet en moet overboord’ (published in *Volkskrant*, 5 February 2008).

231 TK 29665, Nr.84, 2008.

established under chairmanship of André van Lammeren, working at the Ministry of V&W.

A month later, at the Alders Table of 17 March 2008,²³² André van Lammeren presented three options for a new noise measurement system:²³³

1. An option similar to the prevailing system, although with actualized enforcement points and no cap concerning total aircraft noise, as was the case with the current system;
2. An option based on the handling of air traffic in conjunction with the most preferred operational use of the airport in combination with a cap concerning the total amount of air transport movements and/or a 'noisebudget', but without enforcement points, the so-called *vliegen volgens afspraak* (flying according to agreement, VVA);
3. An option based on spatial contours, in combination with limiting values that determined the maximum amount of hindrance within those contours, the VROM option.²³⁴

During the presentation, Van Lammeren concluded that option 2 (VVA), in combination with a 'noise preferential' runway configuration, but without the enforcement points, gave a constant picture concerning the total amount of hindrance for the next 35 years. After the presentation the different delegations gave their opinion.

Kees van Ojik believed that the noise measurement system, contrary to what Parliament maintained, was not a failure according to the inhabitants. However, if a new noise measurement system was to be created, the inhabitants did have some demands in addition to the same protection offered by the prevailing system:

- upholding enforcement during the year and not afterwards;
- the new system had to be steered according to output (limiting values);
- there could only be one system;
- the outer area had to be protected.

Remco Pols, Alderman of Amstelveen and vice-chairman of the BRS, spoke on behalf of the regional parties and stated that the administrators also believed that the noise measurement system was not a failure. It did give problems, but one should not throw away the baby with the bathwater. Gerlach Cerfontaine concluded on behalf of the aviation parties that

232 During this Alders Table, Theo Geudeke, inhabitant and CROS representative, officially joined the consultative body when Rob van Gijzel was inaugurated as Mayor of Eindhoven (Alders Table minutes, 17 March 2008).

233 Alders Table minutes, 17 March 2008.

234 Interview with Heidi Boussen (project secretary), 2009; interview with Bram du Saar (VROM), 2009.

they only wished for a less complex system. Afterwards, a more technical discussion was initiated, but Alders requested all actants to discuss the details in the study groups.²³⁵

‘We all saw it coming’, recalls Peter de Kruijk. ‘The noise measurement system would be questioned one day or another.’²³⁶ ‘The prevailing system was sold to the aviation sector with the guarantee that the system could handle 600,000 air transport movements. But it turned out that there was simply no room for 600,000 air transport movements’, says Hans Alders.²³⁷ The aviation sector had already been arguing in favour of a less complex and rigid systematics for several years.²³⁸ ‘The fact that the assignment was broadened and that we had to come up with a new measurement system was good news for the aviation sector’, states Jeroen Fukken. ‘To them it was a clear case of good riddance.’²³⁹ From the perspective of the local residents, one thing remained out of the question: the rejection of the enforcement points, as these were their main source of legal protection. Actually, all local residents had at least one shared interest prior to the Alders negotiations: to secure the existence of the enforcement points and their limiting values.

During the elaboration of the different options, the first and third option were abandoned relatively quickly. ‘The objective we had in mind was a new noise measurement system that would find a balance between extra protection for the residents in the surrounding area of Schiphol and flexibility for the aviation sector’, says Hans Alders, ‘and the VVA option scored remarkable well on both these points.’²⁴⁰ Different experts were also invited to join the study group. Due to its expertise, the *Stichting Natuur en Milieu* (Nature and Environment, SNM from now on) was invited to participate in the design of the new noise measurement system. However, during the first meeting, the Ministry of V&W argued that one thing was for sure: the enforcement points had to go. Since the creation of a better system with enforcement points was SNM’s key priority, the meeting ended in a rather agitated conflict. After this first meeting, SNM was simply no longer invited, and thus excluded from the discussion (Huys, 2011: 346).

‘The first option resembled the prevailing system and was therefore not an option for us’, begins Joop Krul, ‘and the VROM option with its maximum amount of hindrance within the contours was just too extreme for the local

235 Alders Tafel minutes, 17 March 2008.

236 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

237 Interview with Hans Alders (chairman), 2009.

238 Interview with Joop Krul (Schiphol Group), 2009; interview with Michiel van Dorst (KLM), 2009; interview with Paul Riemens (LVNL), 2009.

239 Interview with Jeroen Fukken (Ministry of V&W), 2009.

240 Interview with Hans Alders (chairman), 2009.

residents.²⁴¹ ‘The VROM option was not that bad at all’, thought Michiel van Dorst. ‘For 70% of all flights, the weather at Schiphol determines which runway should be used. Without enforcement points the operation would not have changed that much because of that dependence on weather elements. However, the VROM option did not give stakeholders the feeling they could control the system.’²⁴² ‘We preferred the VVA option as it was the safest option’, says Paul Riemens.²⁴³ The BRS only wanted to accept the VVA option if a strict preferential runway system was applied in combination with hindrance-reducing measures.²⁴⁴ It became clear that all stakeholders were willing to choose the VVA option, although some parties were more reluctant than others, except for one: the local residents wanted to retain the enforcement points and their limiting values.

Another issue that had to be settled before a final advice could be published was the disagreement between the local residents and the aviation sector concerning the total number of air transport movements that could be accommodated at Schiphol in 2020. The local residents had proposed a maximum of 500,000, whereas the aviation sector wanted to facilitate approximately 525,000 air transport movements. It was because of this problem that the issue concerning the new noise measurement system could be settled: ‘I believed that the prevailing system did work’, says Kees van Ojik. ‘However, we knew that if the Ministry and the aviation sector continued to actualize the noise criteria every year or so in order to enable Schiphol to grow, the system would ultimately not offer us any protection at all.’²⁴⁵ ‘This was also about the time that the negotiations for the final advice begun,’ he continues, ‘so the wheeling and dealing commenced. For instance: a cap on air transport movements was negotiable if the VVA option was negotiable.’²⁴⁶ As a result, the inhabitants decided that getting rid of the enforcement points was no longer unacceptable.

During the consultation phase, the concerned spokespersons acquired a say. By now the power to take into account had been completed. Three options concerning a new noise measurement system had been presented and all actants had had the opportunity to give their opinion. What can be seen is that almost all parties are in favour of the VVA option, except for the inhabitants who did not want to get rid of the enforcement points. However, the inhabitants at the Alders Table, voiced by Kees van Ojik, seem to reconsider this statement as long as a cap on air transport movements would be negotiable. And so an association is forming

241 Interview with Joop Krul (Schiphol Group), 2009.

242 Interview with Michiel van Dorst (KLM), 2009.

243 Interview with Paul Riemens (LVNL), 2009.

244 Internal communication BRS stakeholders, 2008.

245 Interview with Kees van Ojik and Theo Geudeke (Inhabitants and CROS representatives), 2009.

246 Interview with Kees van Ojik and Theo Geudeke (Inhabitants and CROS representatives), 2009.

where the aviation sector and the inhabitants find each other, because in order to reach their goals, they need each other. Now, let's examine how associations did become rearranged.

6.2.2. *Putting in rank order*

Hierarchy

Between March 2008 and June 2008, several concept versions of the final Alders advice were distributed and discussed. It became evident that the original alternative formulated by the local residents was developing into the final advice. There remain two points to negotiate: the total amount of air transport movements in 2020, ranging from 500,000 to 525,000; and a new noise measurement system without enforcement points and their limiting values. It became a matter of give and take (especially between Kees van Ojik on behalf of the local residents, and Gerlach Cerfontaine on behalf of the aviation parties);²⁴⁷ the aviation parties would accept a cap concerning total air transport movements, if they would get their new noise measurement system.

However, during these months, as the first concept version of the final advice was discussed, a heated debate arose within the ranks of the local residents. For the most part, the local residents were quite pleased with the concept version. However, there was one issue that raised concerns and contradicted their basic principles: the choice to abandon all enforcement points and to replace these with the VVA alternative. Cancelling the enforcement points was an issue that was high on the agenda of several VGP meetings and at all these meetings the final conclusion had been that the VVA alternative was unacceptable and contrary to the main interest of the platforms, which was to secure as much legal protection as possible.²⁴⁸ During the following months, a division between the three inhabitants seated at the Alders Table could be seen. Kees van Ojik changed his perspective and became a supporter of VVA, while Theo Geudeke and Erwin von der Meer did not. This reflected the opinion of the concerted platforms, of which the majority were still against the VVA alternative (Huys, 2011: 352).

In September, political pressure to meet the deadline of the first of October increased. Hans Alders had to report back to his formal commissioner, the Minister of V&W, and therefore wanted to formulate a final advice at

²⁴⁷ Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009; interview with Paul Riemens (LVNL), 2009; interview with Willem Kleijn (Province of Noord-Holland), 2009; interview with Elzeline de Jong (Municipality of Amsterdam), 2009.

²⁴⁸ VGP Minutes, 16 July 2008.

any cost.²⁴⁹ However, during a VGP meeting on 11 September, it was again concluded that the majority opposed the VVA alternative. Moreover, the actants concerned decided to send a letter to Hans Alders stating that they would withhold their support for the entire agreement and would abandon the negotiations if VVA was pushed through.²⁵⁰ Geudeke also repeated his stance via an e-mail sent to several representatives of VGP. However, it seemed that the other members of the Alders Table would not succumb, and therefore on 26 September an emergency meeting was set up by the VGP to decide upon the strategy to follow. Of the 26 platforms, 12 attended the meeting. A vote was held, and seven of the twelve platforms voted against the Alders agreement. At the same time, a majority voted for continuation of participation as the VVA was merely one element of the total package and they wanted to see what would happen in the weeks to come (Huys, 2011: 353). Nevertheless, Von der Meer did decide to leave the Alders Table immediately. Therefore, Von der Meer sent a letter to Hans Alders saying that the VGP could not approve the new noise measurement system. He concluded that therefore, on behalf of the VGP, he had to quit the Alders Table. The media immediately seized upon the news and, as a result, several, mainly left-wing, politicians stated in the newspapers that this meant that Hans Alders had failed. This occurred only days before the final advice was to be published, and the other members of the Alders Table were rendered speechless and furious. They asked themselves why Von der Meer left the Alders Table three days before the final advice was to be published: ‘My answer was simple. Otherwise my vote would not be heard’,²⁵¹ said Von der Meer. ‘With the cancellation of the enforcement points, citizens no longer had a reference frame. By leaving I wanted to make clear that the advice was wrong and immoral.’²⁵²

‘Not surprising,’ is Jeroen Fukken’s summary of Erwin von der Meer’s decision to leave the Alders Table.²⁵³ Paul Riemens seconds this: ‘I expected Von der Meer leaving the table, but it was not a very classy act.’²⁵⁴ Von der Meer would have a meeting with Hans Alders a week later, going through the new noise measurement system once more.²⁵⁵ According to Von der Meer, this meeting no longer mattered as Alders and Vermeegen had repeatedly stated that the VVA alternative could no longer be changed (Huys, 2011: 353). ‘Von der Meer thought he could force a

249 Interview with Kees van Ojik and Theo Geudeke (Inhabitants and CROS representatives), 2009.

250 VGP Minutes, 11 September 2008.

251 Original citation in Dutch: “mijn antwoord was simpel. Anders was mijn stem ten onder gegaan” (published in Parool, 4 October 2008).

252 Original citation in Dutch: “door het wegvallen van de meetpunten heeft de burger geen referentiekader meer. Door op te stappen wilde ik duidelijk maken dat het advies niet deugt en immorrel is” (published in Parool, 4 October 2008).

253 Interview Jeroen Fukken (Ministry of V&W), 2009.

254 Interview Paul Riemens (LVNL), 2009.

255 Interview Paul Riemens (LVNL), 2009; interview Hans Alders (chairman), 2009.

breakthrough by leaving the Alders Table, but his strategy backfired', says Paul Riemens.²⁵⁶ Some stakeholders believed that Von der Meer had to defend to his rank and file an advice that could mostly be ascribed to Kees van Ojik.²⁵⁷ He was the most dominant actant of the three local residents at the table. Von der Meer simply did not want to defend this advice.²⁵⁸ 'Von der Meer was only seated at the Alders Table to get his way, and not to negotiate in order to come to a final advice', believes Willem Kleijn.²⁵⁹ 'He almost endangered the whole consultative process', states Michiel van Dorst.²⁶⁰ Joop Krul concludes: 'I find it truly unbelievable and worrying that one actor can stir up such commotion in the national media and almost blow up the whole decision-making process: it shows how fragile the Alders Table was.'²⁶¹

However, a day after the letter by Von der Meer, on 27 September 2008, the VGP published another letter stating that 75% of the concerted platforms still wanted to be part of the Alders Table negotiations, as decided by a vote on 26 September. Van Ojik mobilized the media and he argued in the *Haarlems Dagblad* (a regional newspaper) that a majority was in favour of participation at the Alders Table and that the action of Von der Meer had to be seen as a 'totally illegal act, a kamikaze action.'²⁶² This, then, increased the unrest amongst the local residents even further.²⁶³ During the days to follow, Alders himself attempted one last time to convince as many platforms as possible in order to increase the support for the agreement. He and Vermeegen organized a presentation session on 29 September for the local platforms in order to gain support of other platforms. During this meeting, Vermeegen argued that not supporting the agreement meant excluding oneself from further decision-making. During the final negotiations, Geudeke suddenly made a 180-degree turnaround and decided to vote for the VVA systematics.²⁶⁴ Two of the three representatives

256 Interview Paul Riemens (LVNL), 2009.

257 Interview Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

258 In a local newspaper, Erwin von der Meer even spoke about 'the coup of Zwanenburg'. Zwanenburg is the village in which Kees van Ojik resided.

259 Interview with Willem Kleijn (Province of Noord-Holland), 2009.

260 Interview with Michiel van Dorst (KLM), 2009

261 Interview with Joop Krul (Schiphol Group), 2009

262 'Van Ojik hekelt opstapbesluit: Ruzie bewoners Schipholoverleg' (Published in *Haarlems Dagblad*, 29 September 2008).

263 Huys (2011) obtained several e-mails in which different local residents called each other names and accused each other of foul play and treason. In order to protect the people concerned, I shall not quote them here.

264 Several local residents have asked Geudeke why he suddenly changed his mind just when the final decision was to be made. Nobody ever received a straight answer from him, and this gave rise to an interesting conspiracy theory. The following story was constructed. One member of the CROS needed to extend her driving license. Since her eyes were very bad, she feared that this might be problematic. Fortunately, Van Ojik happened to be a doctor as well, so he helped her out. But in exchange she had to convince Geudeke, who was a very close friend of her, to vote in favor of VVA. This is what he finally did. Not surprisingly, it is impossible to verify this story, but it certainly gives an impression of how the different residents related to one another and view one another (Huys, 2011).

were thus now in favour of VVA, which was enough to give the impression that a majority of the local residents supported the Alders advice. However, despite all attempts to persuade the platforms by pressuring them into voting in favour of a new noise measurement system, 14 of the 26 platforms (a majority) still rejected VVA. Since these platforms had no voting power other than via the three representatives at the table, it seemed that a majority was in favour, as both Van Ojik and Geudeke – as only representatives of the local residents left at the Alders Table – voted in favour of the agreement. So did all other actants involved (Huys, 2011: 354).

Closure

Flying according to agreement was eventually introduced as an initiative for a new noise measurement system. This section has followed the transformation of the controversy– ‘what to do with the noise measurement system?’– to the fact: the VVA option was introduced. This was the last hurdle that needed to be cleared by the Alders Table to come to the final advice. It can be seen as the final controversy that had to be settled. And as showed, it almost went wrong, with the VGP leaving the Alders Table. However, the association remained and the Alders Table black box could be closed. This socio-technical controversy can be seen as a prime example of how matters of concern are transformed into matters of fact. Actants use as much immutable mobiles possible to persuade – or translate – their interests into facts. In the end, the VVA option is all that remains as all power struggles of policy in the making disappear in the black box.

6.3

Presenting the Alders advice for the mid-term

And so, on 1 October 2008, Hans Alders could finally present his advice concerning the future of Schiphol and the region for the mid-term period. After the assignment for the short term, the Alders Table had been asked to produce an advice that all participants could agree upon. In this sense, this advice assured that the national government could make decisions concerning the future capacity of Schiphol for the period up to 2020, as well as identifying nuisance-reduction opportunities at the same time. The advice had to find a balance between the development of the aviation industry, nuisance-reducing measures, and an improvement of the overall quality of life.²⁶⁵

265 Alders, H. (2008: 1), Advies van de heer Alders over de toekomst van Schiphol en de regio voor de middellange termijn (tot en met 2020).

The advice offered recommendations concerning selectivity, the development of regional airports, the introduction of a new noise-measurement system, the implementation of nuisance-reducing measurements, and investment in projects to improve the quality of the direct surroundings.

Selectivity: the actants chose to consolidate the mainport function of Amsterdam Airport Schiphol, and so it was important for the airport to focus on so-called ‘hub-related’ or ‘mainport-related’ air traffic. Growth perspectives showed that Schiphol would grow towards 580,000 air transport movements in 2020. However, this was impossible at Schiphol as the legal environmental boundaries did not allow 580,000 air transport movements at the airport. Therefore the Alders Table chose to facilitate 510,000 air transport movements at Schiphol. If the Netherlands wished to grow towards 580,000 air transport movements in 2020, a further development of capacity at the regional airports – Eindhoven and Lelystad – would be necessary.

Arrangements for runway configuration: the runway configuration has a huge impact on the distribution of airport noise across the region. Therefore the Alders Table discussed several runway configurations. Eventually the conclusion was drawn that the best runway configuration was the 2+1 runway configuration, the one already in operation. During the day, three runways are in operation. During the inbound and outbound peaks, four runways operate: the so-called ‘2+2’ runway configuration. Next to this, the actants opted for a ‘noise preferential’ runway configuration. Because of these agreements a further development of the airport would be possible while reducing noise nuisance in the direct surrounding area.

Nuisance-reducing agreements: the further development of Schiphol should be accompanied by a set of agreements concerning nuisance reduction, for both the outer area and the inner area. These were agreed upon in the covenant on nuisance reduction and should be evaluated every four years. Because of the nuisance-reducing agreements, the total number of severely hindered people should decrease by at least five percent in 2020. A measurement that sounded very promising was the introduction of the continuous decent approaches (CDA). The inhabitants bargained hard for the CDAs: a smooth, constant-angle descent to landing, which required significantly less engine thrust than a conventional approach, thus resulting in noise and emission benefits. In 2010, an experiment concerning CDAs should take place from 22.00 to 23.00. If this experiment was successful, the same would be done between 20.30 and 22.00. After 2012, whether or not CDAs would be possible between 15.00 and 18.00 would be studied.

Improving the quality of the environment: there will always be areas that are hindered by air traffic. Therefore, the national government, the Province of Noord-Holland and the Schiphol Group each made ten million euro available for projects to improve the quality of life through ways other than nuisance-reducing agreements. For five pilot projects in Aalsmeer, Amstelveen, Haarlemmerliede, Uithoorn and Zwanenburg, twenty million euro would be made available at short notice. The national government, the Province of Noord-Holland and the Schiphol Group would contribute thirty million more for the period up to 2020, if the projects turned out to be a success.

Experimenting with a new noise measurement system: after the Houses of Parliament had asked for a new noise measurement system, the actants at the Alders Table came up with basic assumptions for a new system. The new system should be easier to manage, offer at least the same protection, as well as being transparent and explainable. The agreements made concerning the development of air traffic movements at Schiphol and runway configurations formed the fundament of a new noise measurement system, the VVA option. Every year the aviation sector should produce an operational plan that states where and when airplanes will fly. Inhabitants, administrators and the CROS should evaluate this plan. Then the ministries of VROM and V&W would ratify the plan. This experiment should commence in 2010.

The most obvious winners seem to be the inhabitants. When looking at the final Alders advice, one can't help but notice that the final advice closely resembles the alternative presented by the inhabitants in January 2007.²⁶⁶ The inhabitants used only one sheet of paper to present four simple and straightforward points: a cap of 500,000 air transport movement at Schiphol and the relocation of 100,000 air transport movements, a predominantly 2+1 runway configuration, no adjustment to the prevailing limiting values concerning aircraft noise, and no deterioration of the current situation in the inner area concerning noise nuisance and an improvement in the outer area. The fundament of their alternative was a focus on the hub-operation of Air France/KLM. 'If you read the final advice you cannot conclude otherwise than that the local residents played a major role in the formulation of this advice', states Hans Alders.²⁶⁷ 'What was rather smart,' says Jeroen Fukken, 'was that the inhabitants focused on the Air France/KLM hub-operation and found a strong ally in the form of KLM. (...) Furthermore, the inhabitants aimed

266 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009, Interview with Joop Krul (Schiphol Group), 2009, Interview with Jeroen Fukken (Ministry of V&W), 2009, Interview with Bram du Saar (Ministry of VROM), 2009, Interview with Willem Kleijn (Province of Noord-Holland), 2009, Interview with Hans Alders (chairman, 2009).

267 Interview with Hans Alders (chairman), 2009.

for a cap of 500,000 air transport movements, 100,000 air transport movements less than agreed upon in the Cabinet position concerning Schiphol: this was more than enough to mobilize the rank and file of the inhabitants.²⁶⁸

‘The biggest advantage that the inhabitants had was that the same people participated at both the Vermeegen Table, the Alders Table, as well as in all other Alders-oriented meetings’, believes Paul Riemens. ‘They trusted no one and did not take anyone’s expertise on the subject for granted; they wanted to attend every meeting.’²⁶⁹ ‘We were fighting at the frontline as soldiers and planning the overall strategy as generals at the same time’, explains Theo Geudeke. ‘This gave us a big advantage as we could steer and monitor on every level and knew the background of all decisions made.’²⁷⁰

‘Gerlach Cerfontaine understood that he needed the inhabitants in order to formulate a compromise’, says Joop Krul. ‘For the Schiphol Group, KLM and LVNL the biggest fish to catch was a new noise-measurement system.’²⁷¹ Of course, a new noise-measurement system was something that the inhabitants opposed fiercely, but the cap of 510,000 air transport movements as well as the implementation of Continuous Descent Approaches persuaded the inhabitants to agree with a new noise-measurement system. In the end, it was Gerlach Cerfontaine and Kees van Ojik who bargained to reach a compromise with which all actants could agree.²⁷² It became a matter of give and take: the aviation parties would accept a cap concerning total air transport movements if they would get their new noise-measurement system.

The BRS seemed to be the weakest link at the Alders Table. ‘Logical’, thinks Joop Krul: ‘The municipalities became trapped between their own local interests and the regional interests. (...) That is how one can explain the press release by the Haarlemmermeer: Alderman Bezuijen chose his municipality over the BRS as a whole.’²⁷³ From a Haarlemmermeer point of view, this was very smart but, for the BRS as a whole, it severely undermined their position at the Alders Table. ‘It is remarkable that municipalities and the province only played a marginal role, as these

268 Interview with Jeroen Fukken (Ministry of V&W), 2009.

269 Interview with Paul Riemens (LVNL), 2009.

270 Interview with Theo Geudeke and Kees van Ojik (inhabitants and CROS representatives), 2009.

271 Interview with Joop Krul (Schiphol Group), 2009.

272 Interview with Joop Krul (Schiphol Group), 2009, Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009, Interview with Bram du Saar (Ministry of VROM), 2009, Interview with Theo Geudeke and Kees van Ojik (inhabitants and CROS representatives), 2009, interview with Elzeline de Jong (Municipality of Amsterdam), 2009, interview with Willem Kleijn (Province of Noord-Holland), 2009, interview with Paul Riemens (LVNL), 2009.

273 Interview with Joop Krul (Schiphol Group), 2009.

are the bodies with electoral mandate', says Paul Riemens.²⁷⁴ Within the BRS, the actants had different interests: 'let's be honest: of all BRS parties at the Alders Table, Haarlemmermeer was the one that had to deal with the most hindrance from Schiphol. The Province of Noord Holland had interests on a higher level of abstraction, and Amsterdam only had to deal with the positive effects of Schiphol', states Peter de Kruijk.²⁷⁵ 'The Alderman of Amsterdam actually found issues within the city more important than the Alders Table', believes Kees van Ojik.²⁷⁶ In the end, the BRS won almost nothing within the final Alders advice, especially because the politicians kept contesting, almost right to the end, the fact that inhabitants were involved with the formulation of the Alders advice, instead of forming one strong alliance.

One factor that also did the position of the BRS no good was the fact that they – or mainly the Province of Noord-Holland – kept supporting the 2+2 runway configuration as presented by LVNL. The province believed that the 2+2 runway configuration in combination with CDAs would lead to more possibilities for spatial developments. And as already shown, the KLM and the inhabitants heavily contested the 2+2 runway configuration. The whole 2+2 runway configuration discussion weakened the position of the LVNL. 'I still believe that we had a great vision concerning the 2+2 runway configuration', said Paul Riemens.²⁷⁷ 'LVNL never denied that they rather preferred an operation with a constant 2+2 runway configuration', recalls Hans Alders.²⁷⁸ 'LVNL could have done so much more for all parties, but because of the unbalanced administrative relations, severe distrust and the prisoner dilemma behind it, we did not get leverage to do so', concludes Paul Riemens.²⁷⁹

The actants endorse that formulating the Alders advice was primarily a Machiavellian exercise.²⁸⁰ 'Alders and Vermeegen aimed for an advice signed by all parties which they could show to the Minister', says Joop Krul. 'They really did not care how the advice was formulated as long as all parties could live with it.'²⁸¹ 'That was indeed our whole input', confirms Hans Alders. 'We tried to reach a final agreement with all parties at the table, but if this failed: well, no hard feelings, but we were going to

274 Interview with Paul Riemens (LVNL), 2009.

275 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

276 Interview with Theo Geudeke and Kees van Ojik (inhabitants and CROS representatives), 2009.

277 Interview with Paul Riemens (LVNL), 2009.

278 Interview with Hans Alders (chairman), 2009.

279 Interview with Paul Riemens (LVNL), 2009.

280 Interview with Joop Krul (Schiphol Group), 2009, Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009, Interview with Bram du Saar (Ministry of VROM), 2009, Interview with Theo Geudeke and Kees van Ojik (inhabitants and CROS representatives), 2009, interview with Elzeline de Jong (Municipality of Amsterdam), 2009, interview with Willem Kleijn (Province of Noord-Holland), 2009, interview with Paul Riemens (LVNL), 2009.

281 Interview with Joop Krul (Schiphol Group), 2009.

present the Minister with an advice, one way or another.²⁸² ‘Alders was the one that had to close the gap between the demand and supply side, so to speak, while the process director forced all parties to talk to each other’, according to Paul Riemens.²⁸³ ‘Alders was more the good cop, while Vermeegen was most definitely the bad cop’, remarks Heidi Boussen.²⁸⁴ ‘It is remarkable how Vermeegen and Alders made it to an overall advice’, says Peter de Kruijk.²⁸⁵ ‘Yes, Alders and Vermeegen did an absolutely wonderful job’, thinks Michiel van Dorst. ‘In a file saturated by years of frustration, distrust and discontent, one can give only credit to Alders and Vermeegen.’²⁸⁶

For the Cabinet, the approval of the inhabitants was very important: ‘As long as the inhabitants would sign the final advice, the Cabinet would be satisfied’, says Joop Krul.²⁸⁷ The ministry was aware of the fact that they did not need the support of the BRS parties, as they knew that if the inhabitants were to sign the final advice, the BRS had no choice but to agree with the final advice too.

‘However remarkable it may be that Vermeegen and Alders managed to formulate a final advice, I still believe the whole Alders Table was a muddling-through solution by a government that was too afraid to take a stance when it came to the development of Schiphol’, states Michiel van Dorst.²⁸⁸ Paul Riemens agrees: ‘It is the impoverishment of our democracy.’²⁸⁹ Joop Krul recalls: ‘I once told Jeroen Fukken of the Ministry of V&W that, in my opinion, it is a bloody shame that we’re living in a country where the government is afraid to take its responsibilities when it comes to Schiphol, an economic engine of national importance. Fukken replied: “Oh, you really think that this is the case? We see things differently: because Schiphol Group, KLM and LVNL have neglected their direct surroundings for years, we had to step in and form the Alders Table in order to break through the existing deadlock”’²⁹⁰ ‘It is almost disturbing how much distrust there is within the Schiphol file’, states Peter de Kruijk.²⁹¹ The final Alders Advice was just the beginning: the inhabitants believed that the framework was there and evident to all,²⁹² ‘But although all actants signed the final advice, I believe that everyone had the feeling that he had a ligature around his neck, which

282 Interview with Hans Alders (chair man), 2009.

283 Interview with Paul Riemens (LVNL), 2009.

284 Interview with Heidi Boussen (project secretary), 2009.

285 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

286 Interview with Michiel van Dorst (KLM), 2009.

287 Interview with Joop Krul (Schiphol Group), 2009.

288 Interview with Michiel van Dorst (KLM), 2009.

289 Interview with Paul Riemens (LVNL), 2009.

290 Interview with Joop Krul (Schiphol Group), 2009.

291 Interview with Peter de Kruijk (Municipality of Haarlemmermeer), 2009.

292 Interview with Theo Geudeke and Kees van Ojik (inhabitants and CROS representatives), 2009.

was slowly tightening. And what is a natural reaction in such a case? You try to free yourself from the ligature. So, we have to be alert; you cannot miss a single meeting because you get screwed over in a blink of an eye', according to Kees van Ojik. Theo Geudeke continues: 'So many people were involved in the Alders Table and so many meetings were organized; thus you come to know a lot of people including their attitudes and opinions. We knew around whom we had to be extra cautious. (...) I do not want to call it *distrust*, but being *attentive*. Let me put it another way: I am glad that we were involved in the implementation of the Alders advice.'²⁹³ Paul Riemens sighs: 'The summit of distrust is when the acceptance of expertise becomes a mere illusion.'²⁹⁴ The inhabitants see all sorts of emergency exits: 'The only real danger we saw was that fewer flight movements meant less money for the KLM, the Schiphol Group and LVNL', explains Theo Geudeke. The inhabitants believed that the economic recession was a prime reason for the aviation parties to try to postpone certain measures, which feeds the climate of distrust. 'If the economy is booming the aviation parties have no manpower to implement the measures, and during an economic recession there is no money', states Geudeke rather cynically.²⁹⁵ Paul Riemens concludes: 'There will always be losers. The only solution that makes everybody happy is an airport with endless capacity where you don't hear or see airplanes.'²⁹⁶

Thus, the second empirical chapter has continued with the Alders Table case, following the negotiations until the advice for the mid-term was published. Before Hans Alders could publish his final advice, two controversies had to be settled: the 2+2 runway configuration controversy and the controversy surrounding the design of a new noise-measurement system. The advice consisted of recommendations concerning selectivity and the development of regional airports – laid down in the covenant on selectivity – the introduction of a new noise-measurement system and the implementation of nuisance-reducing measurements – laid down in the covenant on nuisance reduction – and the investment in projects to improve the quality of the direct surrounding area – laid down in the covenant on spatial quality.

All controversies were followed from the phase of perplexity until closure. The chapter shows how during the effort to achieve closure, actants are constantly trying to mobilize their own interest into facts by searching for new associations and allies. Especially immutable mobiles are used to feed the socio-technical discussions emerged from disagreements about norms, values and knowledge.

293 Interview with Theo Geudeke and Kees van Ojik (inhabitants and CROS representatives), 2009.

294 Interview with Paul Riemens (LVNL), 2009.

295 Interview with Theo Geudeke and Kees van Ojik (inhabitants and CROS representatives), 2009.

296 Interview with Paul Riemens (LVNL), 2009.

In the following chapter - the last chapter describing the Alders Table case - will focus on the implementation of three measures from the Alders covenants during the period 2008-2011: idle reverse thrust, the radius-to-fix technique, and research for an alternative departure route for the Spijkerboor departure from the Kaagbaan.

Chapter 7

The Alders Table: Implementation

The previous chapter showed how the final Alders advice for the mid-term presented three covenants, namely, one covenant dealing with hindrance reduction, another covenant dealing with spatial quality, and a third covenant dealing with selectivity. These three covenants jointly formulate an impressive list of improvements. Some measures focus more on operational aspects than others, but what they all have in common is that, in one way or another, these measures should improve the overall quality of life around Schiphol. Chapters 5 and 6 focused on the realization of the Alders advice (2006-2008). Chapter 7 will focus on the implementation of the three covenants (2008-2011). Seventeen quite intricate and technocratic measures have been defined (see box 7.1) therefore, for reasons of readability, we shall not describe all measures comprehensively.

On the one hand, describing them in detail – which is the most logical thing to do from an ANT point of view – would lead to a chapter that is much too extensive, whereas, on the other hand, reducing the level of detail would downgrade the chapter to nothing more than a stack of factsheets.

Therefore a selection has been made. The measures have been categorized into:

1. Measures that are ongoing on the moment of writing (Q4 of 2011)
2. Measures that have been either implemented or stopped, and where closure was reached in a rather smooth way due to acknowledged spokespersons with evident obligatory passage points (such as: when it comes to ‘safety’, the LVNL, the KLM and the Schiphol Group are all undisputed spokespersons. If these spokespersons state that a measure cannot be implemented because of safety reasons, all concerned actants understand and accept this).
3. Measures that have been either implemented or stopped, and inhabit controversies that triggered perplexity.

Box 7.1: Measures formulated in the three Alders covenants

- Forming a new noise-measurement system
- Reducing levels of ground noise in Hoofddorp-Noord
- Researching the total levels of ground noise in Badhoevedorp and Amsterdam West
- Forming a jurisprudential framework to measure ground noise
- Discouraging the operation of ICAO Annex 16 Chapter 3 aircrafts.
- Finding an alternative for procedure 17: ‘prolongation of the night regime to 06:30’
- The micro-climate approach (small tailor-made alternative route designs)
- Implementing parallel departures from Polderbaan and Zwanenburgbaan
- Implementation of idle reverse thrust
- Elevation of *Instrument Landing System* intercept altitudes
- Development of *Continuous Descent Approaches*
- Researching alternative departure routes from the Kaagbaan and Aalsmeerbaan.
- Researching and implementing the *radius-to-fix technique*
- Upgrading Noise Monitoring System (NOMOS) Schiphol
- Restricting accelerated executions of aircraft turns.
- Development of the Environmental Simulator
- Introducing compulsory information tasks for real estate developers and agents
- Inauguration of the Spatial Quality Foundation Schiphol (*Stichting Leefomgeving* in Dutch)
- Improving the descent profile of night arrivals for the Polderbaan

Source: the Alders covenants, 2008

As already mentioned, not all measures will be described as too much detail would make this chapter too extensive and too less detail would leave this chapter with nothing more than factsheets. Therefore, this chapter focuses on the last category: only measures are described which have either been implemented or stopped, and have triggered a lot of perplexity. So, controversies are followed once more, accompanying actants up to the end, leading us slowly from policy-in-the-making as associations disappear into the black box of ready-made policy. These controversies emerge from the associations (the measures) made at the Alders Table. As the final Alders Table advice can be seen as a closed black box, or the closure of the collective, the measures derived from the final advice, and all the controversies they trigger can be defined as renewed rounds of controversies.

However, although this chapter remains true to the Actor-Network vocabulary and framework already used in the former chapters, an important shift in perspective must be presented. The two chapters concerning the formulation of the Alders advice were based upon the stories the actants told us, the associations they formed, and the ‘immutable mobiles’ they created. In this chapter, the point of view shifts toward my own experiences within the Alders file. Just after the Alders advice was presented, I began work with the Municipality of Haarlemmermeer as a strategic advisor on the Schiphol file. Within this role, I participated in the implementation of several Alders Table measures. On the one hand, this means that it makes me part of the process of generating associations but, on the other, it gives me a unique position amidst the policy-in-the-making process; one that not many researchers get to witness. In this way, I see myself as a privileged eyewitness with access to all documents and inside information. The chapter focuses less on the actants themselves and more on the technologies and immutable mobiles used during the power struggles leading to closure.

Three measures live up to the previously presented third categorization: *measures that have been either implemented or stopped, and inhabit controversies that have triggered perplexity.* The first one is the implementation of *idle reverse thrust*. ‘Reverse thrust’ means the temporary diversion of an aircraft engine’s exhaust, so that the thrust produced is directed forward, rather than backward, which leads to deceleration of the aircraft. During idle reverse thrust, the thrust reverser is unlocked – as is the case with reverse thrust – but the engine is only running stationary (or ‘idle’). Basically, it means that aircraft make less noise while deceleration after landing.

The second measure is the implementation of the *radius-to-fix technique* between the communities of Hoofddorp and Nieuw-Vennep. This project, called ‘CROS pilot 3b’, aims to concentrate air traffic on the departure route between the two villages, leading to less noise annoyance. Using the radius-to-fix technique leads to less dispersion on the same route than without the usage of the radius-to fix technique.

The last measure is the *research for an alternative departure route for the*

Spijkerboor departure from the Kaagbaan. This measure actually deals with the same route as CROS pilot 3b. As the departure route between Hoofddorp and Nieuw-Vennep flies directly over Floriande, a major housing project in Hoofddorp with more than 17,000 inhabitants, the actants concerned researched the possibilities to relocate the departure route to a less populated area.

All three measures are described using the research framework as presented in Chapter 4, with one major difference: the prevailing practice has already been explained in the last two Alders Table chapters. So, as the final advice of the Alders Table is the prevailing practice, the starting point of every section is to describe closure. Next, I show how closure emerged through mapping the power to take into account, consisting of perplexity and consultation, and the power to arrange in rank order, consisting of hierarchy and closure of institution. Every section ends in the same way as it began, by describing closure.

7.1

Idle reverse thrust

Communities close to Schiphol, most notably the small town of Vijfhuizen (see figure 7.1), experience noise hindrance by aircrafts decelerating after touchdown. Therefore, pilots are advised to use *idle reverse thrust* after touchdown instead of *full reverse thrust*. This noise abatement measure simply means that airplanes leave the engine idle and decelerate by using the brakes on the landing gear, leading to a positive effect on noise annoyance, most notably close to the runways. The Schiphol Aeronautical Information Publication reads:

Between 2030-0530 (2130-0630): After landing, the use of idle reverse thrust is advised on all runways except RWY 04/22, safety permitting. To achieve the highest possible runway capacity, runway occupancy times are to be reduced to a minimum.

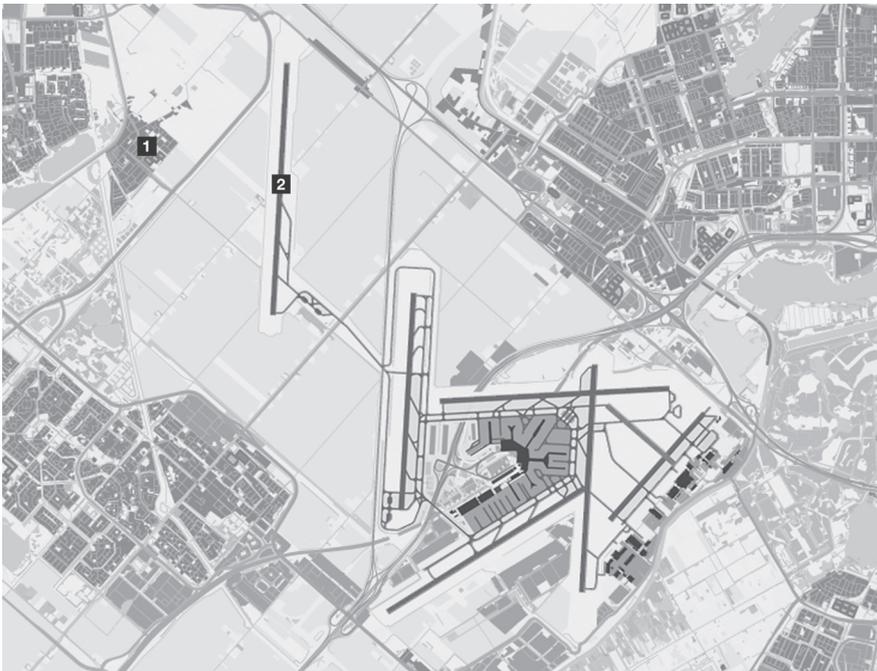
Described above is how Idle Reverse Thrust reads after closure. The remainder of the section is used to describe how closure emerged from controversy.

7.1.1. Taking into account

Perplexity

Most inhabitants around Schiphol experienced noise hindrance because of airplanes flying over their houses. However, the communities next to Schiphol also experienced noise hindrance by airplanes taking off, touching down and taxiing towards their runway or gate. Therefore, the Alders Table laid down several measures especially aimed at reducing noise hindrance in the direct surroundings of the airport, such as decreasing levels of ground noise in Hoofddorp-Noord, studying the total levels of ground noise in Badhoevedorp and Amsterdam West (and whether or not measures to decrease the total levels should be taken), forming a jurisprudential framework to measure ground noise (for standardization purposes), and implementing idle reverse-thrust recommendations. The last measure, idle reverse thrust, was seen as a quick-win as it is easy to implement: there is no need for technological changes within the airplane and an amendment of the Schiphol law would not be necessary. As long as a pilot thinks it is safe, he or she is allowed to use idle reverse thrust. In the case of Schiphol, idle reverse thrust has been used since 2007: perplexity arose when the measure was evaluated in 2009, and the human actants involved seemed to disagree about operational consequences of idle reverse thrust.

Figure 7.1: Location of Vijfhuizen (1) and the Polderbaan (2)



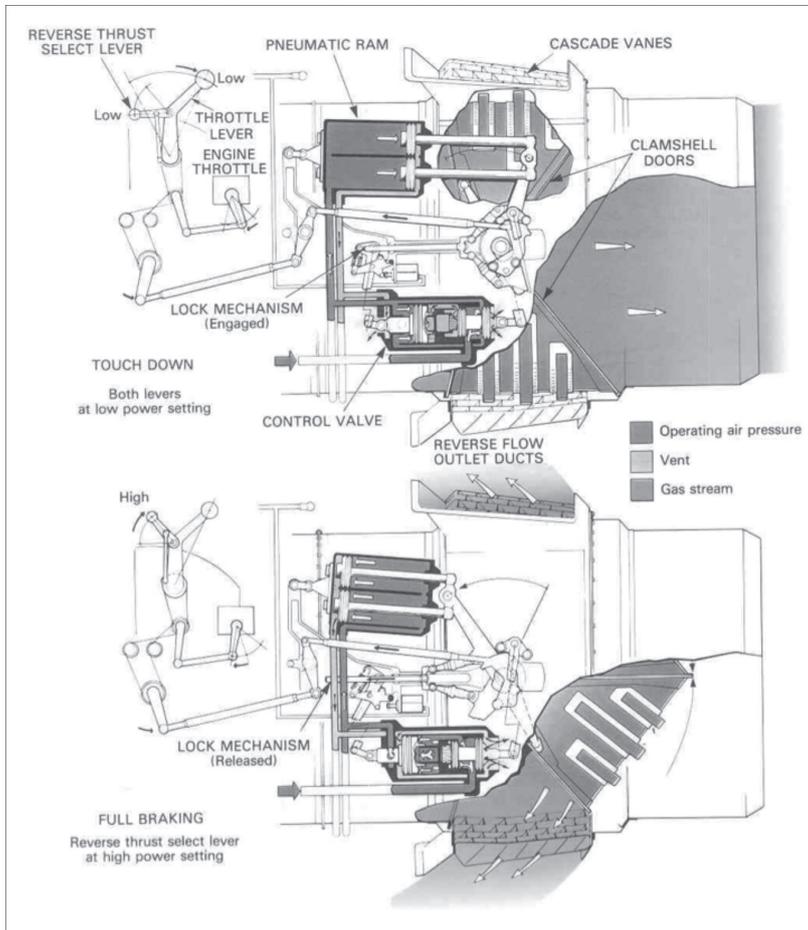
Source: Google Maps

Consultation

As mentioned previously, since October 2007 (as laid down in the Alders advice about the short-term) pilots have been advised to use *idle reverse thrust* after touchdown instead of *full reverse thrust*. Full reverse thrust, commonly referred to as reverse thrust or thrust reversal, is applied immediately after touchdown to improve deceleration.

Normally, the thrust produced by an aircraft is directed aft (see figure 7.2). When reverse thrust is selected, the aircraft engine's exhaust is diverted, so that the thrust produced is directed forward. Passengers can recognize the use of thrust reversal through the sudden increase in engine noise. This sudden increase in engine noise is also what leads to noise nuisance in the direct surroundings of a runway.

Figure 7.2: Idle reverse thrust



Source: Boeing online, 2011

Therefore pilots landing at Schiphol are advised to unlock their thrust reverser after touchdown, just as normal, but to leave the engine idling. Decelerating by using the brakes on the landing gear in combination with idle reverse thrust leads to a positive effect on noise annoyance, especially close to the runway.²⁹⁷ Idle reverse thrust can be used on all runways at Schiphol (during day and night), except for the Schiphol-Oostbaan (04/22), which is not long enough to use idle reverse thrust safely. Besides, idle reverse thrust is never compulsory. Ultimately, the pilot is responsible for flight safety. Therefore, he or she will only use idle reverse thrust if safety permits it.

Two studies on idle reverse thrust were conducted as far back as 2008. Local Community Contact Centre Schiphol (*Bewoners Aanspreekpunt Schiphol*, Bas) asked KLM pilots at the crew's quarters if they were familiar with the measure. 93% of a total of 40 pilots confirmed that they were. Next, monitoring along the runway showed that 76% (83) out of 109 aircraft used idle reverse thrust, 9% used medium reverse thrust, and 15% used full reverse thrust. Thus, idle reverse thrust was relatively widely known and implemented by pilots.

The second research was done by a Dutch market and policy research firm called Motivaction. It studies the effect of idle reverse thrust on noise annoyance by conducting questionnaires via telephone. It was a broad research, not only focusing on Vijfhuizen. In total, Motivaction conducted three measurements: the zero-measurement in October 2007, the first control measurement in February 2008 and the last control measurement in May 2008. During the last measurement, people were told that some procedures had recently been taken in order to reduce noise hindrance. Without saying which measures had been implemented, 68% of all respondents noticed no difference in noise hindrance between October 2007 and May 2008. More striking is that 24% of the respondents who did notice a difference preferred the old situation to the new one.²⁹⁸

In June 2009, CROS decided to conduct a small survey on noise annoyance in Vijfhuizen. From the 30 surveys that were conducted, 23% stated that they experienced hindrance due to aircraft landing on the Polderbaan. 25% of the 30 respondents noticed that, since 2007, aircraft had been making less noise during touchdown. However, 75% of all respondents declared that they experienced no difference with regard to noise annoyance since 2007.²⁹⁹

The results were not really ground-breaking, but the actants concerned believed that idle reverse thrust was a quick-win: it was easily implemented, because no amendment of the Schiphol law was necessary, idle reverse thrust had already been published in the Aeronautical

297 To70, 2010a: 17

298 CROS (2010: 2-3), Notitie adviserend CROS 'Idle Reverse Thrust'

299 CROS (2010: 3), Notitie adviserend CROS 'Idle Reverse Thrust'

Information Publication (AIP) and, last but not least, although the effect on noise annoyance was minimal, it did have a positive effect.

In 2009, two years after the measure was implemented, idle reverse thrust was evaluated on both noise abatement effects and operational effects. Until then, there seemed to have been no real controversy as the use of idle reverse thrust had been taken for granted.

A controversy emerged after KLM and LVNL, in the wake of the 2009 evaluation, published an overview of the operational consequences of idle reverse thrust. KLM concluded that not using full thrust reversal leads to a minor fuel-saving effect, but at the same time leads to extra deterioration of the aircraft brakes and wheels. Furthermore, in the specific case of the Airbus A330, the use of idle reverse thrust leads to longer turn-around times at the gate because it takes longer for the brake discs to cool down. The costs of the extra deterioration are estimated to be 1 million euro per year. Next to the additional costs, idle reverse thrust interferes with the landing procedures, as KLM pursues easy and standardized landing procedures for safety reasons. Before the idle reverse thrust evaluation, the AIP read:

- During daytime 0600-2200 (0500-2100): After landing, the use of idle reverse thrust is advised on all runways except RWY 04/22, safety permitting. To achieve the highest possible runway capacity, runway occupancy times are to be reduced to a minimum.
- During nighttime 2200-0600 (2100-0500): After landing, reverse thrust above idle shall not be used on any runway, safety permitting.

KLM believed that this advice to use idle reverse thrust in preference to full reverse thrust increased the workload in the cockpit. To conclude, the KLM stated that idle reverse thrust was a deviant measure, as modern aircraft are equipped with thrust reversers. These thrust reversers are implemented in modern aircraft design because of the primarily and effective braking function they fulfil. From the perspective of aviation, there is a strong urge to use the offered technique effectively. LVNL concluded after a quick-scan that, up to that point, there were no (negative) effects on runway capacity. However, LVNL also stated that the measure would not contribute to the intention to increase runway capacity.³⁰⁰

As a result of the published overview, the KLM requested another thorough evaluation of idle reverse thrust (in addition to the Motivation evaluation). Concerned actants at the Alders Table succumbed and

300 CROS (2010: 3-4), Notitie adviserend CROS 'Idle Reverse Thrust'

therefore, in December 2009, CROS commissioned the Team Vier research firm to carry out the noise-annoyance evaluation. Because Motivaction used a database with a fixed population,³⁰¹ a different firm was hired to minimize the chance that the same people from the same database would be interviewed again.³⁰² Only communities close to the airport (situated roughly 2.5 kilometres from the runways) were included in the research. Team Vier conducted 1152 surveys by telephone.³⁰³

91% of all respondents were satisfied or extremely satisfied with their living environment: the 9% of the respondents that scored their living environment as either neutral or unsatisfactory generally stated reasons other than noise hindrance due to aircraft. When asked if the respondents experienced noise annoyance as a result of aircraft, approximately one third said that they experienced noise annoyance. However, this annoyance is mostly a result of departing aircraft (43%) rather than of landing aircraft (19%). Even more remarkable is that the vast majority (65%) experienced the same levels of noise hindrance as two years ago, while 13% perceived an improvement, and 22% concluded that they were more annoyed by noise than they had been in 2007. To conclude, the research showed that respondents in Vijfhuizen were more familiar with idle reverse thrust and regarded the measure as a positive development.³⁰⁴

In addition to the Team Vier research, in January 2010 Haarlemmermeer asked To70 to research the operational effects of idle reverse thrust once more through a quickscan. To70 concluded that, contrary to what the KLM believed, idle reverse thrust did not lead to more maintenance costs and fuel costs compared to full reverse thrust. The research did underline that bigger aircraft in particular would need more turn-around time at the gate because of the increased time required to cool down the brake discs. To70 also believed that thrust reversers provide an extra safety and control factor during departures, landings and ground operations. Most notably, human factors can result in fatal errors: if thrust reversal is not deployed in time, a runway overshoot can occur. On 23 September 1999, Qantas flight QFA1 overran the runway at Bangkok while landing in heavy rain for a stop over. The Australian Transport Safety Bureau concluded

301 Motivaction gives people the opportunity to participate in research concerning Schiphol. One can send an email stating that they want to be part of the database and participate in future research concerning Schiphol.

302 This was the result of several consultations between CROS, KLM and Haarlemmermeer in October and November 2009.

303 In Zwanenburg (zipcode 1161, 174 surveys), Badhoevedorp (zipcode 1171, 147 surveys), Lijnden (zipcode 1175, 37 surveys), Aalsmeerderbrug (zipcode 1436, 16 surveys), Oude Meer (zipcode 1438, 9 surveys), Amstelveen (zipcode 1182, 30 surveys), Aalsmeer (zipcode 1431, 67 surveys), Aalsmeer (zipcode 1432, 176 surveys), Hoofddorp (zipcode 4350, 176 surveys), Hoofddorp (zipcode 4990, 176 surveys), and Vijfhuizen (zipcode 2141, 144 surveys).

304 Team Vier (2010: 48), onderzoek inzake effect Idle Reverse Thrust

that the Boeing 747-438 overran the runway because the thrust reversers were not deployed accurately, hence the aircraft did not decelerate enough. Qantas recently changed its policy, implementing idle reverse thrust as standard procedure. After the accident, the policy was changed again by the Australian airline.³⁰⁵

Because most runway overruns are the outcome of an inadequate deployment of thrust reversers and a growing number of airports are dictating idle reverse thrust as a noise-abatement measure, the International Federation of Air Line Pilots' Associations (IFALPA) stated in 2001 that: *IFALPA opposes any operating restrictions on the use of full reverse thrust for noise abatement reasons.*³⁰⁶ The International Civil Aviation Organization (ICAO) follows this line, stating that an AIP should read: *operational conditions permitting (or safety permitting), use idle reverse only.* But there are still AIPs that read *avoid reverse thrust above idle or prohibited to use reverse thrust above idle, except for provable safety conditions* (see box 7.2).

Box 7.2: Idle reverse thrust as stated in several AIPs

Frankfurt: *Reverse thrust, other than idle thrust, shall not be used between 2000 and 0400 (1900 and 0300) except when necessary for safety reasons.*

Paris Orly: *Reverse thrust or pitch reversing may only be used from 2200 to 0615 for safety reasons.*

Madrid Barajas: *The use of reverse power above from idle regime is forbidden at night time except for safety reasons, in this case, it must be notified to TWR and to Division de Medio Ambiente of the airport.*

Rome Fiumicino: *The use of the reverse thrust at power higher than idle is allowed only in the event of proven safety/operational reasons.*

Brussels Airport: *Except for safety reasons, reverse thrust shall not be used at other than idle power.*

Manchester Airport: *To minimize disturbance in areas adjacent to the airport, Captains are requested to avoid the use of reverse thrust after landing, consistent with safe operation of the aircraft, especially between 2300 and 0700 (local time).*

Stockholm Arlanda: *Do not use more than idle reverse or equivalent between 2100-0500 (2000-0400).*

Source: To70(2010: 23-24), Toepassing idle reverse thrust op Schiphol

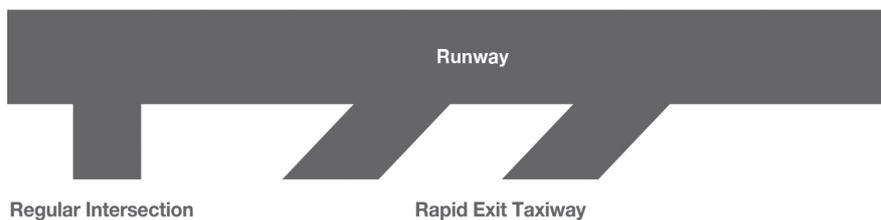
305 To70 (2010: 16), Toepassing idle reverse thrust op Schiphol

306 IFALPA PANS-OPS, Vol. I, Part V, Chapter 3, 3.5 AEROPLANE OPERATING PROCEDURES – LANDING.

The To70 research showed that idle reverse thrust led to aircraft occupying the runway longer than was the case when they used full reverse thrust. Runways at Schiphol have Rapid Exit Taxiways (RETs) and Regular Intersections (see figure 7.3). Runway capacity is – among other factors – defined by the total amount of time that an aircraft occupies the runway. If an aircraft can depart from the runway relatively quickly through one of the RETs, total runway capacity will increase. One motivation to use full reverse thrust could be the time gained by exiting through a Rapid Exit Taxiway.³⁰⁷

To conclude, the research showed how idle reverse thrust had a positive effect on the total amount of aircraft noise (see figure 7.4 and 7.5), most notably for communities close to the runways.

Figure 7.3: Regular Intersection and Rapid Exit Taxiway at a Runway.

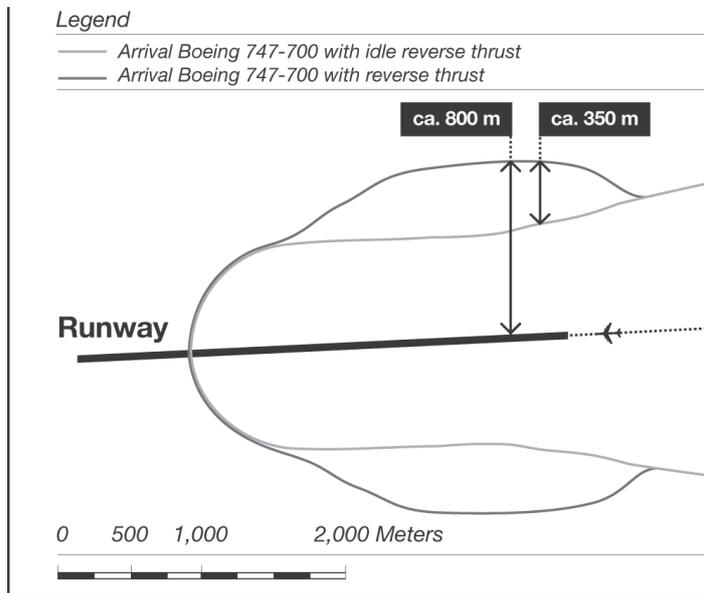


Source: To70(2010: 6), *Toepassing idle reverse thrust op Schiphol*

Concerned spokespeople had a say in the consultation phase. Now, the power to take into account has been completed. Indeed, human actants deployed numerous immutable mobiles in order to transform their statements into facts. However, it was still not clear how the associations had been rearranged. To find out, it was time to turn to the power to arrange in rank order.

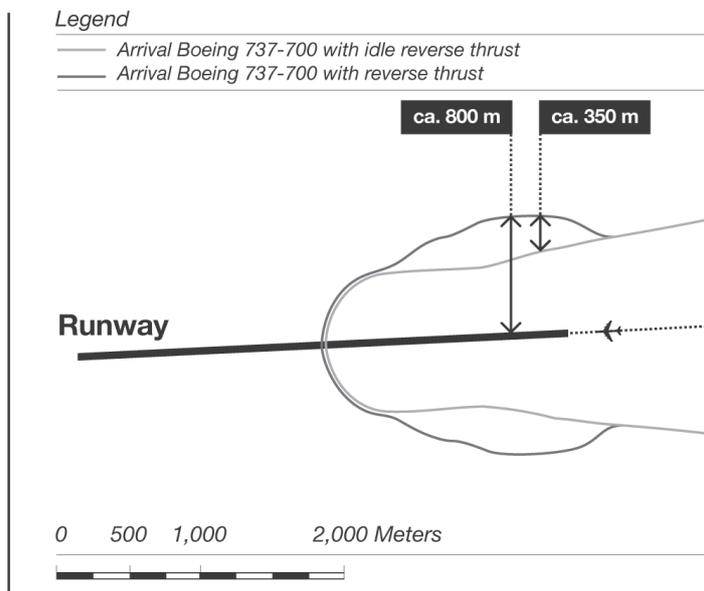
307 To70 (2010: 6), *Toepassing idle reverse thrust op Schiphol*

Figure 7.4: Boeing 747 noise footprint using idle reverse and full reverse thrust



Source: To70(2010: 20), Toepassing idle reverse thrust op Schiphol

Figure 7.5: Boeing 737 noise footprint using idle reverse and full reverse thrust



Source: To70(2010: 21), Toepassing idle reverse thrust op Schiphol

7.1.2. Putting in rank order

Hierarchy

During the CROS plenary meeting of 24 June 2010, it became clear that – considering all data – the KLM did not want to implement idle reverse thrust during the daytime. In other words, they wanted to delete the following sentence from the AIP: *during daytime 0600-2200 (0500-2100): after landing, the use of idle reverse thrust is advised on all runways except RWY 04/22, safety permitting. To achieve the highest possible runway capacity, runway occupancy times are to be reduced to a minimum.* On the other hand, Haarlemmermeer wanted to leave the AIP as it was, because of the positive effect on noise annoyance in Vijfhuizen. This led to a stalemate and the parties concerned concluded that the matter should be settled at the Alders Table.

During the Alders Table of 14 December 2010, Ype de Haan (Executive Vice President Operations and COO at KLM) presented a report written in conjunction with LVNL, in which they explain why idle reverse thrust should only be considered during 22:00 and 06:00. KLM and LVNL used the same arguments as mentioned previously. In the wake of the mainport objective, runway capacity in particular was an important reason why KLM believed that idle reverse thrust could only be implemented between 22:00 and 06:00. The BRS and inhabitants were disappointed and Ype de Haan promised that KLM and LVNL would research whether or not idle reverse thrust could be implemented before 22:00 and after 06:00 at off-peak moments.³⁰⁸

In that perspective, LVNL researched the possibilities to use the Automatic Terminal Information Service (ATIS) during off-peak moments, to point out to pilots that idle reverse thrust can be used. ATIS is a continuous broadcast of recorded information in busier airport areas. ATIS broadcasts contain essential information, such as weather information, which runways are active, available approaches, and any other information required by pilots. Pilots usually listen to an available ATIS broadcast before contacting the local air traffic controller, in order to reduce the controllers' workload and relieve frequency congestion. However, the peak moments at Schiphol are relatively unpredictable, meaning that pilots would be confronted with a constantly updating ATIS system. To tackle this problem, a different software algorithm is necessary. Because the current software system used by the LVNL is based on older software architecture, updating the system leads to unpredictable consequences and instability. The only way to overcome this problem is to manually overwrite the source code, and LVNL avoids alteration of the source code

308 Alders Table minutes, 14 December 2010

where necessary because this could endanger the whole air traffic control system.³⁰⁹ This conclusion was communicated to the other actants at the Alders Table of 3 March 2010. The inhabitants asked LVNL and the KLM to search for other opportunities and re-examine the possibility of implementing idle reverse thrust before 22:00 and after 06:00. The reason for this question was that the inhabitants and BRS did not believe that, with the current volume of air traffic movements, capacity would be endangered when idle reverse thrust is used.

At the next Alders Table (19 June 2011), the KLM and LVNL showed how idle reverse thrust could be implemented from 21:30 until 06:30. However, the parties had to realize that, if runway capacity or safety is an issue, pilots are advised to use full reverse thrust in preference to idle reverse thrust.³¹⁰ The inhabitants and the BRS were still not completely satisfied, but they realized that this was all they were going to get.

Closure

And so the idle reverse thrust controversy was settled in June 2011. A measure that was seen as a quick-win concerning noise-hindrance reduction – idle reverse thrust – turned into a controversy as KLM questioned its impact on the operation (runway capacity) and the financial consequences. Supporters and opponents of idle reverse thrust deployed several immutable mobiles and eventually the KLM managed to convince all actants that idle reverse thrust could only be implemented between 21:30 and 06:30. Therefore the AIP text was altered:

Between 2030-0530 (2130-0630): After landing, the use of idle reverse thrust is advised on all runways except RWY 04/22, safety permitting. To achieve the highest possible runway capacity, runway occupancy times are to be reduced to a minimum.

7.2

Radius-to-fix technique: CROS pilot 3b

On 20 October 2011, Joop Atsma, State Secretary of Infrastructure and the Environment, sent a letter to the Cabinet in which he explained that he had decided that an amendment of the Schiphol Law was needed in order to implement CROS pilot 3b+: an experiment as laid down in article 8.23a of the Dutch Aviation law.³¹¹ The experiment focused on

309 Alders Table minutes, 3 March 2011

310 Alders Table minutes, 19 June 2011

311 TK 29665, Nr.169, 2011.

the implementation of the so-called ‘radius-to-fix technique’ between Hoofddorp and Nieuw-Vennep. This technique is used in order to navigate a route more precisely, leading to smaller dispersion of the flight tracks in comparison to conventional navigation. CROS pilot 3b+ was regarded as a success with 219 fewer people severely hindered by noise nuisance in Hoofddorp, and 62 fewer in Nieuw-Vennep. However, this was how the story read after closure: this section shows through the power to take into account and the power to arrange in rank order that many voices disappeared behind the above-described closure.

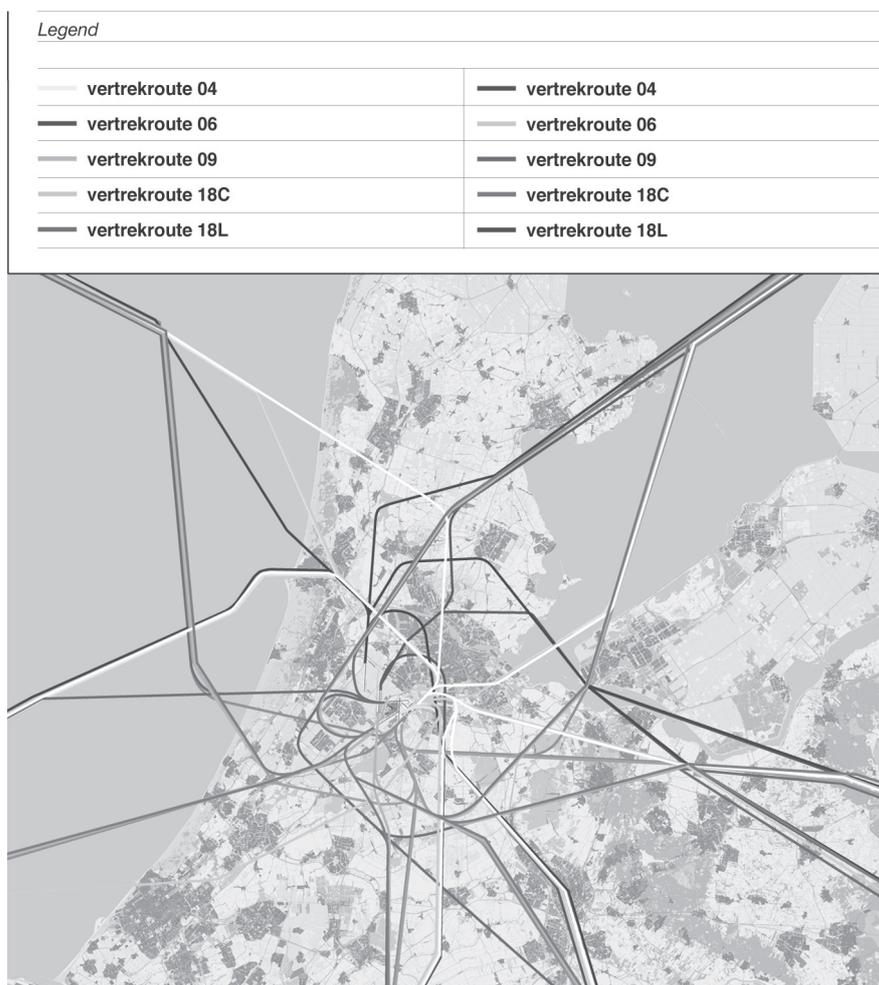
7.2.1. *Taking into account*

Perplexity

Schiphol has about twenty different departure and arrival routes (see figure 7.6). Some of these routes can be as old as 40 years. One such route is the Spijkerboor departure: this route departs from the Kaagbaan and is situated between the communities of Haarlemmermeer and Nieuw-Vennep (see figures 7.7 and 7.8). The problem with this route was that the flight paths conventionally showed a significant dispersion. This meant that aircraft flew over both Hoofddorp and Nieuw-Vennep instead of between the two communities (see figure 7.9).

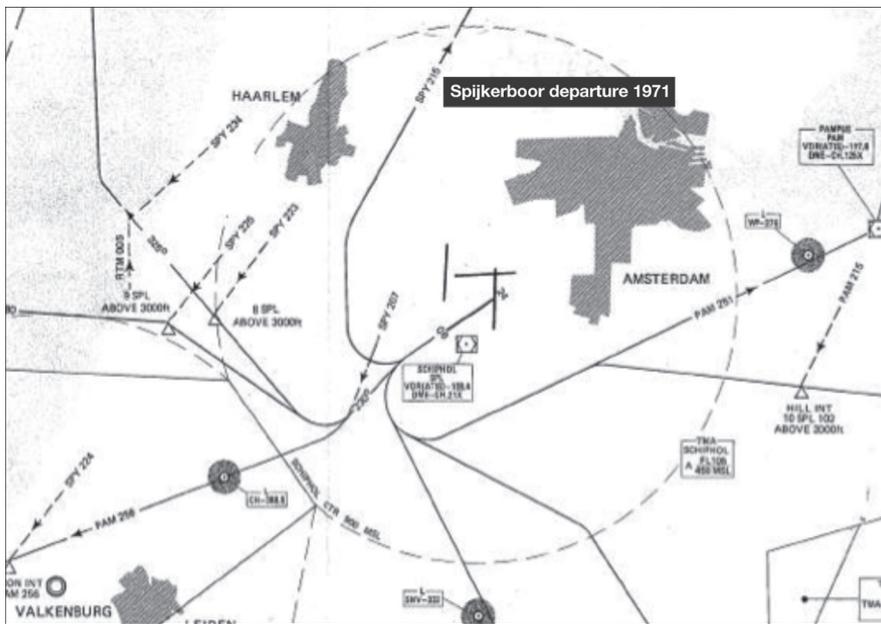
Therefore, in the Alders advice for the short term, it was decided that KLM would experiment with the implementation of the so-called radius-to-fix technique (also known as a RF-leg) on the Spijkerboor departure. A radius-to-fix coding in the navigation database of an aircraft describes a turn as an arc on the map. Aircraft equipped with the necessary navigation systems try to navigate the same path, resulting in smaller dispersion of the flight tracks compared to conventional navigation (see figure 7.10). Normally, this technique is primarily used for arrival routes, especially in mountainous terrain. KLM believed that the principle could also be used for departure routes, and made a route design for the Spijkerboor departure using the radius-to-fix coding. In this way, by concentrating air traffic in between Hoofddorp and Nieuw-Vennep, air-traffic nuisance could be limited. But CROS pilot 3b concentrated air traffic above Floriande, a neighbourhood in Hoofddorp with more than 17,000 inhabitants. The inhabitants of Floriande opposed CROS pilot 3b and stirred up quite some controversy.

Figure 7.6: Departure and Arrival routes at Amsterdam Airport Schiphol during the day



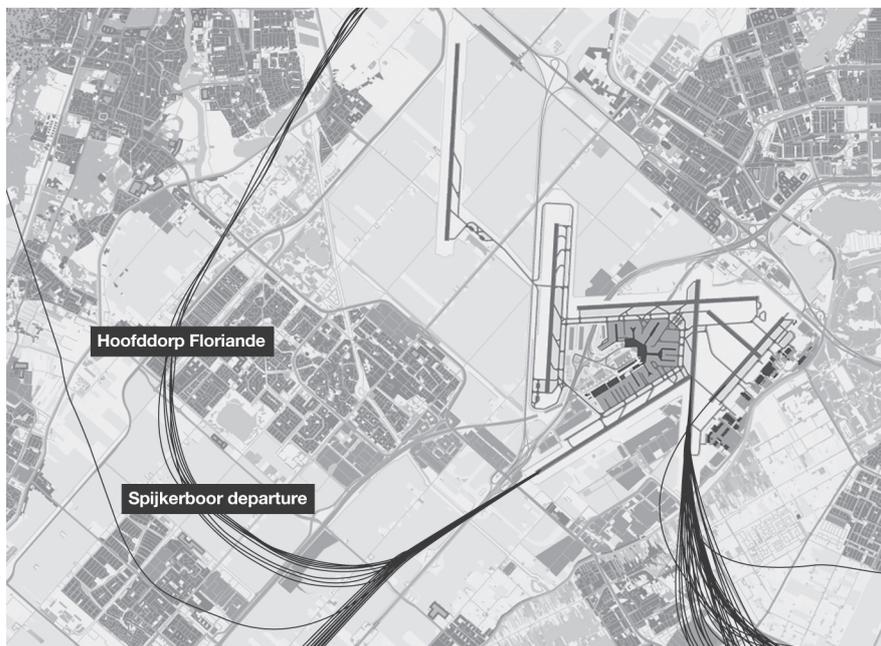
Source: Bewoners Aanspreekpunt Schiphol, 2011

Figure 7.7: Original Spijkerboor departure in 1971



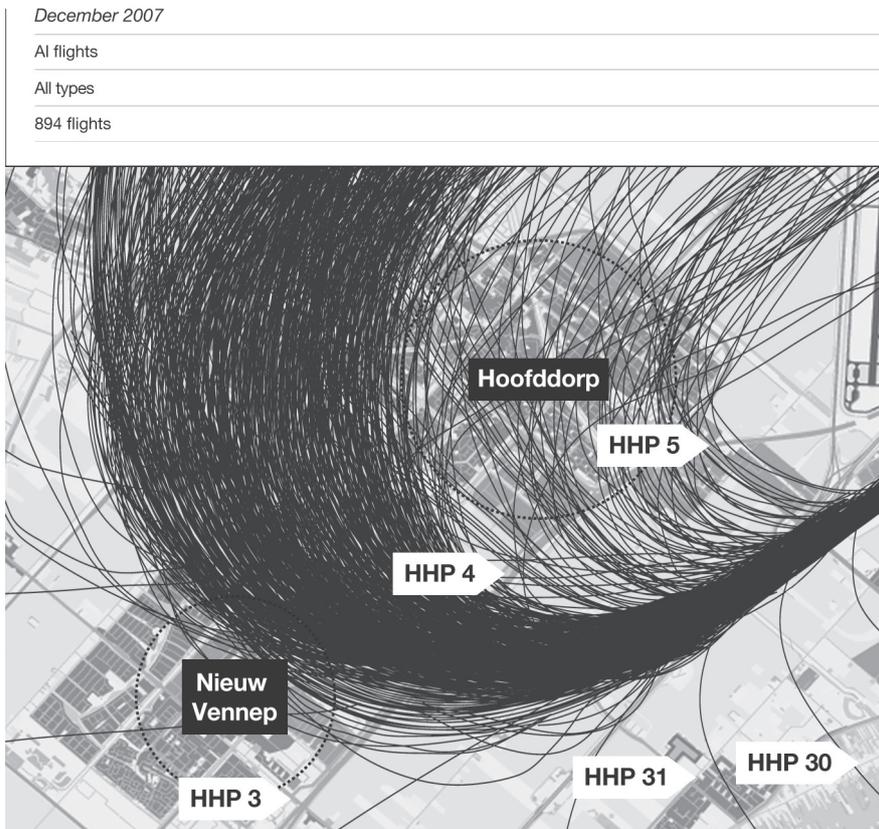
Source: KDC-Mainport, 2010: 4

Figure 7.8: Spijkerboor departure in 2011



Source: Vliegverkeer Inzicht Online, 2011

Figure 7.9: Dispersion of flight paths from the Spijkerboor departure, December 2007



Source: CROS, 2007: 12

Figure 7.10: Effect of the radius-to-fix technique (black flight paths) in relation to the conventional SID Kaagbaan Departures (white flight paths).



Source: CROS, 2010: 23

Consultation

The RF-leg route design for the Spijkerboor departure, called CROS pilot 3b,³¹² was temporarily taken into operation as an experiment as laid down in article 8.23a of the Dutch Aviation Law. During the first year of trial, only the Boeing 737 aircraft of KLM flew the new Standard Instrument Departure (SID). A SID is a published flight procedure followed by aircraft on a flight plan immediately after take-off: it is a map of the departure, so to speak, and every departure has its own SID. The experiment could be operated in conjunction with the use of the conventional SID by all other traffic on the Spijkerboor departure, while maintaining flight safety and without increasing the air traffic control workload.³¹³ An important notion of CROS pilot 3b was that, if the experiment was successful, every aircraft capable of flying the radius-to-fix technique should participate.³¹⁴ After the trial year had been prolonged with another year, on 6 July 2009 CROS advised the former Ministry of V&W to convert the experiment to a definite measure because of the positive effects the experiment had on noise annoyance.

However, although CROS and the Alders Table evaluated the experiment as a success, not everyone was enthusiastic about CROS pilot 3b. People living in Floriande, a neighbourhood in Hoofddorp with more than 17,000 inhabitants, strongly opposed the continuation of the experiment. Floriande is a so-called 'VINEX neighbourhood': VINEX stands for *Vierde Nota Ruimtelijke Ordening Extra* ('Fourth report on national planning extra', 1994) and the main focus of the report was that it designated large outer city areas for massive new housing developments. However, the *Nota Ruimte* (Sixth report on national planning, 2004) introduced the 20Ke contour around Schiphol. Within this contour, new developments were only allowed if more houses were demolished than built. The *Nota Ruimte* also stated that, within the 20Ke contour, massive new housing developments (such as the VINEX neighbourhoods) were not allowed, except for Haarlemmermeer West (Floriande), Legmeerpolder and Noordwijkerhout. Many people in Floriande complained that they had bought a house without knowing about the Spijkerboor departure. Moreover, they did not understand that the national government had allowed Floriande to be built knowing that the neighbourhood would be located partly inside and partly outside the 20Ke contour within which the building restrictions applied. CROS pilot 3b, which concentrated air traffic above Floriande, led to vehement protests. Now that the power to take into account has been followed, it is time to turn to the power to arrange in rank order to examine out how closure was reached.

312 The experiment was initiated by CROS, hence the name.

313 See KDC-Mainport project CROS pilot 3b RF-Leg, <http://www.kdc-mainport.nl>

314 Boeing 747s for instance are not equipped to fly a RF-Leg

7.2.2. Putting in rank order

Hierarchy

Although the experiment was judged to be a success, the fierce protests of Floriande did have an effect. As Alderman Bezuijen of Haarlemmermeer spoke to representatives of Floriande on several occasions, he decided to try to do something for the neighbourhood. Of course, after all the positive feedback that CROS pilot 3b had received this was no easy task. Therefore, Alderman Bezuijen agreed with the positive evaluation of the experiment, but he demanded that the advice of 6 July should mention that Haarlemmermeer agreed with evaluation, but that an optimization of the RF-leg had to be researched before all aircraft were allowed to fly the Spijkerboor RF-leg (this project is called CROS pilot 3b+). And so the CROS pilot 3b+ *accent* was born. The project investigated the potential to improve the location of the radius-to-fix turn, and came up with two alternate route designs (see figure 7.11).³¹⁵ Furthermore, the municipality stressed that, in their opinion, the only durable solution was a different route design for the Spijkerboor departure altogether.

The first option had the most positive effect on Floriande, but led to more annoyance in Nieuw-Vennep, Zwaanshoek and Cruquius, as well as other communities outside Haarlemmermeer. Option 2 would also lead to more annoyance in previously mentioned communities. Moreover, option 2 was still located over Floriande. Mostly because of more noise nuisance in Nieuw-Vennep, a community already heavily plagued by other departure routes, Haarlemmermeer decided to drop the subject of optimization. However, during the CROS plenary meeting in February 2010 – a month before local elections – Alderman Bezuijen stated he still did not want to start with CROS pilot 3b+ until two questions had been answered:

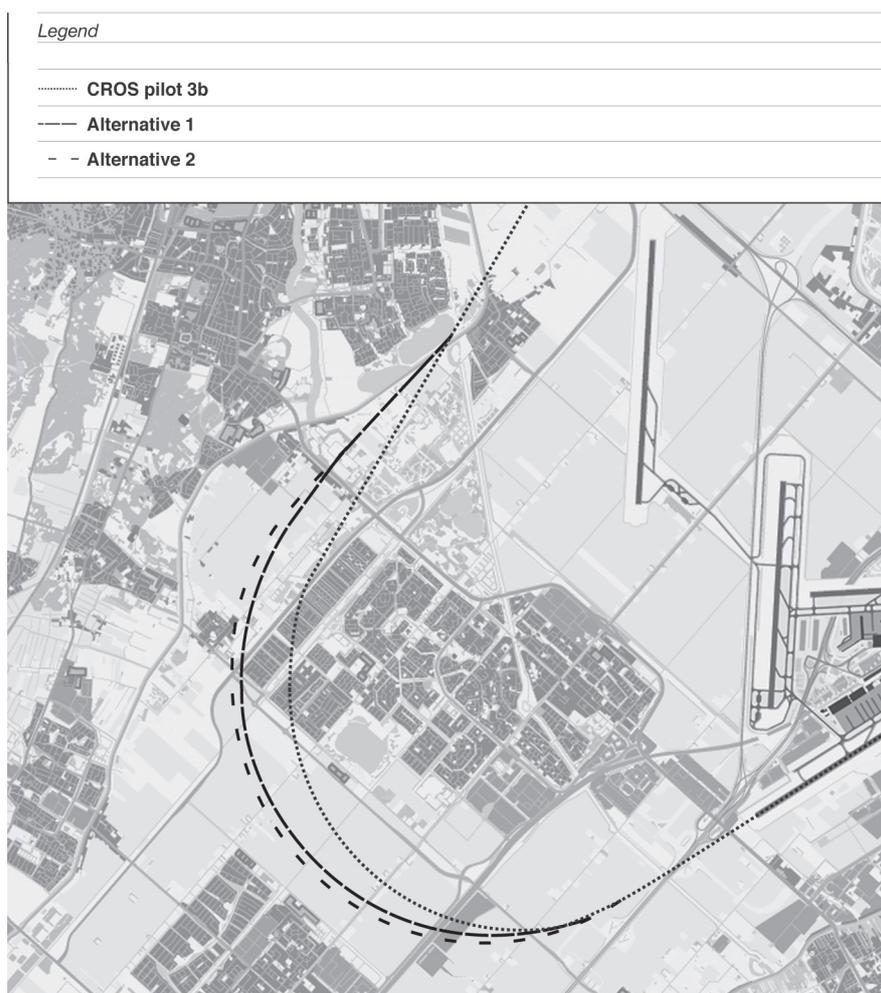
1. Have all optimization options been researched?
2. Is freezing the CROS pilot 3b situation (only KLM Boeing 737 fly the RF-leg) an option?

CROS, KLM, LVNL and Haarlemmermeer collaborated to answer the questions, and two months later it could be concluded that all optimization options had been researched, that KLM did not want to freeze the situation, that a standardized operation was necessary because of safety reasons, and that, last but not least, all actants concerned agreed that going back to the situation before the implementation of the RF-leg – thus, dispersing the flights again – would be undesirable. During the CROS plenary meeting in April 2010, Haarlemmermeer stated it would no longer

315 CROS report on pilot 3b accent, 2009: 3

oppose the start of CROS pilot 3b+. The municipality did stress again, however, that an alternative route design for the Spijkerboor departure was the only durable solution to reduce noise annoyance. Alderman Bezuijen did have two additional demands: noise levels within Floriande should be monitored by installing an extra noise-monitoring control position by NOMOS (control position 47), and four consultation rounds with concerned inhabitants had to be organized. And so, on 21 October 2010, the first trial year of CROS pilot 3b+ commenced.³¹⁶

Figure 7.11: CROS pilot 3b and two alternate route designs



Source: CROS report on pilot 3b+ accent, 2009: 4

During the trial year, three consultation rounds were organized. Over the course of the summer of 2011, the consultation round was cancelled because a suitable date could not be found by CROS. During the consultation rounds, it became clear that Nieuw-Vennep was contented with the experiment, while Floriande – not surprisingly – was not. The other participating communities were divided. Zwaanshoek, for instance, was also convinced that CROS pilot 3b+ led to more noise nuisance. Kees van Ojik, the CROS representative, believed that Floriande should not forget that, as a consequence of CROS pilot 3b+, other people were less annoyed by aircraft noise, and that small communities such as Lijnden and Zwanenburg were much more afflicted than Floriande.³¹⁷ In the meantime, the noise-monitoring control position 47 in Floriande was also evaluated. The Schiphol Group – which owns all NOMOS control positions – believed that there was no reason to believe that the experiment led to extremely high noise events in Floriande.³¹⁸ However, BAS did register an increase in total complaints coming from Floriande during the first year of the experiment. Some of the peaks, however, could be linked to press attention for CROS pilot 3b+. And in November 2010, the neighbourhood council of Floriande summoned inhabitants to complain about CROS pilot 3b+, leading to a peak in registered complaints at BAS.³¹⁹ What stands out is that the top 5 of specific cases with the most complaints registered at BAS during the trial year are, almost without exception, Boeing 747 full freighters departing from the Spijkerboor runway between 20:00 and 22:00, which are not capable of flying the RF-leg and thus not part of the experiment.

Because the trial year ended in October 2011, CROS and the Ministry of I&M already started the preparations and data gathering for the evaluation during the summer. To70 was asked to evaluate the impact of CROS pilot 3b+ on noise contours and sound levels. Motivaction was asked to research the effect of the experiment on noise annoyance. Noise-monitoring control position 47 and the registered complaints at BAS were also used in the evaluation. To conclude, the operational effects were evaluated. Using all the data together, CROS would advise the State Secretary, who will use this advice in his consideration to implement the experiment, to prolong it for one more year, or to cancel the experiment.

The To70 report shows that sound levels directly under the RF-leg increased by 0.09 dB(A) Lden compared to the situation prior to CROS pilot 3b+ (when only the KLM Boeing 737s were flying the RF-leg). In Nieuw-Vennep, sound levels decreased by 0.16 dB(A) Lden and in

³¹⁷ Consultation round minutes, 2010 and 2011

³¹⁸ Ministry of I&M (2011: 23), Evaluatie Experimenten Hinderbeperkende maatregelen Schiphol: CROS Pilot 3b+.

³¹⁹ Bewoners Aanspreekpunt Schiphol (2011: 1), Analyse meldingen focusgebied CROS Pilot3B+.

Hoofddorp by 0.07 dB(A) Lden. These are no ground-breaking changes.³²⁰ The Motivaction report shows how the total quantity of people severely hindered by noise nuisance increased by 9% in Floriande. Noise annoyance also increased in Floriande. However, as the total amount of Spijkerboor departures increased by 65% compared to the base situation, one cannot conclude that the increase in noise hindrance is a direct result of CROS pilot 3b+.³²¹ However, in total, the CROS pilot 3b+ led to 62 fewer people who were severely hindered by noise nuisance in Nieuw-Vennep, and 219 fewer people severely hindered in Hoofddorp, including Floriande. To conclude, the experiment was a success when looking at the operational effects. CROS pilot 3b+ maintained flight safety without increasing the air traffic-control workload.³²² One striking detail is that only 41% of all traffic on the Spijkerboor departure uses the radius-to-fix technique. The actants concerned assumed that participation would be close to 70% during the trial year. No distinctive reason for this difference could be found, except perhaps that pilots were not familiar with CROS pilot 3b+ and air traffic control was not allowed to inform them (again because of standardization of the operation for safety reasons).³²³

Closure

As a result of the evaluation report, the CROS members decided to advise the State Secretary to implement CROS pilot 3b+ during the CROS plenary meeting of 29 September 2011. A week prior to the meeting, the Northern cluster decided to leave the CROS because they believed that the consultative body no longer played an important role in the Schiphol file, as all decisions were being made at the Alders Table. Furthermore, two months prior to the plenary meeting, CROS chairman Nico Schoof had decided to resign, as he held the opinion that he had not been successful in giving CROS a more decisive role. The main discussion during the meeting was about the future of CROS in relation to the Alders Table. CROS pilot 3b+ sparked no discussion at all, and within one minute it was decided that CROS would advise the State secretary to implement the experiment. On 20 October 2011, the State Secretary of Infrastructure and the Environment, Joop Atsma, followed the advice of CROS and sent a letter to the Cabinet stating that he wanted to implement CROS pilot 3b+.³²⁴ And thus, despite all protests by Floriande, CROS pilot 3b+ was implemented after 4 years of experimentation with the RF-leg.

320 To70 (2011: 24), Geluidbelasting en RO t.b.v. evaluatie CROS pilot 3b+.

321 Motivaction (2011: 12), Onderzoek hinderbeleving 'CROS pilot 3b plus'.

322 Ministry of I&M (2011: 30), Evaluatie Experimenten Hinderbeperkende maatregelen Schiphol: CROS Pilot 3b+.

323 Consultation round minutes, 2011

324 TK 29665, Nr.169, 2011.

7.3

Alternate route design for the Spijkerboor departure

In January 2011 the BRS issued a press release that stated that the Spijkerboor departure would not be relocated as there was not enough support within the BRS for an alternative route. It was stressed, however, that in the near future, when a new ATM system was to be implemented, the BRS would be willing to reconsider relocating the Spijkerboor departure.³²⁵ In this last section, the described closure will again be analysed by following controversies from the beginning of policy-in-the-making to the closed black box of ready-made policy.

7.3.1. Taking into account

Perplexity

During the CROS pilot 3b experiment (see section 7.2), the Municipality of Haarlemmermeer continued to stress on several occasions that an alternate route design for the Spijkerboor departure was the only comprehensive solution to decrease noise nuisance in Floriande. The Kaagbaan is one of the busiest runways on Schiphol, and has seven departure routes (see figure 7.12). The Spijkerboor departure is used approximately 7,800 times per year (only during daytime), which equals 20 air transport movements per day.³²⁶

Article 16 of the Alders advice for the mid-term deals with alternative route designs for both the Kaagbaan and Aalsmeerbaan, and reads *that there are opportunities for a net reduction of noise hindrance by relocating the Spijkerboor departure.*³²⁷ The actants concerned have to propose an experiment in which noise abatement effects, operational effects and effects on spatial planning should be considered. And so, perplexity arises, as alternatives for the Spijkerboor departure are researched. However, it is not clear *which* alternatives, and *what* the designs will look like.

Consultation

The Alders advice presented two alternative route designs: the first option is to bundle the Spijkerboor with the Bergi departure (option 1 in figure 7.13), and the second option is to make a turn directly after Nieuw-Vennep and fly towards sea (option 2 in figure 7.13). At the same time, NLR was asked by the municipalities of Aalsmeer, Uithoorn, Amstelveen and Haarlemmermeer to provide a second opinion concerning the alternative

325 Press release: "Geen nieuwe uitvliegeroute Kaagbaan", Januari 2011.

326 BRS (2011: 2), Internal BRS report concerning the alternate route designs.

327 Alders, H. (2008: 18), Alders advice for the mid term, covenant hindrance reduction.

route designs for both the Kaagbaan and Aalsmeerbaan.³²⁸ Concerning the Kaagbaan, NLR proposed two alternatives: the first one was the same as option 1 of the Alders advice, whereas the second option followed the original path of the Spijkerboor departure, only to fly directly towards the sea, between the communities of Hillegom and Bennebroek (option 3 in figure 7.13). A fourth alternate route design was formulated by LVNL: option 3 was too dangerous as the flight path heads toward the Bergi departure. Therefore Henk Waltman of the LVNL suggested a 330-degree turn as option 3: the *Waltman option* (option 4 in figure 7.13).

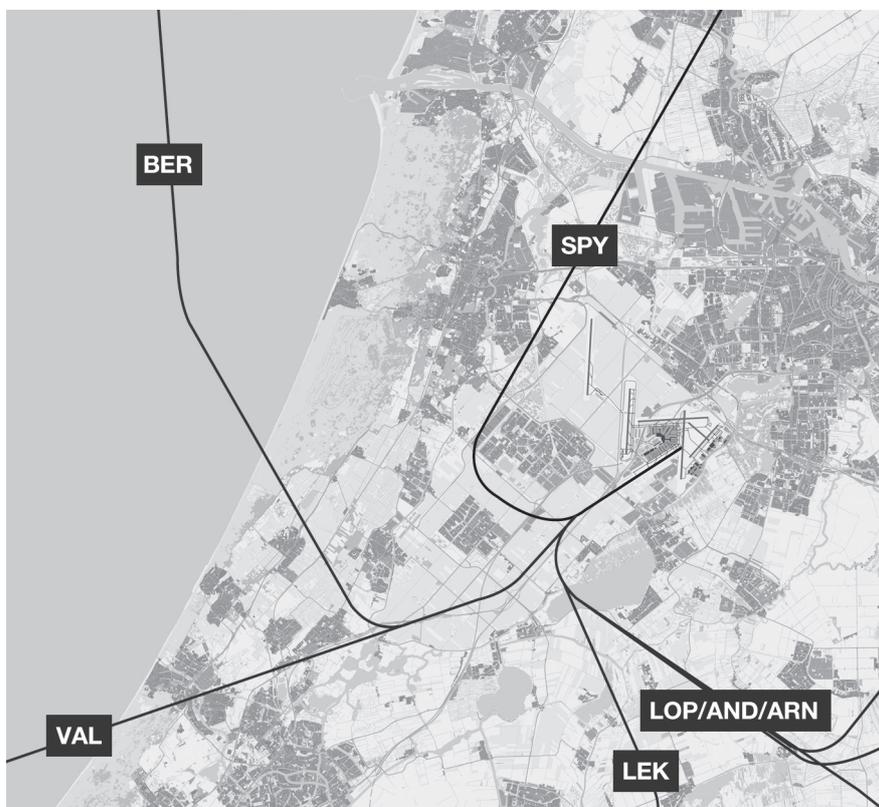
In December 2009, KLM, LVNL, Schiphol Group, BRS and the former ministries of V&W and VROM decided that BRS would research all four alternatives and look specifically at noise-abatement consequences, effects on the capacity of Schiphol, and the effect on spatial developments. The BRS would formulate a joint statement and send a letter to Hans Alders explaining their viewpoint.³²⁹

Options 1 and 2 led to fewer severely hindered people within the 48 dB(A) Lden contour: option 1 accounts for 11,000-13,800 fewer severely hindered people, whereas option 2 led to 8,500 fewer severely hindered people (see table 7.1). This was mostly caused by the fact that the 48 dB(A) Lden contour shifted from densely populated areas to less densely populated areas. This resulted in *new* severely hindered people: inhabitants that were not or only scarcely annoyed by aircraft noise before the contours were redefined.

328 NLR (2008: 22), Effecten van routeverleggingen Schiphol voor gemeenten Aalsmeer, Amstelveen, Haarlemmermeer en Uithoorn

329 BRS minutes, 13 January 2011.

Figure 7.12: All Kaagbaan departures: Spijkerboor, Bergi, Valko, Lopik, Andik, Arnem and Lekko



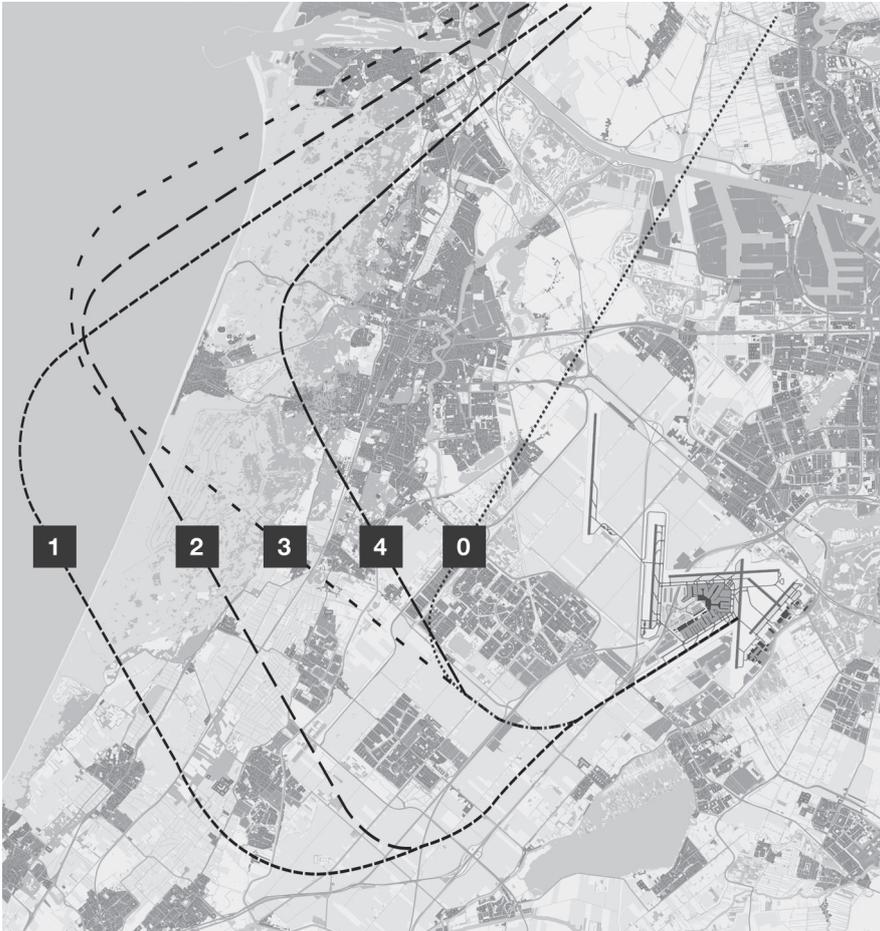
Source: Alders advice for themid-term, covenant hindrance reduction, 2008: 145

Table 7.1: Noise abatement and operational effects of options 1, 2 and 3.

	SPY 1	SPY 2	SPY 3
Total amount of severely hindered people within the 48 Lden (compared with SPY 0 without RF-leg)	range -11,000 / -13,000	-8,000	-4,900
New severely hindered people within the 48 Lden (compared with SPY 0 without RF-leg)	range 4,400 / 6,000	8,000	6,300
Total amount of houses within the 58 Lden (compared with SPY 0 without RF-leg)	range 200 / 275	200	-135
Safety risks in relation to the BERGI-route	No	No	yes, route converges towards BERGI
Safety risks in relation to the BERGI-route Hourly runway capacity Kaagbaan (compared with SPY 0 without RF-leg)	-8 VTBs = ATM per hour	-8 VTBs = ATM per hour	0

Source: Internal BRS report concerning the alternative route designs, 2011: 5

Figure 7.13: Alternate route designs for the Spijkerboor departure



Source: Internal BRS report concerning the alternate route designs, 2011: 2

From operational perspectives, both options were safe and did not result in extra workload for the air traffic controller. But because the alternate route designs followed the Bergi departure for a longer time than the Spijkerboor departure did, runway capacity would decrease. LVNL believed that both option 1 and option 2 would lead to a runway capacity of 30 departures per hour instead of the current 38 departures. A decrease in runway capacity on only the southern runway configuration (Kaagbaan and Aalsmeerbaan) was not necessarily a bad thing. However, the runway capacity system at Schiphol (with the incoming and outgoing peaks) needs a constant departure capacity equal to the southern and northern runway (Polderbaan and Zwanenburgbaan) configuration (74 per hour). Decreasing the departure capacity on the southern runway configuration leads to a decrease

on the northern runway configuration as well. Because this leads to longer peak moments, connecting flights have to arrive earlier or depart later than usual, endangering the mainport ambitions of Schiphol as laid down in the Alders advice.³³⁰ Therefore, the Schiphol Group, KLM and LVNL opposed option 1 and option 2.

Option 3 led to 4,900 fewer people who were severely hindered by noise nuisance. The alternative route design also had no effect on runway capacity. The drawback was that option 3 heads toward the Bergi departure, so LVNL concluded that option 3 was impossible to fly, from a safety perspective.

So this only left option 4. The Province of Noord-Holland took the initiative in researching the effects of this alternative route design. It was concluded that option 4 would lead to 2,250 fewer people suffering noise nuisance within the 48 dB(A) Lden contour. Especially within Haarlem (-4,450), Haarlemmermeer (-2,080), and Zaanstad (-1,620), the total quantity of severely hindered people would decrease. Velsen (+3,010), Bloemendaal (+1,530) and Heemstede (+760) would undergo an increase in the number of people severely hindered by noise nuisance. Option 4 had no effect on runway capacity and did not lead to dangerous situations. The alternative route avoided densely populated areas and lay mostly over the secluded Zuid-Kennemerland national park. Therefore, this alternate route design seemed to a feasible option (see table 7.2). However, the route interfered with a Polderbaan arrival route. Only when a new ATM system³³¹ becomes operational in 2020, and the arrival route is repositioned away from the Dutch coastline, can option 4 be implemented.

Table 7.2: Noise abatement and operational effects of option 4.

	SPY 4 compared to SPY 0 with RF-leg
Total amount of severely hindered people within the 48 Lden (compared with SPY 0 with RF-leg)	-2,250
New severely hindered people within the 48 Lden (compared with SPY 0 without RF-leg)	6,500
Total amount of houses within the 58 Lden (compared with SPY 0 without RF-leg)	-40
Safety risks in relation to the BERGI-route	No
Hourly runway capacity Kaagbaan (compared with SPY 0 with RF-leg)	0 Vtb/hr = ATM per hour

Source: Internal BRS report concerning the alternative route designs, 2011: 6

330 BRS (2011: 5-6), Internal BRS report concerning the alternative route designs, 2011: 5-6.

331 Air Traffic Management

7.3.2. Putting in rank order

Hierarchy

Although the fourth alternative route design is not an option until 2020, it remains the sole feasible alternative. If concerned actants want to implement this alteration to departure routes, one must not wait until 2020. But in their report, the Province of Noord-Holland eventually took a strange leap...

When it came to assessing noise hindrance measures, the effect on the environmental criteria and norms were taken as a starting point. This meant that the effect on the total quantity of houses within the 58 dB(A) Lden contour (per 1 January 2005), the total number of people severely hindered by noise nuisance within the 48 dB(A) Lden contour, and the total number of people whose sleep was disturbed was taken into consideration. Because the Spijkerboor departure was only used during daytime, the effects on people whose sleep was disturbed fell outside the scope of the research. Of course, everybody knows that aircraft annoyance does not stop all of a sudden outside the 48 dB(A) Lden contour, just as there are enough people within the 48 dB(A) Lden contour who are not annoyed by Schiphol at all. The 48 dB(A) Lden contour just happened to be chosen as environmental norm in the Schiphol Law.

Noord-Holland asked To70 to perform additional research and come up with the effect of option 4 on the number of people severely hindered by noise nuisance within the 46 dB(A) Lden contour, as well as the effect on severely hindered people living between the 46 dB(A) Lden and 48 dB(A) Lden contour. The report showed that, if we take the 46 dB(A) Lden contour instead of the 48 dB(A) Lden contour, the total number of severely hindered people increased by 400. Noise hindrance increased especially in Velsen, Bloemendaal, Zandvoort and Heemstede³³² (see figure 7.14). Subsequently, the Province concluded that the calculation leading to the total amount of severely hindered people was based on flight paths with no dispersion. However, aircraft are allowed to disperse above 3000 ft. (which is somewhere between Hoofddorp and Nieuw-Vennep on the Spijkerboor departure route), which could lead to more noise annoyance. Another conclusion was that option 4 flies over the Zuid-Kennemerland national park, which could have an effect on the experience of nature and recreation activities.³³³ To conclude, the report stated that directly under or close to the alternate route design, new housing developments are planned, or have been built between 2005 and 2009: almost 900 houses in Velsen and Bloemendaal, 3400 houses in Zaanstad Assendelft, 3000 houses in Broekpolder, 3000 houses in Haarlem and 10,000 houses in Haarlemmermeer (see figures 7.15 and 7.16). The report led to a lot of unrest within the rank and file of the BRS. Especially the municipalities of Bloemendaal, Zandvoort, Heemstede,

332 To70 (2010: 5), Resultaten SPY alternatief 'heading 330'.

333 Internal BRS report concerning the alternative route designs, 2011: 14

Bennebroek and Hillegom reacted furiously. People express the opinion that Haarlemmermeer should have thought twice before building Floriande, instead of opting for an alternative route design after the neighbourhood was built. In this perspective, the report written by Noord-Holland led to broad support for leaving the Spijkerboor departure as it is. By analysing the report and questioning why the 46 dB(A) Lden contour was used instead of the 48 Lden dB(A), some rather suggestive conclusions, such as the negative effect on the recreational experience in the Zuid-Kennemerland national park were mentioned. One can only get the strong impression that reasons to discard option 4 had been sought.³³⁴

Figure 7.14: Spijkerboor departure (1) and option 4 (2) and the location of the hindered municipalities.



Source: To70, 2010b: 4

334 I would like to stress that all reasons within the report are very legitimate, but were never used when analysing other noise-abatement measures. So why all of a sudden in this case?

Figure 7.15: Realized housing developments between 2005 and 2009



Source: Internal BRS report concerning the alternative route designs, 2011: 9

Figure 7.16: Planned housing developments



Source: Internal BRS report concerning the alternate route designs, 2011: 11

Laila Driessen, a former member of the Provincial Executive Noord-Holland, fiercely opposed the alternative route design. In January 2011, two months prior to the States-Provincial elections, she approached several regional politicians, asking them to back her and vote against the route design during the BRS meeting of 13 January 2011. Haarlemmermeer was not approached by Driessen.³³⁵

On 13 January, the Aldermen of Haarlemmermeer, Aalsmeer, Amstelveen, Castricum, Velsen, Zaanstad, Lisse, Noordwijkerhout, Oegstgeest, Bloemendaal, Zandvoort, Beverwijk, Heemskerk, Uitgeest and the member of the Provincial Executive of Noord-Holland discussed option 4. The Alderman of Uithoorn was not present and neither was the member of the Provincial Executive of Zuid-Holland. However, Zuid-Holland briefed all other parties by mail that the Province opposed the alternate route design. During the meeting it became obvious that there was no support for the relocation of the Spijkerboor departure. Most parties reasoned from a NIMBY point of view and, in order to try to influence this NIMBY attitude, Haarlemmermeer postulated the fact that the Municipality suffered severely from noise nuisance and that most measures had no effect within the Haarlemmermeer area. This was in vain: at the end of the BRS meeting it was concluded that further research on an alternative Spijkerboor departure was futile as there was no broad-based support.

Closure

A press release stated that the BRS had concluded that there was no support within the region for an alternative route design for the Spijkerboor departure. It was stressed, however, that in the near future, when a new ATM system would be implemented, the BRS would be willing to reconsider relocating the Spijkerboor departure.³³⁶ On 18 January, the former chairman of the BRS, Laila Driessen, sent a letter to Hans Alders on behalf of the BRS, stating that the BRS had researched different options to relocate the Spijkerboor departure, but that they concluded that, for the moment, there was not sufficient regional support for an alternative route design.³³⁷ And so closure emerged.

335 Confidential mails sent in January 2011.

336 Press release: "Geen nieuwe uitvliegroute Kaagbaan", January 2011.

337 Letter addressed to Hans Alders with the subject 'Spijkerboor route'

7.4

Conclusions

This chapter has described how three measures from the Alders covenants led from policy-in-the-making to closure. I chose only those measures that had either been implemented or had been stopped, as well as inhabiting controversies that triggered perplexity. First, there was a discussion of the idle reverse thrust case. This case showed how a controversy emerged between the aviation sector, which believed that idle reverse thrust led to additional operational costs and had a negative effect on safety, and the BRS and inhabitants, who believed that the measure was a *quick-win* leading to less noise annoyance close to the runways. The controversy was eventually settled to the advantage of the aviation sector.

The second measure described was CROS pilot 3b: the implementation of the radius-to-fix technique between Hoofddorp and Nieuw-Vennep. In this case, the controversy emerged with the introduction of an appellant entity: the neighbourhood of Hoofddorp Floriande. Right from the outset, all human actants underlined the positive effect of the radius-to-fix technique, meaning that the black box should close relatively easy. However, the black box remained open for four years, because Floriande sparked enough uncertainties, ambivalences, transgressions and resistances.

The last case was a logical continuation of the RF-leg case: researching an alternative route design for the Spijkerboor departure. This can be seen as a logical continuation because the Municipality of Haarlemmermeer in particular wanted to relocate the Spijkerboor departure so the flight path would no longer extend over Floriande. Haarlemmermeer did not succeed; four options were researched and only one was found realistic enough to research in more depth. It was, however, a disagreement between the regional governments that resulted in the inevitable rejection of the last option.

With the completion of this chapter, I also complete Part III of my thesis. I have recorded how I followed and retraced the dynamics of the controversy in time: the stakeholders (individuals, groups, institutions and objects), their arguments, their different positions and how they changed and progressed over time, the spaces in which they developed, the many ways of closing and re-opening the debates, the extent of public involvement and participation in the process. Part III answered the second research question: *How can mapping controversies lead to a better understanding of the Alders Table, a consultative body consisting of members of the public sector, the private sector and the civil society?* By following socio-technical controversies as they unfold, instead of just the human actants and their different views on perceived issues - which is common

in planning and policy sciences – it becomes clear how actants constantly contest associations by using immutable mobiles to transform matters of concern into matters of fact. By showing how non-human actants play a very important role during the process to come to closure, an extra dimension has been added to the research of complex decision-making processes. Planning and policy-making processes occur in an undefined area right between facts and values, where science and politics are mutually intertwined, making transparent, unmediated, undisputable facts rarer and rarer (Latour, 2005a: 19). Now it is time to turn to the last part of the thesis, consisting of the analysis, recommendations and conclusions. But before I do, an intermezzo is introduced, assessing the outcomes of the Alders Table from an ANT point of view.

Intermezzo

Assessing the outcomes of the Alders Table

As mentioned in the first chapter, the explanatory analysis of the case study has been deliberately separated from the empirical description. The explanatory analysis given in this intermezzo comments on the outcomes of the Alders Table through the *disposition of the propositions*³³⁸ and the *disposition of the collective*. In this way, I will show the added value of using the Actor-Network Theory and bridge the gap with the recommendations and conclusions.

The outcomes of the Alders Table were presented as a widely supported package deal, which – according to the original press release – *chooses to strengthen the Mainport Schiphol together with a sustainable development of the direct surroundings within the existing environmental norms until*

338 Proposition is an association of non-humans and humans before it becomes a full-fledged member of the collective (Latour, 2004: 247).

2020.³³⁹ Due to the unprecedented unanimity, the Cabinet embraced the advice. However, by now we ought to have learned at least one important notion: we must not accept the collective phenomenon to take over, and we should not reduce individuals to self-contained atomic entities, but let them deploy the full range of their associations (Latour, 2011a: 12). Therefore, this section will analyse and criticize the outcomes of the Alders Table by applying the different insights offered by the Actor-Network theory, as presented in previous chapters. First, the disposition of propositions will be presented in order to discuss the associations of humans and non-humans, their roles, statements, and underlying values and norms. Second, the degree of accessibility and comprehensiveness of the collective will be covered.

Disposition of the propositions

Who assembles, who speaks, who decides [...]? We know now the answer: *neither nature nor humans, but [...] associations of humans and non-humans, well-formed propositions* (Latour, 2004: 86). Latour defines propositions as the associations of humans and non-humans not yet taken up as members of the collective. In order to find ways for governmental action to bridge the gap between existing and normatively valued situations, facts and values must be replaced by the uncertainty of recalcitrant associations of humans and non-humans:³⁴⁰ *controversies*. It seems logical that governmental actants will respond differently to 'a widely supported package deal' (while planners, policy-makers and researchers keep asking themselves why political deadlocks won't die off) than to a 'complex and mediated environment' (made and remade between humans and non-humans that are part of the issue at stake).

The Alders Table consists of 'the aviation sector' (KLM, Schiphol Group and LVNL), 'the inhabitants' (CROS and VGP representatives) and 'the governmental parties' (BRS, represented at the Alders Table by the municipalities of Haarlemmermeer, Uitgeest, Aalsmeer and Amsterdam, and the Province of Noord-Holland) which have jointly formulated a final compromise. Thus, it seems as if three parties signed the Alders advice: the aviation sector, the BRS and the inhabitants. This assumption is wrong, as this arbitrarily set demarcation will not show how networks of heterogeneous elements actually construct these positions: *In decision-making processes, what is just as important as detecting the relevant parties are the methods to bring to the centre of the debate the proof of what it is to be debated* (Latour, 2005a: 18). All specified members of the Alders Table constantly deploy a plethora of irrepressible mobiles to conceal their

339 See <http://alderstafel.nl/schiphol/actueel/9/advies-van-de-tafel-van-alder-aangeboden.html> for the original press release (in Dutch).

340 And thus also get rid of the distinction between object/subject and nature/culture.

‘claims’ and ‘feelings’ into a stable configuration,³⁴¹ a stable configuration where strife and controversies are no longer present, only the facts (Harman, 2009: 34). Because, ultimately, there is no difference between facts and assertions (Latour, 2005a: 18).

Throughout the formulation and implementation of the Alders advice, the introduction of technologies and other non-humans as matters of fact seem to offer ways out of political disputes *by unifying the world once and for all* (Latour, 2011b: 79). But in reality, there are no matters of fact, but only matters of concern, which are not only influenced by political disputes, but actively influence them as well. By analysing the Alders Table through mapping the controversies, finding out the disposition of the propositions, not only focusing on the composition of the relevant parties, checking their degree of representativity, discovering the ideal genre of language and writing a good constitution, one should also focus seriously on what is at issue – namely the objects of concern that bring all human actants together (Latour, 2005a: 16). This can be clarified further by revisiting all controversies described in the case study chapters.

The first controversy showed how the Alders Table was formulated. Before the Alders Table was formulated, the national government believed that by publishing the Cabinet position concerning Schiphol, they had created an obligatory passage point for all involved actants concerning the future of Schiphol. However, as actants decided not to follow the path laid down for them by Cabinet position, the Ministry of V&W had to come up with a new scheme to mobilize all actants and negotiate and delimit the identity of actants, the possibility of interaction and the margins of manoeuvre. Eventually the idea of the Alders Table was born in order for the ministry of V&W to become indispensable and mobilize all actants. Next, as the Lower House explicitly had requested that the inhabitants should be part of the round-table, the inhabitants cunningly used this notion to their advantage and secured their position at the Alders Table. In the end, the black box shows a very ambitious form of decision-making as the Alders Table is a consultative body formed by delegations from the public, private and civil societies. And the national government was happily willing to approve such a collaborative form of governance.

The formulation of the short-term advice turned out to be an intricate discussion about how the limits could be enhanced through an actualization of the enforcement points and if the prevailing law ought to be adjusted to allow compensatory balancing. During this period, the inhabitants used their position to present their own alternative to be considered by the EIA. As all actants knew how important the active involvement of the inhabitants was to the Lower House, no delegation

341 *Fact construction is so much a collective process that an isolated person builds only dreams, claims and feelings, not facts* (Latour, 1987: 41).

did question the alternative. During the formulation of the short-term advice, two parties at the Alders Table seemed to function as mediators, or those that organize the associations or networks. The inhabitants on the one hand as the Lower House made them indispensable actants, and the KLM on the other, who quit effortlessly, used the classic mainport syntax and international competitiveness of the Netherlands as a whole to their advantage. In the end, when the advice was presented by Hans Alders in June 2007, only voices speaking in unison were heard.

The 2+2 Runway configuration is a prime example of an object – an issue – that generates different patterns of emotions and disruptions, of disagreements and agreements (Latour, 2005a: 15). A 2+2 runway configuration means that an extra (fourth) runway is deployed (two runways for landing and two runways for take-offs and vice versa, depending on whether there is an inbound or outbound peak, hence ‘2+2’). This configuration is to be introduced instead of the normal 2+1 system currently in operation at Schiphol (which means that two take-off runways are used simultaneously with one landing strip, and vice versa). KLM immediately presented itself as an opponent, believing that a 2+2 configuration would influence capacity at peak times in a negative way. Nevertheless, LVNL presented the 2+2 configuration as the most preferable air traffic system. BRS believed that a more predictable and easily managed air traffic operation would lead to more possibilities for spatial planning. However, the inhabitants thought that 2+2 only signified more scope for air transport movements. The local inhabitants and the KLM were allies on this issue and eventually, after intensive deliberation, the conclusion was drawn that a continuous 2+2 runway system would be impossible. LVNL, KLM and Schiphol Group did introduce an alternative (the 2+1 [+1] ‘noise preferential’ runway configuration). They collectively presented this alternative and diverse individual interests disappeared.

Another controversy was the formulation of a new noise measurement system. When the House of Representatives dismissed the prevailing regulative system and requested a new system, it became subject to discussion. This was because two renowned knowledge institutes seemed incapable of agreeing on the validity of new calculation methods to determine the new limits for the enforcement points, although using the same dataset. The noise measurement system was called into question. Of course the aviation sector, which found the noise measurement system unworkable, was delighted that a new system had to be created. The inhabitants, however, were fierce opponents of a new system without enforcement points. In the end, it was a matter of wheeling and dealing: the aviation sector stated that a cap on air transport movements was negotiable if the inhabitants would agree that a new noise measurement system was negotiable. And so closure could be reached, not because of an

alignment of interests, but rather because actants with diverse interests had been persuaded that moving toward their objectives can be best achieved by working with the other actants (Aylett and Rytland, 2008: 632).

It was also shown how idle reverse thrust, a technique that had actually been taken for granted, led to a controversy as one human actant started to question the effect of the technique on both noise-abatement effects and operational effects. Idle reverse thrust is a technique where the aeroplane does not brake by diverting the engine's exhaust forward (leading to a sudden increase in engine noise), but by leaving the engine idle while using the brakes on the landing gear. This leads to a remarkably positive effect on noise nuisance. This measure was recorded in the Alders advice for the short term, and therefore it has already been in use at Schiphol since 2007. However, when the measure was evaluated in 2009, the KLM questioned the effect of the technique on both noise-abatement effects and operational effects. The eventual conclusion was in favour of KLM, which – of course – we cannot truly know as long as the collective remains closed. What we do know is that the Aeronautical Information Publication on the subject reads: *between 2030-0530 (2130-0630): After landing, the use of idle reverse thrust is advised on all runways except RWY 04/22, safety permitting. To achieve the highest possible runway capacity, runway occupancy times are to be reduced to a minimum.*

Furthermore, controversies emerging from the introduction of the *radius-to-fix* technique were described. A radius-to-fix coding in the navigation database of an aircraft describes a turn as an arc on the map. Aircraft equipped with the necessary navigation systems try to navigate the same path, resulting in a smaller dispersion of the flight tracks compared to conventional navigation. The Spijkerboor departure at Schiphol is located right in-between the communities of Hoofddorp and Nieuw-Vennep, and the perceived problem with this route is that the flight paths normally show significant dispersion.³⁴² By concentrating air traffic on this route by using the radius-to-fix technique, the noise nuisance of air traffic could be reduced.

On paper, this measure sounds logical and positive. After a year of experimentation, the human actants involved underpinned the theoretical hypotheses – except for inhabitants of Floriande, a neighbourhood in Hoofddorp with more than 17,000 inhabitants, located directly under the Spijkerboor departure. Floriande is a controversial neighbourhood as the national government allowed Floriande to be built while knowing that the neighbourhood is situated partly inside and partly outside the 20 ke contour within which building restrictions apply, as a result of flight paths and noise contours. Therefore, the experiment with the radius-to-fix

342 See figure 7.10 in the last chapter

technique – called ‘CROS pilot 3b’ – which concentrates air traffic above Floriande, led to vehement protests. Although CROS pilot 3b received a great deal of attention, was far from overlooked and heavily criticized, Floriande failed to become an obligatory point of passage for other actants. What is tangible is a press release which says that the State Secretary will implement the radius-to-fix technique. The massive network of alliances upon which his decision is lovingly or violently based has disappeared.

Finally, the quest for an alternative route design for the Spijkerboor departure can also be seen as (just one of the many) examples where not only the relevant parties were described but also the objects of concern that bring all human actants together. In the final Alders advice, it was decided that an alternative for the Spijkerboor departure should be researched, largely so that the departure route would no longer be located right above Floriande. Initially, there were 3 options, and eventually one remained as the other two were unfeasible because of safety reasons and decreasing runway capacity.³⁴³

When assessing noise hindrance measures, the effect on the environmental criteria and norms were taken as a starting point. This meant that the effect on the total amount of houses within the 58 dB(A) Lden contour (per 1 January 2005), the total amount of people severely hindered by noise nuisance within the 48 dB(A) Lden, and the total amount of people whose sleep was disturbed are taken into consideration. These contours happened to be chosen as environmental norm in the Schiphol Law.

However, the Province of Noord-Holland performed additional research on the only feasible alternative route design, and used the 46 dB(A) Lden contour instead of the 48 dB(A) Lden contour. If the 46 dB(A) Lden contour is taken into consideration instead of the 48 dB(A) Lden contour, noise hindrance increases especially in Velsen, Bloemendaal, Zandvoort and Heemstede. The report pointed out more reasons why the Spijkerboor departure should not be relocated, but the use of 46 dB(A) Lden contour was the most important one. Actually, the report led to much unrest within the rank and file of the regional municipalities, and the 46 dB(A) Lden contour gave the province the tools to achieve closure to their advantage. In a letter sent to Hans Alders, the regional municipalities concluded that there was insufficient support for an alternative route design. As one reads this letter, presented as a raw fact, the multi-faceted, chaotic, and contrasting network underlying the letter remains unseen.

By looking at the disposition of the propositions behind the Alders Table collective, it becomes clear that the decision making process concerning Schiphol was not merely a process of several human actants with different norms and values trying to reach compromises while considering

343 See figure 7.10 and further in the last chapter

international competitiveness and ecological sustainability. It was about *deploying the associations* [of humans and non-humans] *and collecting them into one collective* (Latour, 2005b: 256). What an ANT analysis shows, is the constant deployment of immutable mobiles to translate matters of concern into matters of fact. In this way, presumed propositions become credible and indisputable.

Disposition of the collective.

The six principles that Bruno Latour presents in *Science in action* (1987: 259) state that facts are a consequence of collective action, that spokespersons can make those facts weaker or stronger, that facts can always be contested by irrationalities and contested actants, and that facts are actually values made into facts by strong networks of associations. Power and organization are produced, stabilized and made to cohere through the collective. This also means that the collective can be weakened or contested anytime as actants redefine their identity and mutual relationships, bringing new elements into the network. This is done through controversies, as actants are *unremittingly engaged in tying and untying relations* (Venturini, 2011: 1).

What the Alders Table case shows is that, although the collective is constantly under pressure from controversies, it remains a collective: actants construct and reconstruct associations through interaction. But as long as actants keep interacting, the collective will look stable from the outside. When actants decide to leave the collective, the weakness of that collective becomes apparent and its comprehensiveness can be questioned. Empirical analysis shows that this only happened on a single occasion throughout the whole Alders Table period: just before the formulation of the final advice, the VGP representative decided to leave the negotiations, which almost led to the end of the consultative body. However, this raises another question: how well did the spokespersons at the Alders Table convey the message of the humans and non-humans they were representing (Latour, 2004: 64-5)? There is no question that the KLM, Schiphol Group and LVNL succeed in speaking on behalf of all actants they represented. These three organizations have corporate strategies, which were brought into the negotiations on the Alders advice.³⁴⁴ It became more indistinct to the governmental parties. Of course, these representatives had been chosen through a democratic process, but they were not necessarily speaking for all actants they claimed to be speaking for. This may not necessarily have been apparent during the formulation of the Alders advice, but it did become clear when considering the

³⁴⁴ Of course, not all employees have to agree with these corporate strategies, but it is more than likely that a corporate strategy is embraced by all members of that collective (hence 'KLM', 'Schiphol Group' or 'LVNL').

implementation of the Alders advice. As shown, the implementation of certain noise-reducing measures triggered fierce protest – by actants for whom the representatives of the governmental parties claim to speak. With regard to the inhabitants' representatives at the Alders Table, the extent to which they spoke for all inhabitants was even more vague. First, they were not representatives of all inhabitants but representatives of CROS and VGP. CROS and VGP stated that they were spokespersons for all inhabitants around Schiphol, but far from all inhabitants are members of CROS and VGP or even actively involved. And this logically led to perhaps the most important factor when considering the comprehensiveness and accessibility of the Alders Table collective: the voices that have not been heard until now, the externalized entities.

First, the local residents who had been excluded from further negotiations criticized the Alders advice. The Cabinet, however, which was generally very happy with the Alders advice, neglected the internal struggles within the rank and file of the local residents. This was seen as something that had to be solved by the local residents themselves (Huys, 2011: 355). However, more and more inhabitants – also representatives from CROS and VGP – started to contest the Alders advice.³⁴⁵

Second, the environmental interest groups, which had been completely neglected during the forming of the Alders advice, criticized the final covenants. On behalf of several environmental parties (Friends of the Earth, Environmental Federation Noord-Holland), the Netherlands Society for Nature and Environment (SNM) sent a letter to the members of the standing committees of V&W and VROM in which the Alders advice was criticized on two points: they found it highly peculiar that the CO₂ issue had not been taken into account by the Alders Table at all. Furthermore, they believed that the new regulative system would lead to an unnecessary deterioration of the level of local protection. Moreover, the traffic forecasts that had been used were not realistic (580,000 airplane movements in 2020) and a lower, more realistic forecast would have made the discussion about the growth of the regional airports Eindhoven and Lelystad redundant (Huys, 2011: 356).

Third, the decision to facilitate 70,000 extra flights spread over Lelystad and Eindhoven, triggered heated discussions around those airports. The local actants believed that the Schiphol actants were pleased to get rid of additional noise problems, safety problems, and lack of space by relocating flights to the two regional airports (Huys, 2011: 356). The local residents started to resist, and they were not alone. In the case of Eindhoven, the final advice was not unanimous or broadly supported, as the local inhabitants organized in BOW (*Belangen organisatie Omwonenden*

³⁴⁵ In Chapter 7 I pointed out that the Northern cluster decided to leave the CROS because they believed that the consultative body no longer played an important role in the Schiphol file, as all decisions are made at the Alders Table.

Welschap) and the environmental party, the *Provincial environmental federation*, did not sign the final advice. Five regional municipalities, Veldhoven, Eerstel, Best, Oirschot and Son en Breugel, partly supported the final advice.³⁴⁶ However, the Lower House decided to adopt the final advice concerning Eindhoven, allowing Eindhoven 10,000 extra aeroplane movements until 2015 and 15,000 more after 2015, but only if specific agreements are kept.³⁴⁷

- 75% of all air transport movements have a business or business/leisure destination (so-called 'Brainport destinations': Eindhoven is called the Brainport – derived from Mainport – as the Eindhoven region is a breeding ground for innovation and the home base of companies and world-class knowledge and research institutes such as Philips and Eindhoven University of Technology);
- the realization of a covenant with hindrance-reducing measures;
- focus on sustainability and liveability (aiming for the highest *Airport Carbon Accreditation* initiated by the Airport Council International, allowing the assessment and recognition of participating airports' efforts to manage and reduce their CO₂ emissions;
- relocating a part of the military aviation at Eindhoven.³⁴⁸

With regard to Lelystad, decentralizing flights proved to be even more intricate. Where Eindhoven was capable of handling bigger airplanes, the runway at Lelystad was too short and needed to be extended in order to handle Schiphol-sized flights. However, the municipalities of Dronten and Zeewolde, the organized inhabitants of Almere-Hout, and a huge amount of farmers filed a lawsuit against the expansion plans. In December 2011, the Council of State decided that Lelystad airport would not be allowed to expand,³⁴⁹ making the relocation of flights from Schiphol to Lelystad less feasible.

Finally, the excluded airlines also criticized the final Alders advice. Especially those airlines that were not defined as hub-oriented traffic (at Schiphol almost 70% of this hub-oriented traffic – or traffic important to keep the hub and spoke model intact – consisted of AirFrance/KLM flights), and thus became eligible for relocation to Eindhoven or Lelystad, reacted furious. Airlines defined as *Low-cost Carriers*, such as EasyJet (one of the biggest airlines at Schiphol in terms of passengers) and Vueling (which has been using Schiphol as its third European hub since 2011)

346 Alders, H. (2010: 38), Alders Advice for Eindhoven.

347 Alders, H. (2011: 7), AldersTable annual report 2010.

348 Alders, H. (2010: 35), Alders Advice for Eindhoven.

349 See the website of the Council of State for the press release (in Dutch): http://www.raadvanstate.nl/pers/persberichten/persbericht/?pressmessage_id=181

made it very clear that they did not have any intention of leaving Schiphol to relocate their operation towards Lelystad. These excluded airlines found it strange that only AirFrance/KLM had been part of the negotiations, securing their own growth by removal of the competition (Huys, 2011: 356). However, you cannot force an airline to give up its slots: the only thing Schiphol can do is increase airport charges, but only for all airlines or airlines with older airplanes that make more noise, making them subject to an international decision that they ought to pay more. Most Low-cost Carriers have the most modern aircraft fleets to date.

Conclusions

An analysis of the outcomes of the empirical chapters from an ANT point of view showed how planning and policy making apparently neglect the tremendous impact of socio-technical controversies: the unexpected connections that are established between *what should have been a simple technical project and a plurality of stakes that are anything but technical* (Callon et al., 2011: 15). The controversies that unfold are fostered by scientific and technical uncertainties as well as by social uncertainties. Human and non-human actants interact through socio-technical controversies, fixing and anchoring their meanings and values, preferred architectural and urban design solutions, current policies, scientific knowledge, economic considerations, network of practices, theories, and social institutions.

Furthermore, by politicizing science and scientizing politics, the authority of scientific facts is increasingly being disputed by opponents: facts no longer exist. It seems that politicians can no longer turn to scientists and experts to halt political controversies and can no longer hide behind science to disguise their arbitrary decisions; scientists are suddenly forced to unveil the complex background that gives authority to their voices (Latour, 2011b: 72).

Socio-technical controversies and normative and cognitive disagreements lead to the deployment of immutable mobiles and processes of translation. Through stratification of material and mobilization of allies, closure is pursued. And, as the Alders Table chapters showed, actants succeed in reaching closure. However, closure is very fragile, as with every new controversy, groups are being made and remade, spokespersons are being questioned, and associations are being rearranged.

If present governmental actions do not seem able to cope with these developments, the question remains as to how planners and policy makers should react to the influence of socio-technical controversies on the decision-making process concerning the future of Amsterdam Airport Schiphol. This is what studies concerning Schiphol neglect and gives the ANT research framework its added value. Planners and policy makers

should restrain the fixation on scientific knowledge and the negative impact of the representational paradox³⁵⁰ (Callon et al., 2011: 117). Therefore, the next chapter will introduce the Hybrid Forum and give pointers to come to an ANT-inspired planning methodology that focuses on socio-technical controversies.

350 A growing breach between real people and their representative

Part IV:
**Presenting a normative
grid**

Chapter 8

Analysis:

From delegative democracy towards dialogical democracy

Until now, the dissertation has consisted of three parts. The first part gave an introduction to Schiphol, the second part presented a descriptive framework based on ANT, while the third part applied this descriptive framework to the empirical chapters on the Alders Table. By now, the extent to which socio-technical controversies have influenced the outcomes of the Alders Table ought to be clear. This leaves the second part of the main research question: how should planners and policy makers react to the influence of socio-technical controversies on the decision-making process concerning the future of Amsterdam Airport Schiphol? Or, to be more precise, we are faced with a third and final additional research question: *how should the Actor-Network theory be implemented by*

planners and policy makers in such manner that association building can be steered and influenced in a normative and proactive way?

To come to an answer, the chapter introduces the Hybrid Forum as a first building block of an ANT-inspired planning methodology. The Hybrid Forum elaborates on the way in which science and policy become intertwined as a result of socio-technical controversies. Successively it gives pointers on how to deal with divergent perceptions of what is knowledge and what is evaluation. Finally, this chapter introduces several spatial theorists who have tried to develop a more relational idea on time-space assemblages. These theoretical insights help to answer the main research question in the final chapter.

8.1

The Hybrid Forum

Unexpected connections are established during the course of a controversy, as new actors pick up the problem (people start to protest against aircraft noise), articulate unexpected themes for discussion (aircraft noise translates onto maps and into graphs, making it an issue for planners and policy-makers) and redefine the possible consequences of the project (noise hindrance-reducing measures are sought in – for instance – new air routes influencing the traffic control operation) (Callon et al., 2011: 15). And ultimately no one knows anymore – or agrees on – what are facts and what are values. These socio-technical controversies take place in public places that are called hybrid forums:

‘forums’ because they are open spaces where groups can come together to discuss technical options involving the collective, ‘hybrid’ because the groups involved and the spokespersons claiming to represent them are heterogeneous, including experts, politicians, technicians, and laypersons who consider themselves involved. They are also hybrid because the questions and problems taken up are addressed at different levels in a variety of domains, from ethics to economics and including physiology, nuclear physics and electromagnetism (Callon et al., 2011: 18).

8.1.1. *Dialogical space*

Hybrid forums are the place where the most heterogeneous relationships are formed (Venturini, 2010: 7). A hybrid forum refers to a space of conflict and negotiation among actants that would otherwise happily ignore each other. And the line describing the border between what is considered to be unquestionably technical and what is recognized as

unquestionably social fluctuates throughout the controversy (Callon et al., 2011: 25).

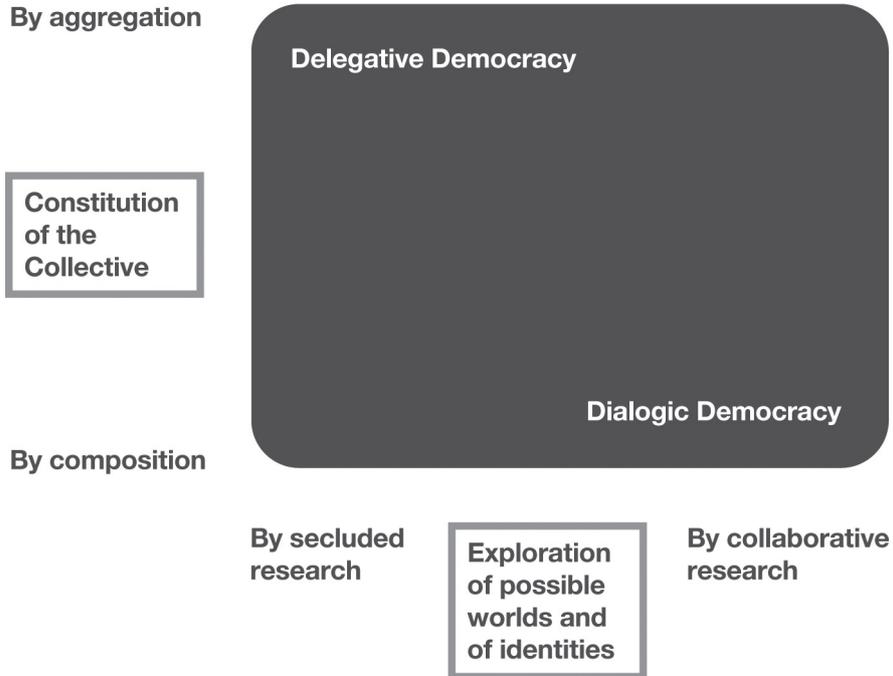
Socio-technical controversies are far from exceptions to the rule. Most of the time, they are seen as a lack of communication and information, as the scientist or politician did not want (or failed) to be understood by your average citizen. However, although very common, controversies are generally seen as a waste of time at best, and as *the hardly avoidable consequences of the intellectual backwardness of people in need of continuous guidance at worst* (Callon et al., 2011: 28). The position I take in this thesis is that controversies enrich democracy: within the hybrid forums in which they develop, *they are powerful apparatuses for exploring and learning about possible worlds* (Callon et al., idem), or they provide us with an ambitious and promising planning and policy-making framework.

According to Callon et al. (2011: 119-21), our democracies know two important delegations to manage situations of uncertainty: *those concerning our knowledge of the world and those affecting the composition of the collective*. The first delegation produces certified knowledge making sure politics are purged of all scientific uncertainty, while the second delegation organizes the debate that should lead to the expression of general will. This is called *the delegative democracy*, which is characterized by separating specialists and laypersons and carving out the gap between professional politicians and ordinary citizens. The two delegations in conjunction are referred to as the 'double delegation': *the process of transferring the power to decide from citizens to political officials and administrative experts as those capable of making appropriate decisions in the political and administrative field, and to scientists and experts for those issues involving matters requiring some kind of specialized knowledge* (Arriscado Nunes et al., 2008: 9).

Opposite to delegative democracy there stands *dialogical democracy*, a form of democracy that puts controversies and hybrid forums at the centre of debate. This leads to the dialogical space (see figure 8.1) with, on the Y-axis, *the constitution of the collective* and, on the X-axis, *the exploration of possible worlds and of identities* (Callon et al., 2011: 135). What the dialogical space explains is that dialogical democracy favours the exploration of problems, identities and the collective, but is constantly under the threat of being absorbed by delegative democracy. Aggregation is explained as the presupposed existence of spokespersons, groupings and classification, while composition replaces those classificatory certainties of aggregation with the uncertainties of groupings. The X-axis shows the extent to which laypersons are content to wait outside of the laboratories until scientists present them with certified knowledge, or demand to be part of the research even before scientists

enter their laboratories: the latter extreme being called *research in the wild* (in contrast to secluded research) (Callon et al., 2011: 124).

Figure 8.1: the dialogical space



Source: Callon et al., 2011: 135.

8.1.2. Normative criteria for classifying dialogical procedures

Using the dialogical space, Callon et al. (2011: 158) present a list of criteria that can contribute to the emergence of a dialogical democracy. These criteria must break down the monopoly of the double delegation and can be defined as *organizational criteria* and *implementation criteria*.

To start with the organizational criteria, the criteria are *intensity*, *openness* and *quality* (see table 8.1). *Intensity* means *the degree of earliness of involvement of laypersons of possible worlds and the degree of intensity of concern for composition of collective*. To put it quite simple: intensity focuses on how early laypersons are involved and the extent to which the collective is taken for granted through aggregation, or composed by linking singularities that are rendered visible and audible. Considering the Alders Table once more, the degree of earliness of involvement of laypersons in the exploration of possible worlds can be seen as weak: the inhabitants involved were no longer laypersons: they were organized within a group, already had spokespersons, and their intense involvement

with the Schiphol planning and policy making process made them – at least semi-- specialists. The degree of intensity of concern for composition of collective was also weak: the aggregate collective was preferred over the composed collective.

Openness means: *to what extent are new groups invited to express their views, exchange their points of view, and negotiate?* Obviously, the more groups there are and the greater their diversity, the more meaningful the debate can be. The second criterion is specified by the way new groups and their diversity and autonomy are taken into account by already constituted and visible (action) groups and by the extent to which the representativity of the spokespersons is open and debatable. Although a new group – the VGP - was added to the Alders Table when the formulation of the mid-term advice commenced, both sub-criteria had weak values. The groups that already constituted the collective opposed new groups participating in the dynamics of co-operative research and the composition of the collective. Next, there was almost no room for repeated redefinitions: the representativity of the spokespersons was not open and debatable as the actants were deeply entrenched in their matters of concern.

To conclude the organizational criteria, *quality* means: *are the protagonists able to deploy their arguments and claims, as well as answer objections, with the requisite acuteness and relevance* (seriousness of voice); *and are the interventions and discussion spasmodic or can they last* (continuity of voice)? The case study shows that the seriousness of voice was well considered. When part of the Alders Table, all actants were able to deploy their arguments and claims as well as respond with objections. However, when certain arguments and claims were raised as objections, such as the 2+2 runway configuration for example, arguments and claims can become a taboo, for instance through press releases that were condemned by all other actants. This weakens the value of the continuity of voice. Now that the three organizational criteria together with their six sub-criteria have been presented, a *normatively orientated space of dialogical procedures* has been defined (Callon et al., 2011: 159-61).

Table 8.1: Degree of dialogism of procedures

Criterion	Sub-criteria
Intensity	Degree of earliness of involvement of laypersons in the exploration of possible worlds
	Degree of intensity of concern for composition of collective
Openness	Degree of diversity of groups consulted and degree of their independence vis-à-vis established action groups
	Degree of control of representativity of spokespersons of groups involved in debate
Quality	Degree of seriousness of voice
	Degree of continuity of voice

Source: Callon et al., 2011: 160

The three criteria provide a framework for evaluating the contribution of procedures to democratic confrontation and dialogue, but what we still miss are criteria to assess the conditions of implementation of these procedures. All debate is permeated with asymmetries, especially reinforced and transmitted by the delegative democracy. Keeping Latour's collective in mind, it becomes clear that the deployment of the dialogical space will be thwarted by those actants that won't allow more diversity, increasing representativity, independence, and more research in the wild. Therefore, in order to challenge the double delegation, three implementation criteria are presented (see table 8.2) (Callon et al., 2011: 162-3).

First, *equal access to the procedure* is necessary and must be monitored. It is relatively easy for a procedure for democratic confrontation and dialogue to turn into a masquerade, narrowing the debate instead of widening and enriching it. To tackle these asymmetries, it might be useful to envisage or redefine the formation of new professional roles, such as 'translators' or 'mediators'. Second, *transparency* must be assured and controlled. In order to develop dialogical richness, the different voices heard must be tracked. Transparency here only applies to the procedures themselves. Again, it is rather easy for already established actants to obscure debates, and to present outcomes as collective will. It is very important that transparency is not only retrospective and therefore a third and final criterion is needed: that of the *clarity (and publicity) of the rules of the game*. This criterion lays down the rules of the game that must be known in advance by all the participants and, once obtained, should constitute firm commitments.

Table 8.2: The implementation of procedures

Criterion
Equality of access to debates
Transparency and traceability of debates
Clarity of rules for organizing debates

Source: Callon et al., 2011: 163

Planning and policy-making takes place in hybrid forums: a space of conflict and negotiation among actants that otherwise would have ignored each other; this is also where the most heterogeneous relationships are formed through controversy. Planners and policy makers can use the normative criteria for dialogical procedures, as given in this section, to influence the forming of plans and policies from an ANT perspective, leading to outcomes that are not narrowed down by both the aggregation of individuals and research cut off from the world of laypersons.

Still, two obvious weaknesses exist within hybrid forums. I wish to refer to them as *the false promise of emancipatory* and *Machiavellian manipulation*. The false promise of emancipatory refers to collective mystification (Callon et al., 2011: 162) as actants are given the idea that their voice is heard (through referenda or opinion polls for instance), while Machiavellian manipulation refers to the deliberative short-circuiting of voices heard (through embargos for instance). However, the implementation criteria provide planners and policy makers with tools to try and tackle these weaknesses.

Furthermore, the Hybrid Forum can be criticized for the fact that it seems to propagate a utopian worldview, where laypersons, scientists and politicians create policies for the common good that can count on endless support. In this sense, it seems to fall for the same mistake as the Critical Theory, and the discursive or collaborative planning resulting from that theory (Boelens, 2010: 8), having an omnipresent blind faith in the willingness of actors to participate and avoid a misuse of their powers. Next, as the Hybrid Forum states that delegative democracy fails to incorporate everyone needed to arrive at a mutually agreeable solution, the question remains as to whether or not an increase in participation leads to a deeper and wider – or ‘better’ – form of democratic representation. In my opinion, the above-described criticism is valid. It becomes important to stress that – also as a result of these critiques – the Hybrid Forum will be explained as a means to an end to deal with the socio-technical complexity of the Schiphol file. In the next section, I wish to stress that the Hybrid Forum is only a small part of the solution: dialogical democracy will never replace delegative democracy. Therefore, the following section introduces three recent theoretical perspectives on spatial planning that react to the notion that the organizing government and the matching view on governmental planning have become inadequate to cope with the current complexity of society formed by the multiplicity of relational webs that transect space and time. These theories are necessary in order to explore the possibilities of a normative ANT perspective on planning and policy-making..

8.2

The Hybrid Forum and relational planning

In recent years, planning theory and public policy have ‘borrowed’ notions from ANT to formulate a relational view of space. When applying the fundamental notions of ANT to space, it may sound obvious that space is transformed, translated, destroyed, created, negotiated, challenged, dominated, contested within networks of heterogeneous materials. Space (and so is time) consists of relations of various kinds. What is ‘real’,

materially as well as ontologically, is produced through these interactions: we must not mistake socially constructed conceptions of reality for reality (Healey, 2007: 205; Hillier, 2007: 16). Furthermore, we must understand that socially constructed conceptions of reality are made up of heterogeneous networks of associations: *instead of seeing space as a prefabricated container that sets conditions where objects exist in, ANT states that spaces are made with objects* (Law, 2000: 96). Therefore, in order to analyse a particular space we must follow – as said before – the networks and the actors and their associations, or relations, to understand the processes that construct space. Space is, quite simply, nothing more than a network effect (Murdoch, 2006: 73). So there is no absolute space, only specific space-time configurations, conditioned by actor-networks, and this is exactly the reason why absolute space does exist, just like network space, global space, urban space, Cartesian space, and so on. As multiple networks exist, there are multiple forms of spatiality (Murdoch, 2006: 74; Law, 2000: 92; Wissink, forthcoming: 3): a city, for instance is *an endless kaleidoscope of possible viewpoints* (Cooper, 2005: 1693, cited in Hillier, 2007: 39).

Normally our common understanding of time leads to a misapprehension of relations between objects, events and places: virtual worlds like *World of Warcraft* have millions of members from around the globe. In terms of cultural affinity, these people are very close to each other (they all love to play a Massively Multiplayer Online Role Playing Game in a fantasy setting), although physically one can live in Argentina and the other in France. By contrast, a South African shanty town can have no electricity although a pylon stands in the middle of the village. So the shanty town and the pylon coexist in time, but are far removed in terms of their relationship. Times and spaces are folded *into complex geometries and topologies by series of connections and disconnections* (Murdoch, 1998: 360). Therefore we cannot speak of one time or one space; rather there are a number of coexistent space-times. Thus, in this sense, a relational view of space-time is created: it recognizes the importance of complexity, agnosticism and contestation as new interpretations and representations come into being (Hillier, 2007: 4). In this sense, some networks are allowed to become structural and so become an essential part of everyday life whereas others do not (Murdoch, 1998: 359-60; Hagendijk, 1998: 93). This can be illustrated by examining the development of aviation. The increasing accessibility of air travel influenced human thinking and acting and – more importantly – led to a rearrangement of the material world. Airports, the development of hotels and office buildings in the proximity of airports, shopping malls within airports, building restrictions as a result of safety and noise contours, the development of cities towards airports, the impact on security and global terrorism, are all part of this translated world. In the meantime, aviation has influenced commercials, music and

even art. New technology not only introduces new elements, but also causes a redefinition of distance and space. In addition, technology evolves and even generates opponents.

In this day and age, planning should deal with relations and processes, acknowledging the dynamics and driving forces of the multiple meanings of space and time. Space and time must be defined as *an arrangement of priorities* (Star: 1995: 89). And what priorities are, is up to human and non-human actors: *Whoever succeeds in defining this order of priorities succeeds in determining the connections which give rise to the spatialities and temporalities that compose our world* (Murdoch, 1998: 370). In this sense, space is always *political* (Law, 2000: 102): spaces must always be treated as *complex interrelations between modes of ordering and forms of resistance* (Law, 2000: 102). With this in mind, this section first describes *relational planning* (Healey, 2006) and then two different but relational perspectives within planning and governance: *the multiplanar theory of spatial planning and governance* (Hillier, 2007), and *the actor-relational approach* (Boelens, 2009). These three approaches all offer new directions for thinking about planning in highly fragmented, highly schizophrenic societies. Moreover, the three relational perspectives presented in this section give leads on how to come to a normative ANT perspective on planning and policymaking.

8.2.1. *Relational planning*

The theory of relational planning, primarily developed by Patsy Healey (2007), links two streams of academic thought. First, interpretive policy analysis, which suggests that policy is not necessarily a result of objective ideological politics, but rather the consequence of dominant discourses that develop within policy communities (Healey, 2007: 17). And second, relational geography, in which place is seen as a site of heterogeneity juxtaposed within close spatial proximity, and as sites of multiple geographies of affiliation, linkage and flow (Amin, 2004: 38). Places are actively produced through processes of *continually intersecting, transecting, conflicting and synergetically innovating interactions between multiple trajectories* (Healey, 2007: 203). Thus, places are imagined, constructed by overlapping and intersecting complex relations, perceived in different ways by different people. From a relational point of view, *planning work has an important role in helping to frame the communicative and interpretive processes through which collective meanings of space and time are negotiated and maintained, for the purposes of mediating the challenges of co-existence in 'places' of shared space-time* (Graham and Healey, 1999: 30). And therefore the relational planning approach is founded, as *the planning field needs a vigorous effort to reconfigure our thinking about socio-spatial relations and their translation into the routines and spatial strategies pursued in planning practices* (Graham and Healey, 1999: 9).

Relational planning does not consider a plan or a project to be the focal point when it comes to spatial developments, but rather the actors. The theory believes that generalizations about desirable spatial forms, dominated by narrow pursuits of understanding, should be replaced by the comprehension that *social processes* and *spatial form* are related (Graham and Healey, 1999: 28-30). Complex interactions, linking public society, civil society and the business society in diverse, uneven ways, form relations, networks, communities and institutional practices either in synergy or conflict. Through such interactions, place must be seen as a stage where complex, shifting and conflicting relations shape the meanings, values and knowledge by means of which everyday life is experienced and formed. Spatial strategies emerge from specific situations understood as structured by different times and spaces.³⁵¹ Then, a relational planner should find ways to tap into multiple sources and forms of knowledge by means of both formal and informal forces in order to generate strategy formation. Several stakeholders should be actively involved in order to produce inside-out and outside-in debates, and to understand which actions, values, understandings and arguments will affect strategic frames and how we can learn from this. A relational planner listens, observes, tests and thinks in order to relate different bits of information and opinions (Healey, 2007: 283-6). In summary, multiple webs of relations should be linked by respecting different spatialities and temporalities with different opinions and interests. In this way, by formulating goal-oriented strategic and flexible frames for specific issues in conjunction with the actors involved, opposing interests can be truly balanced.

8.2.2. *Multiplanar theory of spatial planning and governance*

Jean Hillier (2007: 10) states that *although some theorists, such as Patsy Healey, attempt to emphasize a more dynamic, relational view of governance and spatial planning, there is a tension within the work of these authors between a transcendent ideal or universal and a more non-linear immanent notion of change. There is a definite need for a new theory which recognizes such tensions.* This 'new theory' led to Hillier's multiplanar theory of spatial planning and governance, heavily influenced by the concept of the rhizome as introduced in *A Thousand Plateaus* by Gilles Deleuze and Félix Guattari. Hillier sees space and time as performative, which means that space and time are constructed through the performance of a multiplicity of actants and their complex relational behaviour, which has an impact on the contingencies of themselves and other actants. Thus that space is continuously in the making and the un-making, being made and unmade, by unforeseen and unforeseeable *performative improvisations* (Hillier,

351 A planner must look for conflicts and synergies, potentialities and restrictions, and identify what is perceived as a problem or opportunity, for whom, when and where.

2007: 10). Therefore, spatial planning and governance is an immanent affair: practitioners should recognize the fundamental openness of the future and the multiplanar characteristics of time, space, identity, power, representation, and so on, that make up this openness. However, this still provides no clues on how planning and policy making should be organized.

Next to immanence, spatial planning and governance accommodates fluidity (Hillier, 2007: 234), which, combined, means *seeing spatial planning as [being] concerned with dynamic arenas of claims and counter-claims, temporary and fragile agreements and coalitions (...) which are often fragmented, ruptured and transformed, as new folding takes place and new juxtapositional arrangements emerge* (Hillier, 2007: 249). And so we move towards, as Hillier (2007: 235) puts it, a *rhizomic ontology* and to think rhizomically *is to reveal the multiple ways possible to assemble thoughts and actions in immanent, always-incomplete processes of becoming* (Hillier, 2007: 3). However, we should also recognize the need for an *epistemological ordering frame* (Hillier, 2007: 236), as planning and urban governance should also contain *some form of temporary fixity* (Hillier, 2007: 234), because *we need limits in order to say something* (Cilliers, 2002: 82, cited in Hillier, 2007: 233).

Therefore, she introduces the plan of consistency and the plan of organization (table 8.3), which exist simultaneously and are interleaved. The plan of consistency is a continual process of immanence. It is a strategic plan or trajectory where heterogeneous elements come together to form rhizomic multiplicities³⁵² (Hillier, 2007: 244). The plan of organization is a transcendent plan with certain goals for development. These goals can be predetermined standards – such as zoning regulations – to which things or issues are submitted in judgment and ordered by representation³⁵³ – such as where litterbins should be located on a certain site, for instance. Plans of organization tend to be relatively local, short-term and content specific and *facilitate small movements or changes along the dynamic, open trajectories of plans of consistency* (Hillier, 2007: 247). The two plans thus exist simultaneously, interleaved in a multitude of layers that sometimes overlap more and are sometimes more dispersed. And so, the multiplanar theory of spatial planning and governance offers the potential for several trajectories or visions of the longer-term future to be made (immanence), while at the shorter-term location specific and detailed plans and projects with collaboratively determined – and very important – tangible goals are produced (transcendence).

352 Heterogeneous elements (actants) that form rhizomatic multiplicities (networks); hence actor-networks.

353 *Representations are bound up with issues of power, its establishment and maintenance* (Hillier, 2007: 272).

Spatial planning must understand actants' desires and lines of flight in a field of agonistic engagement and as a result spatial juxtaposition of contesting spaces and practices (Hillier, 2007: 249-50): *Practitioners of spatial planning and governance are potentially well-placed to act as interpreters, translating between different actants, their desires, needs and so on, and between the multiple plans of practice (...) Although identities and spaces are fluid, they nevertheless require partial fixing (reterritorialization) in some manner if differential subject positions and social relations are to exist. Such partial fixing takes place around nodal or passage points in the form of temporary, hegemonic relations (the adoption of a local plan for instance). In traditional forms of planning and governance practice, temporary and partial fixations have tended to perpetuate for many years, turning into reified rigidities (...) I believe that policy-making could become a performative process which mobilizes complex, heterogeneous understandings to temporarily fix the meanings of dynamic entities (Hillier, 2007: 272-3).*

Table 8.3: Schematic description of plans of consistency and organization

<i>Plan of Immanence/Consistency</i>	<i>Plan of transcendence/Organisation</i>
Becomings/emerging	Transcendence
Open-ended-trajectories	Closed goals
Rhizomic multiplicities	Arborescent hierarchical relations of power
Chance	Planned development
Time as Aeon	Time as Chronos
Smooth space (with some virtual striation)	Striated space (with some smoothing)
Unstructured	Structured
Dynamism of unformed elements	Stability of judgement and identity
Flux and fluidity	Inertia or sluggish movement
Power to	Power over

Source: Hillier, 2007: 243

8.2.3. *The actor-relational-approach*

Planning theory could never again be a theory of planning, neither could planning again go for a kind of meta-level, to tell what is right or wrong, to forbid or approve from a rational-comprehensive, single-minded Cartesian view on time and space. Rather, spatial planning itself takes part in the ongoing struggle against those whose 'reading in space' could take priority, and could better be attached to new meaningful interrelations and therefore possible spatial identities. Planning therefore is neither a director, nor stage manager,

let alone an 'orchestra leader' of specific time-space frames; at best it is only a(n) (f)actor of importance within specific heterogeneous processes of spatial 'becoming'. In other words, it is highly embedded and relational, instead of taking a general, moral stand on what is right and wrong (Boelens, 2009: 31).

Over the last ten years, Luuk Boelens (2009), in particular, has given impetus to an actor-relational view of planning. The attempts to do so are actually derived from an intensive interchange between planning practice and planning theory (Boelens, 2009, Mommaas and Boelens, 2006). This approach focuses on thinking beyond the plan; the centre of attention is not the plan or the formal institutions, but the aim *to identify possible actors, stake- and shareholders who may be ready to associate and invest around common opportunities, possibilities and/or themes from the ground up* (Boelens, 2009: 8). Next, the theory states that it is all about leading actors, who – according to Boelens (2010: 11) – have the ability to invest in their direct surroundings for reasons of more or less self-interest. Furthermore, sustainability, defined in multiple ways, is perceived as very important. The actor-relational approach judges processes on durable economic (hence profitable), social (hence broadly supported), and environmental (hence climate neutral) solutions. Another important point of the actor-relational approach is that it has its primary focus, where possible, beyond the confines of government, as in the urban and regional regime theory, for instance. That is why the actor-relational approach searches for commissioners in the semi-public or semi-private sphere. However, the government does have a framing and facilitating role, according to Boelens (2009: 9). A last characteristic is that the actor-oriented approach is very associative, as the approach tries to *design alternative arrangements of markets, hierarchies, networks and associations that flexibly take into account the different requirements for the huge diversity of goods and services in the different societal fields* (Bader, 2001). By using these central themes and basic assumptions, Mommaas and Boelens (2006: 164-7) developed an operational framework consisting of seven steps that Boelens (2009) has extended throughout the years (see table 8.4).

The first step, *interpreting the problem by determining the focal actors and unique core values*, consists of *a) the identification of the primary problem – or stakeholder(s), and b) an analysis and joint determination of a region's, an issue's or an entity's unique core features* (Boelens, 2009: 193-4). This is a fundamental step, and although rather logical, it is often forgotten in planning practice. The next step consists of *actor identification and actor analysis*. After focal actors and unique core values have been identified, it is time to identify *other possible leading actors (actants) who feel connected or contented with these core values, or who see new chances and possibilities for themselves* (Boelens, 2010: 20). The third step consists of creating

opportunity maps and/or developmental possibilities on the basis of the first two steps. Then, the opportunity maps and/or developmental possibilities are discussed in bilateral, trilateral and small round table discussions. The objective is not only to see if maps and developments meet expectations, but also whether or not a willingness to invest can be achieved. By formulating concrete business cases and pilot projects, the fifth step is the proof of the pudding. If this step is successful, the next question concerns whether or not it is possible to achieve some sort of project-transcending planning strategy (Boelens, 2009: 196-7), perhaps through an urban regime: *a governing coalition of public and private actors sharing a consistent policy agenda that has a degree of stability* (Hamilton, 2004: 455),³⁵⁴ for example. The final step is to research if this new spatial development regime can be anchored in associative democracies as a supplement to current centrally organized institutions and representative democracy (Boelens, 2010: 24).

Table 8.4: actor-relational conceptual framework

1. Interpret the problem by determining the focal actors and unique values
2. In-depth actor identification and actor analysis
3. Create maps with opportunities and developmental possibilities
4. Organize bilateral talks and round tables
5. Formulate concrete business cases and pilots
6. Regime development and general plan outlines
7. Democratic anchoring in special district

Source: Mommaas and Boelens, 2006: 164-7, Boelens, 2009: 193-6

8.2.4. *New perspectives on spatial planning: some comments*

The three theories presented in this section all look promising. The strongest point of all three theories is that they start *in medias res*, from a human actant-oriented point of view. By focusing attention on human actants, the notion that there is a multiplicity of ideas, opinions, interests and objectives that can no longer be grasped by certain organizations or institutions, is basically underpinned. However, I can also identify some points of criticism.

³⁵⁴ The regime theory was formed through the political economic perspective that turns down the pluralistic assumption that government is adequate enough to make and carry out policies, and the structuralist assumption that economic forces determine policy. The theory emphasizes the dynamics of coalition building, or informal modes of co-ordination across institutional boundaries (Mossberger and Stoker, 2001: 812). Co-ordination needs to be created and maintained. Regimes acclaim collective action and secure participation in the governing parties through the distribution of selective incentives (contracts, jobs, facilities for a certain neighbourhood, for instance) (Mossberger and Stoker, 2001: 812-13).

The theory of relational planning stated that places are imagined, constructed by overlapping and intersecting complex relations, perceived in different ways by different people. Planners should frame the communicative and interpretive processes through which collective meanings of space and time are negotiated and maintained, for the purposes of mediating the challenges of co-existence in 'places' of shared space-time. Thus, relational planning does admit that in multiple webs of relations, mobilizing power becomes a strategic tool in order to prioritize the power geometries of place. However, relational planners seem to stay within the path dependencies of the government, tending towards public-oriented problem definitions of their own, focusing on internal time-consuming coordination processes, interaction overkill, and are ultimately exclusively oriented to vote winning (Boelens, 2009: 187). This results in less creative and middle-of-the-road solutions, based on concession-driven and/or subsidiary principles.

The multiplanar theory of spatial planning and governance offers the potential for several trajectories or visions of the longer-term future to be made (immanence), while for the shorter-term, location-specific and detailed plans and projects with collaboratively determined tangible goals are produced (transcendence). Planning and governance must be performative in order not to turn into reified entities, as is the case with traditional forms of planning and governance. Planning practitioners act within this theory as interpreters, translating between different actants, their desires, needs and so on, and between the multiple plans of practice. My critical note here is that, although Hillier provides planners and policy makers with a very interesting mindset, it remains vague how practical implementation of the multiplanar theory of spatial planning and governance should take place.

The actor-relational-approach starts by identifying unique selling points and leading human actants that have the ability to invest in their direct surroundings for reasons of more or less self-interest. Through judging planning and policy-making processes on durable economic, durable social and durable environmental solutions, surprising coalitions can be formed beyond the confines of government. Looking at the last two steps of the approach – Regime development and general plan outlines and Democratic anchoring in special district – the actor-relational approach can be criticized as being sensitive to embedded regulatory rigidities (existing in statutory and institutional environments) that thwart the innovative character of this approach.

This section has demonstrated how planning theory has reacted to the notion that the organizing government and the matching view on

governmental planning became inadequate to cope with the current complexity of society formed by the multiplicity of relational webs that transect space and time. This has been explained in more detail by describing three relatively new movements in planning theory. All the theories described look very promising when combined with the Hybrid Forum. By now all building blocks have been presented in order to show how association building can be steered and influenced in a normative and proactive way, which will be done in detail in the next section.

8.3

Presenting a dialogical framework for planning and policy making

In reference to the discussions above planning and policy making must occur in dialogical space. But how do you set up a dialogical framework for planning and policy making? First, some clarification is needed: I do not see dialogical democracy as the ideal planning and policy-making zenith in which everyone participates, no one disagrees, and only beautiful plans for the common good are created. Dialogical democracy will never banish delegative democracy. What is feasible is dialogical space, where planners and policy-makers are constantly searching for an effective and efficient equilibrium between delegative and dialogical democracy. Therefore, a relational approach is needed, as such an approach accepts that space and time are enacted through the performance of a multiplicity of actants and their complex relational behaviour, which has an impact on the contingencies of themselves and other actants. In my opinion, the actor-relational approach (Boelens, 2009) and the Multiplanar theory of spatial planning and governance (Hillier, 2007) – both derived from Healey's relational planning theory (2006) to some extent – embody the notion of the Hybrid Forum (coincidentally or otherwise) and give planners and policy makers pointers on how to deal with the constant tension between delegative and dialogical democracy.

First, as is the case with the Multiplanar approach, planning must consist of some form of transcendence. For instance, the Plan of Transcendence can consist of institutional forces that can hardly be influenced. It is the part of planning and policy-making that is the closest to the delegative democracy. It is out there and we have to deal with it. But, at the same time, planning and policy making is a continual process of immanence where heterogeneous elements come together to form rhizomic multiplicities. The Plan of Immanence resembles dialogical democracy and inhabits the organizational and implementation criteria as described by Callon et al. (2011: 159-62). It is within the immanent nature of

the planning and policy making that the Actor-relational approach is deployed. The planning and policy making does not take a stand on what is right and wrong, and is most certainly not the *orchestra leader of specific time-space frames* (Boelens, 2009: 31), but can try to set up a conceptual framework in order to steer the multiple enactments of Schiphol, for instance, and influence association building.

In order to set up this conceptual framework, I return to the collective once more. As already announced in Chapter 3, Latour also presents a sixth and seventh requirement for the collective, which have not been described until now. These two requirements help to set up an ANT-inspired planning methodology. First, Latour presents *scenarization* as a sixth requirement (Latour, 2004: 136). The scenarization can be seen as a temporarily description of how the collective could look. To put it straightforwardly, it describes what is included and left out of the collective. However, a final judgement about reality – or a permanent collective – is not possible, of course: there are all sorts of ‘great narratives’ about what the collective should look like, and these trigger new rounds of discussion or socio-technical controversies.

Scenarization is the starting point of my dialogical framework for planning and policy making. As shown by ANT, planning can no longer be seen as an applied social science (theory of planning (Faludi, 1973: 1-4), as once was the case, most notably in the seventies. Nor can planning be seen as the outcome of deliberative processes: the argumentative or communicative turn in planning, as popular from the nineties onwards (Fainstein, 2003: 175).³⁵⁵ Thus, and this is very important, the dialogical framework departs from the uncertainty of recalcitrant associations of humans and non-humans, replacing the bifurcation between subjects and objects, facts and values. As said previously, scenarization short-circuits no one and takes the organizational and implementation criteria of dialogical democracy very seriously: we cannot define ‘actors’, ‘groups’, ‘methods’ and ‘domains’ in advance, and deny access to transparent debates.

After scenarization, and all socio-technical controversies are made apparent, it is time to turn to the seventh requirement of the collective: *the power to follow-up*. This last requirement seeks test paths that allow collective experimentation to explore the controversies (Latour, 2004: 206). According to Latour, this requirement is procedural and can be called *the power to govern* (Latour, 2004: 200). To govern does not mean

355 Despite the introduction of the communicative planning approach as far back as the beginning of the seventies, most notably through pragmatism as developed by John Dewey and the theory of communicative rationality as worked out by Jürgen Habermas, the notion that planning can be perceived as a communicative process only received adequate attention during the 1990s (Fainstein, 2003: 175).

the arbitration of reason or the arbitration of sovereignty, but rather to multiply agencies and stabilize or discipline some of them (Latour, 2005b: 258). In the dialogical framework for planning and policy making, this is done by first determining actants, the unique core values and the different geographical and temporal relations, by interpreting the problem or opportunity arising from controversy. This first step consists roughly of the first two steps in Boelens's actor-relational conceptual framework. Next, maps with opportunities and developmental possibilities are created, which are discussed through bilateral talks and round tables (steps 3 and 4 within the actor-relational conceptual framework). In the end, concrete pilot projects are created. The last two steps of the actor-relational framework (regime development and general plan outlines and democratic anchoring in special district) are neglected, as they remain within the Plan of Transcendence instead of the Plan of Immanence. However, the two plans thus exist simultaneously, interleaved in a multitude of layers that sometimes largely overlap and are sometimes more dispersed within dialogical space. In the next chapter I will project this line of reasoning on Amsterdam Airport Schiphol.

8.4

Conclusions

And so the thesis finally arrives at the planned destination: to form normative recommendations for an ANT-inspired planning and policy-making methodology. First, the conclusion was drawn that planning and policy making neglect the tremendous impact of human and non-human actants interrelating through socio-technical controversies, as it refuses to reject the subject/object, nature/culture, and fact/value antitheses. As long as planning and policy making does not consider and study shared uncertainties, the gap between existing and normatively valued situations will never close.

Then, the hybrid forum was introduced to denote the type of democratic process that is performed during socio-technical controversies. Hybrid forums host deliberative processes in which heterogeneous actants collectively articulate the problem in which they are all implicated – dialogical democracy – as opposed to delegative democracy where scientists and experts present certified knowledge to deal with issues and political officials, and administrative experts make the appropriate decisions in the political and administrative field.

Subsequently, a list of criteria was presented that contribute to the emergence of dialogical democracy and the demise of the monopoly of the double delegation, defined as organizational criteria and implementation criteria. These criteria jointly define the normatively orientated space of

dialogical procedures, giving planners and policy makers a framework to influence the forming of plans and policies from an ANT perspective, but in a normative and proactive way. Furthermore, this framework can operate beside existing policies, influencing and hopefully improving them at the same time.

To complete the exploration of a normative ANT perspective on planning and policy-making, three recent relational insights in planning theory were described. Relational planning (Healey, 2006), the multiplanar theory of spatial planning and governance (Hillier, 2007), and the actor-relational-approach (Boelens, 2009), look promising as all three perspectives react to the notion that the organizing government and the corresponding view on governmental planning were indeed inadequate in coping with the current complexity of society formed by the multiplicity of relational webs that transect space and time.

Next, the third research question could be answered. How should the Actor-Network theory be implemented by planners and policy makers in such a manner that association building can be steered and influenced in a normative and proactive way? This must be done by positioning planning and policy making within dialogical space, considering Latour's last two requirements of the collective: scenarization and the power to follow-up. Here, Hillier's Plan of Transcendence and Plan of Immanence co-exist, interleaved, overlapping and dispersed through a multitude of layers. Within the Plan of Immanence, planners and policy makers must interpret problems and opportunities by determining actants, unique core values and the different geographical and temporal relations; they ought to create maps with opportunities and developmental possibilities and discuss these through bilateral talks and round tables in order to eventually formulate concrete pilot projects. In this way, association building can be influenced. The next and final chapter of this thesis uses the normatively orientated space of dialogical procedures to come to recommendations on how to refine planning and policy making concerning the future of Amsterdam Airport Schiphol.

Chapter 9

Recommendations and Conclusions: Schiphol Assembled

Aim of the study was to focus on the correlation between the technical influence and the actor-oriented side of the decision-making process concerning Schiphol and how this leads to impasses, and more importantly, solutions for these impasses. The Actor-Network theory was introduced as providing the fundament for developing this type of approach, because it does not study complexity, but the disposition of complexity. However, the main challenge was to actually create a normative grid while using a descriptive theory such as the Actor-Network theory, leading to the main research question:

To what extent do socio-technical controversies influence the decision-making process concerning the future of Amsterdam Airport Schiphol in an obstructive way, and what lessons could be learned by planners and policy makers?

In order to answer the main research question, three additional research questions were formulated:

1. Why should a descriptive research framework formulated with the aid of the Actor-Network theory contribute to answering the main research question?
2. How can mapping controversies lead to a better understanding of the Alders Table, a consultative body consisting of members from the public sector, the private sector and civil society?
3. How should the Actor-Network theory be implemented by planners and policy makers in such a manner that association building can be steered and influenced in a normative and proactive way?

Eventually, by answering the three research questions mentioned above, the gap could be closed between the rather abstract and descriptive principles of the Actor-Network theory and the detailed and normative recommendations for concrete planning and policy processes.

Aim of this chapter is to provide an answer to the main research question. First, we summarize the answers to the three additional research questions, which basically entails a recapitulation of the thesis so far. Then, the main research question is answered using all the insights from the earlier chapters. The chapter will end with a short conclusion.

9.1

Recapitulating research questions 1 – 3

First, Schiphol was introduced: not only in the first chapter, but also in the second chapter, which contained a historical overview of ninety years of Schiphol policy debate (1906-2006). It was shown how the airport was originally glamorized, leading to inevitable growth. This was mostly initiated by three leading actors: Jan Delleart (Schiphol), Albert Plesman (KLM) and Anthony Fokker (Fokker). After the Second World War and the reconstruction of the airport, politics, values, science and technology intermingled for the first time, with the introduction of the jet engine. Negative spill-over effects such as noise hindrance were given more and more attention. Development was hampered as the first protest groups emerged, and noise hindrance found its way onto the political agenda through scientific research resulting in noise contours, maps and graphs. This changed during the economic recession of the 1980s: Schiphol became a *mainport*, an economic engine with a worldwide network that functions as a whole of companies and activities that reinforce each other. During the nineties, policies were introduced to ensure that economic

development and ecological sustainability could go hand in hand: the *dual objective* was born. At the same time, the dual objective sparked much controversy, as many people were not convinced that ecological sustainability and economic development could dovetail together. This resulted in many consultative bodies and commissions, which had to breakthrough the stalemate that had arisen because of conflicting values: economy versus ecology. Respectively PASO, PMMS, CORUS, TNLI, TOPS, ONL, and CDV were all formed as consultative bodies to deal with this impasse. None of them succeeded, however, as actants constantly contested prevailing associations by using immutable mobiles such as graphs, technologies, contours, reports by independent consultants and numerous other non-human actants to transform matters of concern into matters of fact. The changing position of Schiphol at a local, regional and international scale, the increasing number of actors involved, the existence of conflicting norms and values, and *the scientization of politics/policy and the politicization of science*, triggered and fed complexity. That is why, today, Schiphol stands for multiple, but all legitimate, perceptions formed through an accumulation of socio-technical controversies. Where social and technical uncertainties used to be neatly divided from each other, the border between the two spheres has been completely scrambled in the space of two or three decades.

9.1.1 *Towards a descriptive grid*

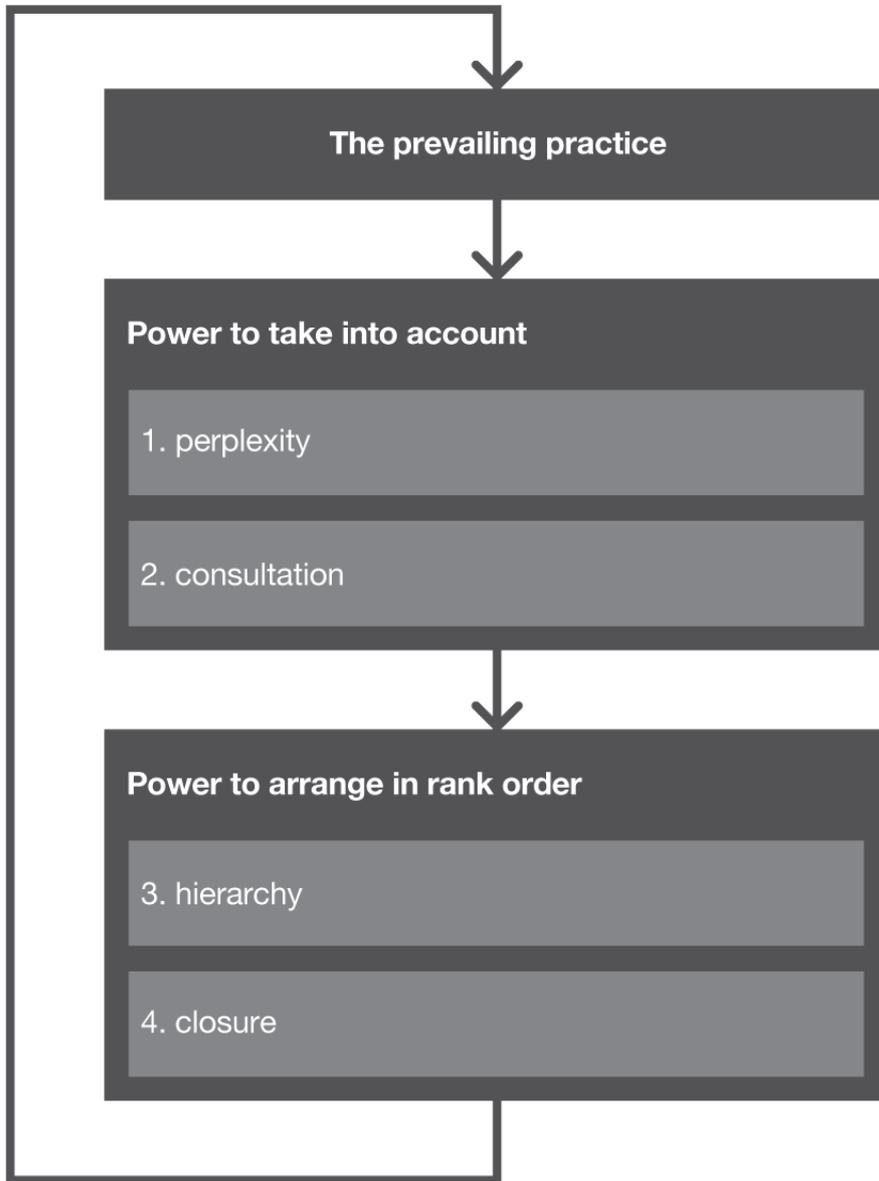
The second part of the thesis presented a descriptive grid that helps describe and explain the impasse in the planning and policy-making process concerning the future development of Amsterdam Airport Schiphol. First of all, the Actor-Network theory was presented. The Actor-Network theory enables readers to understand how actors construct 'realities' through the forming of networks of associations, as a result of controversies. By following the traces that actors leave behind while forming networks of associations, Actor-Network theorists analyse why some actors become more powerful, and how. ANT starts from three notions: first, a priori definitions are obsolete: *instead of taking a reasonable position and imposing some order beforehand, ANT claims to be able to find order much more discerningly after having let the actors deploy the full range of controversies in which they are immersed* (Latour, 2005b: 23). Second, all actors are equal: *if some actors are larger, we should study how this comes about – how, in other words, size, power or organization are generated* (Law, 1992: 380). And third, ANT uses the principle of symmetry as an actor is defined as: *any element which bends space around itself, makes other elements dependent upon itself and translates their will into a language of its own. An actor makes changes in the set of elements and concepts habitually used to describe the social and the natural world* (Callon and Latour, 1981: 286). This last notion is very important: not only do

ANT theorists claim that we cannot say in advance which actors are more powerful than others, but in addition to that we have to keep in mind that humans and non-humans are a priori equal. That is why the word 'actors', which is automatically associated with a human being, has been replaced by the noun 'actant' which can embrace both human actors and non-human objects.

After the introduction of ANT, the *conceptual lens* through which this research looks at that evidence was presented. The word 'controversy' refers here to every bit of science and technology that has not yet been stabilized, closed or 'black-boxed'; it does not mean that there is a fierce dispute nor that it has been politicized; we use it as a general term to describe shared uncertainty. Controversies emerge when a statement is uttered and no agreement is reached. As a result, the actants concerned do their best to render the statement either fact or fiction. In this thesis, controversies are the essential resource to make social connections traceable.

The case studies were analysed by following controversies and accompanying the actants up to the end, being slowly led from policy-in-the-making as associations disappear in the black box of ready-made policy. First, the prevailing practice, or the context, was introduced. Then, a controversy emerges that influences the prevailing practice. As it is clear that associations are rearranged, but still unclear as to which ones and how, the research framework first focused on the power to take into account (the task of unfolding the complexity). Whereas controversies are observed in the first phase, they are described in the next: the second power of representation, or the power to arrange in rank order (the task of ordering such complexity) (see figure 9.1).

Figure 9.1: Mapping Controversies



Source: Derived from Latour, 2004.

9.1.2 *Mapping Controversies: the Alders Table case*

Part III of the thesis used the descriptive grid as presented in Part II to give a descriptive analysis of the Alders Table: a commission consisting of members from the public sector, the private sector and civil society that, from 2006 onwards, has been formulating recommendations concerning the future capacity of Schiphol.

First, the formulation of the short-term Alders advice (<2011) was given between 2006 and 2007. The first controversy focused on the Cabinet position concerning Schiphol, released in 2006, which stated that economic growth strategies should be combined with the simultaneous realization of environmental objectives, in line with the dual objective. However, as the Cabinet position came under heavy fire, the former Ministry of V&W, in collaboration with the former Ministry of VROM, concluded that the erstwhile discussion of the Cabinet position concerning the future of Schiphol would not lead to constructive and durable solutions, and that a different policy strategy was needed in order to develop constructive and durable solutions regarding further development of Schiphol. That 'different policy strategy' became the Alders Table. The second controversy emerged when the Alders advice on the short-term had to be formulated. The thesis discussed the way in which actants arranged an order of importance in the rather heterogeneous list of spokespersons, and how the actants tried to achieve closure by uttering statements underpinned by numerous heterogeneous materials.

Next, the formulation of the mid-term advice (<2020) between 2007 and 2008 was analysed. Through two socio-technical controversies, namely the 2+2 runway configuration discussion and the formulation of the new noise-measurement system, the thesis illustrated how overflows occurred, giving rise to unforeseen effects, outbursts of mobilization, and emergent identities that have to be taken into consideration. Nevertheless, the final Alders advice was formulated in October 2008 and presented as a unique and widely supported package deal.

The Alders Table produced three covenants. The first covenant focuses on Selectivity: as the actors chose to consolidate the mainport function of Amsterdam Airport Schiphol, it was important that the airport focus on so-called 'hub-related' or mainport-related air traffic. The second covenant focuses on an improvement of the quality of the environment: measures are created to improve the quality of life by means other than nuisance-reducing arrangements, such as communication towards potentially new inhabitants of the Schiphol region, reminding them that they are about to buy a house close to an airport and pointing out insulation projects. The third covenant focuses on nuisance-reducing agreements: the further development of Schiphol is accompanied by a set of agreements concerning nuisance reduction.

Three of those measures were described in the last empirical chapter: the

implementation of idle reverse thrust, the implementation of the radius-to-fix technique between the communities of Hoofddorp and Nieuw-Vennep, and the research for an alternative route for the Spijkerboor departure from the Kaagbaan. The thesis showed how the three measures triggered a renewed round of socio-technical controversies stemming from the final Alders advice.

By using the descriptive grid as defined in chapters 4 and 5 the Alders Table, controversies could be mapped, demonstrating that the Alders table did not *present* an advice, but *became* an advice. The intermezzo started with an analysis of the as-yet descriptive Alders Table case, using the ANT vocabulary already present. First, the disposition of the propositions was described, as well as the disposition of the collective. The gap between existing and normatively valued situations of Schiphol could not be bridged as the collective seemed arbitrarily short-circuited, on the one hand, and politicizing science and scientized politics made decision making based on scientific facts impossible, on the other. The ANT analysis showed that planning and policy making will never bridge this gap between existing and normatively valued situations as long as planning and policy making cannot escape from the artificial dichotomies of nature/culture, subject/object, and fact/value; it must turn to shared uncertainties instead.

9.1.3 *Presenting a normative framework*

The last part of the thesis answered the question as to how the Actor-Network theory could be implemented by planners and policymakers in such a way that association-building can be steered and influenced in a normative and proactive way. In order to explore the possibilities of a normative ANT perspective on planning and policy-making, which does focus on shared uncertainties, the hybrid forum was introduced in Chapter 8: a *forum* because they are open spaces where groups can come together to discuss technical options involving the collective and *hybrid* because the groups involved and the spokespersons claiming to represent them are heterogeneous, and include experts, politicians, technicians and laypersons who consider themselves involved. They are also hybrid because the questions and problems taken up are addressed at different levels in a variety of domains, from ethics to economics (Callon et al., 2011: 18). Hybrid forums are the place where the most heterogeneous relationships are formed, because of the socio-technical controversies running through them. Controversies enrich democracy, as they are powerful apparatuses for exploring and learning about possible worlds and the composition of the collective. Also, in this respect, controversies provide an ambitious and promising planning and policy-making framework. First, two democracies were introduced leading to the dialogical space. *Delegative democracy* is characterized by separating specialists and

laypersons and carving out the gap between professional politicians and ordinary citizens. These two delegations combined are referred to as the 'double delegation': *the process of transferring the power to decide from citizens to political officials and administrative experts, as those capable of making appropriate decisions in the political and administrative field, and to scientists and experts for those issues involving matters requiring some kind of specialized knowledge* (Arriscado Nunes et al., 2008: 9).

Contrasting with delegative democracy there is *dialogical democracy*, a form of democracy that puts controversies and hybrid forums at the centre of debate. In order to break down the monopoly of the double delegation and contribute to the emergence of a dialogical democracy, *organizational criteria* and *implementation criteria* were defined, forming the *normatively orientated space of dialogical procedures*.

In order to form a normative ANT perspective on planning and policymaking, three recent relational insights in planning theory were described as they consider the basic assumptions of ANT: *relational planning* (Healey, 2006), the *multiplanar theory of spatial planning and governance* (Hillier, 2007), and the *actor-relational approach* (Boelens, 2009). Planning and policy making was positioned within the dialogical space, considering scenarization and the power to follow-up. This was completed by using Hillier's Plan of Transcendence and Plan of Immanence in combination with Boelens's actor-relational approach. In this way, a dialogical framework for planning and policy making could be created to influence association-building. Planners and policy makers can constantly check if they are operating more in the delegative realm or dialogical realm, and can adjust their position if needed. Furthermore, no new administrative or organizational body has to be set up: the dialogical space exists next to existing policies; to control, stimulate, influence and improve.

9.2

Schiphol as dialogical space

By now, after all additional research questions as presented in Chapter 1 have been answered; it is time to answer the main research question. I shall dissect the main research question. So I will first answer the part concerning the extent to which socio-technical controversies influence the decision-making process concerning the future of Amsterdam Airport Schiphol in an obstructive way. Actually, the socio-technical controversies do not influence anything in an obstructive way. It is *the lack of attention for socio-technical controversies* that influenced the decision-making process around Schiphol in an obstructive way. As mentioned many times

before, there is a gap between the valued situations (how actants want to see Schiphol) and the normative situations (the actual policies that dictate how Schiphol should be seen). This gap will never be bridged as long as the focus does not shift towards controversies or the associations involved in planning and *policy-in-the-making*. Without departing from socio-technical controversies, planners and policy makers will never grasp why social, political and moral uncertainties are rendered more complex, rather than less, by scientific knowledge or established technologies (and do something about it!) as is the case with Schiphol.

And this automatically leads to the second half of the main research question: when considering socio-technical controversies what lessons could be learned by planners and policy makers? In order to answer this question, I have already introduced the dialogical framework for planning and policy making. Derived from this framework and the case studies, this section provides planners and policy-makers with three important tasks: *to set concrete and accountable goals, to diminish the impact of politicizing science and scientized politics, and to perceive planning as an empty signifier.*

9.2.1 *Set concrete and accountable goals*

In the previous chapter, I presented Hillier's Plan of Transcendence within the Multiplanar theory of spatial planning and governance to explain that planning and policy making has to account for institutional forces that can hardly be influenced. In addition to this explanation, I wish to use the Plan of Transcendence to show that concrete and accountable targets are necessary *while embracing shared uncertainties*.

The Alders Table controversies made clear that during the decision-making process concrete and accountable goals were never set. Therefore, no clear-cut agenda ever existed. The only thing actants agreed upon, was that the Alders Table was founded to formulate recommendations concerning the future capacity of Schiphol in combination with hindrance-reducing measures. Of course, the current complexity of the decision-making process around Schiphol cannot be simplified by organisational charts, action plans and / or working schemes. However, when starting up a project, there must be room to generate and mobilize force as this takes time. Almost without any exception, a furious start leads to unpleasant delays later on in the process of association building as actants contest earlier decisions and / or show spontaneous strategic behaviour. Also in this respect, actants should set up a common frame of reference to state a priori which data and hypothesis are plausible and which are not. Furthermore, actants should be clear about disadvantages and show that they are willing to reduce these disadvantages to a minimum. Reciprocal explanations lead to more support and sympathy and decreasing distrust. Clarity is better than chaos and rigidity: actants must transform unprolific disagreement concerning content into remunerative dissension. How can

this be achieved? By creating a frame of transcendence in which actants get the chance to roam freely and dialogically. So instead of providing a new deficient solution focusing on either the complex society or the straightforward governmental bureaucracy, we need an approach which focuses on association building by setting up concrete and accountable goals that will channel the forming of associations.

Schiphol wants to become the most preferred airport; the Metropolitan Region Amsterdam finds international competitiveness important; Haarlemmermeer wants a delicate equilibrium between Schiphol's economic advantages and ecological disadvantages. Just some random, existing policy goals. But what do they say? Not much actually. All three are wide open to personal interpretation. What is a most preferred airport? How does the Metropolitan Region Amsterdam measure international competitiveness? And how should one define a balance between economic advantages and ecological disadvantages? It is rather strange that the Schiphol file is crammed with these sorts of policy goals, but that a clear definition does not seem to be at hand. As a result, policy goals – such as the maximum amount of air transport movements at Schiphol for instance – are redefined and stretched over and over again. Vague policy goals and uncertain outcomes lead to distrust. Setting concrete and accountable goals becomes even harder when realizing that the decision-making process of Schiphol is completely based on the rather ideal situation to reconcile the gap between the pursuit of private self-interest and activities directed at the realization of the common or public good (Griggs and Howarth, 2008: 125).

And so, in order to come to concrete and accountable goals, it may be best to divide the “particularity” and “universality”: a general direction is defined (for instance “Schiphol is allowed to grow”) but not by setting up yet another consultative body with all sorts of representatives that discuss how Schiphol should grow. By dividing the particularity and universality, consultative bodies like the Alders Table – with representatives of the public, private and civil society – become obsolete. On this level of transcendence, in order to move away from the delegative democracy, only the strictly necessary demarcations are set, for instance to ensure the safety of people living around the airport. Next, because the Netherlands see Schiphol as an economic engine, the general direction that is chosen will be “growth” and not economic growth and ecological sustainability. The development of infrastructure in the air (e.g. flight paths, arrival routes and departure routes) is the responsibility of Air Traffic Control, airlines, the national government and – in the wake of the implementation of a single European sky initiative (the SESAR programme) – European governments and traffic control. Thus, within the confines of safety and international regulations, the most preferred operation in the air is set. It is within this

frame of transcendence that consultative bodies are not needed anymore.

How actants are still involved in the decision-making process when consultative bodies are redundant, will become clear when I have described how to diminish the impact of politicizing science and scientized politics, and treat planning as an facilitator.

9.2.2 *Diminish the impact of politicizing science and scientized politics*

Delegative democracy dominates the Schiphol file, which is indeed characterized by the separation of specialists and laypersons and a wide (and even widening) gap between professional politicians and ordinary citizens (just look at the case studies!). These professional politicians and specialists decide what is good for ordinary people concerning the development of Schiphol. Of course, all sorts of actants lobby and influence the double delegation, which has led to the dual objective down through the years: economic development and ecological sustainability could go hand in hand. This basically means more air transport movements and less noise hindrance. At the same time, although delegative democracy carves out a gap between professional politicians and specialists on the one hand, and ordinary citizens and laypersons on the other side, a multiplicity of stakes and divergent perceptions within delegative democracy leads to disagreements, ambiguities and uncertainties concerning normative and cognitive elements. The way the planning and policy process around Schiphol is organized nowadays, through consultative bodies such as the Alders Table, a) short circuits the degree of intensity of concern for composition of the collective (because of an absolute dominant focus on noise, hindrance and restrictions), and b) short circuits the exploration of possible worlds and of identities (because of the technocratic disposition of the focus on noise, hindrance and restrictions). Furthermore, the disagreements about the exact composition of the dominant technologies and science used within the Schiphol file ensure that consultative bodies concerning Schiphol are destined to fail in finding durable and sustainable solutions for the stalemate that exists. Although closure is reached – as shown in the case studies – very delicate associations are formed, which can be contested any moment.

What makes the technocratic focus on noise, hindrance and restrictions even more peculiar is that in 2011 Schiphol had less than 5500 registered complainers, while handling more than 420,000 air transport movements in a dense residential area where approximately 2,2 million people live: the

Amsterdam Metropolitan Area.³⁵⁶ This quantity of 2,2 million people does not even include the Province of Zuid-Holland, where the Leiden region and the Bollenstreek region are also located below heavily used departure and/or arrival routes.

Moreover, the total number of people severely hindered by noise nuisance within the 48 Lden dB(A) contour – which is the number used to judge hindrance-reducing measures on their effectiveness – is based on a questionnaire dating from 1996 and 2002 set out by the National Institute for Public Health and the Environment (RIVM) and the Netherlands Organization for Applied Scientific Research (TNO), and translated to a doses-effect relation. The fact that the original percentage of severely hindered people was derived from a questionnaire – which sparks discussion when it comes to the objectiveness of questionnaires in general – and the fact that the results from the questionnaire have been standardized into a doses-effect relation, make the total number of severely hindered people within the 48 Lden dB(A) contour a definite case of secluded science and even an arbitrary constant.

The 20 Ke contour defines an area in which building restrictions are in force. However, not only do people question the accuracy of the *Kosten eenheden*,³⁵⁷ the 20 Ke contour is not legally binding, resulting in civil and political unrest when it comes to new developments (as there is no clear distinction between what can and cannot be developed). However, although there is no clear jurisprudential framework to judge requests for new developments within the 20 Ke contour, it does result in controversy when governments want to build within this contour, mostly because the KLM and the Schiphol Group condemn new developments within the 20 Ke contour.

Another factor that stands out is that hindrance-reducing measures spark new complaints as people suddenly become aware of the aeroplanes above them, as the measures and the attention they receive from policy makers and media point out that there are air routes above their houses (see table 9.1 with 2003, the year that the Polderbaan was inaugurated and several mistakes were made as an example of this phenomenon).

Point that I am trying to make is: the fact that all policies concerning Schiphol are mainly focused on aircraft noise from a delegative democracy point of view, which seems less serious than the policies state – the

³⁵⁶ More than 2.2 million people live in the *Amsterdam Metropolitan Area*, a regional administrative collaboration consisting of the City Region of Amsterdam (consisting of the municipalities of Amsterdam, Aalsmeer, Amstelveen, Beemster, Diemen, Edam-Voldendam, Haarlemmermeer, Landsmeer, Oostzaan, Ouder-Amstel, Purmerend, Uithoorn, Waterland, Wormerland, Zaanstad and Zeevang), the municipalities of Almere, Beverwijk, Blaricum, Bloemendaal, Bussum, Haarlem, Haarlemmerliede and Spaarnwoude, Heemskerk, Heemstede, Hilversum, Huizen, Laren, Lelystad, Muiden, Naarden, Uitgeest, Velsen, Weesp, Wijdemeren, Zandvoort, the Province of Noord-Holland and Flevoland.

³⁵⁷ See Chapter 2 for an explanation on the *Kosten Eenheden*.

Schiphol file is *hypochondriac*. This excessive preoccupation or worry about having a serious illness, in this case noise hindrance, ensures that the monopoly of the double delegation will not allow other views, interests and opinions into the dialogical space. All policies are imbued with the compulsive urge to control aircraft noise, while there are uncertainties and disagreements about the composition of the cognitive and normative assumptions that have to form these policies.

Table 9.1: Total amount of registered complaints in 2002 and 2003

	2002	2003	
January	3080	7828	
February	3710	8993	Polderbaan is inaugurated
March	2684	13063	
April	2511	12770	
May	3650	16264	
June	5517	21390	Input mistake is made public
July	4720	31657	Media picks up the input mistake
August	5552	41877	
September	4429	33202	
October	3379	25166	Parallel departures are believed to be dangerous
November	3363	39133	
December	2549	28149	

Source: CROS, 2002 & 2003

It is possible to diminish the impact of politicizing science and scientized politics by assigning less importance to policies focused on the dual objective (and therefore imbued with socio-technological uncertainties): by stopping the implementation of noise reducing measures, for instance. This may sound counterintuitive; how can one oppose measures that lead to fewer people suffering from noise nuisance? Well, in the Schiphol region, which can be seen as a densely populated area, most noise-reducing measures derived from the Alders covenants and not (yet) implemented have led to a small nett amount of people suffering from noise hindrance. Why? Because there is just hardly any leeway for improvement, given the fact that Schiphol is allowed to consolidate its mainport position and develop towards 510,000 air traffic movements.³⁵⁸ CROS pilot 3b+, for instance, only led to 343 fewer people suffering noise hindrance within the 48 Lden dB(A) contour in a total of 209,396 severely hindered people within that contour. And then there is also another side

358 Of course, if Schiphol handled fewer air traffic movements, noise hindrance would also decrease.

to the matter: annoyance by noise is suggestive and cannot be dictated by noise contours.³⁵⁹ The noise contours play an important role as immutable mobiles concerning the relentless association and dissociation of actants and networks in socio-technical controversies.

Next, the implementation of noise reducing measures always leads to a transition of aircraft noise from one place to the other. When considering CROS pilot 3b+ again, the implementation of the radius-to-fix technique led to fewer hindered people in Nieuw-Vennep and parts of Hoofddorp, but resulted in more noise annoyance in the neighbourhood of Hoofddorp Floriande. A difficult question in these situations remains: when are we willing to relocate aircraft noise and when not? An obvious framework for this question is not available. This leads to NIMBY behaviour, which consolidates the climate of distrust.

But what should be done? First, instead of implementing noise hindrance-reducing measures *afterwards*, it is better to deal with noise annoyance *ex-ante*. This means that, instead of implementing noise hindrance-reducing measures and calculating their effect on the number of severely hindered people afterwards,³⁶⁰ people are informed beforehand about the operational effects of the airport. Some steps have already been taken to introduce this line of reasoning. Article 21 of the Alders advice³⁶¹ states that: 'Actions are taken to improve and expand information flows concerning Schiphol. BAS, the Local Community Contact Centre Schiphol, should play a more proactive role when it comes to providing inhabitants with information. Two important measures have already been implemented in 2011:

- an aircraft-tracking website, tracking flights from and to Schiphol online,³⁶² and
- a website called 'living near Schiphol' on which people who are planning to buy a house close to Schiphol or already live in the direct surroundings of the airport can find information concerning flight paths, flight routes, decibels, FAQs and so on, by typing in their zip code. Real estate agents and developers are obliged to tell buyers about the existence of this website.³⁶³

Communicating upfront and providing people with information in a proactive manner, instead of using calculated contours to pinpoint

359 Actually, annoyance by noise cannot even be captured by science, as scientists have been trying for years now to formulate a model in which non-acoustic elements of noise annoyance are captured (see Kroese 2011, for an extensive analysis on the subject).

360 Which almost always leads to discussions concerning calculation methods, the chosen research methodology, etc.

361 See page 20 of the Alders advice for the mid-term

362 See <http://inzicht.bezoekbas.nl/>

363 See <http://www.bezoekbas.nl/> and click on 'wonen bij schiphol'.

whether or not someone suffers nuisance, is far more effective. Even more ground can be won by introducing social media. It is astonishing how companies, brands, musicians, movie actors and even politicians have embraced social media such as Twitter, YouTube and Facebook to make sure their voices are heard, whereas planning and policy makers hardly use these new forms of interaction. Planning and policy makers can react quickly and effectively via the social media to issues raised by society, such as through Twitter, for example:

Tweet 1 by someone living in Aalsmeer; let's call this person @AalsmeerCivilian:
@bas, #aircraftnoise is horrible today in @aalsmeer! Thanks @schiphol!

Tweet 2 by BAS replying:
@AalsmeerCivilian, we're sorry. It is because of unexpected #Kaagbaan #maintenance. Tomorrow it will be better in @Aalsmeer #aircraftnoise

This seems a very simple and rather straightforward idea. And it is. Therefore it is even more astounding that planners and policy makers do not use it. Banks and Telecommunication companies see Twitter as an extension of their customer service. Unfortunately this is not the case within the Schiphol file. Admittedly, the Schiphol Group does already do this through their Twitter account (@schiphol), but they only seem to twitter about airport-related matters such as; when is the panorama deck open? Are there many delays because of the weather? Until what time are the shops open at Schiphol? LVNL also has a Twitter account (@lchtvrksldr), but air traffic control uses it more for corporate communication. BAS does not have a Twitter account.

Another interesting example which could be used in the Schiphol file is the AMBER alert. This alert, a backronym for America's Missing: Broadcasting Emergency Response is used to instantly galvanize an entire community to assist in the search and the safe recovery of a missing child. AMBER alert is a huge success worldwide. A similar system could be used in the Schiphol file, which sends subscribers, through short message service, up-to-date information: about runways in use, operational disturbances (because of weather conditions for instance), or other unusual circumstances, for instance. However, this system could also be used to send subscribers a forecast per day or week, consisting of the total amount of air traffic movements, which runways will be used and when. By making aircraft noise predictable, noise annoyance could be tackled.

Furthermore, Facebook is already being used by spatial developers when they set up a new project, for instance. They create a platform where old and new inhabitants can discuss how the new playground in the neighbourhood should be set up, but also allow people to share their own

history by creating an interactive timeline and a sense of place. This is an excellent platform for the Schiphol region, where people can discuss the sort of projects the airport and governments should implement in their neighbourhood. The other way around, the airport and governments can suggest projects as well. By donating playgrounds, soccer fields and recreational areas, the airport operator can enhance the *Schiphol feeling* within the region, something that is actually already being done by offering educational material about Schiphol and the region to elementary schools.

These sorts of measures are equally accessible to everyone with a computer and an internet connection. The level of transparency and traceability of the information is high and the clarity of the rules is pretty straightforward: you see what you get. Planners and policymakers should use these sorts of digital interactions more often as they truly contribute to a diminishing impact of politicizing science and scientized politics.³⁶⁴ Dealing with noise annoyance *ex-ante* instead of implementing noise hindrance-reducing measures *afterwards*, will make consultative bodies concerning the future of Schiphol, such as the Alders Table, redundant—as mentioned previously. There is no longer need for a separation of specialists and laypersons and a gap between professional politicians and ordinary citizens. And as the professional politicians and specialists no longer have to decide what is good for the ordinary people with regard to the development of Schiphol, it is also no longer necessary to set up consultative bodies with a narrow perspective on the possible worlds of identities, no concern for composition of the collective, and disagreements and uncertainties about values, norms, objectives, research, technologies or information. Using transparent and traceable information and communication, both analogue and through all sorts of digital resources, the Schiphol file will consist of just everyone who feels the urge to join.

9.2.3 *Planning as facilitator*

By saying ‘Stop noise hindrance-reducing measures and let everybody have their say’, the double delegation of Schiphol as well as the focus on *politicizing science* and *scientized politics* is weakened, but the statement offers no clues on how to actually facilitate developments. As already mentioned, the first thing planning and policy making needs is a reconfiguration in order to become *increasingly relational and actor-oriented, rather than setting contextual and geographical conditions* (Boelens, 2006: 34; Boelens and De Jong, 2006: 111; De Jong, 2008: 69, Van Der Twist et al, 2010: 4). Such an approach must:

- see places as imagined, constructed by overlapping and intersecting complex relations, perceived in different ways by

364 And by ‘using’ I mean more than just using the internet for polls and referenda.

- different people (Healey, 2007: 28);
- and reject the notion that technology and knowledge are politically neutral by
- admitting that knowledge cannot be understood as a matter of reference, but as one of manipulation where meaning is attributed (Mol, 2002: 5), and
- embracing the delegated intentionality and agency of technologies (Pels et al., 2002: 8), and finally
- no longer supports the traditional distinction between the social and the material world (Latour, 2005: 24).

In the previous chapter, I used Boelens's Actor-Relational-Approach and Hillier's Plan of Immanence within the Multiplanar theory of spatial planning and governance and positioned the two approaches within the Hybrid Forum and the last two requirements of Latour's collective, to give impetus to a relational approach that embodies above-described characteristics.

However, in the Schiphol region, policies state quite the opposite to what can be defined as a relational approach. In the course of time, delegative democracy has formulated national policies concerning Schiphol that have focused on aircraft noise and restrictions, or a combination of both (restrictions because of aircraft noise). This makes it difficult to influence the composition of the collective, as the values attributed to the criteria of intensity, openness and quality are weak. However, instead of formulating a delegative frame by which demand is conditioned, it may be an idea to open up and listen to what the demand side actually *demand*s. Why does a government dictate that no one may live underneath *runway A* close to Amsterdam, while young people, seeking affordable housing close to the capital are more than happy to live underneath *runway A*? Why do contours say that my house is eligible for insulation against aircraft noise, while the neighbours living three meters across the street are not? Why are governments relocating farmers close to the airport who don't want to be relocated? And why don't governments relocate farmers who do want to be relocated? Instead of the formulation of standardized – often technocratic – policies and procedures, it is time to listen to what people really want. Again, this may sound rather logical, but it does not happen in reality.

In order to shift planning and policymaking from restrictive and obdurate towards relational, planning must become increasingly facilitating by redefining it as an *empty signifier* (Gunder and Hillier, 2009).³⁶⁵ A signifier is a unit of something (for instance a word or gesture) that can carry ambiguous and/or multiple meanings: meaning everything and nothing.

365 Derived from Lacan and de Saussure.

However, without falling into the trap of existential nihilism, I see the empty signifier as an opportunity rather than as a criticism of dominant neoliberal discourses within spatial planning (Mohammadzadeh, 2011: 7). Gunder and Hillier believe that we must get rid of *master signifiers* within planning, such as *globalization, sustainability* and *multiculturalism* (Gunder and Hillier, 2009: 17). Planning is emptied of ideological and semantic content and must be appealing to a range of different actants with divergent identities and interests.

Planners and policy makers should go beyond the mere rationality of planning as this is actually often *not the balancing of facts to maximize predictable and 'measurable' utility, but rather the balancing of desires, values and aspirations, strongly influenced by the power inequalities of the actants involved* (Gunder and Hillier, 2009: 182). Instead of creating the illusion of certainty, planning must embrace shared uncertainties triggered by socio-technical systems and the spatial juxtaposition of contesting spaces and practices. In this way, it is no longer effective to formulate *universally recognized – hence hegemonic – ideas and established solutions to planning and problem solving* (Gunder and Hillier, 2009: 185), as is the case with Amsterdam Airport Schiphol.

As planning is seen as an empty signifier within the Schiphol region, the focus will no longer be on the constant tension between economic development and ecological sustainability. This will no longer lead to prescriptive ideas as known solutions, which, in itself, tends to automatically define and pre-shape the issues and problems it seeks to address (Gunder and Hillier, 2009: 194). What is important is the constant awareness of locations as nodes within networks of associations. In a glocal way, such an approach creates tailor-made solutions on a relatively small scale, without losing track of the network of associations in which the space and practice are involved. As said previously, the dialogical framework for planning and policy making is not a tool to shift from delegative democracy to dialogical democracy. The approach is positioned within the dialogical space and deals with both the delegative and dialogical democracy. The Plan of Transcendence sets the framework by which planners and policy makers must operate. At the same time, the Plan of Immanence does not necessarily start from a governmental viewpoint or the need for periodic renewal of existing plans. It is the intention to divert contemporary planning and governance away from the beaten track and to engage planning practitioners to design and tailor their own planning processes congruent with the ever-changing dynamics of the multiplicity of relational webs that transect space and time.

In this way, at last the particularity and universality can become divided from each other. A more top down approach is used in order to set the framework of transcendence while an actor-relation approach is used

bottom up to form plans of immanence. The given facts within the framework of transcendence set the boundaries for tailor made plans of immanence. By decreasing the impact of politicizing science and scientized politics, because such discussions are withdrawn from the decision-making process as much as possible (at the immanence level at least), the future of Amsterdam Airport Schiphol can be set in a clear and resilient way.

9.3

Conclusions

Traditionally, planning and policy making is about trying to shape the social, economic and physical world in which we live. In that sense, the decision-making process concerning Amsterdam Airport Schiphol has always been focused on experts and specialists providing certified knowledge in order to make sure politics are purged of all scientific uncertainty, while professional politicians organize the debate that should lead to the expression of general will. The first flaw in this approach is that planners and policy makers frequently come up with decisions that are at odds with what those affected would have delivered off their own bat. Next, there is a belief that technologies and science can define the requirements of modern life and take complex decisions. The second flaw is, however, that disagreements about cognitive and normative elements, which lead to uncertainties concerning technologies and science, make 'certified knowledge' part of political discussions: the increasing scientization of politics and politicization of science. As facts and values cannot longer be accounted for, it is time to get rid of these antagonisms and focus on *shared uncertainties*.

Therefore, it should be the social, economic and physical world that shapes planning and policy making through socio-technical controversies, and not vice versa. In order to realize this, a relational approach is needed: an approach that focuses on multiple networks of associations respecting different spatialities and temporalities with different opinions and interests, as well as the issues, themes and organizations emerging from them. To bridge the gap between existing and normatively valued situations of Schiphol, planners and policy makers need to:

- set concrete and accountable goals,
- diminish the impact of politicizing science and scientized politics, and
- redefine planning as an empty signifier within hybrid forums.

Hybrid forums are places where the most heterogeneous relationships are formed, because of the socio-technical controversies running through them. Controversies do enrich democracy, as they are tools for exploring and learning since there are no arbitrary limitations: definitions do not exist, and all actants – both human and non-human – are equal. Dialogical democracy puts controversies and hybrid forums at the centre of debate and favours the exploration of identities, problems and the collective. Unfortunately, dialogical democracy is constantly threatened by delegative democracy. This form of democracy is characterized by separating specialists and laypersons, and carving out the gap between professional politicians and ordinary citizens. Together they form the dialogical space, in which planning and policy makers have to work.

Within the dialogical space, planners and policy makers must diminish the impact of the scientization of politics and politicization of science. I proposed making the transition from implementing noise hindrance-reducing measures *afterwards* to dealing with noise annoyance *ex-ante*. I stated that the Schiphol file tends to be hypochondriac. With an excessive preoccupation on hindrance by aircraft noise, all policies concerning Schiphol are focused on perceived hindrance and restrictions or restrictions because of perceived hindrance. This is the first reason that there is a seemingly widely recognized impasse in the planning and policy-making process concerning the future development of Amsterdam Airport Schiphol is because technological and scientific solutions are questioned and become imbued with politics. Therefore, consultative bodies are inflexible, inefficient and unnecessary. The second reason is that this excessive preoccupation with hindrance leads to highly regulatory, prescriptive and viscous policies and procedures. Current standardized policies suppress new and creative, and maybe even more durable and resilient, initiatives. Therefore, a dialogical framework for planning and policy making has been introduced. The approach challenges planning and policy makers to design and tailor their own planning reality congruent with the issues, problems and challenges they identify: *spread beyond political parties and legitimate authorities, emphasize the need for procedures more open to debate, be more welcoming towards emerging groups, and more attentive to the organization of the expression of their views and the discussions it calls for* (Callon et al., 2011: 118). In this sense, planning and policy making concerning Amsterdam Airport Schiphol will no longer be solely focused on the constant tension between economic development and ecological sustainability.

Bibliography

- Aibar, E. and W. Bijker (1997) Constructing a city: the Cerdá plan for the extension of Barcelona, in: *Science, Technology and Human Values*, nr. 1: 3-30.
- Allison, G. and P. Zelikow (1999) *Essence of Decision: Explaining the Cuban Missile Crisis*. New York: Longman.
- Amin, A. (2004) *Regions Unbound: towards a new politics of place*, in: *Geografiska Annaler: Series B, Human Geography*, nr.1: 33-44
- Amsterdamska, O. (1990). "Surely, You Must be Joking, Monsieur Latour!"; in: *Science, Technology and Human Values*, nr. 15: 495-504.
- Andere Overheid (2005) *Je gaat er over of niet: Rijksbrede takenanalyse Advies Gemengde Commissie Bestuurlijke Coördinatie*. Den Haag: Andere Overheid
- Arriscado Nunes, J., M. Matias, A. Matos and D. Neves (2008) *New accountability systems: experimental initiatives and inequalities in public policy and health care domains*. James Martin Institute ResIST Working Paper 14
- Aylett, A. and T. Ryland (2008) *The work of policy: actor networks, governmentality, and local action on climate change in Portland, Oregon*, in: *Environment and Planning D: Society and Space*, nr.4:627-646

- Bader, V. (2001). Introduction, in: Hirst, P. and V. Bader (eds.): *Associative Democracy - the real third way? Special volume of Critical Review of International Social and Political Philosophy (CRISPP)*, nr.4: 1-14
- Berkhout, G. (2003) *Dossier Schiphol: Relas van een falend democratisch proces*. Den Haag: Value report.
- Bijnsdorp Communicatie Projecten (2005) *Evaluatie Schipholbeleid: twee jaar ervaring met het Schipholbeleid*. Ministerie van Verkeer & Waterstaat, 's-Gravenhage: VROM.
- Bloor, D. (1999) *Anti-Latour*, in: *Studies in History and Philosophy of Science*, nr.1: 81-112
- Boelens, L. (2005) *Up to fluviology*. Inaugural speech. Utrecht University.
- Boelens, L. (2006) *Beyond the plan: towards a new kind of planning*, in: *DISP*, nr.167: 25-40
- Boelens, L. (2009) *The Urban Connection; An actor-relational approach to urban planning*, Rotterdam: 010-Publishers
- Boelens, L. (2010) *Theorizing practice and practising theory: Outlines for an actor-relational approach in planning*, in: *Planning Theory*, nr.9: 28-62.
- Boelens, L. and de Jong, B. (2006): *Constellatie Schiphol. De nationale luchthaven op de overgang van (semi)overheid naar doorslaggevende*

- actor in een complexe netwerkwereld, in: Boelens, L.; Wissink, B.; Spit, T (Eds.): *Planning zonder overheid*: 85-115. Rotterdam: 010 publishers
- Bos, B. (2004) *Een kwestie van beheersing, over de rol van planten, dieren en mensen in technologische systemen*. Amsterdam: de vliegende beer.
 - Bouwens, A. and M. Dierikx (1997) *Tachtig jaar Schiphol: op de drempel van de lucht*. 's-Gravenhage: SDU Uitgevers.
 - Boxtel, M. van and M. Huys (2005) *Unravelling decision making about the future development of Amsterdam Airport Schiphol*, paper for 45th European Regional Science Association, Amsterdam 23-27 August 2005.
 - Bröer, C (2006) *Beleid vormt overlast: hoe beleidscontouren de beleving van geluid bepalen*. Amsterdam: Aksant
 - Burghouwt, G. (2005) *Airline network development in Europe and its implications for airport planning*. Utrecht: Faculty of Geosciences
 - Burghouwt, G. & M. Huys (2003) *Deregulation and the consequences for airport planning in Europe*, in: *DISP*, nr.154: 37-45
 - Buuren, A. van, F. Boons, G. Teisman (2012) *Collaborative Problem Solving in a Complex Governance System: Amsterdam Airport Schiphol and the Challenge to Break Path Dependency*, *Systems Research and Behavioral Science*, nr 29: 116-130.

 - Callon, M. (1986) *Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay*, in: J. Law (ed) *Power, Action and Belief, a new sociology of knowledge?*: 196-223. London: Routledge and Kegan Paul
 - Callon, M. (1997) *Actor-Network Theory – the Market Test*, published by the Department of Sociology, Lancaster University, Lancaster LA1 4YL, UK at <http://www.comp.lancs.ac.uk/sociology/papers/Callon-Market-Test.pdf>
 - Callon, M. and B. Latour (1981) *Unscrewing the big Leviathan: how actors macro-structure reality and how sociologists help them to do so*, in Knorr-Cetina, K. and A. Cicourel (eds.): *Advances in social theory and methodology: towards an integration of micro- and macro-sociologies*: 277-303. London: Routledge and Kegan Paul.
 - Callon, M. en B. Latour (1992) *Don't Throw the Baby Out with the Bath School! A Reply to Collins and Yearley*, in: Pickering, A. (ed) *Science as Practice and Culture*: 343-368. Chicago and London: University of Chicago Press.
 - Callon, M., P. Lascoumes and Y. Barthe (2011) *Acting in an uncertain world: an essay on technical democracy*. Cambridge: MIT press
 - Castells, M. (1996) *Rise of the Network Society – the Information Age: Economy, Society and Culture, Volume I*. Oxford: Blackwell
 - Cerfontaine, G. (2006) *Governance in Randstad Holland. Inaugural speech*: Utrecht University.
 - Collins, H. M. and S. Yearley (1992) *Epistemological Chicken*, in:

Pickering, A. (ed.) *Science as Practice and Culture*: 301-326. Chicago and London: University of Chicago Press.

- Daams, J. (2011) *Managing Deadlocks in the Netherlands aviation sector*. Delft: Eburon
- Dicken, P. (2004) *Global Shift: Reshaping the global economic map in the 21st century*. London: Sage Publications
- Dierikx, M. (2004) *Uit de lucht gegrepen: Fokker als Nederlandse droom, 1945-1996*. Amsterdam: Uitgeverij Boom
- Dierikx, M., C. Werff, G. Mom and A. van den Bogaard (1999) *Schiphol: haven, station, knooppunt, sinds 1916*. Zutphen: Walburg Pers.
- Dijstelbloem, H. (2007) *De Democratie Anders: Politieke Vernieuwing Volgens Dewey en Latour*. Amsterdam: Universiteit van Amsterdam.
- Duinen, L. van (2004) *Planning Imagery: the emerge and development of new planning concepts in Dutch national spatial policy*.

- Eeten, M. van (1999), *Dialogues of the deaf. Defining new agendas for environmental deadlocks*. Delft, Eburon
- El Makhoulfi, A. and H. Kaal (2011) *From Airfield to Airport: An Institutional-Historical Approach to the Early Development of Amsterdam Airport Schiphol, 1916-1940*, in: *Journal of Urban History*, nr.37: 497-517

- Faludi (1973) *Planning theory*. Oxford: Pergamon Press
- Fainstein, S. (2003) *New directions in planning theory*. In: Campbell, S and S. Fainstein (eds.): *Readings in planning theory (second edition)*: 173-195. Oxford: Blackwell Publishing
- Fariás, I. (2011) *Introduction: decentring the object of urban studies*. In: Fariás, I. and T. Bender (eds.): *Urban Assemblages: how actor-network theory changes urban studies*: 1-25. London: Routledge.
- Featherstone, D. (2006) *Skills for heterogeneous associations: the Whiteboys, collective experimentation, and subaltern political ecologies*, in: *Environment and Planning D: Society and Space*, nr.2: 284-306.

- Gils, van M., M. Huys and B. de Jong (2009), *De Nederlandse Mainports Onder Druk: Speuren naar ontwikkelkracht*. Houten: Uitgeverij Spectrum.
- Gordijn, H., W. Hornis and R. Aykaç (2006) *Geluid rondom luchthaven*. Rotterdam: NAI uitgevers
- Graham, S. and P. Healey (1999), *Relational concepts of space and place: issues for planning theory and practice*, in: *European Planning Studies*, nr.7: 623-646.

- Griggs, S. and D. Howarth (2008) Populism, Localism and Environmental Politics: The Logic and Rhetoric of the Stop Stansted Expansion Campaign in the United Kingdom, in: *Planning Theory*, nr.2: 123-144
- Gunder, M. And J. Hillier (2009) *Planning in ten words or less a Lacanian entanglement with spatial planning*. Aldershot: Ashgate
- Güller, M. And M. Güller(2003): *From Airport to Airport City*. Barcelona: Gustavo Gili.

- Hagendijk, R. (1998) *Wetenschap, Constructivisme en Cultuur*. Proefschrift Universiteit van Amsterdam
- Hajer, M (1995) *The politics of environmental discourse, ecological modernization and the policy process*. Oxford: Clarendon press
- Hakfoort, J. and M. Schaafsma (2000) *Planning AirportCity Schiphol: een heroriëntatie op de toekomst van de luchthaven*, in: L. Boelens (ed), *Nederland Netwerkenland*: 79-97. Rotterdam: NAI Uitgevers Rotterdam.
- Harman, G. (2010) *Prince of Networks: Bruno Latour and Metaphysics*. Victoria: Re-press.
- Healey, P. (2006) *Relational complexity and the imaginative power of strategic spatial planning*, in: *European Planning Studies*, nr.4: 525-546.
- Healey, P. (2007) *Urban complexity and spatial strategies: towards a relational planning for our times*. London: Routledge.
- Hillier, J. (2007) *Stretching beyond the horizon: a multiplanar theory of Spatial Planning and Governance*. Aldershot: Ashgate
- Hisschemöller, M., and Hoppe, R. (2001). *Coping with Intractable Controversies: The Case for Problem Structuring in Policy Design and Analysis*. In: M. Hisschemöller, R. Hoppe, W. N. Dunn, and J. R. Ravetz (eds), *Knowledge, Power, and Participation in Environmental Policy Analysis*: 47-72. Transaction Publishers, New Brunswick and London.
- Hoppe, R. (1999) *Policy analysis, science, and politics: from “speaking truth to power” to “making sense together”*, in: *Science and Public Policy*, nr.3: 201-210
- Hugh Crawford, T. (1993) *An interview with Bruno Latour*, in: *Configurations*, nr.2: 247-268
- Huys, M. (2011) *Building castles in the Dutch air: understanding the policy deadlock of Amsterdam Airport Schiphol 1989 – 2009*.
- Huys, M., J. Koppenjan (2010), *Policy networks in practice: the debate on the future of Amsterdam Airport Schiphol*. In: S.P. Osborne (ed.), *The New Public Governance?*: 365-393. London: Routledge.
- Huys, M. and M. Kroesen (2009). *A Foucauldian contribution to the study and transformation of fixated policy discourses*. Paper for 4th international conference in interpretive policy analysis *Discourse, power, and politics*. Kassel: University of Kassel.
- Hommels, A. (2008) *Unbuilding Cities: obduracy in urban sociotechnical change*. Cambridge: MIT press.

- Hommels, A. (2011) Changing obdurate urban objects: the attempts to reconstruct the highway through Maastricht, in: Farías, I. and T. Bender (eds.): *Urban Assemblages: how actor-network theory changes urban studies*: 139-161. London: Routledge.
- Jong, B. de (2006): Schiphol Airport Amsterdam, to understand the past is to secure future economic growth. Paper for the 46th Congress of the European Regional Science Association. Volos Greece. August 30th – September 3rd.
- Jong, B., P. Suau-Sanchez and M. Droß (2008) The underestimated Airport Region: Reflecting on planning policies in the airport regions of AMS, BCN and MUC, in: *Airlines*, nr.41: 1-5.
- Jong, B. de (2008) Glocal Complexity and airport planning: towards a more relational planning approach. In: D. De Jong, B. Kaashoek and W. Zondag (eds.), *Blue Skies or Storm Clouds? Essays on Public Policy and Air Transport*: 65-71. Amsterdam: ScienceGuide.
- Kroesen, M. (2011) *Human Response to Aircraft Noise*. TRAIL nr. 2011/07, Delft University of Technology.
- Kvale, S. and S. Brinkmann (2009) *InterViews: Learning the Craft of Qualitative Research Interviewing*. London: Sage Publications.
- Latour, B. (1986) *The Powers of Association*, in: J. Law (ed.), *Power, Action and Belief - A new sociology of knowledge? Sociological Review monograph*, nr.32: 264-280. London: Routledge and Kegan Paul
- Latour, B. (1987) *Science in Action, How to Follow Scientists and Engineers through Society*. Cambridge: Harvard University Press.
- Latour, B. (1988) *The Pasteurization of France*. Cambridge: Harvard University Press.
- Latour, B. (1993) *We have never been modern*. Cambridge: Harvard University Press.
- Latour, B. (1996) *Aramis or the love of technology*. Cambridge: Harvard University Press.
- Latour, B. (1999a) Give me a laboratory and I will raise the world, in: M. Biagioli (ed.) *The Science Studies Reader*: 141-169. London: Routledge
- Latour, B. (1999b) For David Bloor ... and Beyond: A Reply to David Bloor's Anti-Latour, in: *Studies in History and Philosophy of Science*, nr.1: 113-129.
- Latour, B. (2003) Why Has Critique Run Out of Steam ? From Matters of Fact to Matters of Concern, in: *Critical Inquiry - Special issue on the Future of Critique*, nr.2: 25-48.
- Latour, B. (2004) *Politics of Nature: How to Bring the Sciences into Democracy*. Cambridge: Harvard University Press.
- Latour, B. (2005a) *From Realpolitik to Dingpolitik or How to Make*

- Things Public. In: B. Latour and P. Weibel (eds.) *Making Things Public. Atmospheres of Democracy*: 4-31. Cambridge: MIT Press.
- Latour, B. (2005b) *Reassembling the Social - an introduction to Actor-Network-Theory*. Oxford: University Press
 - Latour, B. (2009) *The Making of Law –An Ethnography of the Conseil d’Etat*. Polity Press, Cambridge
 - Latour, B. (2011a) *Networks, Societies, Spheres: Reflections of an Actor-network Theorist*, in: *International Journal of Communication* [Online] Available: <http://ijoc.org/ojs/index.php/ijoc/article/view/1094/558>
 - Latour, B. (2011b) *Politics of nature: East and West perspectives*. *Ethics and Global Politics*, nr.1: 71-80
 - Latour, B. and S. Woolgar (1979) *Laboratory Life: the Social Construction of Scientific Facts*. Princeton: Princeton University press
 - Law, J. (1986) *On the methods of long-distance control: vessels, navigation, and the Portuguese route to India*. In: J. Law (ed.), *Power, Action and Belief. A New Sociology of Knowledge?*: 234-263. London: Routledge and Kegan Paul.
 - Law (1992) *Notes on the theory of the actor-network: ordening, strategy, and heterogeneity*, in: *Systems Practice*, nr.4: 379-393.
 - Law, J. (2000) *Objects, spaces and others*, published by the Centre for Science studies, Lancaster University: <http://www.comp.lancs.ac.uk/sociology/soc027jl.html>

 - Maar, de H. (1976) *De uitbreiding van Schiphol*. Deventer.
 - Marres, N. (2005) *No Issue, No Public*, Proefschrift Universiteit van Amsterdam.
 - Mohammadzadeh, M. (2011) *Neo-liberal planning in practice: urban development with/without a plan (A post-structural investigation of Dubai’s development)* Paper for the 3rd World Planning Schools Congress. Perth, Australia. 4-8 July 2011
 - Mommaas, H. and L. Boelens (2006) *Voorbij het plan: de actorbenadering*, in: Aarts, N., R. During and P. Van der Jagt (eds.): *Land te Koop*: 161-168. Wageningen: Universiteit en Research centrum.
 - Mol, A. (2002) *The Body Multiple:Ontology in Medical Practice*. Duke University Press
 - Mossberger, K. and G. Stoker (2001): *The Evolution of Urban Regime Theory - The Challenge off Conceptualization*, in: *Urban Affairs Review*, nr.6: 810-835
 - Murdoch, J. (1998) *The spaces of Actor-Network theory*, in: *Geoforum* nr.29: 357-374.
 - Murdoch, J. (2006) *Poststructuralist geographies*. London: Sage

 - Pels, D., K. Hetherington and F. Vandenberghe (2002) *The Status of the Object: Performances, Mediations, and Techniques*, in: *Theory, Culture*

and Society, nr. 5: 1-21

- Riemens, P. (2011) Schiphol is groter dan Nederland
- Robertson, R. (1995): Glocalization: time-space and homogeneity-heterogeneity, in: Featherstone, M.; Lash, S.; Robertson, R. (Eds.): Global Modernities: 25-68. London: Sage
- Routledge, P. (2007) Acting in the network: ANT and the politics of generating associations, in: Environment and Planning D: Society and Space, nr.2: 199-217
- Ruimtelijk Plan Bureau (2007) De toekomst van Schiphol. Rotterdam: NAI publishers

- Star, S. L. (1995) Ecologies of knowledge: work and politics in science and technology. New York: State University of New York press.
- Schaafsma, M. (2008): Accessing Global City Regions. The Airport as a City, in: Thierstein, A. and Förster, A. (Eds.): The Image and the Region - Making Mega-City Regions Visible!: 69-80. Baden: Lars Müller Publishers.
- Schaafsma, M., J. Amkreutz and M. Güller (2008) Airport and City: Airport corridors, drivers of economic development. Published by Schiphol Real Estate for the occasion of its 10th anniversary.

- Tan, G. (2001). Urgentie, leiderschap en kennisontwikkeling: verklaringen voor drie besluitvormingsronden over Schiphol tussen 1989 en 1991. Amsterdam: Uitgeverij Lemma.
- Twist, M. van, R. Peeters, M. van der Steen (2010) De boom en het rizoom: overheidssturing in een netwerksamenleving. Den Haag: Een essay door de Denktank van de NSOB in opdracht van het Ministerie van VROM.
- Teisman, G. R., Boons, F., Van Buuren, A., Marks, P., en Moes, W., (2008) Duurzame ontwikkeling en Schiphol: naar een creatieve confrontatie. Tweede voortgangsrapportage inzake de duurzame ontwikkeling van het governance-veld rond Schiphol. Den Haag: RMNO.

- Venturini, T. (2010) Diving in magma: how to explore controversies with actor-network theory. In: Public Understanding of Science, nr3: 258-273.
- Venturini, T. (2011) Building on Faults: How to Represent Controversies with Digital Methods. In: Public Understanding of Science: <http://pus.sagepub.com/content/early/2010/12/03/0963662510387558>. abstract?rss=1&patientinform-links=yes&legid=sppus;0963662510387558v1
- Warffemius, P. (2007) Modeling the Clustering of Distribution Centers around Amsterdam Airport Schiphol. Location endowments, economies

of agglomeration, locked-in logistics and policy implications. TRAIL nr. 2007/09, Erasmus University of Rotterdam.

- Weggeman, J. (2003) *Controversiële besluitvorming*. Utrecht, Lemma
- Wennekes (1993) *De Aartsvaders*. Zutphen: Olympus-Contact.
- Wijk, M. van (2007): *Airports as cityports in the City-region: spatial-economic and institutional positions and institutional learning in Randstad-Schiphol (AMS), Frankfurt Rhein-Main (FRA), Tokyo Haneda (HND): and Narita (NRT)*. Utrecht: NGS
- Wijk, M. van (2008) *Development of Airport Regions: varieties of institutions in Schiphol and Frankfurt*, in: *Airlines*, nr.40: 1-5
- Wissink, B. (2000) *Ontworpen en Ontstaan: een praktijktheoretische analyse van het debat over het provinciale omgevingsbeleid*. Den Haag: WRR
- Wissink, B. (forthcoming) *Enclave Urbanism in Mumbai: A Relational Study of Urban (Dis)Connection*, in: *Geoforum*.

- Yaneva, A. (2012) *Mapping Controversies in Architecture*. Aldershot: Ashgate

Appendix A

Alders Table members

December 2006: First Alders Table

<i>Chairman</i> Hans Alders	<i>Process Manager</i> Theo Vermeegen	<i>Project Secretary</i> Giap Tan (CROS)	
BRS	Schiphol Group	Inhabitants	National Government
Michel Bezuijen <i>Alderman</i> <i>Haarlemmermeer</i>	Gerlach Cerfontaine <i>Chief Executive Officer</i>	Kees van Ojik <i>CROS representative</i>	Jeroen Fukken <i>Director Airports</i> <i>Ministry of V&W</i>
Lodewijk Asscher <i>Alderman Amsterdam</i>	Roel Hellemons <i>Director Airport</i> <i>Operations</i>	Rob van Gijzel <i>CROS representative</i>	Jacqueline Tammenoms Bakker <i>Directorate General Civil</i> <i>Aviation and Maritime</i> <i>Affairs Ministry of V&W</i>
Remco Pols <i>Alderman Amstelveen</i>	KLM	Hans Ouwekerk <i>Chairman CROS</i>	
Henk Eilert <i>Alderman Uitgeest</i>	Peter Hartman <i>Chief Executive Officer</i>		
Ton Hooijmaijers <i>Member of the Provincial</i> <i>Executive Noord Holland</i>	Michiel van Dorst <i>Head of Flight Operations</i>		
Willem Kleijn <i>Project manager Schiphol</i> <i>Province of Noord Holland</i>	LVNL		
	Eric Kroese <i>Chief Executive Officer</i>		

September 2007: Formulating the Alders advice for the mid-term

Chairman Hans Alders	Process Manager Theo Vermeegen	Project Secretary Heidi Boussem (V&W)	
BRS	Schiphol Group	Inhabitants	National Government
Michel Bezuijen <i>Alderman Haarlemmermeer</i>	Gerlach Cerfontaine <i>Chief Executive Officer</i>	Kees van Ojik <i>CROS representative</i>	Jeroen Fukken <i>Director Airports Ministry of V&W</i>
Lodewijk Asscher <i>Alderman Amsterdam</i>	Roel Hellemons <i>Director Airport Operations</i>	Rob van Gijzel <i>CROS representative</i>	Angelique Berg <i>Director Climate Change and Air Quality Ministry of VROM</i>
Remco Pols <i>Alderman Amstelveen</i>	KLM	Erwin von der Meer <i>VGP representative</i>	
Henk Eilert <i>Alderman Uitgeest</i>	Peter Hartman <i>Chief Executive Officer</i>		
Ton Hooijmaijers <i>Member of the Provincial Executive Noord Holland</i>	Michiel van Dorst <i>Head of Flight Operations</i>		
Willem Kleijn <i>Project manager Schiphol Province of Noord Holland</i>	LVNL		
	Eric Kroese <i>Chief Executive Officer</i>		
	Paul Riemens <i>Director Air Traffic Management</i>		

Oktober 2008: Alders Advice gets published

<p><i>Chairman</i> Hans Alders</p>	<p><i>Process Manager</i> Theo Vermeegen</p>	<p><i>Project Secretary</i> Johan Weggeman (V&W)</p>	
BRS	Schiphol Group	Inhabitants	National Government
<p>Michel Bezuijen <i>Alderman Haarlemmermeer</i></p>	<p>Gerlach Cerfontaine <i>Chief Executive Officer</i></p>	<p>Kees van Ojik <i>CROS representative</i></p>	<p>Jeroen Fukken <i>Director Airports Ministry of V&W</i></p>
<p>Freek Ossel <i>Alderman Amsterdam</i></p>	<p>Joop Krul <i>Director Airport Development</i></p>	<p>Theo Geudeke <i>CROS representative</i></p>	<p>Angelique Berg <i>Director Climate Change and Air Quality Ministry of VROM</i></p>
<p>Remco Pols <i>Alderman Amstelveen</i></p>	KLM		
<p>Henk Eilert <i>Alderman Uitgeest</i></p>	<p>Peter Hartman <i>Chief Executive Officer</i></p>		
<p>Ton Hooijmaijers <i>Member of the Provincial Executive Noord Holland</i></p>	<p>Michiel van Dorst <i>Head of Flight Operations</i></p>		
<p>Willem Kleijn <i>Project manager Schiphol Province of Noord Holland</i></p>	LVNL		
	<p>Paul Riemens <i>Chief Executive Officer</i></p>		

Januari 2012: Present Alders table

<p><i>Chairman</i> Hans Alders</p>	<p><i>Process Manager</i> Theo Vermeegen</p>	<p><i>Project Secretary</i> Heidi Bousсен (V&W)</p>	
BRS	Schiphol Group	Inhabitants	National Government
<p>Arthur van Dijk <i>Alderman Haarlemmermeer</i></p>	<p>Ad rutten <i>Chief Operating Officer</i></p>	<p>Kees van Ojik <i>CROS representative</i></p>	<p>Ellen Bien <i>Director Aviation Ministry of Infrastructure and Environment</i></p>
<p>Erik van der Burg <i>Alderman Amsterdam</i></p>	<p>Daan van Vroonhoven <i>Manager Environmental capacity</i></p>	<p>Theo Geudeke <i>CROS representative</i></p>	<p>Hermen Borst <i>General Manager airport development and environment Ministry of Infrastructure and Environment</i></p>
<p>Jan-Willem Groot <i>Alderman Amstelveen</i></p>	KLM	<p>Gerard Geerdink <i>VGP representative</i></p>	
<p>Jeroen Verheijen <i>Alderman Uithoorn</i></p>	<p>Pieter Elbers <i>Chief Operating Officer</i></p>		
<p>Christel Portegies <i>Alderman Castricum</i></p>	LVNL		
<p>Tjeerd Talsma <i>Member of the Provincial Executive Noord Holland</i></p>	<p>Paul Riemens <i>Chief Executive Officer</i></p>		
<p>Ingrid de Bondt <i>Member of the Provincial Executive Zuid Holland</i></p>	<p>Jasper Daans <i>General Manager Strategy & Performance</i></p>		
	Barin		
	<p>Frank Allard <i>Chairman</i></p>		

Abbreviates

BAS:	Local Community Contact Centre Schiphol
BFS:	Bestuursforum Schiphol
BRS:	Managerial Directing Group Schiphol
CDA:	Continuous Descent Approaches
CDV:	Committee of Noise Experts
CGS:	Commission Noise Hindrance Schiphol
CORUS:	Coordination Regional Execution Schiphol decisions
CROS:	Regional Schiphol Airport Consultation Committee
EIA:	Environmental Impact Assessment
KE:	Kosten Eenheid: noise level notation
KLM:	Royal Dutch Airlines
Lden:	Level day-evening-night: noise level notation
LIB:	Airport planning decree
LVNL:	Air Traffic Control the Netherlands
LVB:	Airport traffic ruling
MNP:	Netherlands Environmental Assessment Agency
Ministry of I&M:	Ministry of Infrastructure and the Environment
Ministry of V&W:	Former Ministry of Transport, Public Works and Water Management
Ministry of VROM:	Former Ministry of Housing, Spatial Planning and the Environment
NLR:	National Aerospace Laboratory
ONL:	Research Dutch Aviation
PASO:	Policy agreement plan of action for Schiphol and its surrounding area
PKB:	National Spatial Planning Key Decision Schiphol and surrounding area
PMMS:	Project Mainport and Environment Schiphol
REVS:	Spatial Economic vision on the Schipholregion
RIVM:	National Institute for Public Health and the Environment
RPB:	Former Netherlands Institute for Spatial Research
SADC:	Schiphol Area Development Company
SNM:	Netherlands Society for Nature and Environment
SID:	Standard Instrument Departures
TNLI:	Project Group Future of Dutch Aerospace Infrastructure
TNO:	the Netherlands Organisation for Applied Scientific Research
TOPS:	Schiphol Temporary Consultation Platform
VGP:	United Platforms of Residents against Airport Nuisance
VINO:	Fourth Report on Spatial Planning

List of Interviewees

The list consists of a first round of orientating interviews which were not used in the dissertation, a list of interviews conducted for a book I edited together with M. van Gils and M. Huys: *De Nederlandse Mainports onder druk*, and a list of interviews solely conducted for the case study within this thesis.

The organisation of the interviewee at the time of the interview is listed.

First round of orientating interviews:

20-02-2008	Lodewijk Abspoel Former Ministry of V&W
08-03-2008	Peter De Kruijk Municipality of Haarlemmermeer
10-03-2008	Henk Waltman LVNL
15-05-2008	Kees van Ojik CROS representative
17-11-2008	Wim Kranenburg Schiphol Group
09-12-2008	Michel van Wijk SADC
11-12-2008	Hans Vonk Province of Noord Holland
11-12-2008	Frouwien Oudkerk Municipality of Haarlemmermeer
01-12-2008	Michiel Weijs Municipality of Amsterdam

De Nederlandse Mainports onder druk interviews:

03-03-2008	Kim Bruggeman KLM
18-02-2008	Elzeline de Jong Municipality of Amsterdam
19-02-2008	Maurits Schaafsma and Gerlach Cerfontaine Schiphol Group

Alders Table interviews:

21-01-2009	Peter de Kruijk Municipality of Haarlemmermeer
29-01-2009	Theo Geudeke and Kees van Ojik CROS representatives

06-02-2009	Bram du Saar Former Ministry of VROM
09-02-2009	Joop Krul Schiphol Group
13-02-2009	Jeroen Fukken Former Ministry of V&W
16-02-2009	Heidi Boussen Project secretary Alders Table
24-02-2009	Michiel Dorst KLM
03-03-2009	Hans Alders Chairman of the Alders Table
13-03-2009	Paul Riemens LVNL
13-03-2009	Willem Kleijn Province of Noord Holland
Via mail	Remco Pols Municipality of Amstelveen

Nederlandse samenvatting

Voor 1914 was de vliegwereld een kleine en besloten wereld. Het vliegtuig was een modern vervoermiddel, dat voor de meeste mensen een onbereikbaar goed was. En ondanks dat de industrialisatie in volle gang was, speelde het vliegtuig – in tegenstelling tot schepen, treinen en vrachtwagens – een onbeduidende rol. Tijdens de Eerste Wereldoorlog kwam de luchtvaartwereld uit de pioniersfase; de vliegerij werd een volwaardig krijgsmachtonderdeel en er werd veel technische vooruitgang geboekt, waardoor de basis was gelegd voor de rol van het vliegtuig in het internationaal vervoer. Intussen was in Nederland de nieuw opgerichte krijgsmacht *Luchtvaart Afdeling* (LVA) driftig opzoek naar een vliegveld om zo een eventuele inval van de Duitsers te kunnen afslaan. In de lente van 1916 werden er twee percelen grond van boer Knibbe gekocht, gelegen in de noordoost hoek van de Haarlemmermeerpolder bij Fort Schiphol. Snel werden er vier houten loodsen gebouwd en op 19 september 1916 landden de eerste drie vliegtuigen van de LVA, waarmee *vliegkamp* Schiphol in gebruik werd genomen. Het gebruik van Schiphol bleef echter vooralsnog beperkt tot incidentele landingen.

Na de Eerste Wereldoorlog was er geen militaire noodzaak meer om het vliegveld te gebruiken. Echter, de Nederlandse overheid was ondertussen steeds enthousiaster geworden over de ontwikkeling van de burgerluchtvaart. Onder de bezielende leiding van 3 leidende actoren, te weten Jan Delleart (Schiphol), Albert Plesman (KLM) en Anthony Fokker (Fokker), werd Schiphol een goed geoutilleerde internationale luchthaven en nam de fascinatie voor de luchtvaart elk jaar verder toe. Schiphol begon pas echt te groeien toen na de Tweede Wereldoorlog de totaal verwoeste luchthaven opnieuw werd opgebouwd. Schiphol werd een moderne luchthaven met KLM als sterke *homecarrier*. Vanaf dat moment staat alles in het teken van de ontwikkeling van de luchthaven. Toch verandert dit al vrij snel: als de straalmotoren en jumbojets geluidsoverlast op de beleidsagenda's zetten, is de groei van Schiphol niet langer vanzelfsprekend. Na de opening van de Zwanenburgbaan in 1968 gaat de luchthaven wat betreft ontwikkelingen op slot. Pas in 2003 zal de zesde baan van Schiphol – de Polderbaan – in gebruik worden genomen. Met een sterke lobby weet Schiphol medio jaren 80 het overheidsbeleid toch weer naar haar hand te zetten: in 1988 wordt het mainportbeleid geïntroduceerd, met Schiphol en de haven van Rotterdam als de motoren

van onze economie. Schiphol krijgt weer volop ruimte om te groeien. In 1991 wordt vervolgens tijdens het PASO overleg de dubbeldoelstelling geïntroduceerd: volgens dit beleidsdoel zou het mogelijk moeten zijn de ontwikkeling van Schiphol tot een luchthaven van grote (internationale) betekenis te faciliteren en tegelijkertijd de kwaliteit van het leefmilieu in de regio rondom de luchthaven te verbeteren. Deze dubbeldoelstelling wordt uiteindelijk in 1995 in de PKB Schiphol geïnstitutionaliseerd.

De discussie rondom Schiphol is daarmee niet ten einde. In tegendeel: na PASO, PMMS en de daaruit voortvloeiende PKB Schiphol, volgt het TNLI overleg, de commissie in 't Veld, het TOPS overleg, het ONL overleg, Flyland, de commissie Deskundigen Vliegtuiggeluid, de commissie Eversdijk, de discussie rondom de gelijkwaardigheidscriteria (en de motie Baarda), de oprichting van de BRS, de REVS, de Pronk brief, het vervangen van de CGS door CROS, de nieuwe luchtvaartwet, de evaluatie van de nieuwe luchtvaartwet, het kabinetsstandpunt Schiphol en de oprichting van de Alders Tafel. En in al die jaren, tussen 1990 en 2012, blijkt de dubbeldoelstelling het belangrijkste agendapunt.

Echter, de veranderende rol van Schiphol op een lokale, regionale en internationale schaal, het toenemende aantal betrokken actoren, het bestaan van conflicterende waarden en normen, en de “verwetenschappelijking van politiek” / “politisering van wetenschap”, initiëren en voeden in toenemende mate de complexiteit rondom de luchthaven. Daarom wordt Schiphol vandaag de dag gekenmerkt door verschillende, maar legitieme, percepties op wat de luchthaven is of moet zijn.

Dit is het centrale thema van dit proefschrift: Amsterdam Airport Schiphol gepercipieerd als een multi-actor, multi-interpretabele setting waarbinnen het besluitvormingsproces ervaren wordt als incrementeel en weifelachtig, doordrenkt met sociale en technische onzekerheden. Dit levert een gapend gat op tussen de ideaalbeelden (hoe actoren Schiphol willen zien) en de normatieve beelden (het beleid dat dicteert hoe Schiphol gezien moet worden). Besluitvormingsprocessen – zoals planning – lijken niet om te kunnen gaan met deze spanning. Het sturen en interveniëren van overheden (met geboden en verboden bijvoorbeeld) kan onbedoeld negatieve effecten hebben en mogelijkheden onbenut laten. Omdat beleid in veel hedendaagse contexten en omgevingen niet of “anders” werkt, wordt vaak wel een effect bereikt, maar niet datgene wat bedoeld was. Het besluitvormingsproces lijkt dus niet in staat te zijn om te reageren op de meest gewenste perceptie op Schiphol.

Schiphol kan al decennia rekenen op veel aandacht; werkelijk honderden

wetenschappelijke en niet-wetenschappelijke publicaties zijn geschreven over de nationale luchthaven. Wat echter opvalt, is dat al deze publicaties – op een enkele uitzondering na – zich richten op of de meer sociale kant van het besluitvormingsproces rondom Schiphol, of de meer operationeel technische kant van het besluitvormingsproces rondom Schiphol. De discussie lijkt nooit te focussen op de correlatie tussen de technische invloed en actor-georiënteerde kant van het besluitvormingsproces rondom de luchthaven. Dit is merkwaardig gezien het feit dat Schiphol een zeer technische entiteit is, met een uitgebreide sociale component. Een voorbeeld: een start- en landingsbaan kent een locatie en deze locatie zorgt dat een bepaalde groep mensen overlast kan ervaren door vliegtuigen. De baan maakt deel uit van de relatie tussen de luchthaven en de omwonenden die last ervaren. Daarnaast kunnen deze mensen hun telefoon pakken of inloggen op hun mail, en een klacht indienen bij het *Bewoners Aanspreekpunt Schiphol*. Een logische vraag is dan: zouden er klachten zijn zonder een centraal punt waar klachten worden geregistreerd? Een ander voorbeeld is de competitie vanuit Dubai en Abu-Dhabi, waardoor Europa als traditionele overstap tussen Noord-Amerika en Azië, in de toekomst wel eens vervangen zou kunnen worden door het Midden-Oosten. Of wellicht zorgen nieuwe innovatieve vliegtuigen wel voor een heel ander businessmodel voor luchtvaartmaatschappijen, waardoor het hub en spoke model van KLM overbodig wordt. Wat is in deze gevallen dan de impact van een buitenlandse luchthaven of een nieuw vliegtuig op de concurrentiepositie van de Schiphol regio? En dan zijn daar nog de vloeistoffen en vogels die een hele luchthavenoperatie wat betreft veiligheid herdefiniëren.

Doel van deze dissertatie is juist om te focussen op de correlatie tussen de technische invloed enerzijds en de sociale invloed anderzijds op het besluitvormingsproces. Op deze manier wordt uitgelegd hoe het kan dat impasses rondom het besluitvormingsproces van de luchthaven bestaan en wat voor oplossingen er mogelijk zijn. Hiervoor wordt de *Actor-Network theorie* gebruikt. Deze theorie focust niet op gestabiliseerde netwerken of geïsoleerde actoren, maar op *besluitvorming in wording*: sociaaltechnologische controverses worden gevolgd van het moment dat ze ontstaan, totdat de actoren door middel van het bouwen van associaties (netwerken van relaties) een soort van overeenstemming bereiken en de controverses verdwijnen in een black box van ‘feitelijkheden’. De theorie kenmerkt zich door een focus op het werk dat betrokkenen doen om een netwerk van relaties te ontwikkelen en te consolideren. Niet complexiteit, maar de samenstelling van die complexiteit wordt bestudeerd. Dit leidt tot de volgende vraagstelling:

Tot op welke hoogte wordt het besluitvormingsproces rondom Schiphol gehinderd door sociaaltechnologische controverses, en wat voor lessen kunnen planners en beleidsmakers hieruit trekken?

Om de hoofdvraag te kunnen beantwoorden, zijn drie additionele onderzoeksvragen geformuleerd:

1. Hoe kan een descriptief raamwerk geformuleerd met behulp van de Actor-Netwerk theorie bijdragen aan het beantwoorden van de hoofdvraag?
2. Hoe kan het in kaart brengen van controverses leiden tot een verbeterd begrip van de Alders tafel, een overlegtafel bestaande uit zowel overheden, omwonenden en de luchtvaartsector?
3. Hoe kan de Actor-Netwerk theorie geïmplementeerd worden door planners en beleidsmakers zodat het bouwen van associaties gestuurd en beïnvloed kan worden op een normatieve en proactieve manier?

Naar een descriptief kader: case onderzoek met de Actor-Netwerk theorie

Om tot een descriptief raamwerk te kunnen komen en zodoende impasses rondom het besluitvormingsproces van Schiphol te begrijpen, gebruik ik de Actor-Netwerk theorie. Onder leiding van Bruno Latour, Michel Callon en John Law is deze theorie de afgelopen 25 jaar ontwikkeld. Aan de wieg van de Actor-Netwerk theorie staat een wetenschapssociologische verklaring van inhoud van wetenschappelijke kennis en de aard van technologische ontwikkeling. De theorie laat zien hoe actoren hun wereld – en dus ook wetenschappelijke theorieën of technologieën – construeren door netwerken van associaties tussen actoren te creëren. Dingen worden hierbij opvallend genoeg ook als ‘actoren’ aangemerkt. Ze zijn niet alleen het resultaat van interacties, maar ook de oorzaak. De theorie wordt veelvuldig gebruikt én bekritiseerd. Ook binnen de ruimtelijke wetenschappen is de Actor-Netwerk theorie de laatste jaren omhelsd (zie bijvoorbeeld Farías en Bender (2011) voor een overzicht).

Eén van de belangrijkste kenmerken van de Actor-Netwerk theorie is dat wordt gebroken met de gewoonte – bijvoorbeeld in de sociologie (‘sociology makes the social’), maar ook in de geografie (‘geography makes space’) – om vooraf groeperingen te definiëren. Dit leidt volgens de Actor-

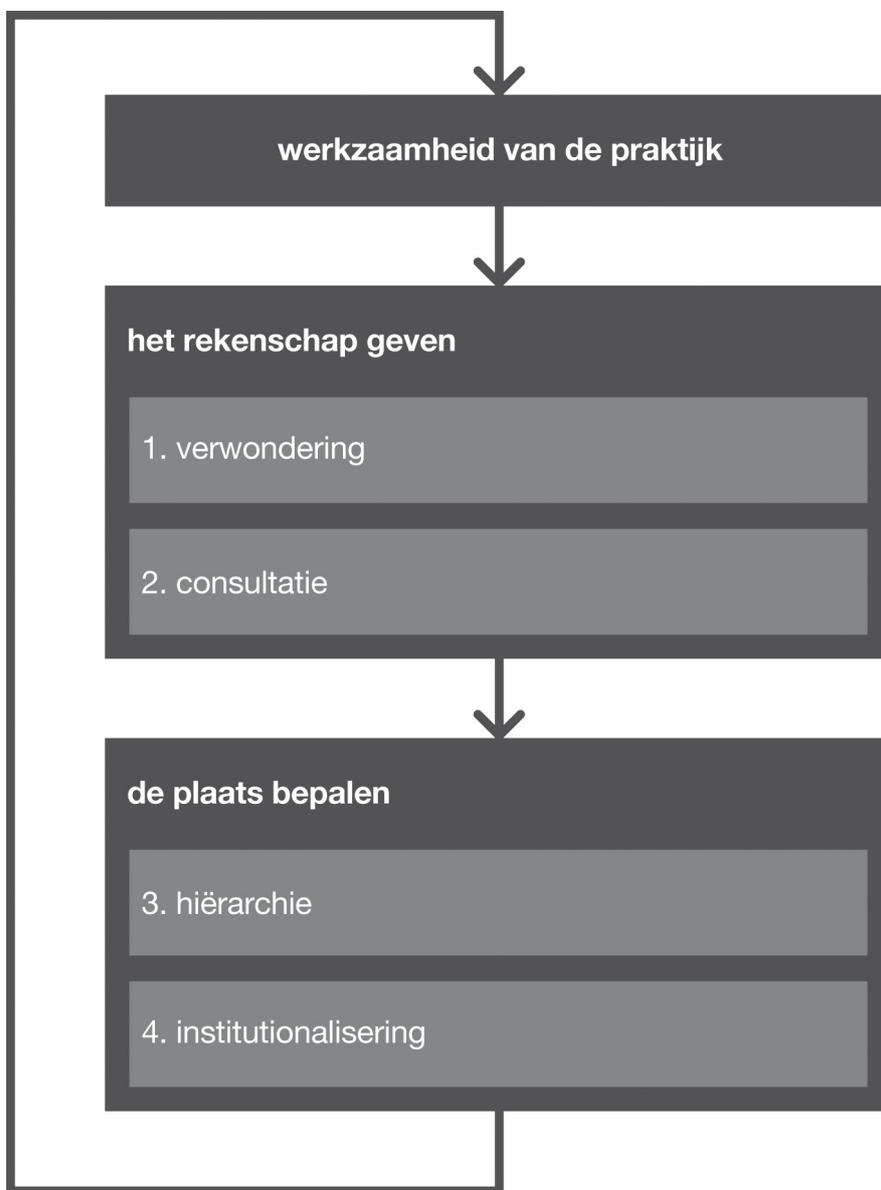
Netwerk theoretici alleen maar tot arbitraire beperkingen en demarcaties. Actoren 'bestaan' niet buiten sociale processen, maar worden opgevat als het resultaat hiervan. Ook spreekt de theorie niet over 'samenleving' of 'maatschappij', maar over netwerken: ketens van actoren die tijdens processen met elkaar verbonden raken wat tot robuuste verbindingen kan leiden. Pas als deze verbindingen zijn ingeburgerd of geïstitutionaliseerd raken, gaan we ze sociale verbanden noemen. We moeten de wereld volgens Latour *cum suis* dus als een ongeschreven blad benaderen, het sociologische begrippenapparaat overboord gooien, en de actoren – en de sporen die deze actoren achterlaten bij het maken van associaties – volgen in plaats van te focussen op reeds bestaande connecties.

Een tweede kenmerk is het antidualistische karakter van de theorie. De netwerken van actoren die de theorie centraal stelt worden niet alleen gevormd door *humans*, maar ook door *nonhumans*, dingen dus. Mensen en objecten gaan dus samen verbindingen – associaties – aan en vormen de 'samenleving' of 'maatschappij' in plaats van andersom. Deze menselijke en niet-menselijke actoren zijn volgens de theorie in principe gelijk. Dit levert de theorie veel kritiek op. Immers, hoe kan een 'ding' net zo belangrijk zijn als een mens? En is een niet-menselijke actor belangrijk, dan komt dat door de waarde die menselijke actoren er aan geven. Wat Actor-Netwerk theoretici bedoelen, is niet dat dingen belangrijker zijn dan mensen, maar dat binnen een associatie de niet-menselijke actor meer op de voorgrond kan staan dan de menselijke actor. Iedereen weet dat H₂O water is, maar niet iedereen weet dat de chemische verbinding door Antoine Lavoisier is ontdekt. Dus, in deze associatie is een niet-menselijke actor (H₂O), belangrijker geworden dan de mens (Lavoisier). Om de gelijkheid te onderstrepen heeft Latour het begrip *actant* geïntroduceerd. Met dit begrip kunnen zowel mensen als dingen worden aangeduid. Een derde kenmerk is dat a priori niet kan worden vastgesteld welke actants en associaties machtiger zijn dan andere. De vraag welke actants organiseren en welke georganiseerd worden, is de uitkomst van een gecompliceerd mediatieproces dat als 'translatie' wordt aangeduid. Met het proces van translatie wordt gedoeld op alle onderhandelingen, intriges, berekeningen, overredingen en zelfs fysiek geweld, die er voor zorgen dat een actant de autoriteit krijgt om te spreken en handelen namens andere actanten. Hoe meer associaties met actanten worden aangegaan, hoe machtiger de oorspronkelijke actant, de *focal actant*, wordt. De focal actant wordt nog machtiger als de associaties geïstitutionaliseerd raken. Op deze manier verdwijnen de associaties in een zogenaamde black box. Het proces van translatie kent echter geen eindpunt. Een consensus kan elk moment worden betwist. Het is essentieel om associaties constant te onderhouden.

De laatste jaren heeft voornamelijk Latour de politieke consequenties van de Actor-Netwerk theorie meer aandacht gegeven. Hij vraagt zich af hoe associaties tussen mensen en objecten op een democratische manier geldigheid kunnen krijgen. Het gaat net als bij zijn sociale programma om het aangaan van sterke verbindingen. Dus zoals een black box stand houdt als deze bestaat uit robuuste netwerken, zo geldt dit ook voor politieke lichamen. Daarnaast kunnen deze netwerken, zoals altijd bij de Actor-Netwerk theorie, naast menselijke, sociale relaties, net zo goed gestructureerd worden door *non-humans*. Dus bij het denken over politiek moeten we ons niet beperken tot waarden en normen, want dingen zoals gebouwen, infrastructuur en communicatiemiddelen structureren een samenleving net zo goed. Ook mogen we geen onderscheid maken tussen cultuur (politiek) en natuur (wetenschap). De wetenschap en politiek zijn door allerlei relaties met elkaar verbonden.

Dus wat Latour doet in zijn politieke programma, is de scheiding tussen het onderzoek naar de feiten enerzijds en de deliberatie over waarden anderzijds, afbreken en ombouwen tot een nieuwe taakverdeling: het collectief. Het collectief bestaat uit 'rekenschap geven' (taking into account) en 'plaats bepalen' (putting in rank order). Latour ruilt het onderscheid tussen feiten en waarden in en stelt de controverses centraal. Een controversie die ontstaat en de werkzaamheid van de praktijk zal beïnvloeden is het beginpunt. Wat we nu moeten doen is de controversie volgen en omschrijven hoe deze zich op een of andere manier vormt tot een gestabiliseerd netwerk. Vanaf het moment dat een controversie zich aandient, zijn er vier fases te onderscheiden: verwondering, consultatie, hiërarchie en institutionalisering. Verwondering ontstaat wanneer een nieuwe controversie zich aandient. In deze fase weten we niet precies wat het probleem is of wat het betekent, maar we weten dat de werkzaamheid van de praktijk aangepast zal worden. De fase van consultatie geeft een stem aan het probleem: deskundigen, betrokkenen, politici, bestuurders, rapporten, grafieken, kaarten en foto's geven articulatie aan het probleem. Vervolgens is het aan de fase van hiërarchie om de relevantie van de getuigenissen te wegen. In deze fase kunnen beleid, wetenschappelijke paradigma's en normatieve kaders in twijfel getrokken worden. In de laatste fase, institutionalisering, treedt stabilisatie op. Ook hier geldt net als bij het proces van translatie dat deze stabiele orde nooit permanent is: nieuwe controverses kunnen zich aandienen en het collectief opnieuw herordenen. Dit leidt tot een onderzoekskader waarbinnen controverses geobserveerd en beschreven worden (zie figuur 1).

Figuur 1: Het Collectief



Bron: Latour, 2004

Het in kaart brengen van controverses: de Alders tafel case

Het onderzoekskader, zoals gepresenteerd na de beantwoording van de eerste deelvraag, is gebruikt om de cases te analyseren en zodoende de tweede deelvraag te beantwoorden. Met het onderzoekskader kan het besluitvormingsproces *in wording* zeer gedetailleerd worden vastgelegd. Ik volg de actanten, bekijk de cases door de ogen van de betrokkenen, en geef zodoende een gedetailleerd beeld vanuit meerdere gezichtspunten in plaats van een globaal beeld. Echter, dit gedetailleerde beeld gaat enigszins verloren in deze samenvatting. Voor de werkelijke Actor-Netwerk analyse moet ik dan ook naar de empirische hoofdstukken verwijzen.

De Alders tafel is een overlegtafel bestaande uit afgevaardigden van Schiphol Group, KLM, de Luchtverkeersleiding Nederland (LVNL), het voormalige ministerie van VROM en V&W, de gemeentes Amsterdam, Amstelveen, Uitgeest, Haarlemmermeer en de provincie Noord-Holland, georganiseerd in de Bestuurlijke Regiegroep Schiphol (BRS) en de omwonenden, georganiseerd in de Commissie Regionaal Overleg luchthaven Schiphol (CROS) en de Vereniging Gezamenlijke Platforms (VGP). De overlegtafel, met als voorzitter Hans Alders, had als opdracht te komen tot een advies over de toekomst van Schiphol. Met de dubbeldoelstelling als fundament zijn twee adviezen uitgebracht (een voor de korte termijn tot en met 2010 en een voor de middellange termijn tot en met 2020) waarin de beschikbare milieuruimte rondom Schiphol benut wordt en de kansen voor hinderbeperking verzilverd worden. Belangrijkste punten zijn het faciliteren van de groei van Schiphol richting 510.000 vliegtuigbewegingen in 2020, de uitwerking van het nieuwe geluidsstelsel, de uitwerking van de hinderbeperkende maatregelen die zijn afgesproken en het uitplaatsen van vluchten naar regionale velden zoals Lelystad en Eindhoven. Toen in oktober 2008 Hans Alders zijn eindrapport kon aanbieden, sprak toenmalig minister Eurlings over een unieke presentatie, omdat het voor het eerst in de geschiedenis van de luchthaven was dat overheden, omwonenden en luchtvaartsector tot een unaniem advies konden komen. De Alders tafel wordt dan ook als een succes beschouwd, in zowel binnen- als buitenland. Mijn Actor-Netwerk analyse laat echter zien dat dit beeld enigszins genuanceerd dient te worden en dat de Alders tafel wellicht niet zo een groot succes is als iedereen denkt.

De Alders tafel case beschrijft 7 dominante controverses. De eerste controversie focuste op de moeizame totstandkoming van de Alders tafel. Beginpunt van deze controversie was het kabinetsstandpunt Schiphol, gepubliceerd in 2006. De dubbeldoelstelling had wederom een prominente

rol: het kabinet wil de positie van Schiphol als een van de belangrijkste hubs in Noordwest-Europa behouden en versterken, en de hinder in de ruime omgeving van Schiphol zoveel mogelijk terugdringen. Echter, het kabinetsstandpunt Schiphol werd dusdanig bekritiseerd door lagere overheden, luchtvaartsector en omwonenden, dat de toenmalige minister van V&W, in samenwerking met de toenmalige minister van VROM, besloot dat alternatief beleid nodig was. In de zomer van 2006 werkte het Ministerie van V&W achter de schermen hard aan dit 'alternatieve' beleid. Uiteindelijk ontstond langzaam maar zeker het idee om een overlegtafel op te richten, waar overheden, luchtvaartsector en omwonenden samen konden discussiëren over de toekomst van Schiphol. Op deze manier konden 'tegenstanders' (immers, alle partijen waren uiterst sceptisch over het beleid zoals geëtaleerd in het Kabinetsstandpunt Schiphol) veranderen in 'medestanders': participeren aan deze overlegtafel levert alleen maar voordelen op voor de andere actants. Sterker nog, als de geïdentificeerde actants hun eigen doelen willen halen moeten ze wel participeren. Tevens was dit een uitgelezen mogelijkheid voor het Kabinet om democratische legitimiteit te creëren binnen de Tweede Kamer voor het Schiphol dossier: "de belangrijkste partijen gaan samen een unaniem gedragen advies schrijven over de toekomst van Schipol en dus kunnen wij als regering niet veel anders doen dan dit unaniem advies omhelzen en overnemen". De omwonenden zouden in eerste instantie aan de tafel worden vertegenwoordigd door CROS, maar zij eisen via de Tweede Kamer een eigen plek op aan de tafel. Verder zorgt in dit stadium de provincie Noord-Holland er voor dat er ook een convenant speciaal gericht op de leefomgeving door de Alders tafel zal worden opgesteld. En zo wordt uiteindelijk – na veel lobby werk van de omwonenden, lagere overheden en de luchtvaartsector – de Alders tafel gepresenteerd.

De tweede controverse kon ontstaan toen het Alders advies voor de korte termijn (tot en met 2010) geformuleerd moest worden. Tijdens het schrijven van het advies voor de korte termijn, werden voornamelijk de randvoorwaarden gedefinieerd waarbinnen het Alders advies voor de middellange termijn (tot en met 2020) geformuleerd zou worden. Daarom waren alle actants voornamelijk bezig met het beïnvloeden van de agenda voor eigen gewin. De bewoners slaan hier een grote slag, door een eigen alternatief voor de milieueffectrapportage te presenteren, die door de andere partijen wordt overgenomen. Zo eisen de omwonenden een maximum aantal vliegtuigbewegingen van 500.000 in 2020. Ook stellen zij dat de KLM operatie op Schiphol uiterst belangrijk is. Verder willen zij een dominante 2+1 baanconfiguratie (2+1 baangebruik betekent dat 2 landingsbanen tegelijkertijd in gebruik zijn met 1 startbaan of vice

versa) en geen veranderingen in het normen- en handhavingstelsel. KLM wordt hier als partner gezocht. De bewoners kiezen voor KLM en haar Skyteam partners en ook KLM prefereert een 2+1 operatie om zodoende het hub and spoke model in stand te kunnen houden. Dit levert ook de eerste spanningen binnen de luchtvaartsector op, omdat Schiphol Group en LVNL een 2+2 baangebruik configuratie wel zien zitten: dit levert meer voorspelbaarheid op (2+2 baangebruik betekent dat 2 landingsbanen tegelijkertijd in gebruik zijn met 2 startbanen en vice versa). Ook de BRS heeft hier wel oren naar aangezien voorspelbaarheid in de lucht ook leidt tot voorspelbaarheid op de grond, wat gunstig is voor ruimtelijke ontwikkelingen. Zo ontstaan de eerste tegenstellingen. Verder wordt het duidelijk dat omwonenden weten dat het Kabinet het zeer belangrijk vindt dat de bewoners ook een stem krijgen, en zij gebruiken deze positie uiterst gewiekst. Dit wordt overigens niet door alle bewoners als dusdanig ervaren. Zit tijdens het formuleren van het Alders advies voor de korte termijn alleen de CROS aan tafel namens de bewoners, met de aanvang van het formuleren van het advies voor de middellange termijn heeft ook de VGP een plek gekregen. Deze groep bewoners heeft dit via de Tweede Kamer geëist en hun gelijk gehaald.

Een derde controverse ontstaat ten tijde van het formuleren van het advies voor de middellange termijn. De LVNL verstuurt een brief waarin zij aangeven vaker 2+2 baangebruik in te willen zetten. Schiphol kent overwegend een 2+1 baangebruik. De bewoners zijn woedend; zij hebben het idee dat dit nooit is afgesproken. Zoals eerder aangegeven is de KLM kritisch: 2+2 baangebruik kan niet de piekuur capaciteit garanderen die zij nodig hebben om het hub and spoke netwerk in stand te houden. De LVNL is zich van geen kwaad bewust. Uiteindelijk wordt de LVNL teruggefloten en worden de gemoederen enigszins bedaard. De LVNL zet zichzelf wel buitenspel dankzij deze actie, en is daarom niet langer een actant die organiseert, maar die georganiseerd wordt. Ook de gemeente Haarlemmermeer zet zich buitenspel, alleen volkomen bewust. Omdat de wethouder aan de Alders tafel het gevoel heeft dat hij het eindadvies niet kan verdedigen binnen zijn raad, laat de gemeente via een persbericht weten dat er wat hen betreft grenzen aan de groei van Schiphol zijn. Met het persbericht sorteert de gemeente Haarlemmermeer voor op het eindadvies, tot grote ergernis van de andere partijen. Ondanks dat binnen de BRS is afgesproken als eenheid naar buiten te treden, verlaat Haarlemmermeer tijdelijk deze associatie om haar eigen positie veilig te stellen. De gemeente kiest duidelijk de kant van de bewoners en de wethouder heeft een legitiem verhaal richting de gemeenteraad. De rol van Haarlemmermeer is hiermee over, maar wel ten koste van de positie van de toch al zwakke BRS.

Tijdens het opstellen van het Alders advies voor de middellange termijn verklaart de Tweede Kamer het vigerende normen- en handhavingstelsel failliet. De ministerie van V&W wijst meteen de Alders tafel aan als meest geschikte platform om tot een nieuw normen- en handhavingstelsel te komen. En zo ontstaat er een vierde controverser. Een drietal opties voor een nieuw stelsel worden gegeven, maar al snel wordt duidelijk dat één optie door de meeste partijen wordt geprefereerd. Behalve door de omwonenden, die onder geen enkel geding de handhavingpunten van het dan vigerende stelsel willen afschaffen. Zij vrezen dat het verliezen van de handhavingpunten (een wens van de luchtvaartsector) het einde van hun juridische bescherming betekent. Echter, een deel van de bewoners verandert van mening als blijkt dat er met de luchtvaartsector valt te praten over een lager maximum aantal vliegtuigbewegingen dan tot op dat moment afgesproken als ook een nieuw stelsel bespreekbaar wordt. Dit leidt uiteindelijk tot koehandel tussen bewoners en sector (voornamelijk Schiphol Group en KLM). De BRS speelt geen rol van betekenis. Dat niet alle omwonenden zich hierin kunnen vinden wordt overigens pijnlijk duidelijk als vlak voor het publiceren van het advies de VGP vertegenwoordiger uit het Alders overleg stapt. Achter de schermen ontstaat er een felle discussie onder de omwonenden over het wel of niet accepteren van een nieuw normen- en handhavingstelsel. Uiteindelijk stellen de twee overgebleven vertegenwoordigers aan de Alders tafel dat zij spreken namens een meerderheid van de omwonenden. En zodoende kan Hans Alders op 1 oktober 2008 zijn advies presenteren eveneens als drie convenanten: het convenant selectiviteit, het convenant omgevingskwaliteit en het convenant hinderbeperking.

De laatste drie controverses die ik heb besproken, hebben allemaal te maken met de implementatie van hinderbeperkende maatregelen uit het convenant hinderbeperking. Het gaat in alle gevallen om sociaaltechnologische innovaties of veranderingen die de werkzaamheid van de praktijk beïnvloeden en verwondering creëren. Achtereenvolgens gaat het over de invoering van *idle reverse thrust* (stiller remmen van vliegtuigen), het vliegen van een vaste bochtstraal (waardoor vliegtuigen nauwkeuriger kunnen vliegen) en het verleggen van de Spijkerboorroute (een uitvliegroute van de Kaagbaan). De drie maatregelen onderschrijven het centrale thema van de dissertatie nogmaals: De luchthaven moet gezien worden als een multi-actor, multi-interpretabele setting waarbinnen het besluitvormingsproces ervaren wordt als incrementeel en weifelachtig, doordrenkt met sociale en technische onzekerheden. En ondanks het Alders advies blijft er een gapend gat bestaan tussen hoe actants Schiphol zien en hoe het beleid dicteert dat Schiphol gezien moet worden, omdat

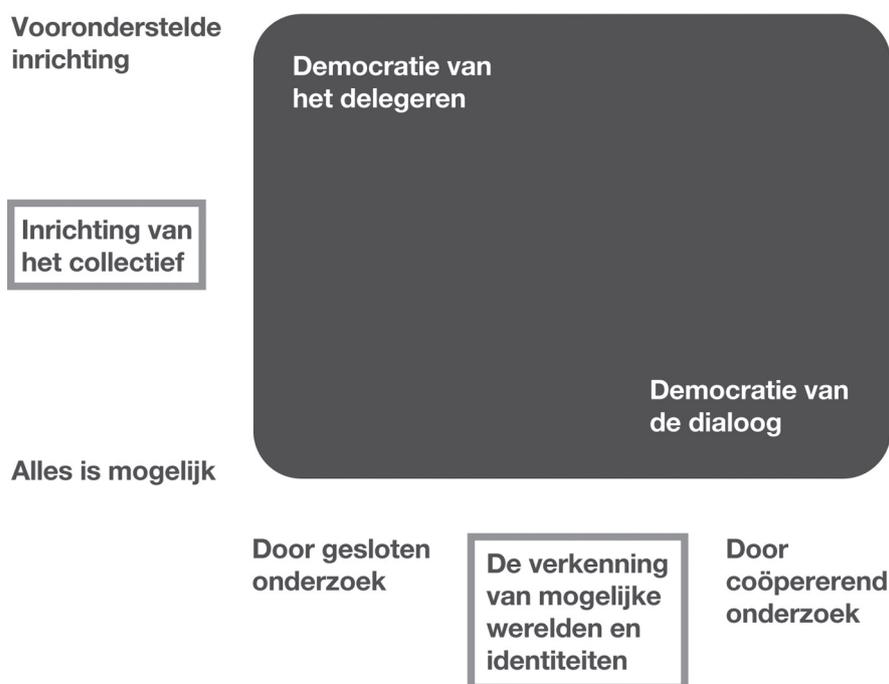
cognitieve en normatieve onenigheden blijven bestaan. Ook de Alders tafel kon dit gat niet overbruggen. Ten eerste omdat het collectief arbitrair gelimiteerd was: er werd niet open gestaan voor het bestaansrecht van iedere actant evenals het aantal mogelijkheden dat in de discussie een rol zou moeten spelen onderschat werd. Ten tweede omdat het onmogelijk is om in een klimaat waar wetenschap in toenemende mate politiek wordt en politiek in toenemende mate wetenschappelijk wordt, beleid te maken gebaseerd op wetenschappelijke feiten. Met andere woorden: het feit dat actants zich buiten de discussie geplaatst voelen en dat er een constant onenigheid bestaat over wat feiten zijn en wat niet, betekent dat de Alders tafel nooit een duurzame en stabiele associatie kon vormen. Op deze manier is natuurlijk ieder soortgelijke overlegstructuur gedoemd om te mislukken en rijst de vraag of dit soort overlegtafels nog wel bestaansrecht hebben. Maar hoe moet het dan wel?

Naar een normatief kader: het raamwerk van de dialoog

Om deze vraag te kunnen beantwoorden zal eerst de derde en laatste deelvraag beantwoord moeten worden: hoe kan de voornamelijk descriptieve Actor-Netwerk theorie door planners en beleidsmakers op een normatieve en proactieve manier worden ingezet? Een eerste bouwblok van het normatieve kader, *het raamwerk van de dialoog*, is het – door Callon geïntroduceerde – *Hybride Forum*. Hybride, omdat schalen en domeinen verdwijnen en alle actants die zichzelf betrokken voelen welkom zijn; en een forum, omdat geïsoleerd onderzoek niet bestaat aangezien alle groepen hier samen kunnen komen om sociaaltechnologische controverses te bespreken en bediscussiëren. Het hybride forum kan gezien worden als een ruimte van conflicten waar actants met elkaar controverses bespreekbaar maken. De scheiding tussen wat sociaal is en wat technologisch is, verdwijnt hier. Met de introductie van het hybride forum zijn we er echter nog niet. Het hybride forum is een ideaalbeeld en de werkelijkheid is anders. Volgens Callon kennen moderne democratieën twee belangrijke delegaties om situaties van onzekerheden te managen. De eerste delegatie zorgt voor feitelijke kennis zodat politiek gezuiverd wordt van elke wetenschappelijke onzekerheid. De tweede delegatie zorgt dat via debat en beleid uitspraken namens ‘het volk’ gedaan kunnen worden. Dit is de *democratie van het delegeren*, die gekenmerkt wordt door het scheiden van specialisten en leken en professionele politici en het gewone volk. Daar tegenover plaats Callon de *democratie van de dialoog*, die gekenmerkt wordt door controverses en hybride fora. Beide democratieën kunnen geplaatst worden binnen de *Ruimte van de Dialoog* (zie figuur 2).

Op de Y-as van deze ruimte staat ‘de inrichting van het collectief’ en op de X-as ‘de verkenning van mogelijke werelden en identiteiten’. Wat de ruimte van de dialoog laat zien, is dat de democratie van de dialoog voorstander is van de verkenning van problemen, identiteiten en het collectief, maar constant bedreigd wordt door de democratie van het delegeren, die juist pleit voor een vooronderstelde inrichting van het collectief en gesloten onderzoek. Planners en beleidsmakers kunnen zodoende voor zichzelf uitmaken waar ze zich bevinden binnen deze ruimte van de dialoog en zelf uitmaken of ze zich meer richting de democratie van het delegeren of de democratie van de dialoog willen bewegen. Recente nieuwe inzichten binnen de relationele planningstheorie geven aanknopingspunten hoe dit laveren binnen de ruimte van de dialoog gedaan kan worden. Ik gebruik hiervoor *the multiplanar theory of spatial planning and governance* van Jean Hillier (2007) en *the actor-relational approach* van Luuk Boelens (2009).

Figuur 2: De ruimte van de dialoog



Bron: Callon et al, 2011

Een relationele benadering gaat voorbij aan het maakbaarheids- en/of normstellend kader van een plan. De benadering gelooft dat generalisaties en te enge definities omtrent gewenste ruimtelijke inrichtingen, vervangen moeten worden door het inzicht dat sociale processen en ruimtelijke

vormen gerelateerd zijn aan elkaar. Complexe interacties, die allerlei soorten actants linken op diverse en onevenredige manieren, vormen relaties, netwerken, gemeenschappen en instituties door synergie of conflict. Door zulke interacties moeten plekken gezien worden als een plaats waar complexe, veranderlijke en conflicterende relaties vorm geven aan waarden, betekenissen en kennis waardoor het dagelijks leven ervaren en gevormd wordt. Met andere woorden: volgens de relationele benadering zijn plekken geconstrueerd door overlappende en snijdende relaties en worden deze plekken door verschillende mensen op verschillende manieren gepercipieerd.

Ik presenteer de twee theorieën van Boelens en Hillier als het tweede bouwblok van het raamwerk van de dialoog. Hillier introduceert met haar theorie het 'plan van immanentie' en het 'plan van transcendentie'. Beide zijn nodig als planners en beleidsmaker op een constructieve manier willen omgaan met de precaire balans tussen de democratie van de dialoog en de democratie van het delegeren. Het plan van transcendentie kan gezien worden als de institutionele krachten die als planner of beleidsmaker moeilijk te beïnvloeden zijn; het zijn de kaders waarbinnen gewerkt moet worden. Ik pleit dan ook niet voor institutionele hervormingen. Tegelijkertijd liet de relationele benadering zien dat plekken niet langer vanuit het normstellend kader van het plan bekeken moeten worden, maar de actanten centraal moet stellen. Daarom bestaat er volgens Hillier, naast het plan van transcendentie, het plan van immanentie: een continu proces waar heterogene elementen samen rizomatische verscheidenheid vormen. Zien we de samenleving als rizoom, dan wordt het duidelijk hoe lastig het is voor overheden om samenlevingen te sturen of te ontwerpen. Maar tegelijkertijd is de samenleving als rizoom in staat allerlei spontane verbindingen tot stand te brengen. Het is dan ook binnen het plan van immanentie dat ik de actor-relationele benadering van Boelens gebruik en zodoende het raamwerk van de dialoog meer diepgang kan geven. Het beginpunt van het raamwerk van de dialoog is de onzekerheid rondom associaties, of controverses, waardoor de scheiding tussen wetenschap en politiek, subject en object, en feiten en waarden verdwijnt. Het vertrekpunt ligt dus niet langer in de ruimtelijke ordening als zodanig, maar in de gevoelde noodzaak om te komen tot een oplossing voor de controverses. Als een controverses zich aanbiedt, zullen eerst sleutelfiguren gezocht en geanalyseerd moeten worden, evenals kernwaarden en de verschillende geografische en temporale relaties. Vervolgens worden kansenkaarten gemaakt met potentiële nieuwe ontwikkelingsrichtingen, welke bilateraal besproken worden. Uiteindelijk worden er concrete en gebiedsgerichte projecten gecreëerd en moet er een duurzame associatie tot stand zijn gekomen die de controverses laat verdwijnen. Door de

ruimte van de dialoog zoals geïntroduceerd door Callon, te combineren met Hillier's plan van transcendentie en immanentie en Boelen's actor-relationale benadering, tekenen zich binnen het raamwerk van de dialoog de contouren af van een andere benadering van een gebiedsgerichte ontwikkeling, waarin geprefereerde ruimtelijke kwaliteiten directer kunnen worden verbonden met feitelijke ontwikkelingstrajecten. Wat betekent dit dan precies voor Schiphol?

Conclusies: Schiphol als Assemblage

Het besluitvormingsproces rondom Schiphol wordt gehinderd doordat er geen aandacht is voor sociaaltechnologische controverses. Zoals al eerder gezegd bestaat er een gat tussen de ideaalbeelden (hoe actoren Schiphol willen zien) en de normatieve beelden (het beleid dat dicteert hoe Schiphol gezien moet worden). Dit gat zal nooit overbrugd worden zo lang de focus niet verschuift richting controversies en veranderende associaties gemoeid met besluitvorming *in wording*. Zonder te vertrekken vanuit sociaaltechnologische controverses, zullen planners en beleidsmakers nooit volledig begrijpen (en dus kunnen interveniëren) hoe politieke en morele onzekerheden eerder meer dan minder complex worden gemaakt door wetenschappelijke kennis en gevestigde technologieën, zoals het geval is rondom Schiphol.

Planners en beleidsmakers kunnen drie belangrijke lessen leren. Ten eerste moeten er concrete doelen gesteld worden. De dubbeldoelstelling is geen concreet doel. De dubbeldoelstelling staat eerder gelijk aan het verkopen van knollen voor citroenen. Er moeten algemene richtlijnen worden gedefinieerd (bijvoorbeeld: "Schiphol mag groeien" of juist "Schiphol mag niet groeien"), maar geen nieuwe overlegtafels worden opgericht waaraan eindeloos wordt gediscussieerd over wat Schiphol wel en niet moet zijn. Dus binnen het plan van transcendentie worden enkel de strikt noodzakelijke demarcaties bepaald (bijvoorbeeld als het gaat om veiligheid en gezondheid van omwonenden) door de actants die verantwoordelijk zijn. Gecompileerde overlegtafels die en over de operatie en over de leefomgeving gaan zijn overbodig. Het plan van transcendentie en immanentie zullen dus losgekoppeld moeten worden van elkaar. Er is een duidelijk kader, waar alleen de actants zich mee bemoeien die er over gaan. Verder worden vooral door middel van een actor-relationale gebiedsgerichte ontwikkeling, geprefereerde ruimtelijke kwaliteiten verbonden met feitelijke ontwikkelingstrajecten.

Een tweede les voor planners en beleidsmakers om de impasses rondom

Schiphol te doorbreken, is de impact van de verwetenschappelijking van politiek en politisering van wetenschap verminderen. Dit is essentieel in het Schiphol dossier, waar de democratie van het delegeren eerder regel dan uitzondering is: de compositie van het collectief wordt gelimiteerd door een dominante focus op geluid, hinder en restricties en de verkenning van mogelijke werelden en identiteiten wordt gelimiteerd door de technocratische aard van deze focus op geluid, hinder en restricties. Zie hier de Alders tafel. Daarnaast zorgt onenigheid over kennis en waarden ervoor dat overlegtafels geen duurzame en constructieve oplossingen zullen vinden om beleidsimpasses te doorbreken. Oplossingen zullen eerder voortborduren op eerdere oplossingen en dus ook weer dezelfde problemen initiëren.

Door de chronische preoccupatie met geluid en hinder, lijkt het wel of het Schiphol dossier hypochondrisch is. Ik wil geluidshinder door vliegtuigen zeker niet bagatelliseren, maar de eenzijdige focus op geluid enerzijds en groei anderzijds, zorgt er wel voor dat nieuwe ideeën, opvattingen, maatregelen en initiatieven bij voorbaat al afgeschreven worden. Het is echter mogelijk om minder belang te hechten aan beleidsmaatregelen gebaseerd op de dubbeldoelstelling: door te stoppen met hinderbeperkende maatregelen. Dit klink contra-intuïtief: hoe kan iemand immers tegen het streven naar minder hinder zijn?

Het stoppen met hinderbeperkende maatregelen betekent niet dat ik tegen het beperken van hinder ben, maar dat ik vind dat men moet accepteren dat het beperken van hinder binnen het technocratische landschap van het Schiphol dossier, meer negatieve gevolgen heeft dan positieve. Ten eerste zijn de grote slagen reeds gedaan: een hinderbeperkende maatregel levert thans 'slechts' een honderdtal minder ernstig gehinderden op en zorgt altijd voor hinderverplaatsing binnen de dichtbevolkte Schiphol regio. Ten tweede is de discussie dusdanig technocratisch geworden en gericht op geluidscontouren, kaarten en criteria, dat actants vaak verzanden in cijfers, kaarten, grafieken en regels in plaats van duurzame oplossingen.

Ik pleit voor een transitie van *hinderbeperking* naar *hinderbeleving*. Er zijn in 2012 al een aantal goede stappen genomen wat hinderbeleving betreft: zo heeft het Bewoners Aanspreekpunt Schiphol de websites vliegverkeer inzicht – die laat zien hoe het vliegverkeer van en naar Schiphol zich beweegt – en wonen bij Schiphol – die informatie geeft over het gebruik van de luchthaven op regionaal en zelfs postcode niveau – gelanceerd. Daarnaast worden gemeentes, makelaars en projectontwikkelaars gevraagd om potentiële nieuwe bewoners te wijzen op de negatieve kanten van de luchthaven. Maar er zou nog veel meer gedaan kunnen worden met social media. Dit lijkt een open deur, maar rondom Schiphol wordt social media volledig genegeerd als het om informatievoorziening voor omwonenden

gaat. Ook zouden er burgernet-achtige initiatieven kunnen worden opgezet, bijvoorbeeld door berichten te sturen als er een afwijking is in de operatie of een wekelijks 'baangebruik weerbericht'. In deze tijd van smartphones moet er op dit gebied veel te winnen zijn. Door het gebruik van transparante informatie en intensieve communicatie via allerlei soorten digitale bronnen, wordt er een digitaal platform gecreëerd waar iedereen met een computer en internet aan kan deelnemen.

Een derde en laatste les is dat planners en beleidsmakers hun plek moeten kennen; zij zijn niet de 'orkestleiders' maar de *facilitators*. Er moet gezocht worden naar sturingsfilosofieën die voldoende ruimte laten voor maatschappelijke initiatieven en eigen initiatieven van burgers en ondernemers. Ruimtelijke ontwikkelingstrajecten worden ingezet vanuit een sturingsfilosofie die past bij het type vraagstuk en de context waarop het beleid betrekking heeft. Met andere woorden: er wordt gebiedsgericht gebruik gemaakt van maatschappelijk probleemoplossend vermogen en tevens zijn planners en beleidsmakers flexibel genoeg om zich naar de vorm van de maatschappelijke problematiek te voegen. Luisteren naar mensen, investeren in de leefomgeving van omwonenden – of ze nu binnen de 58 Lden wonen of buiten de 48 Lden – zal meer zoden aan de dijk zetten dan de implementatie van een hinderbeperkende maatregel waar niet iedereen op zit te wachten. In plaats van het creëren van een illusie van zekerheid, zullen planners en beleidsmakers onzekerheid van controverses en gepercipieerde ruimtelijke tegenstellingen moeten omhelzen. Er zal op lokaal niveau gezocht moeten worden naar gewenste ontwikkelingstrajecten, zonder de plaats binnen het algehele netwerk van associaties uit het oog te verliezen, zoals het Actor-Netwerk theorie aanpak betaamt.