Contexts, Hybrids and Network Governance
A Comparison of Three Case-studies in Infrastructure Governance

Joop Koppenjan, Erasmus University Rotterdam
Myrna Mandell, California State University
Robyn Keast, Queensland University of Technology
Kerry Brown, Southern Cross University

ABSTRACT

While hybrid governance arrangements have been a major element of organisational architecture for some time, the contemporary operating environment has brought to the fore new conditions and expectations for the governance of entities that span conventional public sector departments, private firms and community organisations or groups. These conditions have resulted in a broader array of mixed governance configurations including Public Private Partnerships, alliances, and formal and informal collaborations. In some of such arrangements market based or 'complete' contractual relationships have been introduced to replace or supplement existing traditional 'hierarchical' and/or newer relational 'network-oriented' institutional associations. While there has been a greater reliance on collaborative or relational contracts as an underpinning institutional model, other modes of hierarchy and market may remain in operation. The success of these emergent hybrid forms has been mixed. There are examples of hybrids that have adopted successfully, achieving the desired goals of efficiency, effectiveness and financial accountability, while others have experienced implementation problems which have undermined their results. This contribution postulates that the cultural and institutional context within which hybrids operate may contribute to the implementation processes employed and the level of success attained. The contribution explores hybrid arrangements by analysing three cases of the use of inter-organisational arrangements in three different national contexts. Distilling the various elements of hybrids and the impact of institutional context will provide important insights for those charged with the responsibility for the formation and key infrastructure and public value development.

INTRODUCTION

The optimal arrangements for the provision of services to citizens remains a contested area as the design of delivery frameworks for those services is not simply a matter of choosing between the three pure-form modes of market contracts, relational networks or bureaucratic hierarchies but involves a hybrid mix of modes. The related governance arrangements then may be formed within a dynamic interplay of the different approaches combined with the influence of the context in which these modes co-exist. Keast, Brown and Mandell (2006:28) suggest that the state, market and networks are constantly being reconfigured and as such, could offer flexible options to derive valuable resources from each mode, for example the authority of state-sponsored action, the price signals of markets and the relational capital of trust and reciprocity embedded in networks. As outlined by Skelcher (2000, 2004) hybrids are argued to be based on emergent and distinctive patterns of engagement, resource sharing, combined governance and cultural blending between two or more organisations or sectors. Hybrid governance arrangements rely on shared roles, responsibilities and problem spaces between organisations and other actors in public, private and/or community spheres. This contribution takes at its core concern the development of hybridity through an analysis of network governance in which horizontal relational arrangements are based on cooperation between different self-regulating parties (Sorensen, 2002).

Despite the existence of sectoral, modal and regional contexts, a significant contextual element driving the shape of governance arrangements is argued to be that of national origin. The role of national context in determining particular responses to public management has been debated in terms of understanding the nation-specific effects of reform, the costs and benefits of change and the emergence and impact of new paradigms for designing new governance arrangements (see for example, Osborne and Brown, 2005, Pollitt and Bouckardt, 2004). This study seeks to assess whether national differences matter and accordingly, whether network governance models are better suited for some countries than others. Various typologies of national differences are available (De Jong, 1999). The amount of literature on national attributes and frameworks demonstrates the prevalence of research that focuses on differences: the difference between Anglo-Saxon and Rijnland economies (Albert, 1991), Hofstede's cultural dimensions (Hofstede 1997), historical traditions like neo-corporatism in Western Europe (Schmitter and Lehmbruch, 1979) or 'polder politics' in the Netherlands (Hendriks and Toonen, 2001), diverging policy styles (Richardson 1982), specific political system characteristics like unitary state versus federalism (Scharpf, 1978), etcetera. In this literature various contextual features are outlined as being supportive or hindering to network governance Table 1, for example, gives an overview of the most important characteristics mentioned in this literature.

Following this line of thinking, this research is aimed at identifying the extent to which network governance may be enhanced or hindered by contextual features as suggested above. At the same time we are aware of the fact that countries cannot simply be characterized according to these dichotomous elements. There is a need to elaborate a more specific contextual approach: that is, studying the differences between network governance in various contexts to investigate rather than assume differences. In this study we follow two lines of enquiry in examining the impact of the context on network governance. On the one hand we have national characteristics as

Table 1: Context Characteristics Supporting or Hindering Network Governance

Unfavorable conditions	Favorable conditions
Policy tradition of planning and control	Policy tradition of negotiation and bargaining
Two party system; winner takes all	Multiparty system resulting in coalition governments
Unitary state	Federalism; decentralization
Weak civil society	Strong civil society
Highly politicized culture; sharp interest conflicts	Consensus culture
Institutional and legal environment that enhances short term relationships, a focus on efficiency and contractual relationships	Institutional and legal environment that enhance long term relationships, a focus on quality and trust
Competitive, individualistic culture in which citizens solve their own problems, do not rely on government, and go to court to get their rights	Egalitarian culture in which citizens are relatively passive and loyal and dependent on government or representation by interest groups
Weak implementation culture, in which parties do not have much binding power towards their constituencies	Strong implementation culture, in which parties have binding power towards their constituencies

discussed above in mind as being a determinant; on the other hand we will use an inductive approach. Therefore we compare three cases of network governance and investigate the question whether the differences found can be explained by differences in the context, and to what extent those contextual differences can be considered national differences. In doing so we can also address alternative hypotheses, e.g. that sectoral differences rather than national differences are of importance. In addition, there may be some general trends that have emerged across the globe that may have influenced the structure and form of infrastructure governance. With regard to public infrastructures Graham and Marvin (2001) for example have stated that notwithstanding their critical importance to social and economic development, changes to infrastructure delivery and operation have brought new operating principles and practices. A global trend can be identified from functional, single agency (state) or highly focused, privatised business (market) approaches to infrastructure procurement, delivery and on-going management by multi-party, multiplex and interconnected entities and interests. These hybrid arrangements are a relatively common feature of the agenda for infrastructure development in at least parts of the infrastructure life cycle. However, there is little understanding about whether hybridity in infrastructure has been implemented as a

comprehensive internationalised approach with various degrees of take-up or if it has emerged differentially in different locations with separate and distinct operationalizations, governance approaches and challenges. A case study approach is adopted as this research is exploratory; events are observed rather than controlled by investigators and 'how' and 'why' questions are proposed (Yin 2002). The cases focus on identifying common elements of the processes, actors and outcomes in order to understand the features and characteristics of each of the case studies and how and why the cases developed over time to adopt hybrid governance arrangements. Subsequently the case findings can be compared to determine the significant contextual elements relating to the resultant governance arrangements and their outcomes.

Case selection and the applied research methodology reflect this strategy. The research adopts a comparative cross-jurisdictional case study approach. It draws on three hybrid projects within three different national settings to give a broad scope for comparison on an international scale.

The cases are respectively:

1. The debate on the future of Amsterdam Airport Schiphol, The Netherlands

2. The debate on linking regional economic and Brisbane Airport development, Queensland, Australia

3. The regional planning of water supply in Sacramento, California, USA

However, as this is an exploratory study, the national contexts have been limited to Western, democratic, developed economies that exhibit differences in systems of government in the continuum from liberal to social democratic principles and adversarial to relational legal systems. The frameworks for communities and citizens are also placed on a continuum from inclusive and consensus-driven to top-down and 'command and control'. The examples are chosen to understand decision-making and governance in similar domains. Although there are two types of industry sectors examined, these are both within the physical infrastructure arena, so we have reduced the variety as regard to sectors studied, as advised by Allen and Hunt (2002). At the same time the selection of aviation and water management cases within infrastructure based sectors allows us to pay attention to the relative importance of national differences vis à vis sectoral differences. The contribution examines three infrastructure cases covering the areas of airports and water infrastructure that rely on hybrid governance arrangements across three countries; the Netherlands, USA (California) and Australia (Queensland).

The next sections of the contribution present the case studies. These case descriptions subsequently discuss:

• the different phases of the development of the infrastructure and its governance structure over time

• the drivers of the shift towards a network governance

• the application of the network governance

• the assessment of the network governance practice

• the contextual factors influencing network governance, including the question to what extent national characteristics were of importance.

Next, the contribution presents a comparative section that provides an assessment of the different contextual layers that drive variation in network governance. It concludes that national context is a key contextual el-

ement. However the historical trajectory of institutional pathways for the particular form of public/private ownership, the public values context and the extent to which citizens are affected by actions in their local space, may start to provide a more finely grained understanding of the phenomenon of hybrid governance and the drive to operate within a network governance framework

THE NETHERLANDS: AMSTERDAM AIRPORT SCHIPHOL

Amsterdam Airport Schiphol (Schiphol) covers 2878 hectare in the municipality of the Haarlemmermeer. It consists of 5 runways and one terminal with a capacity of 60 to 65 million passengers per year. In 2006 the airport handled slightly more than 46 million passengers and 1.5 million tones cargo. 59 % of a total of 440.153 air transport movements were made by Air France-KLM. Schiphol is the fourth largest airport in Europe and the 9th largest worldwide. 40% of the passengers use Schiphol as transfer hub. Schiphol has a large regional, national and international economic importance. In 2003 57.000 people were directly employed by Schiphol Airport-related activities. Another 52.000 jobs in the region were attributed to indirect impacts of Schiphol (Beekman and Weening, 2004).

Schiphol is owned and operated by the limited liability company NV Luchthaven Schiphol (Schiphol Group). The Schiphol Group was founded in the 1950s and is owned by the Dutch State (ministry of finance) (75.8%) and the municipalities of Amsterdam (21.8%) and Rotterdam (2.4%). Until recently privatization of the airport was considered as a future pathway, but in 2004 it was decided that although government will reduce its ownership, 51% of the shares are to remain in public hands. Besides Schiphol the Schiphol Group owns regional airports like Rotterdam Airport and Lelystad Airport and 50% of Eindhoven Airport. Outside Europe the Schiphol group participates in the joint venture that operates the fourth terminal of John F. Kennedy Airport in New York. Schiphol also owns shares in Brisbane Airport Corporation, the operator of Brisbane airport, Australia.

Policy making about the development of Schiphol airport has been a delicate issue due to the fact that the airport is situated in a densely populated region near the economic heart of the country, Amsterdam. The development of Schiphol is a matter of national concern. The national government decides on the development strategy, in which diverging economic interests (airport infrastructure, housing, office spaces, industry locations, nature, and infrastructure) and environmental interests (noise, safety, stench, and emissions) have to be balanced.

During the 1950s and 1960s decisions on the operation and expansion of the airport were made in a relatively autonomous network, dominated by the aviation sector, and the Ministry of Transport's aviation regulation agency, the Rijksluchtvaartdienst (RLD) (Tan, 2001).

Why Network Governance?

It was only during the 1960s and 1970s that the operation and development of Schiphol was perceived to be an environmental problem, especially regarding noise nuisance. In 1979 it was decided that the airport was only allowed to grow within strict noise contours/limits. During the 1980s the severe economic recession led to the emergence of a strong coalition that favored Schiphol expansion. Spatial policy was based on the logistic

strength of the Netherlands, and facilitating the development of Schiphol Airport and the Port of Rotterdam as main ports thus had a high priority (Faludi & Van der Valk, 1994).

At the same time a new environmental consciousness was triggered. The ministry of VROM (Housing, spatial planning and the environment) published the first National Environmental Policy Perspective of the Netherlands (NMP, 1989). Besides, the Province of North Holland, in which the Schiphol territory is located, stressed that the airport was a source of noise pollution and of conflicts on plans for especially housing development.

As a result the policy making went into deadlock. Actors participating in the policy debate could not agree on the future of the airport, nor on the kind of policies that were needed to regulate environmental effects. In an attempt to break the deadlock the government formulated the so-called dual objective: the ambitious growth strategy of the airport would be combined with the simultaneous realization of environmental objectives. Government choose to use the so-called ROM-method a new participative policy approach designed to develop integral, tailor-made plans for specific areas that could count on wide public support.

Reconciling Growth and Environmental Concerns: Three Rounds of Network Governance

Round 1. The PKB (Spatial Planning Key Decision) process: 1988 – 1997

This policy round revolved around the operationalization and implementation of the dual objective in a so-called Spatial Planning Key Decision (Planologische Kernbeslissing, PKB). The PKB procedure is an extensive decision making procedure that results in a legally binding national spatial planning decision.

In the process the decision making procedure was extended beyond the traditional participants (Schiphol and RLD) with local and regional governments. A steering group was established with the main stakeholders: the Province of North Holland, the Municipalities of Haarlemmermeer and Amsterdam and the Schiphol Airport authority. The department of Environment (DGM) of the Ministry of VROM was put in charge. Residents, environmental groups (most notably the *Stichting Natuur en Milieu , SNM*), the planning department of the municipality of Amsterdam and the RARO (the independent advisory council of the Ministry of VROM), which were not represented in the process, raised concerns about the feasibility of the dual objective and the rather economic foundation of the steering group's perspective.

Very soon it became clear that it was impossible to not increase noise pollution with the assumed traffic growth of 6% per year. The Steering Group ignited negotiations about the amount of houses within the 35Ke zone that was desirable. For the short term, the Steering Group agreed that 15.000 houses would be allowed within the 35Ke zone. For the long term, after 2003, parties agreed that when the new 5th runway would have come into operation, 10.000 houses are allowed to be within the 35Ke zone.

The Steering Group decided on the 6th April of 1993 that the growth scenario with the lowest level of traffic needed to sustain mainport operations (the 'critical mainport barrier') would be used as point of departure for the remainder of the PKB process. A new calculation model for noise made it possible to fit the desired mainport development within the noise limits. With regard to the five-runway system, it was argued that all the newly formulated environmental and safety criteria would have to be met (PKB part 4, 1995). The environmental parties, especially

SNM, repeatedly questioned the noise norms used and the way the contours were calculated, but with no effect.

At the end of 1995 the PKB was politically ratified. The Lower House was not totally convinced about the rather low growth that was assumed in the PKB. In the end it was decided that capacity limits would be introduced: passenger numbers were not allowed to exceed 44 million in any year. The noise limits would become effective from 1997 onwards, to give the sector parties sufficient time to adapt their daily operations to these newly installed limits.

Schiphol immediately exceeded the noise limits in 1997 and 1998. It was concluded that the forecasts used in the PKB were far too low (Algemene Rekenkamer, 1998). The local residents and the environmental parties started the first of many juridical procedures that would heavily frustrate further decision-making. *Milieudefensie* (Environmental Defence) had bought a strategic piece of cropland in April 1994, exactly where the fifth runway was planned to be constructed. It started to plant trees to create the Bulderbos (Roar Forest). This nature development project had to prevent expropriation.

Round 2. *The new Schiphol Law: 1998 – 2006*

In order to 'clear the air' in September 1998 the Ministry of Transport initiated a new interactive policy approach: the Interim Debate on Schiphol (Tijdelijk Platform Overleg Schiphol, TOPS) .TOPS was the first attempt to give environmental and nature conservation groups a formal place in the decision making process. The final TOPS had 15 members, but Schiphol, KLM, Milieudefensie and SNM did the actual negotiations (cf. Glasbergen, 2002)

TOPS first assignment was to give an advice on how to realise a yearly increase of 20.000 flights without increasing noise pollution. Schiphol took initiative and designed a new noise zone. A research report of a consultancy firm concluded that the environmental situation would deteriorate considerably. Subsequently the environmental parties rejected the new zone and the TOPS actors failed to reach an overall agreement.

TOPS would also advice on a new noise regulative system for the five-runway system (from 2003 onwards). As RLD and Schiphol negotiated the new regulative system, TOPS was sidelined.

At first, ignoring TOPS was not likely to be an efficient strategy, considering that Milieudefensie owned pieces of land where the new runway was to be constructed. However, the cabinet had created a new emergency law in January 1999. As such, Schiphol was legally empowered to acquire the missing pieces of land from Milieudefensie. Furthermore, the Cabinet chose to draft an entirely new Schiphol Law, instead of a new PKB decision. This allowed for a less comprehensive procedure than that of the PKB. The Cabinet presented a new regulative system, claiming it offered equal protection as the PKB system that it came to replace.

The Upper House ratified the new law in July 2002 (cf. EK 27603), but demanded the new system to be evaluated within 3 years (2006). Schiphol and KLM were satisfied with the new law, since it allowed them to put the new fifth runway (Polderbaan) into operation in February 2003.

Round 3. *Revising the Schiphol Law (2006 -2008)*

In 2006 the government installed the so-called Alders table, named after its chairman Hans Alders. Just as

in 1999, the first assignment was to find short-term solutions for revising the existing noise system, of which noise limits had been exceeded in a few enforcement points in 2006 and 2007.

Actors that gathered around this negotiation table were the sector parties (Schiphol Group, KLM/AF, ATM), the regional and local authorities (North Holland, Amsterdam, Haarlemmermeer, but also the municipalities of Amstelveen, Uitgeest), a regional consultative body, platforms of local residents, and the ministries of Transport and VROM. The environmental parties did not take part in the negotiations.

Schiphol suggested a future development allowing for a further growth to 600.000 flights (Startnotitie MER, 2007). The local residents resisted to this growth perspective. In October 2008, the Alders-table presented its final report. Besides a new, more flexible and realistic system to regulate noise nuisance, it was suggested that Schiphol could grow to 510,000 aircraft movements by 2020. Non hub-related activities (approx. 70.000 flight movements) would be moved to the regional airports. Almost all actors were pleased with the agreement. Due to the economic recession the reduced growth rates were acceptable for Schiphol (Van Gils et al., forthcoming 2009).

Assessment of Network Governance

In general the attempts at network governance in the case of Schiphol failed. It proved hard to realize the double objective. The dominant problem definition - reconciling growth and noise nuisance - persisted and arguments, studies and discussions seemed to be repeated over and over again. Environmental measures were systematically traded off against economic growth. Scenarios and calculation method underlying regulation systems were chosen in such a way that growth was not hindered. Environmental measures agreed upon in the interactive arenas were systematically not enforced. The actors traditionally dominating the decision making, notably Schiphol and the Ministry of Transport, outmanoeuvred or overruled the newcomers in the interactive arenas. As a result the interaction resulted in distrust, hostile relations and legal procedures. Remarkably this did not prevent new initiatives at network governance to be undertaken. It was not until the last policy making round that new solutions were suggested. However, the costs of the measures were shifted to the stakeholders in the environments of the regional airports that were not represented at the negotiation table. It might be argued that this outcome is part of the problem rather than a solution.

This failure of network governance might be explained by the unequal power positions of the pro-growth and ecological coalitions that faced each other. As a result of a knowledge assymentry, resources and institutional positions, the economic coalition succeeded in systematically outmanoeuvring the representatives of the physical planning and ecological networks. In addition it might be stated that economic and ecologic interests in this case simply could not be reconciled. But then again it might be argued that because network governance was not taken seriously, actors did not succeed in going beyond the dominant problem definition and in finding a common ground.

How Did the Context Influence the Network Governance?

Applying network governance in the Schiphol case might be expected and likely to be successful given the characteristics of the Dutch policy context. In response to the mixture of deep divisions and strong interdepen-

dencies that characterized the old Dutch society, a culture of consensus building prevails building on;

– a tradition of solving societal conflict by depoliticization and deliberation, resulting in pragmatic solutions and complicated compromises

– a tradition of neo-corporatism, in which powerful interest groups are included in policy making processes

– complex and detailed legal procedures (like the PKB) structuring planning processes in such a way that various societal interests are taken into account and local governments, stakeholders and parliament have a say (Van Wijk, 2007).

– the decentralized nature of the Dutch planning system with constrains for central government to impose solutions upon local governments (Faludi & Valk, 1994).

Given this historical background, it is obvious that attempts at regulation of Schiphol do not result in a hierarchical approach, forbidding further growth or simply ignoring claims of local governments, residents and environmentalist. So, since network governance can be considered the normal Dutch way of approaching wicked problems, what needs to be explained is why this was not effective in the Schiphol case. Here, other contextual characteristics seem to have been important, for instance the fact that the aviation sector differs from other policy areas. Policies regarding Schiphol are traditionally made in a closed, interaction between Schiphol and RLD. The autonomy of this policy network is based on the economic importance of Schiphol and KLM, the specialist knowledge involved in aviation related activities, and the international nature of the aviation sector, international market developments influencing company strategies of Schiphol and KLM rather than national or local policies. As a result Schiphol has never been treated the same as other public infrastructures, but as a special case. Although Schiphol is publically owned, interdependencies would not allow the government to simply impose solutions on Schiphol. This is even truer, since government itself was divided on this issue. Against this background, introducing network governance can been seen as a confrontation between an environmental coalition trying to regulate Schiphol (ministry of VROM, planning departments of local governments, residents and environmentalists) and the 'old' Schiphol network supported by an economic coalition (ministry of economy, departments of local governments), dedicated to defending its autonomy. The decision to draft a separate Schiphol law to replace the PKB can be seen as an attempt to get rid of the intrusion by VROM dominated legal frameworks. Also the adaptation of procedures in order to expropriate the Bulderforest can be seen as an attempt to restore autonomy and make network governance superfluous.

On the other hand, the economic coalition did not succeed completely in overruling the network governance attempts at regulation. To begin with the attempt of privatizing Schiphol failed; a major blow for Schiphol Airport and the new public management oriented economic coalition. Furthermore, depoliticizing the conflict and returning to the old situation of splendid isolation did not succeed either. Attempts at depoliticizing the debate by establishing technical committees with experts failed. The domination of the policy debate by technical arguments and the existence of a complicated, untransparant regulation system were increasingly seen as part of a strategy to solve the conflict within the old sector and to exclude stakeholders.

Environmental issues kept reoccurring on the political and policy agenda, forcing the ministry of transport

to take its regulatory responsibilities seriously. Operational activities of Schiphol were hindered by ongoing legal procedures and rules and regulations set by lower governments. Neither command and control (forbidding growth) strategies, nor public management-like strategies proved to be viable alternatives in this context. Network governance, despite major drawbacks, persists. Actually we can say that environmental interest and the parties that articulate these interests have become institutionalized in the policy network of Schiphol, reducing its autonomy and leading to new practices in which network governance will increasingly be important. Seen in this evolutionary perspective, the assessment of the effectiveness of network governance becomes more positive. Moreover, in comparative perspective we might consider Schiphol to be a typical product of consensus politics: one of the world busiest airports situated in a densely populated area, with 5 runways, wrestling with complicated operational procedures in order to do justice to various conflicting claims.

AUSTRALIA: BRISBANE AIRPORT

Brisbane Airport serves as both a passenger and freight transport hub with international and domestic passenger terminals, a cargo terminal, and two runways. It is the third busiest airport in Australia, after Sydney and Melbourne. The Brisbane–Sydney route is the eleventh busiest passenger air route in the world, and the seventh busiest in the Asia-Pacific region. During 2007/8 Brisbane Airport recorded more than 18.5 million passengers including 4.1 million international travellers. Brisbane Airport's annual passenger numbers are expected to reach more than 25.6 million by 2015 and around 50 million by 2035.

Vast distances, sparse populations and a lengthy unprotected border meant that Australia was an early and enthusiastic aviation adopter. In facilitating this nation building and protection role the Commonwealth Government assumed responsibility for the ownership and control of most airports, including the Brisbane Airport. Under this essentially 'bureaucratic' arrangement the policy, planning, operation and monitoring of airports were shared across government departments and Government –Owned Corporations (GoCs). Responsibility for the overall control and management of Australia's major airports fell to the Federal Airports Corporation (FAC), a self-regulated government-owned business enterprise; the Department of Transport and Regional Services DOTARS) provided policy direction, while other Federal government entities including the Federal Aviation Authority (FAA - operation), Civil Aviation Safety Advisory (CASA - aviation safety) and the Australian Competition and Consumer Commission, (ACCC - price monitoring) provided regulatory oversight of airports in each of their respective areas of responsibility.

During the 1980s, a combination of shrinking resources and capacity along with the adoption of New Public Management principles of exposing government activity to 'market forces and principles', public infrastructure was put into private hands. As a result a range of market based initiatives ranging from corporatisation to privatisation were introduced. Airports as major infrastructure entities were not immune from the drive for efficiency. Indeed, as Oum et al (2006) noted, this was a time of significant aviation policy shifts, with regard to airport ownership, around the world due to the deregulation of the industry in the 1980s.

Rather than outright privatisation or sale of its airport properties, the Australian government introduced an

arrangement in which it leased its larger urban and regional airports to private corporations and syndicates for 50 years, with options for an additional 49 year uptake. Regulation under this semi-privatised model occurred through other regulatory processes such as general business regulation and accountability requirements for business transactions. Under the Airports Act 1996, the government retained policy and planning rights over the properties, while passing onto the incoming airport owners (leasees) operational rights to the airports as well as a range of development rights with no restrictions on land use (other than compliance with the Airports Act 1996). Leasees derived revenue through property development, car parking and other commercial initiatives. The new airport owners were, however, still subject to federal government safety and pricing regulations, albeit a more light handed regulation for business transaction processes (Forstyhe, 1993; 2007 and Schustler, 2008). The Airport Act1996 required an Airport Master Plan with a twenty year indicative vision that is replaced every five years and informed by public comment.

In this way a mix of governance arrangements – state and market – were employed to more efficiently and 'entrepreneurially' operate and manage the major airports. This mixed governance approach – drawing on the state to provide policy direction and regulation and the market to self fund infrastructure developments – proved to be sufficient in the relatively stable operating environment and the ensured separation between airports and local development in the late 1990s- early 2000s. However, as airport regions have become increasingly encroached upon through local urban planning strategies and increasing levels of airport traffic and congestion have arisen, the ability of the state/market mix to provide for an integrated approach to airport precincts and their surroundings was challenged. Adding to the tensions within this environment were the growing demands by local and state governments, previously isolated from direct influence over airport planning, to become more central actors in the decision making and planning agenda.

The Need for Network Governance

In the Brisbane case, the leasing rights for the airport were secured by the Brisbane Airport Corporation (BAC) a consortium in which the Queensland State Government, the Brisbane City Council and the NV Luchthaven Schiphol Group are shareholders. Following the lead of the Schiphol Group, the Brisbane Airport Corporation (BAC) adopted an 'airport city' development approach that has expanded the focus and orientation of the airport beyond a transport hub to include a wider array of developmental initiatives both aeronautical and non aeronautical. This transformation is already underway with approximately 320 businesses located within the precinct, the development of a shopping and office centre, resulting in a regular daily work force of approximately 16,000 people which is forecast to increase to 42,000 by 2023.

Initially located some distance from urban precincts and largely not subject to local or state government planning regimes, airport operation and development occurred separately from local communities and in a local planning vacuum (Baker and Freestone, 2008). Under the privatisation model, local and state government control of on-airport development was limited to consultative processes, with few mechanisms for airport operator input into regional development. Without overarching governance arrangements linking the two domains local

and state governments may consider that airport commercial development is conflicting with, and restricting, their strategic intentions, while airport operators may be alarmed at incompatible land use (May and Hill, 2006). In effect, neither party was able to endorse, influence or veto land use planning decisions of the other. The growing demand for air passenger travel and freight transport, coupled with BAC' s expansionist development to respond to these demands and the introduction of non aeronautical development, generated an increased use of both airport roads and the local road infrastructure in the areas adjacent to the airport. Adding to the complexity, the relative distance of the airport from the city precinct has been breached with housing developments and light industrial businesses established in the corridor, a rail link that provides increased commuter access not only to the airport, but to the city and a greater reliance on air transport as a commuter mode of travel for local residents working in different states. These new developments have meant that there is greater emphasis on 'interface' activities that bring the airport and its operation into greater connection with the urban metropolis.

Attempts at Network Governance

To facilitate this 'interface' between the airport and other actors an array of mediating institutional arrangements – such as task forces, committees and other bodies - were introduced. These largely ad hoc arrangements sit alongside of and serve to supplement exiting governance arrangements in place within the airport domain. However, although exhibiting some basic network governance properties such as a reliance on interpersonal relationships as the connective tissue, these cross-cutting arrangements also draw heavily on bureaucratic principles such as agenda setting and structured reporting processes to establish focus and direction. The end result is an airport governance regime predominantly characterised by the conventional state/market mix. Limited network governance aspects have been introduced to this mix to both facilitate greater community involvement in this previously 'controlled and isolated' planning and decision making space and provide alternative mechanisms with which to begin to link the expanded array of actors operating within this domain.

The inclusion of horizontal governance practices to the governance mix has afforded an increased level of cross-connection that has contributed to a more 'joined-up' or integrated planning and decision making processes. However, for many participants within this domain the linkages were argued to be insufficient and/or ad hoc and therefore not able to address the growing level of interconnection and interdependency argued to be necessary in the contemporary urban planning space.

Sectoral aspirations for an integrated approach to airport planning, coupled with a recognition of the growing influence of aviation on economic development and the lack of a driving policy to facilitate this, led in 2008 to the Commonwealth government seeking responses to an Aviation White Contribution (Paper). This document outlined key areas of federal concern (Commonwealth Government, 2008a) and recorded over 300 responses that confirmed aviation as a driver for future economic and social development. Together these responses highlighted a growing sense of dissatisfaction with the current status of the aviation industry and the way in which it was governed (Airport Metropolis Project, 2009). In particular there was a high level of concern directed at the perceived lack of integration between airport planning and the local and state government

planning processes. The subsequent Green Contribution (Paper) (Commonwealth Government2008b) acknowledged these concerns and expressed a desire for: "cooperative arrangements to be developed between the states, territories and local governments to better integrate airport planning and development and regulatory oversight of airports with local and state government planning and regulatory arrangements, whilst ensuring reasonable provision for the protection and development of the airports" (Commonwealth Government, 2008b: 32), a set of mechanisms to facilitate an integrated approach to development and planning that occurred at the interface of airports and urban areas. Implicit in the Green contribution was the understanding that a more horizontal approach would facilitate interaction in the shared space between airports and local regions. Key among these mechanisms was the proposal for the Australian Government Minister responsible for aviation to be given the power to establish Expert Airport Advisory Panels (AAPs) for each of the major airports to assess airport Master Plans and Major Development Plans.

Assessing Network Governance

AAPs were presented as a way to bridge the largely independent airport and local/state government planning and development domains and secure a level of cooperation and therefore integration of the shared developments and resulting infrastructure overlaps. However, the structure of the proposed AAP and its institutional anchorage in the Federal government domain almost instantly precluded opportunities for collective problem identification and solving, and joint action. Indeed, for the airports and many other Green Contribution respondents it was seen as rescinding airport sovereignty over decision making and actively working against the formation of a collective body. Airports have not seen this as an integration opportunity – rather as an imposition of will through mandate.

Also enshrined in the Green Contribution was a stronger requirement for airport lessees to establish community consultation groups to foster effective community engagement in airport planning and operational issues (Commonwealth Government 2008b: 32). These community consultative groups signify a desire to extend and refine the current stakeholder engagement processes in place for the airports in terms of both the formalisation of the process and the level of incursion of external stakeholders in airport operations. Collectively the proposals articulated within the Green Contribution represent an intention to build a higher level of cohesion among bodies with responsibility for direct and indirect airport infrastructure planning and development.

How Did the Context Influence the Network Governance?

Under the statist or bureaucratic model of airport governance the range of actors involved in decision making and planning was limited and attention was focused on the provision of air-side support to air transport. Under this mode, decision making and planning were essentially top down and airport-centric in that the airport and its infrastructure capital were considered to be 'bound' to the location rather than perceived as 'boundary spanning' and linked to the broader region. Concepts of public good and participation were controlled by specialist policy and regulatory 'insiders' and key industry expert input. Interaction between these core actors was predominantly rule bound and dominated by an authoritarian, hierarchical relationship. Concern with air safety,

linking isolated and dispersed communities and the provision of reliable air services were major public good considerations. With airport planning and development under Commonwealth control and it was therefore not subject to the constraints of local or regional planning regimes. As Baker and Freestone (2008) point out under this statist mode, airport operation and planning was "conducted in a paternalistic black hole" (and) was an "isolated event' outside of the surrounding urban environment. An alternative approach was required; one which presented a more flexible and entrepreneurial operation and management style, while still contributing to national and economic development. The market approach, with limited network governance – based on loose contractual and regulatory arrangements was implemented. It also had the effect of extending the array of actors from the 'iron triangle' of government departments and key interest groups to a broader business decision making and operational domain. The involvement of shareholders and stakeholders also contributed to an expansion of actors involved. The requirement for public consultation also contributed to an expansion of actors participating (albeit at different levels) in the airport decision making and planning space. This formalised inclusion of community in the governance mix was considered to widen the level of expertise, co-opt specialist knowledge (Jordan and Richardson, 1983; Edwards, 2001) and enhance implementation process.

Adopting a community-centric approach, albeit limited to consultation, relies on a network governance style based on inter-personal relationships, which is inherently different to the authority relation of the hierarchy and contractual relations of the market. Indeed, a loosely coupled network approach, underpinned by informal arrangements and ad hoc structures, was used to supplement the relations between the state and the private operators. The end result was a hybrid arrangement where hierarchy, market and network governance attributes co-existed in the airport domain creating what Keast, Brown and Mandell (2006: 28) have described as a 'crowded policy domain'.

Contemporary contextual influences indicate that the government is looking to foster an agenda for a more joined up and integrated approach to airport planning and development. However, this new agenda can be described or categorised as an emerging aspiration for a more horizontal, less adversarial and collective approach to the problems of contested borders and congested infrastructure. We argue that the ability to fully leverage off a network governance approach is presently limited by lack of readiness for the actors to fully engage with and commit to a network approach. That is, the institutional environment continues to operate and function largely from an independent perspective which prevents the development of shared problem spaces and solutions. Indeed, it can be argued that in this regard the domain remains 'pre-contemplative' (Hibbert, Keast and Mohanak, 2006) in that they realise their interdependence in this space, but are unable, due to institutional constraints and skill capacity, to fully embrace and operationalize this mode. Second, the forms of integration proposed such as the AAP do not reflect the intention of network governance and therefore may work against the stated goals. The AAP is a case in point, while it does have a cross-cutting purpose there is also a strong element of control and centralisation inherent in the mechanism.

Further, drawing from the collective proposals and their related mechanisms it could be argued that the Green Contribution signalled an intention by the Federal government to recall some of the power ceded to the privatised airports. However, it is suggested that it was possible to build the foundations of a governance network approach

from this model or that some of the existing informal networks would offer a mediating form of governance.

The practice of 'light handed' regulation in terms of conducting business that was applied to the Australian airport case has also been identified as a feature of other infrastructure industries including for example, electricity. This national approach to infrastructure provision led to private actors defining their charter as operating as businesses. The need to deal with multiple layers of government is a requirement that the airport shares with other industries and sectors. However, the growing complexity of the airport governance environment, coupled with the increasing overlap between airport activities and infrastructure and those of local residents and business points to a greater need for alternative forms of integrated operations.

CALIFORNIA, USA: THE SACRAMENTO WATER FORUM

The City of Sacramento lies at the confluence of the Sacramento and American Rivers. The Water Forum focuses on the Lower American River. In 1884 the California Supreme Court determined that mining was "a nuisance that impeded the utilization of water for the state's infant agricultural industry" (Somach, 1990:252) and stopped the practice. This was later adopted by the court as an early assertion of California's public trust doctrine. This protects the rights of the public to use watercourses for various uses and has been used as a doctrine for ecological preservation (Wiesenfeld and Orton, 2004). In addition, there has been considerable development of infrastructure on the river in the last 50 years. The U.S. Bureau of Reclamation (USBR) plays a key role in the management and operation of these facilities.

In 1972 the USBR contracted to supply East Bay Municipal District (EBMUD), a major San Francisco Bay water agency, with 150,000 acre-feet per year of water from the American River (Wiesenfeld and Orton, 2004). That contract resulted in a lawsuit filed by the Environmental Defence Fund, Save the American River Association, and Sacramento County. The court decision (named the Hodge decision after the judge in the case) recognized the primacy of the public trust to accommodate competing interests and also that the EBMUD would have to divert its waters below the confluence of the American and Sacramento Rivers.

Sacramento County saw itself as a protector of the river and thus had fought the expansion of the City's water treatment plant. As part of the above court case, the County and environmentalist groups challenged the City's environmental statement on the expansion of their water treatment plant. The court decision also prevented the City from expanding its water treatment plant until it could show how they could meet the regional water supply needs.

Before the Water Forum, the City and County of Sacramento, as well as each municipality and water agency along the American River, operated independently from each other (Wiesenfeld and Orton, 2004). Over the years, the many purveyors in the region could never agree on a regional plan. As a result there were many different agencies pursuing their own agendas in terms of water supply with little or no coordination. In addition, there is a kaleidoscope of agencies and organizations that are involved in the management and operation of water resources in the area. These include: the State Water Resources Board Control Board, the Central Valley Regional Water Quality Control Board (Water Board), numerous water districts, the U.S. Fish and Wildlife Service and the U.S. Bureau of Reclamation.

Need for Network Governance

By 1990, the population had grown to a point that it threatened to outstrip the water supplies. The County therefore developed a new general plan in 1993. One of its provisions established a new urban services boundary beyond which new growth could not occur unless it was served by supplemental surface water. This meant that in order to meet the requirements of this plan developers and the County would have to find new surface water supplies (Connick, 2004). At about the same time, the City sought approval for new water treatment plants. Based on past experience, however, both realized that there would be significant opposition to both plans from the environmental community. As a result, both the City and County felt they had to do something in order for the region to be able to grow. They both felt that it was time to try to develop mutual understandings in order to be able to move forward with water-supply projects and for a regional understanding of water-supply needs.

The City and County decided to join forces on developing a new regional plan. As they progressed they recognized that a consensus process was a potential way to succeed where legislation and litigation had previously failed. They determined that a method called interest based negotiation should be used and they called in a consultant to help them set up the process. This process was referred to as the "Sacramento Area Water Forum Process" (Connick, 2004:15) and new stakeholders were identified and brought into the process at that time.

The Process of Network Governance

Round 1: *Establishment of the Water Forum: 1991-1993.*

The Water Forum (WF) was convened by the Sacramento City-County Office of Metropolitan Water Planning to negotiate an agreement on how to manage the water supply for the region and also to preserve the habitat. The initial meetings were held in 1993. They included the City and County of Sacramento, environmentalists, businesses, agricultural leaders and citizen groups. These individuals represented nearly 15 stakeholder groups. Prior to the establishment of the Water Forum, the City and County had separate planning departments. In 1991, the City and County decided to work together and formed the City-County Office of Metropolitan Water Planning (CCOMWP) (Connick, 2006:10). The idea was to develop a mutual understanding of the needs of the region and allow them to move forward on water-supply projects. The Executive Director reported to the City Manager and County Executive, which established a high level of recognition for the CCOMWP. The CCOMWP also involved other water districts in this planning process. The plan, which was approved by the City Council and County Board of Supervisors, set up a technical advisory committee (TAC) which included representatives of all the water purveyors in the County as well as a representative of the Sacramento Metropolitan Water Authority (SMWA). These other water purveyors were sceptical about entering into an agreement with the City and County but did so as they felt the need for a regional planning effort to take place. In addition to the CCOMWP another advisory group was established that consisted of environmentalists and representatives of the business sector. This became known as the Advisory Committee (Connick, 2006:14).

Over a 6 month period both groups (the Advisory Committee and the TAC) worked to develop a plan for a consensus process and new, potential stakeholders were identified to be included (Connick, 2006). Because of

the large number of stakeholders a Working Group, composed of representatives of the groups involved was set up to serve as the core of the group, to get approval of the groups they represented and to formulate a Sacramento Area Water Plan.

The stakeholders were divided into 4 subgroups or caucuses: "water interests, development and business interests, environmental interests, and public interests – and that four representatives from the first three and two from the public interests could form the Working Group" (Connick, 2006:17). Each of the groups' stakeholder boards approved the representatives for each of these groups. This resulted in commitment from the organizations represented in each group.

Round 2: *The establishment of the Water Forum: 1993-2000.*

In order to get the process started they brought on board a consultant who was knowledgeable in the interest-based negotiation process. Her aim was "to bring to the table 'those who are directly affected by the issue, those who could make change happen, and those who could block change'" (Connick, 2006:18). The process called 'interest based negotiation' focuses on re-educating all participants in how to get at their interests rather than their positions. In addition, in the initial stages of the effort an extensive training program was conducted in the interest based negotiation process. Other consultants were also brought in during the process to act as experts and to work on technical issues. In addition a public relations firm was brought in to work with the boards of the organizations represented.

The process took six years, but in the end all of the agreements made were contained in a Memorandum of Understanding (MOU) for the Water Forum Agreement (Water Forum Agreement, 2000b). This MOU was signed in January 2001 by all of the stakeholder organizations. Other contracts, authorities and similar actions will supplement the MOU. The agreement commits the signatories to work together on the continuing and new water issues over the next 30 years. The agreement also set up the continuation of the effort through the Water Forum Successor Effort (Water Forum Annual Report, 2001). In addition to the agreement, the implementation of the Water Forum agreement depends on the cooperation of a number of partners who are not signatories of the agreement.

Round 3: *The Water Forum Successor Effort.*

The Water Forum Successor Effort was meant to ensure that when there was a changed condition, rather than immediately go to litigation they would first negotiate with each other and try to find a solution. There were two co-equal objectives in the agreement: to provide a reliable and safe water supply and preserve the fishery, wildlife, recreational and aesthetic value of the American River. These two objectives represented the interests of the many stakeholders involved in the initial process. The Water Forum Successor Effort has a core group that meets on a monthly basis. The full plenary meets six times a year. It does not have any authority to govern or regulate. They can only make recommendations. It is up to the signatories to implement these recommendations. Nonetheless, many of their recommendations have been accepted and resulted in a number of actions.

Assessing Network Governance

By all accounts, the Water Forum has been a success. This success has been attributed by and large to the network governance type process that occurred (Connick & Innes, 2001). Most water issues in California, prior to the Water Forum case were contentious issues and very often would wind up in court. Since the Water Forum this has not been the case in Northern California. Previous enemies are now working together to try to negotiate issues as they arise. Since the MOU was signed agencies have formed new associations and joint programs and have been working on water issues as a regional problem (Northern California Water Association, 2009; Dana, J, 1939 reprinted 2009; Sacramento Valley Water Quality Coalition, 2009).

Among the successes are the following projects: The USBR, the US Fish and Wildlife Service (USFWS) and other state and federal agencies are now working together to improve the current water flow standard; The USBR has entered into a memorandum of understanding with the Sacramento City-County Office of Water Planning (acting on behalf of the Water Forum Successor Effort) to conduct discussions with all stakeholders on a groundwater management plan; Sacramento County has joined with 3 cities (including the city of Sacramento) to form the Sacramento North Area Groundwater Management Authority (Groundwater Authority) to manage groundwater in the region.

Even more important, the building of social capital is of particular importance in the success of the WF. Stakeholders who previously would only talk to each other during a court case now find that they better understand each other's views and most importantly, include each other in their decision-making processes. The purveyors, who previously only looked at their own issues, have now joined together and focus on the region as a whole. Finally, there is now a state-wide recognition of the value of the American River.

There have also been problems with the Water Forum Effort. For instance, during the process of developing the MOU, many of the stakeholders could not reach agreement and they finally agreed to disagree and removed several issues from discussion (this occurred among the different representatives, but also among representatives within the same group). In addition, results have been slow in coming and many of the groups represented have become frustrated and started talking again about possible lawsuits (although this has not yet occurred). In spite of this, the relationships built up due to this effort and the support given to it by the state has meant that there is no other approach that is considered to be better.

The Influence of the Context on Network Governance

The WF occurred when a number of different elements converged that led to a unique contextual setting. Part of this was the result of the social revolution that occurred in the U.S. in the 1960's and 1970's. As a result of this revolution, more recognition was given to special interest groups and strengthened their influence on public policy. This was not without much conflict and many groups used the courts as arbiter of last resort. This was the case for many years in California. Water issues were contested among many competing interests and the courts had been involved in a number of these issues.

More important for the WF case was the recognition by both the City and County of Sacramento of the

need for a more consensual process to occur. This was coupled with the recognition that neither the City nor County could dominate any effort that could lead to a regional solution. Of particular importance was the recognition by the technical experts in the agencies involved that they would have to give up control. Hiring the consultant to lead the effort using interest-based negotiation was a deliberate move by the agencies involved to set up this effort in a completely different manner. Everyone involved in the WF effort has indicated that this is what really made the difference.

Although the context at the beginning of the effort was contentious it was the interest-based negotiation process that changed this. The process took almost 2 years to take hold, but in the end the context was changed from one of conflict to one of open discussion and attempts at mutual understanding. It was the relationship building process that took place that contributed to the success. This network governance process was influenced by the institutional context, but it also influenced the context.

COMPARING THE THREE CASES OF NETWORK GOVERNANCE

In this section we compare the three case studies in order to identify the influence of the institutional context on network governance practices. Can differences between the cases be traced back to the influence of the context, or more to national differences?

Comparable Planning Problems and the Recognition of the Need for Network Governance

The three cases share comparative planning problems. Due to growth within a context of scarcity and conflicting (spatial) claims, infrastructural systems increasingly create externalities and trespass former jurisdictional boundaries. As a result it becomes difficult to retain traditional autonomy. Operating and governing infrastructure networks almost unavoidable seem to require the involvement of other governments, private organizations, interest groups and citizens that are affected by their activities or that can affect these activities. Of course, these similarities are partly caused by the cases selected for this contribution. Nevertheless they may be an indication that the observed planning problems are not country or sector specific, but part of a general trend, often referred to as the rise of the network society (Klijn, 2009). Due to growing interdependencies public policy making and societal problem solving increasingly require more coordination and collaboration. Consequently the emergence of horizontal arrangements and of forms of network governance may be considered to be a generic phenomenon. If this is true, network governance should not be considered to be a niche practice, restricted to specific countries or sectors with supportive conditions. Rather it is a genuine governance mode alongside traditional 'bureaucratic hierarchical' governance and market dominated governance modes, gradually gaining salience (compare Osborn, to be published).

The Application and Success of Network Governance in the Three Cases

The growing need for network governance does not imply that in practice it will be applied in identical ways, or that this application automatically will be successful. The three cases illustrate this. In all the three case ini-

tiatives at network governance were taken. In the Brisbane case parties tried to bridge the gap between decision making on the airport development with local and regional planning processe, by creating arrangements to involve local communities in airport development. This practice seems not to have become very important yet and has largely remained without noticeable results. In the Schiphol case engaging in network governance practices has gained more momentum, although results remain disappointing. Only in the regional collaboration in water supply in California network management has turned out to be a clear success, resulting in coordinated projects and outcomes, and the development of a new institutional practice in which parties share a common understanding of a need to approach water supply regionally.

The Role of the Context on Network Governance

To what extent did the institutional context hinder or enhance network governance practices? In the Australian case the mixed context of federal public control and privatized operation resulted in a divide between decisions making regarding airport planning and local and regional development. As a result of this governance mode, actors had separate jurisdictions with incentives that discouraged interaction. On the one hand this created the need for a more integral approach, but simultaneously it hindered the emergence of network management. The recognition of the federal government for the need to bridge this gap did not result in a successful follow- up. The dominance of federal governance in attempting to realize a more integrated approach did not result in horizontal practices in which communities could participate on an equal footing.

The Schiphol case differs from Brisbane, given the public ownership of the airport and the tradition of consensual policy making that characterizes the wider political and societal environment. Nevertheless the differences might be smaller than recognized at first sight. The governance of Schiphol was put at arm's length of the government. A businesslike approach dominated. Furthermore central government traditionally governed the airport, while local governments and stakeholders were not involved. Brisbane and Schiphol are similar in the fact that policy making traditionally was characterized by a large autonomy. Attempts at involving local governments, stakeholders and residents by network governance strategies were taken in a setting in which simultaneously other governance type were used, reducing the effectiveness of network governance and leading to frustration and low levels of trust. In fact, network management was contested which led to a hybrid setting in which various governance modes were applied in an uncoordinated way. The success of the Californian case may perhaps be attributed to the absence of active involvement of higher government layers, leaving local and regional government with the need to find solutions for their coordination problems themselves.

It is not to be said that contextual factors were decisive in the successful application of network governance. The cases indicate that the dedication of parties involved, the (investment in) skills needed, the appropriateness of arrangements and the absence of viable alternatives are important success factors. These factors however are not completely isolated from the context. In the Schiphol and Brisbane cases central and federal government were actively involved, determining to a large extent which methods and arrangement were to be used and applying them in a half-hearted way.

A final observation in this respect is the influence of network governance on the context. All the three cases show that the institutional context is not something static, but that it evolves. Furthermore, network governance practices seem to have had a paramount impact on the institutional context. In the Californian case it can be stated that due to a shift to a regional approach the institutional context also went through a transformation process. In the case of Schiphol the regulatory environment of the airport changed over the years, reducing the autonomy of the sector and giving local and regional governments, environmental groups and resident a permanent position in the policy area. Also the Brisbane case resulted in horizontal arrangements being added to the former public-private governance mix.

Do National Characteristics Matter?

To what extent did national characteristics influence the success or failure of network governance? In light of this question the failure of network governance in the Schiphol case is remarkable, since one might expect this governance to be appropriate given the Dutch context of consensus decision making. On the other hand the successful application of network governance in California might be considered less obvious, given a lack of experience with this type of policy making. But perhaps these expectations are based on too generic assumptions about the contexts in these setting. California is governed by a federal system and has a high density of regulatory agencies, making intergovernmental coordination and collaboration not something unique. Moreover, one might wonder whether Schiphol and California are altogether that different. Being confronted with claims from local communities and environmental groups was as new for the policy makers in the Schiphol case, as it was for the planners in California. Actually the rise of the environmental issues was a more generic phenomenon that occurred in all Western democracies in the 1960s and 1970s. As a result former closed policy sectors were opened up and had to invent new ways of dealing with new issues and new interest groups (compare Heclo, 1974).

An important difference between California on the one hand and the Australian and Dutch case on the other is the predominance of litigation. However as the Schiphol case shows, in the Netherlands parties also increasingly use legal procedures to protect their interests. Legal procedures hindering decision making and operational activities are one of the motives for Schiphol and central government to engage in network governance. The Brisbane case, it can be argued, reflects a wider Australian reluctance to engage with politics and this seems to have transferred to community life. That is, until directly affected by, for example aircraft noise, transport congestion and decreasing property values, citizens do not get highly involved in community action. Environmental concerns present a growing but still largely interest-based group contained point of engagement with the airport operators. This appears to be in strong contrast with the Netherland's embedded consensus model of involvement.

Overall it might be stated that although national characteristics are of influence, they are not equally relevant in every policy sector, nor determining the course of affairs. They are being mitigated by other factors, as for instance by sectoral particularities. In this way they add up to the specific governance hybrids that may evolve in various policy areas and countries due to the rise of network governance.

CONCLUSION

It is a too simple representation of reality to state that network governance better suits some countries or context than others. Although national or sectoral characteristics can be identified, in concrete policy making situations a complex mix of various institutional practices comes together. Besides national features, global trends and sectoral particularities are also influencing network governance practices. These all influence the behaviour, but do not determine the course of affairs. For instance in the case of the Water Forum, parties consciously introduced expertise on network governance methods and skills, showing that unfavorable contextual conditions can be counteracted.

The case studies support the idea that the evolvement of network governance is a general trend, given growing complexities and interdependencies, although the selection of the cases restricts the possibilities to generalize the findings of this contribution.

Nevertheless we suggest that network governance is increasingly becoming an important governance mode. We also acknowledge that it evolves in specific institutional contexts, in which various contextual and situational influences interact. So although we conclude that referring to simple categorizations of national differences is not very useful, we do think that a contextual approach to network governance is important, trying to unravel the institutional conditions that further or hinder network governance, and the mutual interplay between network governance processes and institutional contexts.

Moreover we have observed that the application of network governance amidst other governance modes creates new governance hybrids, of which we do not know much yet. Also in this respect a contextual approach to network governance seems to be a fruitful direction for further investigations.

REFERENCES

Aitken, D. and Jinks, B. 1982 *Australian Political Institutions* Pitman Press, Carlton.

Airport Metropolis Project. (2009). *Review of the Responses to the Aviation Issues White Contribution*, Queensland University of Technology, Brisbane.

Albert,M. (1991) Capitalisme contre Capitalisme, Paris: Edition du Sseuil. Algemene Rekenkamer (1998). Groeicijfers Schiphol.Den Haag, Sdu Uitgeverij. Australian Government 2008 *National Aviation Policy Green Contribution: Flight Path to the Future*, Department of Infrastructure, Transport, Regional Development and Local Government, Canberra December.

Baker, D. and Freestone, R. (2008) *Reconciling public and private interests in the planning and development of airports: the Australian experience*, 1995-2008. In: International Planning History Society 13th Biennial Conference: Public versus private planning : themes, trends and tensions, 10-13 July 2008, Chicago, Illinois.

Connick, S. (2006). The Sacramento Area Water Forum: A Case Study. Institute of Urban & Regional Development, IURD Working Contribution Series, University of California, Berkeley, WP2006-06. Accessed through www.csus.edu/ccp/projects/recent.htm#waterforum on March 21, 2006.

Connick, S. & Innes, J. (2001). Outcomes of Collaborative Water Policy Making: Applying Complexity Thinking to Evaluation. Working Contribution 2001-08. University of California Berkeley, Institute of Urban and Regional Development. Accessed through www.waterforum.org on April 20,1009.

Crawford, P. (1996). *The Serious Business of Governing*. Sydney: Hale & Iremonger Dana, J. (1939) Reprinted

in 2009 as: The Sacramento River of Gold. Rivers of America Series. On the website for the Northern California Water Association (2009). www.norcalwater.org/int-program , accessed on April 16, 2009.

Davis, G. And Rhodes, R.A.W. (2000) From Heirarchy to Contracts and Back Again: Reforming the Australian Public Service, in M. Keating, J. Wanna & P.Weller (eds) *Institutions on the Edge* (74-98) Melbourne: Allen & Unwin.DOTARS, 2006

Faludi, A. & A.J. van der Valk (1994), Rule and Order: Dutch planning doctrine in the twentieth century. Dordrecht, Kluwer Academic Publishers.

Forsyte, P. 2003 Regulation Under Stress: Developments in Australian Airport Policy *Journal of Air Transport Management* 9 (1): 25-35

Freestone, R., Williams, P. & Bowden, A. (2006). Fly Buy Cities: Some planning aspects of airportprivatisation in Australia, *Urban Policy and Research*, 24(4), pp. 491-508.

Glasbergen, P. (2002) The green polder model: institutionalizing multi-stakeholder processes in strategic environmental decision-making. European Environment, vol. 12, issue 6, p.303-315.

Graham, S. and Marvin, S. 2001 *Splintering Urbanism: Networked Infrastructures, technological Mobilities and the Urban Condition*, Routledge: Oxon, UK

Hendriks, F. and Th.A.J. Toonen (eds.) (2001) Polder politics. The re-invention of Consensus Democracy in The Netherlands, Ashgate, Aldershot Hofstede, G (1997) Cultures and organizations; software in the minds, Mc Graw Hill, New York

Huys, M.G. and J.F.M. Koppenjan, Policy Networks in Practice: the debate on the future of Amsterdam Airport Schiphol, in S.Osborn (ed), The new public governance?, Routledge, to be published.

Jong, M. de (1999) Institutional Transplantation. How to adopt good transport infrastructure decision making ideas from other countries, Eburon: Delft

Keast, R., Mandell, M.P. and Brown, K. (2006). Mixing State Market and Network Governance Modes: The Role of Government in 'Crowded Policy Domains". *International Journal of Organizational Theory and Behavior* 9 (1): 27-50

May, M. & Hill, S. (2006) Questioning airport expansion – A case study of Canberra International Airport, *Journal of Transport Geography*, 14, pp.437-450.

Northern California Water Association (2009). The Sacramento Valley Integrated Regional Water Management Plan: Meeting Northern California Water Needs Into the Future. Accessed through www.norcalwater.org/int-program , accessed on April 16, 2009.

Osborne, S, (to be published), The new public governance? Oum et al (2006) OAG (2007-09-21). OAG reveals latest industry intelligence on the busiest routes. Press release. http://www.oag.com/oag/website/ com/en/PopUps/Print/Press+Releases/OAG+reveals+latest+industry+intelligence+on+the+busiest+routes+ 2109072. Retrieved on 2008-08-23.

Pollitt, C. and Bouckardt, G. 2004 Public Management Reform: A Comparative Analysis, Oxford University Press, Oxford. Queensland University of Technology 2008. Response to the Aviation Issues Contribution, Brisbane Qld.

Quiggin, J. (1999), 'The future of government: mixed economy or minimal state?', *Australian Journal of Public Administration* 58(4), 39-53.

Richardson, J.J. (ed.) (1982) *Policy Styles in Western Europe*, London: Allen & Unwin.

Ryan, B. (1998). Government, the Community Sector and Service Delivery: Beyond Ideology and Text Books. Contribution presented to the Institute of Public Administration Australian National Conference *Service*

Delivery for the Community: A Time for Critical Reflection, Hobart Australia.

Sacramento Valley Water Quality Coalition. (2009). Sacramento Valley Water Quality Coalition. Accessed through www.svqc.org on April 15, 2009.

Stead, D., Geerlings, H,and Meijers, E. (Eds) 2004. Policy Integration in Practice: The Integration of Land Use Planning, transport and environmental policy making in Denmark, England and Germany

Scharpf, F.W. (1978) *Interorganizational Policy Studies: Issues, Concepts and Perspectives*, in: K.I. Hanf and F.W. Scharpf (eds.) Interorganizational Policy Making: Limits to Coordination and Central Control, London: Sage: 345-370.

Schmitter, P.C. and G. Lehmbruch (ed.) (1979) *Trends Toward Corporatist Intermediation*, London: Sage.

Skelcher, C. 2004 Hybrids: The implications of New Corporate Forms for Public Service Performance, Contribution presented to the British Academy of Management Conference. Somach, S.L. (1990). The American River Decisions: Balancing In-Stream Protection with other Competing Beneficial Uses. River, 1(4):251-263.

Sorensen, E. 2002 Democratic Theory and Network Governance, *Administrative Theory and Praxis* 24(4):693-720.

Tan, G. (2001). Urgentie, leiderschap en kennisontwikkeling: verklaringen voor drie besluitvormingsronden over Schiphol tussen 1989 en 1991. Amsterdam: Uitgeverij Lemma.

Tatom, J. 1993. Is an infrastructure crisis lowering the nation's productivity? Review, Federal Reserve Bank of St. Louis, issue Nov, pages 3-21

The California Center for Public Dispute Resolution. (2002). Report to the Water Successor Effort and the California Department of Water Resources Concerning Stakeholder Interviews and Process Recommendations Relating to a Collaborative Process Addressing Groundwater Management in Central Sacramento County. Accessed through www.waterforum.org/csgwf/rrtwf.pdf on April 20, 2009.

Van Duinen, L. (2004) Planning Imagery. PhD Thesis, PrintPartners Ipskamp.

Van Gils, M.K.A, M.G.Huys, B. de Jong (2009, forthcoming) De Nederlandse Mainports Onder Druk. Spectrum: Speuren naar ontwikkelkracht Uitgeverij, Houten Water Forum Agreement. (2000a).

Water Forum Agreement: Progress on the Seven Elements – A Review 2000-2005. Accessed through on www.csus.edu/ccp/projects/recent.htm#waterforum March 21, 2006.

Water Forum Agreement(2000b). Memorandum of Understanding for the Water Forum Agreement. Accessed through www.waterforum.org March 21, 2006.

Water Forum Annual Report. (2001). Water Forum. Accessed through www.waterforum.org. on April 20, 2009.

Weisenfeld, R.B. & Orton, M. (2004). A Retrospective View of a Collaborative. Master Thesis, Antioch University McGregor. Accessed through www.waterforum.org on April 20, 2009. Yin, Robert K. (2002): Case study research, design and methods, 3rd edition, Newbury Park

ABOUT THE AUTHORS

Dr. Kerry Brown is the Mulpha Chair in Tourism Asset Management and Professor in the School of Tourism and Hospitality Management, Southern Cross University, Southern Gold Coast, Australia. Her principal research areas are change management; collaboration, networks and clusters; capability, strategy, management and policy for infrastructure and asset management; work-life balance, gender and careers in the public sector, public sector management and policy; government-business relations; government-community relations and employment re-

lations. She holds a PhD in industrial relations and public policy from Griffith University, Australia.

Contact information: Professor Kerry Brown; School of Tourism and Hospitality Management; Faculty of Business and Law; Southern Cross University AUSTRALIA; PO Box 42, Tweed Heads NSW 2485; kerry.brown@scu.edu.au; phone: + 61 40 7731939

Dr. Joop Koppenjan is Professor of Public Administration at the Erasmus University Rotterdam. Earlier he was affiliated with the Faculty of Technology, Policy and Management of the Delft University of Technology. He is staff member of the Netherlands Instututute of Governance (NIG) and of the research school for Transport, Infrastructure en Logistics (TRAIL). His research interests focus on policy networks, policy making and planning, management of risk and uncertainties, privatization, public private partnerships and public values.

Contact information: Prof. dr. J.F.M. Koppenjan; Department of Public Administration; Faculty of Social Science; Erasmus University; Room M8-36; Burgemeester Oudlaan 50, 3062 PA Rotterdam; PO Box 1738, 3000 DR Rotterdam; koppenjan@fsw.eur.nl; phone: +31104088634

Dr. Robyn Keast is a Senior Lecturer in the School of Management and Research Director for the Airport Metropolis Project at the Queensland University of Technology, Australia. Her primary research focus is networks and collaborations. However, her research portfolio includes fields such as public management and policy, service delivery integration, governance arrangements such as networks, public private partnerships and clusters. A feature of her current research is on supply chain relationships and sustainable infrastructure planning and development. Her current position is as Research Director for the Airport Metropolis Project, Queensland University of Technology.

Contact information: Dr. Robyn Keast; School of Management; Faculty of Business; Research Director, Airport Metropolis Project; Faculty of Built Environment and Engineering; Queensland University of Technology; GPO Box 2434; Brisbane, Queensland 4001 Australia; rl.keast@qut.edu.au; phone: + 61 4040 32182

Dr. Myrna P. Mandell is Professor Emeritus at California State University, Northridge, and an Adjunct Faculty at Southern Cross University in New South Wales, Australia. Her work includes articles and chapters on a number of different facets of networks, including: how to organize and manage networks, performance measures for networks, citizen participation in networks and leadership in networks. She is also the co-author of a booklet specifically for practitioners in the non-profit sector on best practices for networks. She is currently involved in research on networks in the international arena.

Contact information: Dr. Myrna Mandell, Professor; California State University, Northridge; 8777 Tulare Drive, #407E; Huntington Beach, Ca. 93646; myrna.mandell@csun.edu; phone: 714-536-1505