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Strategy and the Contested Politics of Scale: Air Transportation in Australia

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Abstract: This article explores the ways in which the contested reconfiguration of air transportation infrastructures following deregulation in Australia resulted in the rescaling of air transportation services and their disassociation from the scales of political jurisdictions. In tracing the complex interactions between the state's and firms' strategies and their impacts at different scales, the article contends that it is not sufficient to view scale as an arena and outcome of political struggle. Rather, it argues for an activated understanding of scale as strategy. The reconfigurations of the scales of transportation networks in Australia reveal their profound implications for the production of space: for social equity, the fortunes of cities, and the manner of Australia's insertion in the international division of labor.

Key words: scale, restructuring, networks, aviation.

The past 15 years have witnessed a flourishing of interest in the politics of scale and scalar structuration (Brenner 1998, 2001; Herod 1997; Howitt 1998; Smith 1993; Swyngedouw 1993, 1997, 2004). This article extends the contributions to this project that have explored the uneven and contested scalar reconstitution of capital, labor, and state jurisdictions (Cox 2002; Park 2003). It explores how struggles for power in the restructuring of transportation networks reflect and rearticulate scaled relationships and, as a consequence, reconfigure the relative positions of places in national and global economies. It argues that although transportation has been neglected in the rescaling literature, its role in the production and reproduction of scale should not be underestimated. The article’s theoretical contribution is to extend the notion of rescaling, to view it not simply as an arena or outcome of struggle, but also as a strategic instrument that is exercised in the cooperative and competitive strategic repositioning of firms and nations.

Understanding the role of transportation in the production of scale is problematic because even in an era of privatized infrastructural arrangements, states retain a significant interventionist interest in interplace connections. For example, Yeung (2000) described how, as part of their regionalization strategies, nation-states pursue the control and expansion of international connections by supporting firms that have a close relationship to the state and its policy objectives. At the same time, the competitive strategies of transportation firms stimulate processes of scale transformation and spatial reterritorialization (Brenner 2001). A focus on transportation illuminates the social impacts of shifts in relationships between states and firms<<mut>>in this case, by revealing how state-sponsored engagement with global air transportation networks exacerbated local social divisions.

Transportation networks link places through the deployment of technologies that transform the relationship between space and time in ways that accelerate or retard the spatial circulation of commodities, ideas, and people. As such, they are deeply implicated in the construction of space; changes in transportation networks effectively reposition places, bringing some closer to centers of power and wealth, while pushing others farther away. These changes are never value-neutral or independent; distance is a social product that is reshaped in political struggles between constituencies for the control of space. Thus, the (re)configuration of transportation networks can be thought of as representing a materialization of changing geometries of power in the space economy (Massey 1993). Unpacking the social and power relations that shape both transportation networks and their production of space can reveal who is included or excluded and empowered or disempowered as connectivities change.

These ideas are fleshed out through an examination of the restructuring of scheduled air services in Australia. By interrogating the processes that contributed to the production of scale in the years leading up to and after the deregulation of air services, this article shows how political struggle has actively reshaped the scaled spatial reorganization and territorial reconfigurations of these services. It traces how the liberalization process and associated privatization of infrastructures loosened the association between scales of economic activity and scales of political jurisdiction<<mut>>rupturing the concordances that had characterized the era of Keynesian regulation but not releasing the nation-state from its intimate relationship with the shifting arenas of capitalist competition and cooperation. The reworked postliberalization configuration of Australia's air transportation network was not simply the passive outcome of shifting interfirm and interstate power relations, but was consciously produced by the deliberate strategies of states and firms as they recast their allegiances and reterritorialized their spheres of influence. The outcomes of these processes reflect the uneven influence that different factions of capital (and their associated political constituencies) were able to exert over the direction of regulatory change. The pattern of postliberalization restructuring of the air service infrastructure shows that the introduction of open competition without consideration of its spatial dimensions led to the development of spatial monopolies that consolidated global-local interconnectivities for some constituencies and places while effectively disconnecting others.

The remainder of the article is structured as follows. The second section contributes to the theorization of the relationship between air transportation services, scalar processes, and regional development and explores the notion of scale as strategy. The third section explores these relations by detailing changes in Australia's regional air services, and the fourth section discusses the implications of these shifts. The article concludes with a call for further political economy-oriented research into on the connections between geographic scale, sociospatial processes, and transportation infrastructures.

Transportation and Scale

Theorizing the role of air transportation in processes of restructuring and rescaling requires thinking beyond the commonplace idea<<mut>>which appears frequently in the literature on world cities<<mut>>that air connectivities are the passive expression of interplace power relationships, a spaceless transaction cost, or an uncomplicated driver of state-led regional development (Jin, Wang, and Yu 2004; Smith and Timberlake 1998; but see Ciccantell and Bunker 1994). Rather, the approach taken in this article recognizes the enduring “interdependent separation” of states and aviation firms that reflects historical and other contingencies (Jessop 1990); acknowledges the role of transportation networks in both the production of state territorial configurations and the accumulation of capital (Harvey 1985); and views transportation as simultaneously a force and a relation of production with specific, socially produced spatial dimensions and implications (Sheppard and Barnes 1990). Therefore, a practically adequate understanding of the role of air transportation in the politically contested production of scalar structuration should simultaneously engage multiple threads of inquiry<<mut>>the changing role of states, the associated restructuring of firms within the transportation industry, the analysis of how the strategies of states and firms produce industries and scales, and the assessment of how associated network realignments alter the positions of places. As Cox (2002) argued, this endeavor must recognize the uneven and noncoincidental spatial divisions of differently scaled arenas of capital, labor, and states.

States play a crucial role in constructing, maintaining, and reconstructing political and economic scales and their territorial expressions. Some observers of neoliberal globalization have contended that the association between scale and territory is weakening as transnational flows of money, commodities, and people increase the porosity of state boundaries. Thus, the simple notion of the state as a territorial “container” for social and economic processes is being replaced by conceptualizations in which state power is both socially constructed and relational. In Paasi’s (2005, 110, 112) summation, “territories are social processes in which . . . social space and social action are inseparable,” where territoriality “is always a manifestation of power relations.” In a similar vein, the Westphalian notion of state sovereignty<<mut>>by which states are free to choose the form and timing of their interactions with other states<<mut>>is being replaced by an awareness of interstate space as a tangle of overlapping and variously scaled configurations (see Agnew 1994). Nonetheless, despite the intensification of the linkages among the subnational, national, and global scales, national institutions continue to mediate these interactions (Weiss 1998). For Mansfield (2005, 459), the now “decentered” state remains a key site in the construction of multiscalar formations.

As infrastructure, transportation networks act as conduits of the nation-state’s institutional power; their scope defines the reach of the nation’s authority. Weiss (2006, 168) extended Mann’s (1993) theories, in which state power is “entwined” in its infrastructure, by deploying the concept of “governed interdependence” to explain the cooperative relationships between states and firms. In this view, the state’s infrastructural objectives<<mut>>as materialized in territorialized regulatory frameworks<<mut>>shape both the lateral and hierarchical dimensions of transportation networks as they span multiple scales of engagement (see Leitner, Pavlik, and Sheppard 2002). In a globalizing economy, air transportation networks are a central component of these infrastructures. They define political regions and the scope of markets as well as acting as vehicles of economic patriotism (Raguraman 1997). As a result, providers of air transportation services are engaged in multiple networks of power relations in which commercial issues are muddied by political considerations.

But the focus on state-firm relationships does not adequately incorporate the interdependencies and conflicts between firms or their effects on state-firm relationships at different scales. To understand airlines' simultaneous positioning in multiply scaled regulatory contexts and differently organized markets, it is useful to invoke Cox's (1998, 2) framing of the politics of scale as the networked interplay between "spaces of dependence" and "spaces of engagement." Spaces of dependence are the nonsubstitutable social relations that are necessary for the realization of essential interests. They include the dependences between transportation firms<<mut>>in their guise as territorialized providers of infrastructure<<mut>>and governments, as well as between firms and groups of firms in their various commercial alliances. Spaces of engagement, on the other hand, describe the less binding allegiances that reach out across space and time to secure the continuing viability of the space of dependence. For firms, they delimit the potential spaces of competitive interaction, while for governments, they suggest the potential range of regional and international interactions. These overlapping interests reflect and produce complexly interdependent patterns of conflict and cooperation that are contingent on a range of contextual factors, not the least of which are the specificities of state accumulation strategies and the diverse national "varieties of capitalism" that they generate (Hall and Sockice 2001). Although the spatial formations of air services continue to be governed by national priorities, their different local expressions reflect the tension between economic, political, and developmental objectives. As Swyngedouw (1993) argued, the changing spatial organization of transportation networks can be understood only in the context of the sociospatial dynamics of specific political-economic forms, in which their changing configurations are theorized in both historical and geographic frameworks simultaneously. The interplay between state and firm strategies has significant implications for understanding the strategic dimensions of scale.

Scale as Strategy

Complexes of state and firm networks<<mut>>such as those created by air services<<mut>>are social relations that produce sociospatial scales. For Swyngedouw (1997, 140) these relations are politically contested and fluid, reflecting the complex and shifting power relations between social actors. The observable articulations of scale at any time thus represent a temporary equilibrium in historically evolving sociospatial power struggles or, equivalently, a temporary balance in the complex “geometries of power” that link multiple protagonists in complex networks of association (Massey 1993). Following Harvey’s (1982) insight that every political struggle is inherently spatial, Swyngedouw (1997) viewed scale configurations as both the arena in which political struggles are played out and the outcome of past struggles.

However, in the case of transportation infrastructure, scale is not only an effect and a medium of political struggle, but also a strategy and a tactic used by both states and firms, in complex interaction, as they pursue their partly complementary and partly conflicting interests. In this context, both states and firms engage in the discursive reconstruction of scale to justify and legitimize their commercial, territorial, or political objectives. As actors' differentiated capacities to impose their own constructions, discourses, and narratives shape understandings of scale, perceptions of scale take on an epistemological dimension and become "a way of framing" political spatiality, or a form of knowing that political agents deploy discursively in arguments that change the way in which arenas of interaction are known and apprehended (K. Jones 1998, 27). These creative reimaginings of scale contribute to political and economic projects that entangle scale with power, knowledge, and territory.

From this perspective, scale is purposefully created in initiatives that define the spatial reach and constituent elements of spaces of cooperation and competition. The spatial and scalar fix of a dominant state or firm reflects and reinforces its power networks and at the same time justifies the exclusion of spaces and relations that conflict with its strategic interests. For both firms and states, accepting an existing scale configuration therefore implies accepting the power relations that it embodies. Competitive firms resist any containment within politically defined territories or scaled regulatory spaces. Air service firms have responded to the intractability of regulatory barriers by pressuring states for regulatory liberalizations and by creating interfirm alliances that enable them to bridge regulatory barriers. As these realignments create opportunities to "jump" between existing state-defined crystallizations of scale, they also produce new articulations of scale that disrupt existing power relationships, rework power geometries, and recast territorializations. In a strategic view of scale, when states and firms in the transportation sector forge new alliances, they not only jump between, rework, or modify existing scales (Smith 1992), but also generate new sociospatial scales that materialize as newly configured service networks with their own territorial reaches and hierarchical linkages. Since these reworkings destabilize the previously dominant power geometry, redefining scale becomes a means to escape established institutionalized structures (see also Amin and Thrift 1994). These strategies can put state sovereignty at risk if the resulting reconfigurations of transportation networks erase or transcend the established scaled configurations of state power.

Deploying rescaling as strategy creates a means to escape old definitions, create new metaphors with new spatialities, and shift arenas of competition and cooperation. In this conceptualization, scale is not simply the *expression* of shifting power relations, but is *constituted by* the interacting strategies and tactics of willful agents. The capacity to escape existing scaled rules, regulations, and definitions and to infiltrate interstitial spaces that are not governed<<mut>>or valued<<mut>>by established hegemonic powers is a key to political and economic advantage (Mann 2006, 384). The interactive nature of these processes can be understood by extending Jessop's (1990, 205; 2005) "strategic-relational" approach to states and firms simultaneously, so that both the state and the institutions of capital are viewed as social relations imbued with projects, strategic orientations, and associated tactical maneuvers that involve complex mixes of cooperation and competition. The scope for the reflexive reorganization of scale then reflects the context, history, and timing of the interplay between "reflexively reorganized structural configurations" and the "recursively selected strategies and tactics" of states and firms as they maneuver strategically in the same territorial and interterritorial spaces. From this perspective, scale is intertwined with power relations and with strategy.

Viewing scale as strategy shifts the research task from mapping arenas and outcomes (Brenner 2001) to focusing on ways in which protagonists deploy rescaling in their arsenal of competitive and cooperative strategies. The next section draws on the example of the Australian aviation sector to demonstrate the strategic deployment of scale.

Rescaling Air Services in Australia

Australia’s postliberalization restructuring of the aviation industry unfolded in three phases, each reflecting a different strategic deployment of scale relations. In the first phase, the rigid three-tiered state-led scale configuration created by Keynesian regulation was dismantled. In the second<<mut>>a chaotic period in which firms and states actively pursued noncoincidental and uneven restructuring<<mut>>rescaling and territorial expansion strategies seemed to collapse scales into lateral laceworks. These opposing strategies ruptured the concordance between the state’s and firms’ scales of activity. In the third phase, after the crisis of 2001, a newly scaled firm-led structure consolidated spatial monopolies and institutionalized social inequalities. The remainder of this section details these changes.

Creating the National Scale

Australia was created in 1901 as a federation of its constituent states. The Australian Constitution defines the powers of its three tiers of government<<mut>>local, state, and federal<<mut>>and imposes clear limits on the extent to which these scaled structures can be reworked. Federal powers coordinate interstate and international relations and connections. States retain control over their internal affairs and are responsible for intrastate services, including transportation services. The local level has limited powers, a modest revenue-raising capacity, and limited involvement in the planning or delivery of interplace transportation infrastructure.

The physical configuration of air services in Australia developed to reflect and create the unique characteristics of Australia’s physical, political, and economic geographies. When the air service network was established in the 1930s, it relied on entrepreneurs, mostly from relatively isolated regional areas, who built up local services to meet local needs. The uneven successes of these often-risky ventures combined with the patterns of subsequent mergers and takeovers to produce a peculiar and serendipitous industrial geography. Pioneering air services operated under state-level regulation before World War II, although the Air Navigation Act of 1920 enabled the federal government to exercise limited control..

After World War II, Australia’s air transportation network was shaped by a policy framework in which the federal government purposefully created a national scale. In 1945, motivated by security concerns, nation-building objectives, and infant industry arguments, the federal (Labor) government sought to nationalize emerging interstate air services and bring them under its direct control. In this era, the federal government’s nation-building vision materialized in its objective of creating a national infrastructure. However, airline firms<<mut>>then embedded in state-level political and social networks<<mut>>vehemently opposed the national strategy and challenged the government’s enabling legislation, the Australia National Airways Act of 1945 in the High Court. The Court subsequently found in the airlines’ favor.[1] The intense public

[1] The Court concluded that nationalization contravened Section 92 of the Constitution, which guarantees free trade among the states (see *Australian National Airways v Commonwealth*

debate generated over nationalization reflected the then-strong class divisions between the Socialist-oriented Labor and Conservative (National Party) constituencies.[2]

Following the Labor government's electoral defeat in 1949, the incoming Conservative administration took a different strategic approach to the creation of a national air network. It established the Two Airline Policy (TAP), a managed duopoly that comprised one public and one private airline<<mut>>Australian Airlines and Australian National Airlines, respectively. This politically astute compromise promoted national development without resorting to nationalization and, at the same time, avoided the private aviation monopoly that was likely to emerge in an unregulated market. At the time, Australia's internal air routes did not generate sufficient traffic to sustain competitive markets.

Given constitutional limits on federal power, however, this compromise could be achieved only through a complex web of interventionist enabling legislation. The Airlines Agreement Act of 1952, which ensured that both airlines were treated equally, was later reinforced by the Air Navigation (Charges) Bill, the Income Tax Social Services Assessment (Air Navigation) Bill, and the Australian National Airlines Bill. The Airlines Equipment Bill of 1958 drew on the federal government's power to control international trade to complete the TAP regulatory framework. It placed limits on the importation of aircraft to secure state control of airline seat capacities.

(1946) 71 CLR 29). The outcome highlights the nation-state's reliance on the social power of its constituencies (see Jessop 1990).

[2] These disputes also had a territorial dimension; New South Wales traditionally supported free trade, while Victoria favored industry protectionism (Stilwell 1992, 131).

The TAP was designed to maintain services in Australia's low density aviation markets. It stringently regulated firms, prices, and safety standards on the designated interstate trunk routes connecting the state capitals and a handful of larger urban centers. Interfirm competition was limited to nonprice factors and, as anticipated by Hotelling (1929), the two national airlines matched services on most routes. In addition to highly interventionist regulation, the federal government supported air services through direct and indirect subsidization and provided the infrastructure of airports, navigation, air traffic control, and associated services.

Together, as these interventions created a "national" scale of aviation infrastructure, they consolidated the authority of the national scale and facilitated the emergence of an integrated national economy. The TAP's webs of regulation created spaces of dependence that bound both national trunk airlines to the will of the nation-state. The resulting service configuration maintained state-based territorializations, promoted national cohesion, and encouraged even development across politically defined urban centers. This distinctive geography positioned state capitals as growth centers, nodes in the trunk network, hubs for intrastate services, and (until 1992 regulatory reforms) entry points for international traffic (see Figure 1).

This configuration also reflected Australia's topography and urbanized settlement patterns.[3] The only state that developed relatively dense short-haul air service networks was New South Wales, where the Great Dividing Range poses a formidable barrier. The flat topography in other parts of Australia is suited to road and rail transportation, which carries over 80 percent of commodity exports to ports. As a result, scheduled regional air

[3] More than 70 percent of the Australian population lives in the state capital cities.

transportation services have a limited role in the direct circulation of commodity-based capital.

The TAP was supported by successive federal governments regardless of their political leanings. Most states complemented the national structure with an internal system of regulation and used various forms of route tendering to support and subsidize local services. Meanwhile, Australia's government-owned international flag carrier, Qantas, enjoyed monopoly rights over international services. Over time, these interlocking structures formalized state-federal relations and crystallized sociospatial scales. The activities of aviation firms were contained within the rigid territorializations of political jurisdictions. The TAP structure persisted until the 1980s, although its maintenance required increasing intervention.[4]

Reimaging Scale

By the late 1970s, the rigidly scaled landscape of air services had become the arena in which new political struggles were played out. Australia faced that decade's deepening economic crises by planning the rapid internationalization of its economy. It was believed that Australia's prosperity would be secured by pursuing an aggressive trade liberalization agenda and exploiting its comparative advantage in agricultural and extractive industries. The discursively constructed imperatives of "globalization," in the borderless formulation associated with Ohmae (1986), impelled the nation toward

[4] The Airlines Agreement Act 1961 extended the TAP to 1977 and, in 1981, the Airlines Equipment Amendment Act strengthened the regulatory framework by effectively prohibiting new entrants.

strategic internationalization,. In the economic sphere, the new accumulation strategy favored export industries, promoted the development of large firms that could compete on the international stage, and encouraged the consolidation of "national" product markets. In the political arena, it led the Australian government to champion the development of Asia-Pacific regional governance through participation in APEC (Asia Pacific Economic Cooperation) and other fora. Since improving international connectivities would be a central component of the new policy approach, the nation-state became an active promoter of the internationalization of air service networks. In this way, pressures for reform of the airline industry were part of a broader strategic realignment of the Australian space economy.

The reform process's orientation toward regulatory liberalization, privatization, and internationalization was encouraged by the growing influence of neoliberal economic discourses and theories. Public choice theory was especially influential. In policy contexts, this approach rejects the concept of an undifferentiated national or community interest and insists that well-meaning policies do not necessarily operate in the public good. Its view of state policy initiatives as commodities that are liable to be captured by interest groups directs attention to identifying who benefits from and who pays for interventionist policies (Stigler 1971). Analyses motivated by these discourses revealed that travelers on profitable intercity trunk routes were subsidising travelers on marginal rural routes. Moreover, the "rents" extracted from the regulatory framework appeared to accrue to airline firms and their (well-paid) workforces at the expense of "consumers" (i.e., the mainly business travelers on dense intercity routes). After segmenting the service space into profitable and not-profitable subsectors, neoliberal economic analysis could then demonstrate the inefficiency of cross-subsidizations in which neither subsector operated at its marginal costs. Accordingly, new research attributed the high cost of Australian air services to the inefficiencies of the regulated TAP framework, rather than to the peculiarities of Australia's history and geography (Forsyth and Hocking 1985; Kirby 1986). The associated narratives of waste<<mut>>the image of two half-full airplanes routinely flying in parallel on identical routes<<mut>>made it politically difficult to defend the TAP or its approach to the air service infrastructure. Stories celebrating the successes of the deregulation of air services in the United States encouraged the Australian federal government to embrace the apparent efficiencies of market forces.

By disarticulating profitable from unprofitable locations, the discourses of public choice theory worked to dissolve the coherence of the national scale. Public choice theory not only undermined the goal of even, managed development that had sustained the close relationship between the national state and air service providers under TAP, but also disrupted the cooperative relationships between airlines and their customers in other sectors of the economy. As the new policy discourses separated economic from social policy considerations, they excluded constituencies that viewed air transportation as an essential social service and weakened the rural voice. At the same time, they gave voice to exporters, tourism promoters, transnational firms, and other segments that believed their success had been inhibited by the TAP. These shifting geometries of national power relations fragmented the cooperative spaces of dependence that had tied airlines to state instrumentalities.

To escape these disempowering developments, the private airline of the TAP duopoly, now Ansett Airlines, sought to expand its market scope. In 1980, it jumped scale by operating a charter flight to Singapore in direct contravention of Australia's international aviation agreements, and in 1985 its regional subsidiary East-West Airlines attempted to jump into the national trunk market. Ansett's expansionist strategy<<mut>>which did not challenge existing scale configurations but merely sought to jump between them<<mut>>necessarily conflicted with the established powers, alienated Ansett from the national bureaucracy, and undermined Ansett's relational position in local networks of state-firm interdependencies.

Liberalization and Strategic Rescaling

In 1986, an independent government inquiry recommended the cautious partial deregulation of air services (May 1986). However, the government took a more radical view and resolved that the TAP would be withdrawn, effective November 1990, and that airline regulation would fall into line with the competition-oriented policies that governed other industries (Evans 1987). Air services would no longer be assessed as a component of the social infrastructure with socially determined levels of provision, but as economic ventures guided by market demand. This change implied a reassessment of the nature of the Australian aviation sector, since competition policies can succeed only in markets that are large enough to sustain multiple competitive air service providers. In effect, the government had decided that the market was "contestable," a condition in which firms that are fearful of the threat of new entrants are expected to behave as if they were operating in competitive environment (see Baumol 1967; Joy 1986).[5]

Soon after, in 1989, in anticipation of substantial changes in their work environment, Australian airline pilots began strike action. The long-running dispute alienated pilots from the labor movement and undermined community support for the aviation sector (see Bray and Wailes 1999). The dispute highlighted aviation workers' relatively generous wages and conditions and fueled the perception that firms and their workers had been the beneficiaries of the government's subsidization of aviation infrastructure. The eventual resounding defeat of the pilots' campaign created an opportunity for airlines to reduce their staff numbers and introduce more efficient staff deployment systems. The dispute damaged the networks that had united air service providers and the national government. The government subsequently distanced itself from the aviation sector.

When deregulation was implemented the following year, it produced complexly interrelated changes as firms revised their strategies and reconfigured their services to take advantage of the new environment. These changes altered the scope and content of the preliberalization scales of service provision and reworked the relationships between them. The effects differed for the national, local, and international scales.

[5] This conclusion, which was based on aviation's low entry and exit costs (on a route-by-route basis) and its limited opportunities for the exploitation of economies of scale, underestimated the market power derived from alliances, the control of computerized reservation systems, frequent-flyer schemes, and fleet efficiencies.

National Trunk Services. At the national scale, liberalization opened national trunk routes to competition, allowed new players to enter the market, and gave airlines control over the selection of routes and pricing. For the first time, airlines could initiate increase, decrease, or discontinue services, depending on the profitability of the routes. Soon after deregulation, two new airlines (Compass and Compass II) joined the trunk network, but they were quickly defeated by the incumbents in a debilitating price war. The system temporarily returned to its preliberalization two-airline structure. Additional regulatory reforms in 1992 merged the two state-owned airlines, Qantas and Australian Airlines, and allowed Australia's international flag carrier Qantas to operate on domestic routes.[6] Although critics viewed the merger as "fattening up" Qantas in preparation for its privatization (Pyman n.d.), this national strategy strengthened Qantas's international position by providing it with a secure domestic base. However, the Qantas<<nut>>Australian Airlines merger also undermined the possibility of a competitive national-scale market because it created a firm that was too large and capital-rich to be challenged in the domestic arena. Conscious of Ansett's increased vulnerability, its owners responded: first, by seeking an international buyer that could match Qantas's market and capital resources, and second, by expanding Ansett's operations into the international arena.[7] The competitive environment forced Ansett to

[6] The sale of Australian Airlines had been planned at least three years before liberalization, in the Australian Airlines (Conversion to Public Company) Bill of 1987.

[7] In the 1980s, both Qantas and Ansett had expanded to New Zealand, Papua New Guinea, and nearby island holiday destinations through wholly owned subsidiaries. After 1992, these locations could be served directly.

match Qantas's operational scope. In preparation for intensified national and international competition, both Qantas and Ansett consolidated their authority over subnational feeder routes.

These strategic reorientations upended the preliberalization landscape of horizontal regulation-based scales of interaction and replaced them with vertical cross-scale alignments that were based on coordinating passenger flows. These innovations blurred the boundaries between scales, although the operational separations of the preliberalization era persisted. By the mid-1990s, it appeared that deregulation had had little effect on services and a questionable impact on prices (Bureau of Transport and Communication Economics, BTCE 1994; Grimm and Milloy 1993), an outcome that Quiggin (1997) later attributed to the intrinsic noncontestability of Australia's thin aviation markets.

This temporary equilibrium was disrupted when the Conservative Liberal government came to power in 1996 and introduced radical reforms to the labor market. The Workplace Relations Act 1996 (WRA) rescaled the practices of labor regulation from the national to the firm scale. Its firm-level "Enterprise" industrial relations agreements aimed to replace the (Keynesian) centralized wages system and undermine the power of unions. The WRA tipped the two-airline power balance toward crisis by facilitating the entry of highly competitive low-cost carriers that would not be constrained by a legacy of preliberalization industrial agreements. Henceforth, new airlines would be free to introduce the labor-saving technologies, policies, and practices that had been pioneered by American and European discount airlines. Thus, when Virgin Blue entered the national trunk market in 2000, it had the advantage of significantly lower labor costs and significantly greater scheduling flexibility than the two incumbent airlines. Moreover, since it selectively restricted its operations to the most profitable trunk and tourist routes, it was able to function at higher profit margins than the established carriers.

Virgin Blue’s entry generated intense price competition on primary trunk corridors (principally Melbourne<<nut>>Sydney<<nut>>Brisbane) and led to a reorganization of the trunk network as destinations and service frequencies adjusted to the new demand created by cut-price airfares. Because sophisticated route-planning technologies enabled airlines to assess accurately the viability of different routes, route combinations, and fare structures, the trunk network was redefined as the (shifting) set of routes that could generate sufficient traffic to be served by larger commercial aircraft. Northern tourist hubs (Cairns, Townsville, and Broome) were elevated to national trunk stature, while less popular destinations (Launceston) were effectively demoted to the regional network. Thus, the composition and spatial organization of the national network began to reflect the economic power relations between places in the Australian space economy, rather than the status of cities in the nation’s political federation.

Regional Services. The national deregulation of air services in 1990 reverberated across scales to reshape sub-national air transportation networks. In the scaled preliberalization structure, regional air services had operated within state-level regulatory jurisdictions. With the exception of New South Wales, which continued to regulate routes through Sydney's congested Kingsford-Smith airport, the state governments deregulated their services in rough conjunction with federal changes.[8]

In the absence of subnational regulation, the national liberalization would have significant impacts on regional services. In contrast to Europe and the United States, Australia's deregulation was not accompanied by a community service obligation to isolated regions. On the contrary, national deregulation was accompanied by a reinterpretation of federal power that enabled the federal government to restrict its subnational responsibilities to the management of safety and security standards:

> Generally, it is now accepted that the Commonwealth's power is restricted to matters concerned with safety, security, regularity and efficiency, where regularity and efficiency have been interpreted as relating to safety and navigational aspects. (Bureau of Transport Economics, BTE 1999)

This reversal of the nation-building interpretation of federal power that had created the national air network 50 years earlier implied a discursive reconstruction of national authority and a shift in the relationship between the nation and its internal regions.

Following this revised understanding, the federal government progressively withdrew its financial support for national aviation infrastructure, moving toward a user-pays system and downscaling operational costs and responsibilities to the states, local

[8] Queensland liberalized in 1987, the Northern Territory in 1992, Western Australia in 1994, and Tasmania in 1997. South Australia and Victoria had no local regulatory framework and were effectively deregulated by federal reforms in 1978.

areas, and firms. In 1998, a major component of the national aviation infrastructure, the Federal Airports Corporation, was dismantled. International airports were privatized, and local airports were transferred to local community control. Where the local market could not support commercial airport services, local and state authorities were expected to step in: “The viability of air services is a matter for the airlines. . . . In the final analysis it is up to local communities to support these services for them to remain viable” (Boswell 2001). The clear message was that local communities and air enthusiasts would no longer be subsidized from the national purse. As user costs escalated, cash-strapped regional operators found it increasingly difficult to meet the government’s safety requirements (Regional Aviation Association of Australia, RAAA 2004).

In response to this revision of interscale relations, the major airlines reorganized to quarantine the financial risks of regional provision. Before liberalization, the regional routes served by the two major airlines had been subsidized by the profits that were generated on high-density national trunk routes. In the more competitive postliberalization context, the flow of funds to subsidize marginal regional services quickly evaporated as firms moved to route-based service assessments (see Farrington 1985). As in other sectors, services were reorganized using the tactics of vertical disintegration. By 1997, the two national carriers operated direct services on only 15 percent of the regional routes, but their various alliance partners and subsidiaries operated on 83 percent of the routes and accounted for 97 percent of all regional passengers (BTE 1999). The airlines increasingly avoided wasteful competition on regional routes by establishing route-based spatial monopolies<<mut>>or, equivalently, by demarcating territories within scales. Figure 2 shows that only the highest traffic routes sustained two or more competitive operators.

Less tourist-oriented regional air services remained marginal as passenger traffic fluctuated with the fortunes of the rural economy. As the 1990s came to a close, a number of larger regional firms<<mut>>including Yanda Airlines, Country Connection, and Flight West<<mut>>failed after being unable to offset their increasing costs by increasing prices or load factors. In addition, the volume of nonscheduled “general aviation” traffic fell substantially. In sum, the nation-state’s reimagining of Australia’s regions encouraged the disintegration of the preliberalization regional scale and its replacement by a new subnational framework that was more closely articulated with national and international services.

Internationalization. In the early 1990s, the federal government’s internationalization strategy championed the creation of new scales of governance in Southeast Asia, primarily through APEC and the creation of a common market with New Zealand. The internationalization of air services began in 1992, when, following the simple logic that more incoming planes equal more tourists and therefore more income and jobs in regional Australia, the federal government allowed international carriers limited access to Australian airports.

Next, the partial privatization of Qantas aimed to integrate it into the fabric of (private) international aviation capital. After Singapore Airlines (SIA), Northwest, and British Airways (BA), showed interest, a 25-percent share in Qantas was eventually sold to BA. The resulting Anglophile alliance on the strategically important Sydney<<nut>>London route improved the position of BA and Qantas relative to their principal competitors, SIA and Emirates, but had the effect of undermining Australia's political strategy of regional scale building. Qantas was fully privatized in 1995, although limits on foreign ownership remained.

Conscious of the limitations of Australia's small aviation market, the federal government also began actively promoting a Single Aviation Market (SAM) between Australia and New Zealand (Findlay and Kissling 1997; Kissling 1998). But this 1992 reterritorialization of the market ignored the realities of the uneven regional geometries of state and firm power and met opposition from Air New Zealand, which sought support from its national government to "avoid the risk of being swamped or at least marginalised by its larger trans-Tasman competitors" (Air New Zealand 2003, 5). Australia withdrew from the SAM in 1994, partly to protect Qantas's position prior to its full privatization and partly because it had underestimated the complexities of cross-national regulatory harmonization (Findlay and Kissling 1997).

The federal (Labor) government's strategy from 1990 to 1996 had aimed to build Qantas's stature and resources to enable it to prosper in a deregulated international environment. But as these reforms blurred the division between national and international services and scales, they unleashed supranational competitive forces that ultimately recast the geometries of power between nations in the region as both New Zealand and Singapore perceived Australia's strategy as expansionist (Sullivan 2002). In 1996, the incoming Howard Liberal government retreated from the politics of regional scale building (Higgott and Nossal 1997). The Australia<<nut>>New Zealand SAM with cabotage rights eventually became a reality in November 1996 after Australia's policy shift.[9]

Meanwhile, the international context of the airline industry was changing rapidly. The worldwide trend toward airline alliances had a profound impact on power relationships between airlines and impelled local firms to shift from the market-expansion strategies of the 1990s to a new focus on the economies of network integration. Ansett Airlines quickly realized that a suitable international alliance would enable it to compete with the expanded Qantas organization. It entered code-share arrangements with a number of overseas airlines in the mid-1990s and became a full member of the international Star Alliance in 1997. At about the same time, Qantas's membership in the opposing oneworld alliance further consolidated its association with BA. The emergence of international alliances facilitated the introduction of technologies for "seamless" international transfers of passengers and provided a means for firms to escape, at least partially, the limitations of national-scale regulation. This firm-led international scale-building strategy irrevocably altered relations in the region as cooperation between Ansett, SIA, and Air New Zealand improved their competitive positions relative to Qantas, the only "local" representative of the oneworld alliance. As the millennium drew to a close, the control of sub-national feeder routes in Australia became increasingly important to maintaining the status of Australian airlines in their respective international networks. The international, national, and subnational scales appeared to be flattening

[9] In international aviation agreements, cabotage is the right of an airline from Country A to carry revenue traffic between two points within Country B.

into a global lacework of horizontal networks that were based on streamlined flows of passengers.

After Australia's change of government in 1996, geopolitical concerns began to overshadow competitive interests as it became evident that the association between SIA and Ansett would substantially improve Singapore's position in global spaces of flows. As Rimmer (1996) had warned, Singapore's geographic location made it a natural hub in Southeast Asia, while Qantas's international position was precarious, given Australia's peripheral position and its distance from the world's main east<<nut>>west air traffic flows (see also Findlay 1985). As the geopolitical stakes were raised, SIA's 1999 friendly bid for control of Ansett Airlines was vetoed by Air New Zealand, as was its right as a SIA shareholder, and Ansett's ownership fell to the smaller and undercapitalized Air New Zealand.

Ansett Airlines' subsequent collapse on 12 September 2001 was the culmination of tensions that had been building throughout the 1990s. At the time, this was the largest corporate collapse in Australian history, with some 16,000 direct employees and 5,000 indirect (contractor) employees losing their jobs (Weller and Webber 2004). The determining factor in the collapse was competition from Virgin Blue and Qantas in Australia's finite market, although other contributing factors included the falling number of passengers and increasing costs (Painter 2001, BTRE 2004). Air New Zealand was accused of sacrificing Ansett in political maneuvers that were intended to secure its own survival (see Easdown and Wilms 2002). Qantas was accused of targeting Ansett in response to Virgin's entry (Virgin Blue, 2003). The Australian government chose not to intervene at this moment in the creative destruction of market capitalism. This demonstrated its anxiety with the idea of a "local" firm aligning with competing regional economic interests. It also highlighted the depth of Ansett's alienation from the power networks of the Australian state.

Reasserting the National Scale

Ansett's demise prompted further reconfigurations of the regional geometries of air transportation. Internationally, Ansett's fall prevented SIA from gaining a foothold in the Australian market, thereby securing Qantas's international position. Although Qantas's share of Australia's international traffic has subsequently fallen, its profit rates have remained robust as a result of the integration of services, improved route targeting, and labor-saving reorganization (see Figure 3). In recent statements, Qantas has sought to disassociate itself from "national" obligations and to reposition itself as a "global" player. However, at the same time as it has lobbied for greater access to international sources of capital, it has sought regulatory protection from the "predatory" strategies of SIA (Chin, Dynon, Takeda, and Dao 2002). In 2005, it convinced the federal government not to allow SIA access to Australia<<nut>>U.S. air routes and used the threat of the offshore relocation of aviation maintenance jobs to press home its case.[10]

After Ansett's collapse, Qantas and Virgin Blue quickly incorporated Ansett's more profitable routes. Domestically, Ansett's collapse ensured the ascendancy of Virgin Blue's flexible, low-wage business model, which has now been extended with the addition of Qantas's discount subsidiary Jetstar. In the post-Ansett environment, both

[10] As this article goes the press, Qantas is the subject of a take-over bid by a conglomerate of private equity investors. Public debate has been intense, with opinion now approaching the conclusion that Qantas's sale would not be in the national interest.

national airlines have adopted “leaner” service delivery models. Qantas has downgraded its economy-class services and has adopted a more confrontational attitude toward its unionized workforce. Meanwhile, Virgin Blue is building its customer services to reposition itself as the “second Ansett” (Thomas 2005). On high-demand routes, competition has led to lower prices and more frequent services, but less profitable routes have been downgraded to the subnational scale. These changes are shown in Figure 4.

The major losers of the post-Ansett restructuring have been subnational services. Of the 45 regional airlines that operated scheduled services in 1998, 23 had ceased operations by 2004 (Regional Aviation Association of Australia 2004), while the number of scheduled flights on regional routes fell by 22 percent between 2001 and 2004 (Frawley 2005). The uneven spatial distribution of these changes is shown in Figure 5.

The contraction of the regional services has fragmented the subnational scale. Restructured versions of Ansett’s largest regional subsidiaries<<mut>>Hazelton Airlines, Kendall Airlines, and Skywest<<mut>>recommenced operation in the months after Ansett’s collapse. Sustained by new sources of capital and modified route structures, these now-independent firms became the core providers in a new regional subsector that was closely articulated with the national trunk system through alliances with the Qantas regional brand QantasLink. Although not directly subsidized, the federal government, Qantaslink benefits from state support via supply contracts (especially mail deliveries). In an explicit expression of the space-technology nexus, QantasLink has restricted its direct regional services to destinations that generate sufficient traffic to operate at profitable load ratios with the Qantas Dash 8 turbo-prop fleet. Less dense routes are left to “better equipped” affiliate airlines (Qantas 2004). This reorganization breaks the prederegulation regional scale into two tiers that are separated by their demand characteristics. However, since code sharing with regional affiliates provides Qantas with detailed knowledge of traffic levels on multiple origin-destination pairs, it empowers Qantas to expand or contract its direct provision in accordance with the vagaries of demand, thus maximizing its profitability at the expense of smaller airlines. The new structure consolidates Qantas's power over the subnational network in an organizational arrangement that distances the regions from national centers of firm and state power. In rural Australia, then, the upshot of Ansett Airline's failure has been a Qantas-led reconfiguration of a slimmed-down regional air network. Subsequently, these changes have simulated reregulation in the less populated states<<mut>>Western Australia, South Australia, and Northern Territory<<mut>>where air travel is essential to the survival of rural settlements. Open competition, it seems, has proved that the market on many Australian regional routes is not sufficiently dense to support competitive services.

Continuing the downward trend that began in the 1990s, the losers in this process are the communities in unregulated states and off-shore islands where neither the market nor the state provides services. In these places, declining rural populations; drought; improvements to road, rail, and sea transportation; and the withdrawal of regional administrative infrastructures (banks and governmental departments) have undermined the demand for air travel. The reduced frequency of services and/or relegation to nine-seater unpressurized aircraft has disadvantaged bush communities by reducing their access to urban-based specialized services, increasing travel risks, and adding to the inconveniences of geographic isolation<<mut>>small aircraft are not able to carry wheelchairs, coffins, or animals (Country Women's Association 2001). In these places, functions that were once central to the national transportation infrastructure are shifting to the welfare sector; for example, some transportation for essential medical treatment is now provided by charitable organizations using volunteer pilots.

Implications for the Space Economy

This history demonstrates that the federal government did not simply deregulate to provide a level national playing field on which capitalist competition was played out. Rather, it actively restructured sociospatial scales in pursuit of “borderless” international economic integration. Although the nation-state’s attempt to disown the sub-national level and to create a new transnational scale of engagement failed, the outcome of the process has complicated the boundaries between international, national, and subnational jurisdictions; added a fourth tier to a rescaled service network; and increased the role of technology in defining the scale and scope of air service infrastructures. Table 1 summarizes the scale implications of these realignments.

In the regulated era of Keynesian interventionism, the rigid scale hierarchy of air services was matched to political jurisdictions. In the first phase of liberalization, the nation-state moved from the tiered, hierarchical Keynesian framework centered at the national scale in a dual motion that sought on the one hand to create a transnational Asia Pacific scale and on the other to localize responsibility for subnational services. As firms sought to accommodate these changes by building vertical networks that spanned the subnational, national, and transnational scales, they replaced the scale hierarchy of the Keynesian era with a fragmented multiscalar configuration that was characterized by multiple firm-led spatial monopolies. Cooperative alliances at the international scale helped firms to secure these spatial niches (see also Bisseseur and Alamdari 1998; Nolan, Ritchie, and Rowcroft 2001). The outcome was a reconfigured domestic network in which services follow passenger demand in a new stratification that is based on the technological capacities of airline fleets. Qantas consolidated its control over international connections, but as a component in a mesh of international services. In sum, Australia's air service networks no longer align neatly with the scale configuration of political jurisdictions.

As airlines target niche market segments, their relationships with different class segments of Australian society are also changing. The Qantas trunk network interfaces with international services. This full-fare, full-service hub-and-spoke network is designed for the command and control functions of the national economy<<mut>>the efficient delivery of personnel, high-value tourists, information (mail), and high-value commodities. Meanwhile, the Virgin Blue and Jetstar networks cater to more budget-conscious markets via "flat" point-to-point services that are tailored to the predictable routines of vacationers, tourists, and commuting workers. These demand-driven services are vulnerable to fluctuations in disposable incomes. Qantas's control of regional services has redrawn the boundaries of the space-economy, since Qantas now determines which places are connected directly to Australia's centers of knowledge and expertise. The much-diminished affiliate regional network has become an access network for rural communities, where flights are scheduled for the convenience of rural-to-city (as opposed to city-to-rural) trips. A fifth tier of air passenger services is emerging as the rich and powerful increasingly travel in private aircraft, accessing small local airports (and thereby avoiding the inconveniences of security procedures at large airports). This class-based fragmentation separates globally connected urban growth centers from regional cities. Viewed from a space-time interchange perspective, these changes bring some places and people closer to centers of power and push others farther away; the implications for the longer-term fortunes of places are profound.

Overall, the changes in the spatial and scalar configurations of domestic air passenger services can be understood as the material expression of a more fundamental shift in the mode of Australia’s articulation with the spatial organization of world capitalism. These new power geometries mean that the air transportation infrastructure now follows (rather than leads) the patterns of city development. The new configuration repositions Australia’s gateway cities (Sydney, Melbourne, Brisbane, and Perth) as outward-looking connectors in a global city network and as nodes in an international division of labor. This systemization benefits and empowers urban control centers and their international links and disempowers regional communities.

Conclusion

Air transportation services are a necessary component in capitalist accumulation, circuits of production, and the production of value. Their quality both reflects and creates the status of places in the hierarchies of world capitalism. Understanding the strategies of privatized transportation firms in market-oriented economies, and how they react to and stimulate regulatory change, is fundamental to understanding rescaling, urban formations, and sociopolitical processes.

This article has shown that the political project that led to the deregulation of Australia’s air services ignored the inherent spatiality of the capitalist space economy, the political dimensions of economic activity, and the complex interdependencies between scales. The restructuring process ruptured the coincidence between transportation networks and political jurisdictions and fragmented the market, creating spatially and socially differentiated services that both reflect and reinforce social inequalities. For transportation research, this discussion shows that it is not sufficient to measure the aggregate number of passengers who travel between two points, but that the type of travel, the direction of travel, and the nature and structure of allegiances between service providers and nations are also important.

The central point of this article, however, is that rescaling is not only simply an arena and outcome of political struggle, but is a central means by which struggles for power and influence are played out. In this case, both states and firms manipulated the content and structure of scales and used scale-specific tactics<<mut>>including the discursive reconstruction of scale and the material reinvention of articulations of scale<<mut>>to recast relationships of cooperation and competition. Altering the composition of networks within scales was a *means* of struggle, although the outcomes were often at odds with their aims. Firms' strategic tactic of flattening out scale and creating streamlined passenger flows interacted with continuing scaled regulatory limits to produce the greater interpenetration and interdependence of scales. At the same time, the firms' strategies fragmented the territorial composition of politically based scales by excluding their less profitable components. These reconfigurations have restratified the social world and have differentiated services by customers' capacity to pay.

This example highlights that air service patterns can be understood only in the context of contested regulatory frameworks, the tensions between cooperative and competitive strategies of states and firms, and the intimate relationship between scale politics and the scale division of labor. However, although this examination has illuminated the role of privatized transportation networks in the creation of sociospatial inequalities, it has only begun the pressing task of exploring how the transportation connections between places create the space economy.

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References

Agnew, J. A. 1994. The territorial trap: The geographical assumptions of international relations theory. *Review of International Political Economy* 1:53<<nut>>80.

Air New Zealand. 2003. Confidential Air New Zealand counter-factual submission to the New Zealand Competition Commission (Public Version). Available online: http://www.comcom.govt.nz/BusinessCompetition/Anti-competitivePractices /Applications/airnewzealandandquantas.aspx

Amin, A., and Thrift, N. 1994. Living in the global. In *Globalisation, institutions and regional development*, ed. A. Amin and N. Thrift, 1<<nut>>22. Oxford, U.K.: Oxford University Press.

Baumol, W. J. 1967. *Business behavior, value and growth.* New York: Harcourt, Brace & World.

Bissessur, A., and Alamdari, F. 1998. Factors affecting the operational success of strategic airline alliances. *Transportation* 25:331<<nut>>55.

Boswell, R. 2001. Letter from Senator Boswell, parliamentary secretary to the minister for transport, read by Mr. Torbay (Northern Tablelands) in the New South Wales Legislative Assembly, Hansard, 18 September 2001.

Bray, M., and Wailes, N. 1999. Reinterpreting the 1989 pilots' dispute: The role of managerial control and labour productivity. *Labour & Industry* 10(1):79<<nut>>105.

Brenner, N. 1998. Between fixity and motion: Accumulation, territorial organization and the historical geography of spatial scales. *Environment and Planning D: Society and Space* 16:459<<nut>>81.

______. 2001. The limits to scale? Methodological reflections on scalar structuration. *Progress in Human Geography* 25:591<<nut>>614.

Bureau of Transport and Communication Economics. 1994. *The progress of aviation reform*. Report No. 81. Canberra: Australian Government Publishing Service.

Bureau of Transport Economics 1999. Regional aviation competitiveness. Working Paper No. 41. Canberra.

Bureau of Transport and Regional Economics 2004. Australia's domestic aviation industry three years after Ansett. *Avline: Bureau of Transport and Regional Economics*, 5, November.

Chin, R.; Dynon, N.; Takeda, D.; and Dao, V. 2002. *Strategic options for Qantas in the international aviation industry: A risk analysis.* Sydney: Centre for International Risk, University of Sydney.

Ciccantell, P. S., and Bunker, S. G. 1994. Introduction: Space, transport and world-systems theory. In *Space and transport in the world system*, ed. P. S. Ciccantell and S. G. Bunker, 1<<nut>>15. Westport, Conn.: Greenwood Press.

Country Women's Association. 2001. Submission to the House of Representatives Inquiry into Regional Air Services, Country Women's Association. Sydney. Available online: www.aph.gov.au/House/committee/aviation/sub51.pdf

Cox, K. R. 1998. Spaces of dependence, space of engagement and the politics of scale, or Looking for local politics. *Political Geography* 17:1<<nut>>23.

______. 2002. "Globalisation," the "regulation approach," and the politics of scale. In *Geographies of power: Placing scale*, ed. A. Herod and M. Wright, 85<<nut>>114. Oxford, U.K.: Blackwell.

Easdown, G., and Wilms, P. 2002. *Ansett: The collapse*. Port Melbourne, Victoria, Australia: Lothian.

Evans, G. 1987. *Domestic aviation: A new direction for the 1990s*. Statement by the minister for Transport and Communications, 7 October. Canberra: Department of Transport and Communications.

Farrington, J. H. 1985. Transport geography and policy: Regulation and privatisation. *Transactions of the Institute of British Geographers*, NS 10:109<<nut>>19.

Findlay, C. 1985. *The flying kangaroo, an endangered species? An economic perspective on Australian international civil aviation policy*. Sydney: Allen and Unwin.

Findlay, C., and Kissling, C. 1997. Flying toward a single aviation market across the Tasman. In *Asia-Pacific air transport: Challenges and policy reforms*, ed. C. Findlay, L. C. Chia, and K. Singh, 181<<nut>>91. Singapore: Institute of South-East Asian Studies.

Forsyth, P., and Hocking, D. M. 1985. Competition and regulation in domestic aviation: Submission to independent review. Occasional Paper No. 72, Bureau of Transport Economics, Canberra.

Frawley, G. 2005. Regional aviation: Fighting the squeeze. *Australian Aviation* 220 (September):34<<nut>>36.

Grimm, C., and Milloy H. B. 1993. Australian domestic aviation deregulation: Impacts and implications. *Logistics and Transportation Review* 29:259<<nut>>74.

Hall, P., and Sockice, D. 2001. *Varieties of capitalism*. Oxford, U.K.: Oxford University Press.

Harvey, D. 1982. *The limits of capital*. Oxford, U.K.: Blackwell.

______. 1985. The geopolitics of capitalism. In *Social relations and spatial structures*, ed. D. Gregory and J. Urry, 128<<nut>>63. London: Macmillan.

Herod, A. 1997. From a geography of labor to a labor geography: Labor’s spatial fix and the geography of capitalism. *Antipode* 29:1<<nut>>31.

Higgott, R. A., and Nossal, K. R. 1997. The international politics of liminality: Relocating Australia in the Asia Pacific. *Australian Journal of Political Science* 32:169<<nut>>85.

Hotelling, H. 1929. Stability in competition. *The Economic Journal* 39:41<<nut>>57.

Howitt, R. 1998. Scale as a relation: Musical metaphors of geographical scale. *Area* 30(1):49<<nut>>58.

Jessop, B. 1990. *State theory: Putting the capitalist state in its place*. London: Polity Press.

______. 2005. The political economy of scale and European governance. *Tijdschrift voor Economische en Sociale Geografie* 96:225<<nut>>30.

Jin, F., Wang F., and Yu, L. 2004. Geographic patterns of air passenger transport in China, 1980<<nut>>1998: Imprints of economic growth, regional inequality and network development. *The Professional Geographer* 56:471<<nut>>87.

Jones, K. 1998. Scale as epistemology. *Political Geography* 17(1):25<<nut>>28.

Joy, S. 1986. Contestable market analysis in the Australian domestic aviation industry. *Journal of Transport Economics and Policy* 20:245<<nut>>54.

Kirby, M. G. 1986. Airline economies of scale and Australian domestic air transport policy. *Journal of Transport Economics and Policy* 20:339<<nut>>52.

Kissling, C. 1998. Beyond the Australasian single aviation market. *Australian Geographical Studies* 36:170<<nut>>76.

Leitner, H.; Pavlik, C.; and Sheppard E. 2002. Networks, governance, and the politics of scale: Inter-urban networks in the European Union. In *Geographies of power: Placing scale,* ed. A. Herod and M. Wright, 274<<nut>>303. Malden, Mass.: Blackwell.

Mann, M. 1993. *The sources of social power, Volume II: The rise of classes and nation states*. Cambridge, U.K.: Cambridge University Press.

______. 2006. The sources of social power revisited: A response to criticism. In *An anatomy of power: The social theory of Michael Mann,* ed. J. A. Hall and R. Schroeder, 343<<nut>>96. Cambridge, U.K.: Cambridge University Press.

Mansfield, B. 2005. Beyond rescaling: Reintegrating the “national” as a dimension of scalar relations. *Progress in Human Geography* 29:458<<nut>>73.

Massey, D. 1993. Power geometry and a progressive sense of place. In *Mapping the futures: Local cultures, global change,* ed. J. Bird, B. Curtis, T. Putman, G. Robertson, and L. Tickner, 59<<nut>>69. London: Routledge.

May, T. 1986. Independent review of economic regulation of domestic aviation. Canberra: Australian Government Publishing Service.

Nolan, J. F.; Ritchie, P. C.; and Rowcroft, J. 2001. Open skies and open gates. *Transportation* 28:119<<nut>>35.

Ohmae, K. 1986. *The end of the nation-state*. London: HarperCollins.

Paasi, A. 2005. Territory. In *A companion to political geography,* ed. J. A. Agnew, K. Mitchell, and G. Toal, 109<<nut>>22. London: Blackwell.

Painter, M. 2001. Economic and political logics in the restructuring of the Australian domestic aviation industry in the 1980s. *Australian Economic History Review* 41(1):56<<nut>>77.

Park, B.-G. 2003. Politics of scale and globalisation of the South Korean automobile industry. *Economic Geography* 70:473<<nut>>94.

Pyman, T. n.d. W(h)ither Australian civil aviation policy. Sydney: Evatt Foundation.

Qantas. 2004. *Qantas annual report*. Melbourne: Qantas. Available online: www.qantas.com.au/infodetail/about/investors/2004AnnualReport.pdf

Quiggin, J. 1997. Evaluating airline deregulation in Australia. *Australian Economic Review* 30(1):45<<nut>>57.

Raguraman, K. 1997. Airlines as instruments for nation building and national identity: Case study of Malaysia and Singapore. *Journal of Transport Geography* 5:239<<nut>>56.

Regional Aviation Association of Australia. 2004. Industry demands new government act on regional aviation crisis. Press Release. Available online: www.raaa.com.au/media

Rimmer, P. 1996. Airlines as information networks: Qantas and Singapore Airlines. In *Airline deregulation in the Asia Pacific: Toward "open skies?"* ed. H. W. Dick, 63<<nut>>94. Sydney: Institute of Transport Studies.

Sheppard, E., and Barnes, T. J. 1990. *The capitalist space-economy: Geographical analysis after Ricardo, Marx and Sraffa*. London: Unwin Hyman.

Smith, N. 1992. Contours of a spatialised politics: Homeless vehicles and the production of geographical space. *Social Text* 33:54<<nut>>81.

______. 1993. Homeless/global: Scaling places. In *Mapping the futures: Local cultures, global change*, ed J. Bird, B. Curtis, T. Putman, G. Robertson, and L. Tickner, 87<<nut>>119. London: Routledge.

Smith, D. A., and Timberlake, M. 1998. Cities and the spatial articulation of the world system through air travel. In *Space and transport in the world system*, ed. P. Ciccantell and S. Bunker, 213<<nut>>40. Westport, Conn.: Greenwood Press.

Stigler, G. J. 1971. The theory of economic regulation. *Bell Journal of Economics and Management Science* 2:3<<nut>>21.

Stilwell, F. 1992. *Understanding cities and regions*. Sydney: Pluto Press.

Sullivan, F. 2002. Business bloc bids to stop Qantas. *New Zealand Herald*, 7 August. www.nzherald.co.nz/storydisplay.cfm?storyID=2348250&thesection=news&thesubsection=general&reportid=58552

Swyngedouw, E. 1993. Communication, mobility and the struggle for power over space. In *Transport and communications in the new Europe*, ed. G. Giannopoulos and A. Gillespie, 305<<nut>>25. London: Belhaven.

______. 1997. Neither global nor local: "Glocalisation" and the politics of scale. In *Spaces of globalisation*, ed. K. R. Cox, 137<<nut>>66. New York: Guilford Press.

______. 2004. Globalisation or "glocalisation"? Networks, territories and rescaling. *Cambridge Review of International Affairs* 17(1):25<<nut>>48.

Thomas, A. S. 2005. The future for Australian aviation: Policy, market & infrastructure challenges. Paper presented at the BTRE Transport Colloquium, Parliament House, Canberra, ACT, 18<<nut>>19 May. Available online: http://www.btre.gov.au/colloquium/proceedings.aspx

Virgin Blue (2003) Virgin Blue Submission in response to applications for authorisation of the proposed Qantas/Air New Zealand/Air Pacific Alliance. Submission to the New Zealand Commercial Commission. Brisbane, February. At http://www.comcom.govt.nz//BusinessCompetition/Anti-competitivePractices/Applications/ContentFiles/Documents/Virgin_Blue,_12_February.pdf

Weiss, L. 1998. *The myth of the powerless state: Governing the economy in the global era*. Cambridge, U.K.: Polity Press.

______. 2006. Infrastructural power, economic transformation, and globalization. In *Anatomy of power: The social theory of Michael Mann*, ed. J. A. Hall and R. Schroeder, 167<<nut>>86. Cambridge U.K.: Cambridge University Press.

Weller, S. A. and Webber M.J. 2004. Labour market transitions of former Ansett Airlines employees: Preliminary outcomes. *Employment and Labour Relations Review* 14:305<<nut>>30.

Yeung, H. W.-c. 2000. State intervention and neoliberalism in the globalizing world economy: Lessons from Singapore’s regionalization programme. *Pacific Review* 13:133<<nut>>62.

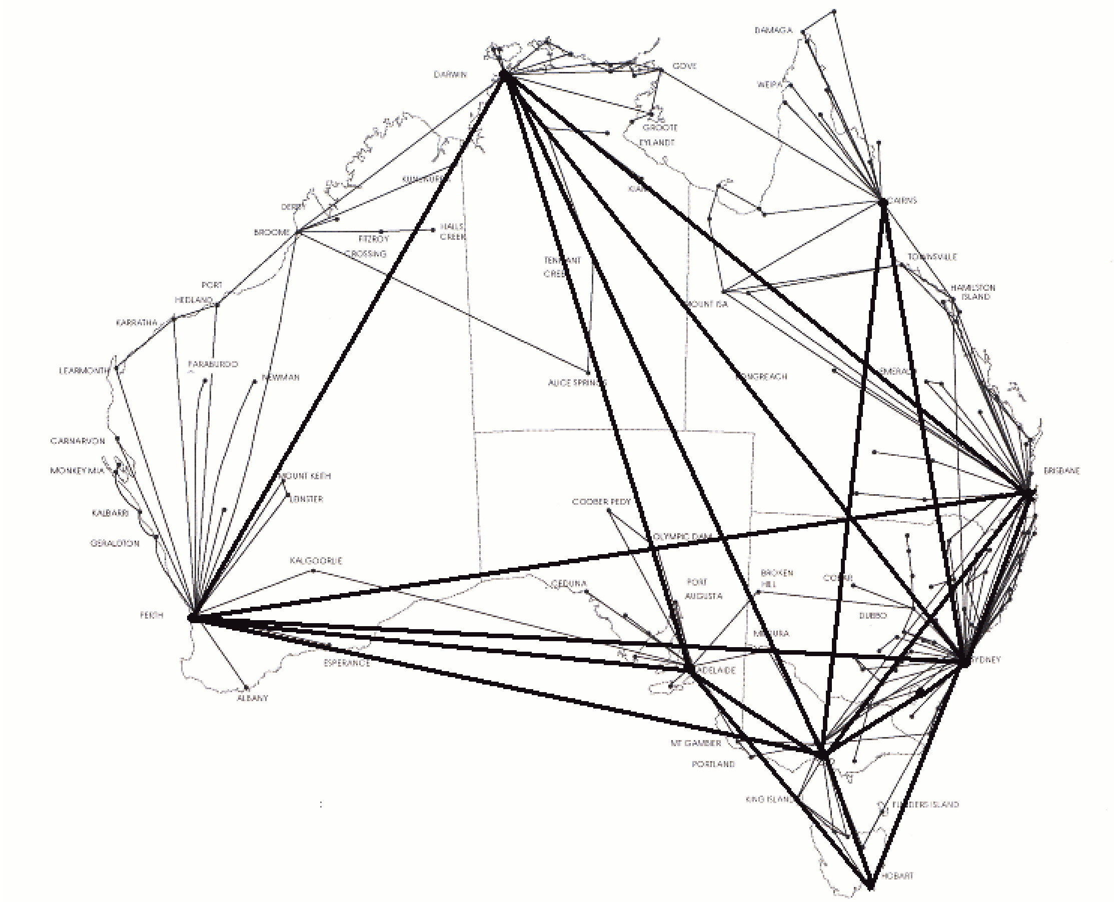

Figure 1. Australia's regional air transport networks (circa 1985). *Source*: Author's adaptation of Department of Transport and Regional Services data, http://www.dotars.gov.au/maps. *Note*: Thin lines represent regional routes.

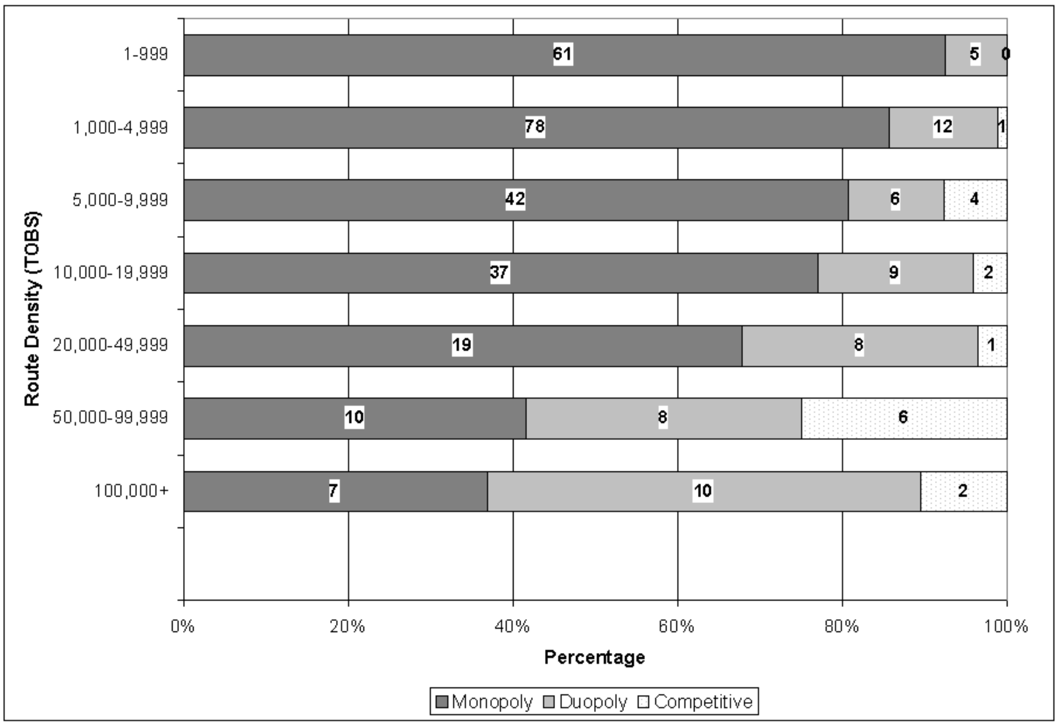

Figure 2. Competition in regional flight sectors. *Source*: BTE (1999). *Note*: Route density is measured as traffic on board in stages (TOBS).

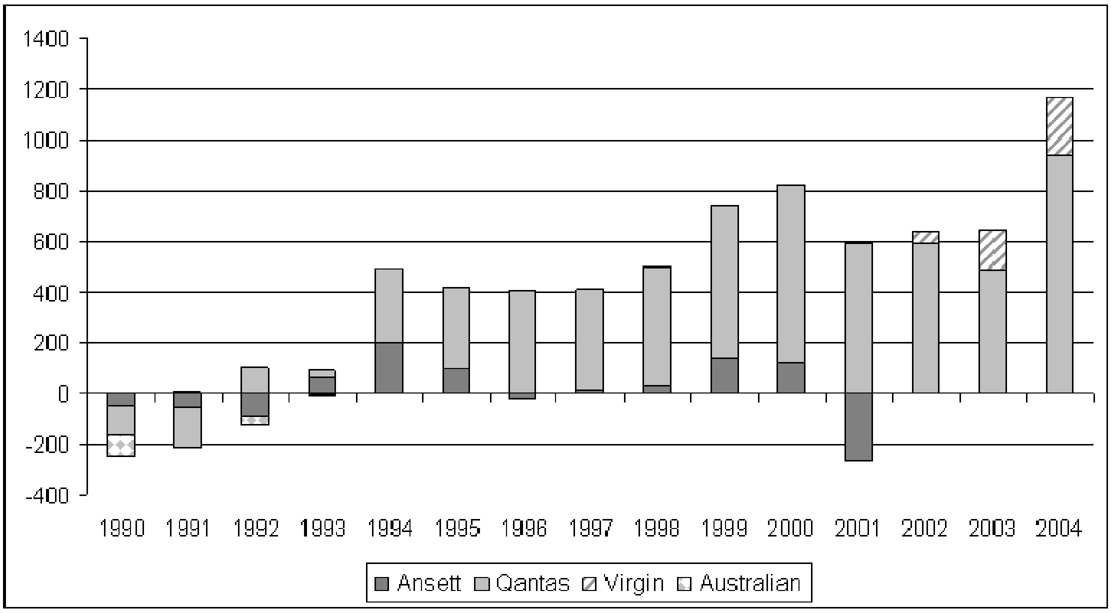

Figure 3. Combined profits of major airlines, 1990<<nut>>2004 (in current dollars).

Source: Thomas (2005).

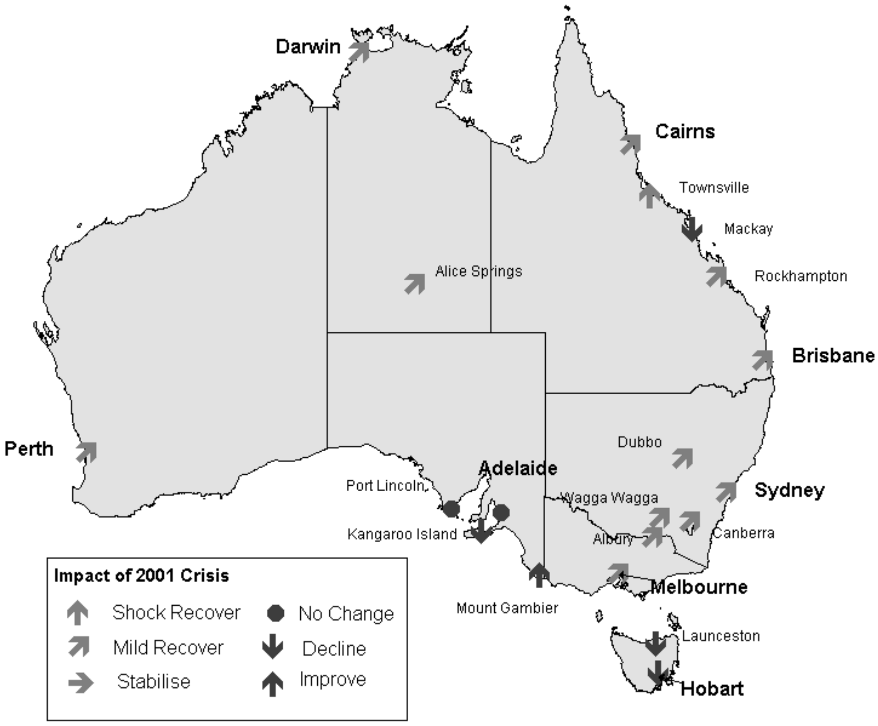

Figure 4. Changes in the number of flights, national trunk network, 1998<<nut>>1999 to 2003<<nut>>2004. *Source*: Author's manipulation of data from Avstats, http://www.btre.gov.au/statistics/aviation/avline/avline.aspx

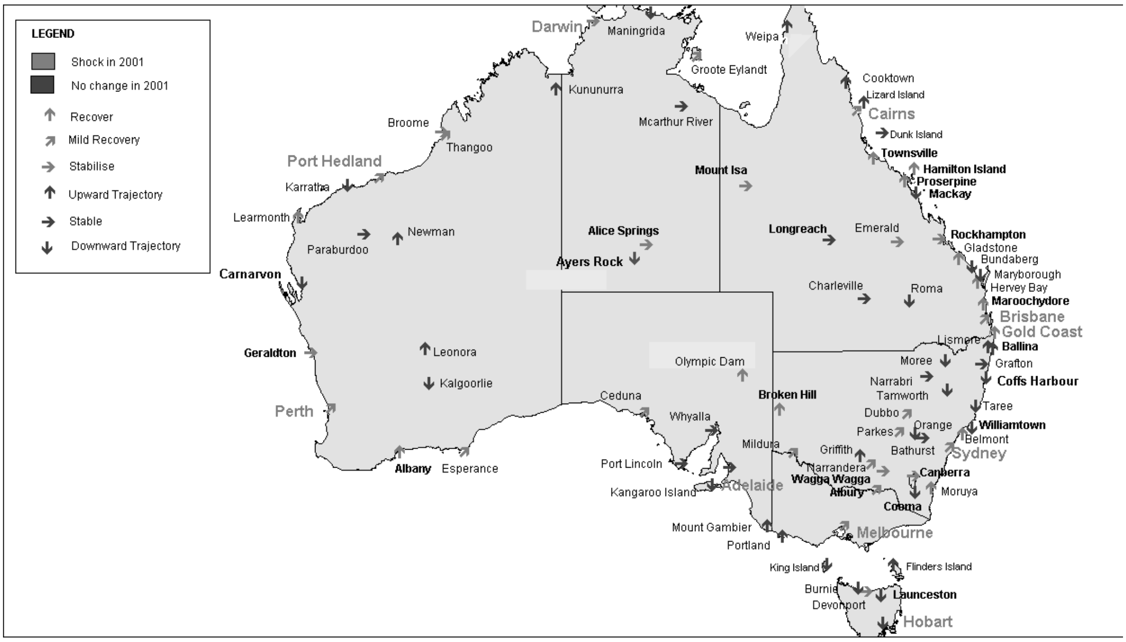

Figure 5. Changes in the number of flights, regional network, 1998<<nut>>1999 to 2003<<nut>>2004. *Source*: Author’s manipulation of data from Avstats, http://www.btre.gov.au/statistics/aviation/avline/avline.aspx.