

The Boarding Pass: Pathways to Corporate Networks in Early Twentieth Century Australia

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Networks are an enduring feature of Australian economic life. Connections between firms and individuals have long provided access to new knowledge and resources, while also maintaining the wealth and interests of a small group. This article examines the network of board members of large Australian corporations in the 1910s. Social network analysis is used to identify the structure of the network, and prosopography is used to understand the characteristics of the group and the possible paths through which interlocking directorates developed. The evidence reveals a heavily interlocked business sector in Australia in the 1910s. Multiple directorships were the result of professional skills, prior business experience, kinship, marriage, class, gender and empire. By combining a range of sources, this approach integrates different types of Australian history. It reimagines the Australian economy by revealing that power was relational, and that the Australian economy was a stratified and interdependent space.

Introduction

In some respects Collins House resembles the devil ... Everyone has heard the name of his Satanic majesty. Everyone suspects his vast influence upon their affairs. Yet few have seen him: few could describe accurately his features; even fewer have transacted business with him.¹

Networks have played an important role in Australia's economy and society. Co-operation between individuals and firms has been necessary to mitigate the risks of Australia's geographic distance, slow

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¹ *Australian Financial Review*, 28 November 1961, 6.

communication, environmental uncertainty and small local market. However, business connections have also perpetuated collusion, with firms working together to fix prices, exploit workers, and lobby governments. The paths through which ideas, contacts and resources travel are a crucial aspect of Australian economic life, and yet the extent and implications of these connections are largely opaque. Australian historiography has, to date, offered few lessons in this area, seeing the economic sphere primarily in terms of individuals or firms operating within a particular structure, rather than a set of interconnected entities.

Elsewhere, networks are a fixture of economic and business history scholarship, used to understand the influence of connections on individual, group and firm behaviour. Drawing on extensive research in sociology, economic and business historians have studied the way connections develop trust, reputation, information diffusion, and the accumulation of human capital.² Discussions of small-scale business networks have focused on family, ethnicity, religion, or neighbourhood connections.³ Others have studied larger scale networks including industrial districts, where the agglomeration of similar or complementary businesses into a region has contributed to communication, innovation, shared labour markets, and common infrastructure.⁴ Histories of

² Natasha Glaisyer, 'Networking: Trade and Exchange in the Eighteenth-Century British Empire', *The Historical Journal*, 47, no. 2 (2004): 451–76; Margaret C. Jacob, *The First Knowledge Economy: Human Capital and the European Economy, 1750–1850* (Cambridge University Press, 2014); Hartmut Berghoff and Ingo Köhler, 'Redesigning a Class of Its Own: Social and Human Capital Formation in the German Banking Elite, 1870–1990', *Financial History Review*, 14, no. 1 (2007): 63–87.

³ Andrea Colli, *The History of Family Business, 1850–2000* (Cambridge: Cambridge University Press, 2003); Mark Casson, 'An Economic Approach to Regional Business Networks', in *Industrial Clusters and Regional Business Networks in England, 1750–1970*, eds J. F. Wilson and Andrew Popp (London: Ashgate Publishing, Ltd., 2003).

⁴ For a range of case studies, see John F. Wilson and Andrew Popp. For non-UK examples, see Keun Lee and Xuehua Jin, 'The Origins of Business Groups in China: An Empirical Testing of the Three Paths and the Three

globalisation have analysed international trade networks, where business relationships operated in the face of vast geographic and cultural distance.⁵

There have been some attempts to examine Australian business networks, interrogating the fine line between co-operation and collusion in Australian firms.⁶ However, existing scholarship generally analyses connections within a single firm, group of firms or industry. Company histories and individual biographies provide rich detail, but they do not place their subjects within their broader, economy-wide networks. Networks between firms are largely absent from the current authoritative work on Australian big business, Fleming et al.'s *The Big End of Town*. Despite broad interest in the subject elsewhere, studies of Australian corporate networks and connections amongst the corporate 'elite' are few.⁷

Theories', *Business History*, 51, no. 1 (2009): 77–99; J. C. Cirer-Costa, 'Majorca's Tourism Cluster: The Creation of an Industrial District, 1919–36', *Business History* 56, no. 8 (2014): 1243–61.

⁵ Paul Duguid, 'Networks and Knowledge: The Beginning and End of the Port Commodity Chain, 1703–1860', *Business History Review* 79, no. 3 (2005): 493–526.

⁶ See Simon Ville, 'Colonial Enterprise', in *The Cambridge Economic History of Australia*, eds Simon Ville and Glenn Withers (Melbourne: Cambridge University Press, 2015), 214–17 for an overview of research on the nineteenth century. Twentieth century research includes Grant A. Fleming, David Merrett, and Simon Ville, *The Big End of Town: Big Business and Corporate Leadership in Twentieth-Century Australia* (Melbourne: Cambridge University Press, 2004); David Merrett and Simon Ville, 'Industry Associations and Non-competitive Behaviour in Australian Wool Marketing: Evidence from the Melbourne Woolbrokers' Association, 1890–1939', *Business History* 54, no. 4 (2012): 510–28; Peter Richardson, 'The Origins and Development of the Collins House Group, 1915–1951', *Australian Economic History Review* 27, no. 1 (1987): 3–30.

⁷ Gareth Shaw and Andrew Alexander, 'Interlocking Directorates and the Knowledge Transfer of Supermarket Retail Techniques from North America to Britain', *International Review of Retail, Distribution and Consumer Research* 16, no. 3 (2006): 375–94; Meindert Fennema and Huibert Schijf, 'Analysing Interlocking Directorates: Theory and Methods', *Social Networks* 1, no. 4 (1978): 297–332; Mark S. Mizuchi, *The American Corporate Network, 1904–1974* (Beverly Hills: Sage Publications, Inc, 1982); Tim E. Crumplin, 'Opaque

Interlocking directorates (company directors sitting on the boards of multiple related firms) are an important type of business network. Board members develop strategy, monitor the firm's progress, and ensure that obligations to stakeholders are met. They are intended to be a source of independent, objective decision-making; a near-impossible task if they are simultaneously connected to multiple organisations.⁸ Interlocked directors have been found to be a positive feature of the corporate environment, mitigating risk and improving innovation and co-ordination.⁹ Existing research has revealed that they may help diffuse knowledge, provide access to investment, help monitor the company's management team, and add legitimacy to operations.¹⁰ However, in other instances, concentrating corporate control within a small group may stifle innovation.¹¹ Interlocks

Networks: Business and Community in the Isle of Man, 1840–1900', *Business History* 49, no. 6 (2007): 780–801.

⁸ Thomas David and Gerarda Westerhuis, eds, *The Power of Corporate Networks: A Comparative and Historical Perspective* (London: Routledge, 2014).

⁹ Luc Renneboog and Yang Zhao, 'The Governance of Director Networks', in *The Oxford Handbook of Corporate Governance*, eds Mike Wright, Donald S. Siegel, Kevin Keasey and Igor Filatotchev (Oxford: Oxford University Press, 2013); Agrawal and Knoeber, 'Political Role?'; Shaw and Alexander; Richard E. Ratcliff, 'Banks and Corporate Lending: An Analysis of the Impact of the Internal Structure of the Capitalist Class on the Lending Behavior of Banks', *American Sociological Review* 45, no. 4 (1980): 553–70.

¹⁰ Mark S. Mizruchi, 'What Do Interlocks Do? An Analysis, Critique, and Assessment of Research on Interlocking Directorates', *Annual Review of Sociology* 22, no. 1 (1996): 271–98; Jens Schmidt and Thomas Keil, 'What Makes a Resource Valuable? Identifying the Drivers of Firm-Idiosyncratic Resource Value', *Academy of Management Review* 38, no. 2 (2013): 206–28; Gerald F. Davis, 'Agents without Principles? The Spread of the Poison Pill through the Intercorporate Network', *Administrative Science Quarterly* 36, no. 4 (1991): 583–613.

¹¹ Mark S. Granovetter, 'The Strength of Weak Ties', *American Journal of Sociology* 78, no. 6 (1973): 1360–80.

may also indicate busy board members, higher CEO remuneration, weaker transparency, and higher incidence of insider trading.¹²

In this article, I examine interlocking directorates among large Australian corporations on the eve of World War I. This was a period of considerable political and economic change in Australia, marked by greater working-class consciousness and scepticism towards capitalist organisation, and by the emergence of a corporate elite who maintained influence across the economy. I adopt an innovative approach, combining company data for board members of 125 large firms with collective biography for the cohort of interlocked individuals. This reveals a powerful corporate elite and a heavily interlocked corporate sector in Australia in the 1910s. There were a number of important pathways into this corporate elite. Directors were invited to sit on multiple company boards due to their professional skills, prior business experience, kinship, marriage, class, gender and imperial caché. Understanding these director network allows us to reimagine Australia's economy at a particular moment in time, revealing that power was relational, and that the Australian economy was a stratified and interdependent space.

Uncovering the corporate network

Economic history has recently emerged as a key area of study, and in Australia scholars are utilising their training in cultural and social history to re-frame economic life in new and exciting ways.¹³ Here I use social network analysis (SNA) to reveal the presence and structure of interlocking directorates in

¹² Joseph Engelberg, Pengjie Gao and Christopher A. Parsons, 'The Price of a Ceo's Rolodex', *The Review of Financial Studies* 26, no. 1 (2012): 79–114; Erik Devos, Andrew Prevost and John Puthenpurackal, 'Are Interlocked Directors Effective Monitors?', *Financial Management* 38, no. 4 (2009): 861–87.

¹³ Hannah Forsyth and Sophie Loy-Wilson, 'Seeking a New Materialism in Australian History', *Australian Historical Studies* 48, no. 1 (2017): 169–88; Simon Ville and Claire Wright, 'Neither a Discipline nor a Colony: Renaissance and Re-Imagination in Economic History', *Australian Historical Studies* 48, no. 2 (2017): 152–68.

Australia in the 1910s. SNA examines the pattern of relationships (ties) between different actors (in this case, either individuals or firms). Ties may have formed in a number of different ways. I assume that connections between actors resulted from their participation in common activities. These activities meant actors were in the same room at the same time, which vastly increased the chance that they communicated and learnt from each other.¹⁴ Overlapping participation in different types of activities also increased the probability of a relationship among participants. For this case study, it is assumed that activities associated with board membership (meetings, correspondence and so on) created the potential for connections between individuals who sat on the same company boards, and between firms who shared board members.

I have visualised the network of firms using *NetDraw*. Visualisations have analytical power, revealing relationships, patterns and outliers that may be obscured in qualitative or quantitative research. Ties indicate that firms shared at least one board member, and thicker ties indicate that they shared more than one board member. *NetDraw*'s spring-embedding function with Gower scaling has been used to place nodes with more shared ties closer together, and move those with fewer ties further apart.¹⁵ This means firms that had more shared board members are clustered. It is important to keep in mind that SNA is a representation of the relative probability of a relationship between entities, rather than a guarantee.

Rather than focusing on a prominent individual, firm, or industry, I analyse director networks across the economy. The data includes directors of the top one hundred companies and top twenty-five financial institutions in Australia in the 1910s. The list of firms is based on the work of Simon

¹⁴ Scott L. Feld, 'The Focused Organisation of Social Ties', *American Journal of Sociology* 86, no. 5 (1981): 1015–35.

¹⁵ This is a popular way to represent network data. See Helen Gibson, Joe Faith, and Paul Vickers, 'A Survey of Two-Dimensional Graph Layout Techniques for Information Visualisation', *Information Visualization* 12, no. 3-4 (2013): 324–57.

Ville and David Merrett, which estimates a company's size by its total assets.¹⁶ Information about firms, including office locations, issued capital, dividends, assets and liabilities, and board members, can be found in Robert Lucas Nash's *Australasian Joint Stock Companies Year Book*. Nash was a London-based financial journalist who had a strong interest in Australia's business sector. His *Year Book* was published between 1896 and 1914, and the latest edition has been used here. Because of publication lags, the data in this volume most likely refers to 1912 or 1913. All directors for the 125 private and financial firms have been recorded, providing evidence of a densely interwoven cohort of companies, directors, and board membership. I have traced networks in a single year, ensuring that all members were operating concurrently, and I assume that those who were members of the same company board interacted with each other. This approach to identifying the corporate elite democratises Australian business history by shifting the focus from prominent individuals and firms who left extensive archives to all those who may have formed networks in this period. While focusing on large corporations understates the total level of interconnection, analysing all firms of a certain size reveals connections across multiple sectors, and at various parts of the supply chain. It thus provides a broad understanding of networks in the economy at a particular moment in Australia's history.

Prosopography is then used to reveal the pathways into this corporate elite. Prosopography seeks, in part, to understand the common characteristics of a group of historical actors through the analysis of their collective life histories. Distinct from examining the whole population, or a random sample, prosopography examines the structure of individuals in a particular group or field. It includes both demographic (age, gender, ethnicity, kinship and so on) and descriptive (career trajectory, social

¹⁶ The 1910 benchmark year is used here. See Simon Ville and David Merrett, 'Big Business in Twentieth-Century Australia', *ANU Source Papers in Economic History* 21 (Canberra: Centre for Economic History, Australian National University, 2016).

activities) data.¹⁷ This method is increasingly used in business history to understand the nature of elites, entrepreneurship and the corporate sector.¹⁸ For this case study, biographical information regarding professional skills, prior business experience, kinship, marriage, religion and social activities has been compiled. Many of these individuals feature in the *Australian Dictionary of Biography* or in individual biographies or company histories. Their activities were also often reported in newspapers, and published obituaries summarise their lives and professional careers. Compiling biographical information for a cohort reveals broad commonalities that may be obscured if each individual is examined on their own. Combining this individual-level data with the company-level data of the director network also highlights the intersections between business connections and personal, professional, and societal characteristics.

I use Bourdieu's class theory to frame the evidence. Class is a well-worn category in economic history. In the classical Marxist tradition, class is based on access to money and wealth, with tension between the bourgeoisie (capitalists) and the proletariat (working class). Bourdieu, on the other hand, characterises class based on the access of individuals to economic capital (money and wealth), as well as their social connections and cultural tastes. Each form of 'capital' influences the individual's *habitus* – the set of dispositions, social cues, ability to develop networks, and so on. These patterns of behaviour then reproduce the individual within various *fields* (for instance, family circles, friend groups, or the workplace), and determine where in the hierarchy the individual falls.

¹⁷ K. S. B. Keats-Ronan, 'Biography, Identity and Names: Understanding the Pursuit of the Individual in Prosopography', in *Prosopography Approaches and Applications: A Handbook*, ed. K. S. B. Keats-Ronan (Hockley: University of Oxford, 2007).

¹⁸ Susanna Fellman, 'Prosopographic Studies of Business Leaders for Understanding Industrial and Corporate Change', *Business History* 56, no. 1 (2014): 5–21; Walter Friedman and Richard Tedlow, 'Statistical Portraits of American Business Elites: A Review Essay', *Business History* 45, no. 4 (2003): 89–113; D. J. Jeremy 'Anatomy of the British Business Elite, 1860–1980', *Business History* 26, no. 1 (1984): 3–23; Juha Kansikas, 'The Business Elite in Finland: A Prosopographical Study of Family Firm Executives 1762–2010', *Business History* 57, no. 7 (2015): 1112–32.

Access to power is relational, and is the result of social and cultural context, as well as economic capital.¹⁹ In sum, this is an interdisciplinary inquiry, using a combination of methods and a broad theoretical framework to integrate Australian histories of the economy, class, gender, culture and society.

Pathways to the corporate elite

The eve of WWI was a period of economic and political upheaval in Australia. The devastating depression of the 1890s hardened class consciousness and weakened mass confidence in capitalist organisation. It resulted in an economy-wide restructure. Primary production was diversified and manufacturing output increased, reducing the relative power of big graziers and swelling the size of the industrial working class. Trade unions gained members and influence, establishing federal structures to negotiate wages and working conditions. The emergence of the Labor party as a major political force in the early twentieth century aimed to temper capitalism's excesses, reflecting and reproducing a social democratic system of organisation.²⁰ Some described Australia as a 'workingman's paradise', with earlier retirement, a shorter working day and week, and the establishment of a minimum wage.²¹ However, while some see Australia in the decades preceding WWI as a 'social laboratory', others argue that the hegemony of capitalists remained largely unchallenged. Buckley and Wheelwright, for example, conclude that pastoralists, merchants, financiers and the urban bourgeoisie maintained their influence and were able to manipulate the state

¹⁹ Loïc Wacquant, 'Symbolic Power and Group-making: On Pierre Bourdieu's Reframing of Class', *Journal of Classical Sociology* 13, no.2 (2013): 274–91.

²⁰ Noel G. Butlin, Alan Barnard and Jonathan J. Pincus, *Government and Capitalism: Public and Private Choice in Twentieth Century Australia* (Sydney: Allen and Unwin, 1982); Bede Nairn, *Civilising Capitalism: The Beginnings of the Australian Labor Party* (Melbourne: Melbourne University Press, 1973).

²¹ Ian W. McLean and Jonathan J. Pincus, 'Did Australian Living Standards Stagnate between 1890 and 1940?', *Journal of Economic History* 43, no. 1 (1983): 193–202.

into serving their interests.²² The largest Australian firms by assets were generally pastoral agencies: Dalgety, NZLMA, AML&F, AEM, Goldbrough Mort and Elders were all in the nation's top ten companies.²³ Pastoral companies and mining firms also developed strong connections through industry associations and cross-shareholdings, using their cohesion to control prices and influence governments.²⁴

These connections are evident in the board membership of large corporations. While Australia was socially progressive in some arenas, decision making for large private and financial firms remained with the elite. Extensive professional, kinship and social connections amongst this group were leveraged to increase their influence over a range of firms and industries. There were broad corporate networks across all industries. About 650 seats existed on the boards of the top 113 firms in 1913–1914.²⁵ Eighty-four individuals occupied 213 (about a third) of the total board seats, across 78 companies. This means that 70 per cent of the largest firms in Australia had interlocked directors. Figure 1 visualises the network of firm connections, based on common board members.²⁶ Table 1 lists the interlocked directors and the industries in which they held board membership, and Table 2 details the number of connections among interlocked firms.

The director network reveals a heavily interlocked corporate sector, with 85 per cent of interlocked firms connected within a single cluster (this cluster is shown in Figure 1). The most

²² Kenneth D. Buckley and Edward Lawrence Wheelwright, *No Paradise for Workers: Capitalism and the Common People in Australia, 1788–1914* (Melbourne: Oxford University Press, 1988).

²³ Ville and Merrett, 'Big Business in Australia'.

²⁴ Richardson, 'Collins House Group'; Merrett and Ville, 'Industry Associations'.

²⁵ The top one hundred private firms and top twenty-five financial institutions, accounting for the twelve firms for which there is no data for this year.

²⁶ This visualises the main cluster, which includes 85 per cent of interlocked firms but omits a small number of outlier pairs of firms. The outliers are as follows: Finney Isles-Nicholson-Perkins; NZLMA-Qld Nat Bank; B&N-Robert Reid; Perdriau-Light and Power; Kalgoorlie Trams-Perth Trams.

interlocked directorates within the same industry were among mining firms. This group included four different Broken Hill Propriety firms, as well as Mount Lyell Mining, Chillagoe, Great Fitzroy Mining, Amalgamated Zinc, and the Zinc and Sulphide Corporations. Table 1 indicates that 12 members of the elite group exclusively held directorships of mining or mineral processing companies.²⁷ Robert Reid and Co and Buckley and Nunn also had very strong connections. These two transport firms shared four directors, all of whom had no other directorships in the group of firms at this time.²⁸ Semi-public transport or utilities companies also shared directors, including Kalgoorlie and Perth Electric Tramways (Stoneham, Wethered, Wren), Adelaide and Melbourne Electric Supply Co (Braithwaite and Clements), Metropolitan Gas and Melbourne Tramway and Omnibus (Pratt), and Australian Gaslight and Sydney Ferries (Goddard).

The corporate boardroom in the 1910s was comprised of two main classes of individual – those who had an abundance of economic capital, and those who held mostly social and cultural capital. Economic capital may describe either access to monetary resources, or access to ‘valuable’ knowledge and skills (human capital). Knowledge and skills were a key source of power and influence for professionals in the director network. Accountants, lawyers and bankers were often appointed to multiple boards. Indeed, of the board members who had experience in these professions, all but one had directorships across multiple firms and industries.²⁹ Their role was to signal legitimacy and moderation, and to provide advice otherwise contracted to external professional firms. Thomas Davis was a Sydney-based accountant, and ‘one of the best-known businessmen in Sydney’.³⁰ After

²⁷ Alex Campbell, F. L. Cox, F. A. Govett, Herbert Hoover, F. C. Howard, W. H. Hyndman, W. J. Loring, Sir B. A. Moulden, H. W. Pelham Clinton, William S. Robinson, Colin Templeton, J. L. Wharton.

²⁸ W. E. Bates, John Hastings, Robert Reid and James Wright.

²⁹ Baillieu, Clark, Montague Cohen, Davis, Finlayson, Goddard, Grice, Howard, Hyndman, Taylor, Templeton, Walker, and Watt. Bates was the only member of the group who had training as a professional but had directorships within the same industry.

³⁰ ‘Death of Mr Thomas Davis’, *The Sydney Morning Herald*, 29 January 1914, 10.

setting up his own firm, Davis used his reputation to develop board memberships later in life. He was on the board of financial services companies such as Yorkshire Insurance, as well as companies across primary industries and wholesale trade. Similarly, Patrick Taylor was an accountant who developed board memberships across companies engaged in transport (Sydney Ferries, Newcastle and Hunter River Steamship), gas (North Shore Gas Co, Australian Gaslight), food and iceworks (New South Wales Fresh Food and Ice, Tooheys), and insurance (Union Fire Insurance Society).³¹

Lawyers were also in demand for their knowledge and skills. George Downer, an Adelaide-based lawyer, was a pastoral investor and a specialist in mercantile law. This made him a good fit for broad board memberships in the shipping (China Traders Company), pastoral services (Elder Smith & Co.) and banking (Bank of Adelaide) industries.³² Montague Cohen was a Melbourne-based lawyer who held a number of directorships in brewing and mineral processing.³³ He was able to use this expertise to negotiate the merger of Carlton and United Breweries in the early 1900s.³⁴

Experience in banks and financial institutions was also an advantage. Although links between banks and other companies were present in all industries, Figure 1 indicates that banks were particularly frequently interlocked with pastoral firms. All of the large Australasian pastoral services companies – Australian Estates and Mortgage (AEM), Australian Pastoral, Goldsbrough Mort, New Zealand Loan and Mercantile Agency (NZLMA), Australian Mercantile, Land and Finance (AML&F), Elder Smith & Co., Dalgety, and Australian Mortgage and Agency (AMA) – had interlocks with at least one bank. The Union Bank, the Bank of NSW and the Commercial Bank of

³¹ Heather Radi, 'Taylor, Patrick Thomson (1862–1922)', *Australian Dictionary of Biography (hereafter ADB)*, vol. 12, 1990, National Centre of Biography, Australian National University (hereafter NCB, ANU), <http://adb.anu.edu.au/biography/taylor-patrick-thomson-8764/text15361> (accessed 10 October 2018).

³² 'The late Mr A. Geo. Downer', *Pastoral Review*, 16 September 1916, 827.

³³ Barbara Falk, 'Cohen, Montague (1855–1931)', *ADB*, vol. 8, 1981, NCB, ANU, <http://adb.anu.edu.au/biography/cohen-montague-5717> (accessed 10 October 2018).

³⁴ Falk, 'Cohen'.

Australia had connections to multiple pastoral companies, and AML&F, AEM and Australian Pastoral had connections to multiple banks. There was also some regional concentration, with Adelaide-based Elder Smith & Co having connections with the Bank of Adelaide. There was strong association between the banking and pastoral industries from the mid-nineteenth century, as pastoral agents acted as intermediaries between banks and wool growers. Most frequently, agents re-lent money from banks, but they also acted as advocates and financial guarantors for those growers who dealt directly with banks.³⁵ Engaging with pastoral agents meant banks could invest in the growing pastoral sector, while also benefitting from the agents' local networks and knowledge of the industry.

Knowledge was an important motivation for connections between banks and non-financial firms. Bankers had access to professional networks and knowledge of lending processes. Engaging directly in a particular industry may have, in turn, helped the bank make sound lending decisions, and having one of their representatives on a company board was important to protect their stake in the firm.³⁶ For pastoral agents, having bank representatives on their boards may have been a requirement for obtaining loans on behalf of their clients. Long-term staff members of financial institutions sat on the boards of pastoral companies, including Finlayson, who was general manager for the Union Bank of Australia, then chairman of the London Bank of Australia and board member of pastoral company AML&F.³⁷ Maclaurin, a finance and insurance specialist on the board of the Bank of NSW, also sat on the board of pastoral company Australasian Mortgage and Agency and primary producer CSR.³⁸ In

³⁵ Simon Ville, *The Rural Entrepreneurs: A History of the Stock and Station Agent Industry in Australia and New Zealand* (Melbourne: Cambridge University Press, 2000).

³⁶ Linda Brewster Stearns and Mark S. Mizruchi, 'Board Composition and Corporate Financing: The Impact of Financial Institution Representation on Borrowing', *Academy of Management Journal* 36, no. 3 (1993): 603–18; Schmidt and Keil.

³⁷ 'Return of Mr D. Finlayson', *South Australian Register*, 23 January 1899, 4.

³⁸ Ann M. Mitchell, 'MacLaurin, Sir Henry Normand (1835–1914)', *ADB*, vol. 10, 1986, NCB, ANU, <http://adb.anu.edu.au/biography/macLaurin-sir-henry-normand-7412> (accessed 10 October 2018).

other industries, bankers were also appointed to the boards of private firms. Colin Templeton had experience in finance at the Bank of Australasia. He leveraged his posting to the Broken Hill branch to sit on the board of several mining companies in the area.³⁹ Reginald Black was a long-term employee of the Bank of NSW, serving at various country branches before undertaking an array of directorships throughout his career. In the 1910s he was on the board of the Australian Mutual Provident Society (AMP) and North Shore Gas, but later in his career he was also on the board of Commercial Union Assurance Co, Goldsbrough Mort, NZLMA, Harrison, Jones and Devlin, and the Daily Telegraph.⁴⁰

While bankers, accountants and lawyers found board memberships across multiple industries, other professions found directorships within a single industry. Engineers, for example, were valued for technical knowledge within their chosen specialty. Joseph Braithwaite, for instance, was a London-based electrical engineer. He was involved in several electric utilities companies in England, as well as the Adelaide and Melbourne Electric Supply companies.⁴¹ Clements, also an engineer, was involved in the same electric supply companies.⁴² Herbert Hoover, an engineer who was later the US president, was sent to Australia to undertake exploration in the Western Australian goldfields. Hoover was well-known internationally for his knowledge and skills, as well as for the profits he generated

³⁹ 'Mr. Colin Templeton Dead', *Barrier Mining*, 12 August 1940, 4; 'Obituary: Mr C. Templeton', *The Age*, 10 August 1940, 22.

⁴⁰ A. W. Martin, 'Black, Reginald James (1845–1928)', *ADB*, vol. 7, 1979, NCB, ANU, <http://adb.anu.edu.au/biography/black-reginald-james-5253> (accessed 10 October 2018).

⁴¹ William J. Hausman, Peter Hertner and Mira Wilkins, *Global Electrification: Multinational Enterprise and International Finance in the History of Light and Power, 1878–2007* (Cambridge: Cambridge University Press, 2008), 107–8.

⁴² 'Mr F. W. Clements Dies, Pioneer of Electricity Services', *The Sydney Morning Herald*, 13 December 1939, 17.

for his other mining interests.⁴³ He became central to the Broken Hill mining community with directorates in Zinc Corporation and Great Fitzroy Mining. James Reid began as a journalist in North Queensland in the 1870s, specialising in gold mining. This interest encouraged a move to Broken Hill in 1880, which led to his involvement in BHP and other mining companies.⁴⁴

Entrepreneurs and company founders were often invited to join the boards of other large firms. Though these men had a substantial sum of financial resources to deploy, their source of power in this case was their human capital. They were valued for their ability to provide expert knowledge and for adding legitimacy to the firm's operations.⁴⁵ For example, Sir James Burns and Sir Robert Philp, founders of shipping agents Burns Philp & Co, were both popular board members. They achieved success in their own business before obtaining diverse directorships across banking and finance, pastoral services, and coal mining.⁴⁶ In a public statement announcing his election as a member of the Sydney board of the Bank of North Queensland, Burns was introduced as 'a business man of great capacity'.⁴⁷ Robert Harper established the shipping firm Robert Harper and Co. in 1865 and was a leading Melbourne merchant by the 1870s. The success of this firm, Harper's prominence in Melbourne's commercial district, and his 'remarkable business ability' led to multiple

⁴³ Geoffrey Blainey, 'Herbert Hoover's Forgotten Years', *Australian Economic History Review* 3, no. 1 (1963): 53–70; Hannah Forsyth, 'Class, Professional Work, and the History of Capitalism in Broken Hill, c. 1880–1910', *Labor* 15, no. 2 (2018): 21–47.

⁴⁴ 'Death of Mr J. S. Reid', *The Argus*, 17 January 1922, 6.

⁴⁵ Mizruchi, 'What do interlocks do?'.

⁴⁶ G. J. Abbott and H. J. Gibbney, 'Burns, Sir James (1846–1923)', *ADB*, vol. 7, 1979; W. Ross Johnston, 'Philp, Sir Robert (1851–1922)', *ADB*, vol. 11, 1988, NCB, ANU, <http://adb.anu.edu.au/biography/burns-sir-james-177> (accessed 10 October 2018).

⁴⁷ 'The Bank of North Queensland', *The North Queensland Register*, 20 September 1893, 42.

directorships.⁴⁸ Harper was appointed director of his own company, the Commercial Bank of Australia, and Kauri Timber Co. William ‘Willie’ Baillieu’s investment activities in land shares and mining property was highly regarded by company boards in a variety of industries such as media, brewing, manufacturing and mineral processing.⁴⁹ Henry Muecke became a partner of, and then took over, John Newman’s commercial shipping agency, renaming it H. Muecke and Co. He was well-known and well-respected in the Adelaide business community, serving on the Adelaide Chamber of Commerce for thirty-five years until 1915. Illustrating the esteem associated with his expertise, when Muecke was interned for his German heritage during WWI, his peers sought to have him moved from a camp to his own home.⁵⁰ His influence in business was rewarded by a range of directorships in his local community (Bank of Adelaide, Adelaide Steamship Co.) and nationally (Broken Hill Proprietary Co., National Mutual Life Association).

While some developed board membership because of their knowledge and experience, in other cases it was through family, friendship or social connections. Hereditary involvement in the family firm resulted in many directorships. Robert Reid was the son of the founder of the firm with the same name, and George Cohen, Grice, Walker, and Waterhouse each began their professional careers through the family firm.⁵¹ In addition to his individual business achievements (above),

⁴⁸ ‘The Hon. R. Harper’, *The Express and Telegraph*, 9 January 1919, 1; Peter Cook, ‘Harper, Robert (1842–1919)’, *ADB*, vol. 9, 1983, NCB, ANU, <http://adb.anu.edu.au/biography/harper-robert-6572> (accessed 10 October 2018).

⁴⁹ Peter Yule, *William Lawrence Baillieu. Founder of Australia’s Greatest Business Empire* (Melbourne: Hardie Grant Books, 2012); J. R. Poynter, ‘Baillieu, William Lawrence (Willie) (1859–1936)’, *ADB*, vol. 7, 1979, NCB, ANU, <http://adb.anu.edu.au/biography/baillieu-william-lawrence-willie-5099> (accessed 10 October 2018).

⁵⁰ Joan Hancock and Eric Richards, ‘Muecke, Hugo Carl Emil (1842–1929)’, *ADB*, vol. 10, 1986, NCB, ANU, <http://adb.anu.edu.au/biography/muecke-hugo-carl-emil-7674> (accessed 10 October 2018).

⁵¹ G. F. J. Bergman, ‘Cohen, George Judah (1842–1937)’, *ADB*, vol. 8, 1981, NCB, ANU, <http://adb.anu.edu.au/biography/cohen-george-judah-5711> (accessed 10 October 2018); Judith Tyers, ‘Grice, Sir

Baillieu's family was also influential in business. The family company 'Mutual Trust' involved Baillieu's father and a number of his brothers. Other members of the family worked in similar industries and their business activities overlapped formally and informally.⁵² Robinson's family connections were crucial to his directorships in the mining industry. He began his career as a commercial journalist for *The Age* (of which his father was editor), and his brother Lionel Robinson was a partner in a share broking firm in the City of London. Both William and Lionel Robinson were key members of the Collins House Group.⁵³ Involvement in the family firm represented economic capital through inheritance of substantial monetary resources. Human capital was also key, as these men acquired expert knowledge through a lifetime of association with the firm and its founder. Connections of kin underpinned both economic and human capital in these cases.

Members of prominent or influential families were quickly inducted into the corporate elite. Charles Bright was from an influential English family, and he became a leader of Melbourne society when he migrated to Australia. With a background in shipping, Bright also sat on the boards of pastoral and banking firms.⁵⁴ Montague Cohen was asked to sit on the board of Amalgamated Zinc through his friendship with founder Auguste de Bavay.⁵⁵ Theodore Fink was extremely well-

John (1850–1935)', *ADB*, vol. 9, 1983, NCB, ANU, <http://adb.anu.edu.au/biography/grice-sir-john-6483> (accessed 10 October 2018); Margaret Steven, 'Walker, James Thomas (1841–1923)', *ADB*, vol. 12, 1990, NCB, ANU, <http://adb.anu.edu.au/biography/walker-james-thomas-995> (accessed 10 October 2018); 'Death of Mr A. Waterhouse, Former Chairman of Bank of Adelaide', *The Advertiser*, 24 June 1935, 14.

⁵² Yule; Poynter.

⁵³ Peter Richardson, 'Robinson, William Sydney (1876–1963)', *ADB*, vol. 11, 1988, NCB, ANU, <http://adb.anu.edu.au/biography/robinson-william-sydney-8247/text14441> (accessed 10 October 2018); W. S. Robinson, *If I Remember Rightly: The Memoirs of W. S. Robinson, 1876–1963*, ed. Geoffrey Blainey (Sydney: F. W. Cheshire, 1967); Forsyth.

⁵⁴ 'The late Mr C. E. Bright', *The Pastoral Review*, 16 August 1915, 742.

⁵⁵ Falk, 'Cohen'.

connected, attending school and later working with Alfred Deakin.⁵⁶ Robinson, similarly, was Edmund Barton's nephew.⁵⁷ Both Fink and Robinson were good friends of Baillieu's, and sat on the boards of the same companies. Henry Henty's grandfather founded the British colony at Portland, Victoria, and George Downer's family was (and continues to be) very influential in South Australian politics and society.⁵⁸

The elite also had informal connections through clubs and hobbies. The somewhat informal Collins House group was key to the interlocks amongst mining companies, and between mining companies and other firms. Located at 360 Collins Street in Melbourne's CBD, it housed the headquarters of three of Australia's leading mining companies (North Broken Hill, Broken Hill South and Zinc Corporation), as well as a key treatment operation (Amalgamated Zinc). The four main companies jointly owned the building and moved their head offices there from 1912. The shared physical location of company headquarters provided a space for in-person communications and collaborations.⁵⁹ Meanwhile, interlocking directorates were one of the symbols of unity amongst the Collins House Group, alongside formal shareholdings, long-term supply agreements and market-sharing arrangements amongst member companies. Immediately prior to WWI, the four main Collins House Group companies shared directors. Baillieu was crucial to the Group's establishment, and other interlocked directors of prominent member companies included Montague Cohen, Robinson, Howard, Hyndman, Pelham Clinton and Wharton. The director network also ensured access to financial resources, with members of the Group found on the boards of associated Australian and British

⁵⁶ Wilma Hannah, 'Fink, Theodore (1855–1942)', *ADB*, vol. 8, 1981, NCB, ANU, <http://adb.anu.edu.au/biography/fink-theodore-6171> (accessed 10 October 2018).

⁵⁷ P. Richardson, 'Robinson'.

⁵⁸ Sally O'Neill, 'Henty, Henry (1833–1912)', *ADB*, vol. 4, 1972, NCB, ANU, <http://adb.anu.edu.au/biography/henty-henry-488> (accessed 10 October 2018); 'The late Mr A. Geo. Downer', *Pastoral Review*, 16 September 1916, 827.

⁵⁹ Richardson, 'Collins House Group'.

banks.⁶⁰ The group also shared director networks with companies outside this sample of firms, including lead, zinc and copper suppliers and customers, as well as mining operations for other metals.⁶¹ Members of the Collins House group thus used their network to control a large proportion of the Australian mining and mineral processing industries.

Other informal community connections emerged from directors being ‘citizen[s] of munificent spirit’.⁶² Involvement in Chambers of Commerce; membership of Hospital and University Boards; Trustees of Public Libraries, Museums, and Galleries were common. Many were members and administrators of cricket, golf, fishing, athletics, and turf clubs, and they were often philanthropists and patrons of the arts. Membership of exclusive (men’s) clubs was common, including the Melbourne, Adelaide, Australia and Athenaeum Clubs. Some were members of the Highland Society – a forum for those of Scottish heritage. Religious organisations also featured prominently, with a number of individuals involved in the Church Missionary Association, the Presbyterian Church, or the Jewish community.

Sir Normand Maclaurin was typical of these intersecting social and cultural characteristics. A Scottish migrant and surgeon by trade, Maclaurin became well-established in Sydney’s medical profession before sitting on the board of Australasian Mortgage and Agency, CSR, Mutual Life Australasia, and the Bank of New South Wales. He was a member of the Royal and Linnean Societies of New South Wales, the Australian Club and the Highland Society. He was Chancellor of the University of Sydney, sat on the board of the Royal Prince Alfred Hospital, and was a trustee of Sydney Grammar School and the Public Library of New South Wales. He was knighted in 1902.⁶³

⁶⁰ Namely the English, Scottish and Australian Bank, and Lloyds Bank.

⁶¹ See individual biographies and Richardson, ‘Collins House Group’.

⁶² Watt was remembered thus in his obituary. ‘Death of Mr W. C. Watt: Noted City Figure’, *The Sydney Morning Herald*, 23 August 1920, 8.

⁶³ Ann M. Mitchell, ‘MacLaurin, Sir Henry Normand (1835–1914)’, *ADB*, vol. 10, 1986, NCB, ANU, <http://adb.anu.edu.au/biography/macclaurin-sir-henry-normand-7412> (accessed 10 October 2018).

Obituaries highlighted the esteem associated with his civil service, describing him as a ‘patriotic Australian’ and a ‘distinguished citizen’.⁶⁴ His board directorships were not the result of his human capital – medical expertise would be of little use for a sugar refinery – instead Maclaurin’s social position imbued his activities with an air of competence and morality. He had both the social networks and appropriate cultural markers to cement his place in the corporate elite.

This elite group, and indeed all board members in this sample, were exclusively male. Women were excluded from this space in a much more severe way than in the Australian economy overall. For comparison, women made up around 22 per cent of the formal labour force in 1911, and Bishop estimates that around 20 per cent of businesses were run by women in the nineteenth century.⁶⁵ However, women performed hidden but crucial work for the functioning of the director network. They perpetuated the network through marriage and the inheritance of monetary resources. For example, Baillieu married Bertha, daughter of Edward Latham, the founder of Carlton Brewery. Latham then provided finance for Baillieu’s early estate agencies, and Baillieu joined the Carlton Brewery board ‘in response to a solemn petition from its directors, prompted by respect for his abilities as well as his wife’s substantial shareholding’.⁶⁶ Baillieu’s wife, by virtue of being born into a wealthy family, had equity in the company, but it was her husband who was asked to help make decisions for the firm. George Cohen and Charles MacKellar both took over their father-in-law’s board memberships.⁶⁷ Marriage was also infinitely beneficial to Bates’s career. He married Catherine Reid, daughter of Robert Reid.⁶⁸ Soon after, Bates became a board member of Robert Reid and Co.

⁶⁴ ‘Sir Normand Maclaurin: A distinguished citizen’, *Sydney Morning Herald*, 25 August 1914, 6; ‘Death of Sir Normand Maclaurin: Scholar and publicist’, *The Daily Telegraph*, 25 August 1914, 6.

⁶⁵ Hatton and Withers, *CEHA*; Catherine Bishop, *Minding her own Business: Colonial Businesswomen in Sydney* (Sydney: NewSouth Books, 2015).

⁶⁶ Yule, Poynter.

⁶⁷ Bergman, ‘Cohen’; Mitchell, ‘Mackellar’.

⁶⁸ ‘Mr W. E. Bates’, *The Age*, 19 September 1938, 4.

Mary A. Grice, wife of John Grice, was exceptional in the group because she was not only wealthy (she held substantial money and property in her own name), but was able to deploy this wealth independently. Mary lent two thousand pounds to Dunlop (of which John was a board member) so the firm could pay its debts promptly.⁶⁹

Women's work also supported the director network, and the place of their husbands in it, by developing the social and cultural capital of the urban bourgeoisie. A number of businessmen married into influential families. Reginald Black's wife Eleanor came from one of the oldest pastoral families in NSW; Charles MacKellar's wife Marion was the daughter of prominent pastoralist and banker Thomas Buckland; Kater's wife Mary was the daughter of prominent NSW politician William Forster; and Bright married the daughter of Governor Sir John Henry Thomas Manners-Sutton.⁷⁰ Wives also maintained their husbands' status by excelling in the traditional 'women's work' of the middle and upper classes – as skilled hostesses and artists, or generous philanthropists. They were part of the cultural capital that convinced others of the family's status, while also providing social spaces in which their husbands could develop connections. Carl Pinschof, an Austrian migrant and merchant, was married to famous singer Elise Wiedermann. Elise was the daughter of a prominent Austrian merchant and had performed on operatic stages in Vienna, Zurich, Brunswick, Hanover, Hamburg, London and Leipzig. Both Carl and Elise became leading patrons of music and art in Melbourne, these activities providing a 'fine backdrop for business, social and musical functions'.⁷¹ Bates' wife Catherine was a famed hostess, recognised publically through newspaper coverage of parties at their home 'Larino' on the outskirts of Melbourne. Guests included prominent members of Melbourne

⁶⁹ Geoffrey Blainey, *Jumping over the Wheel* (Sydney: Allen and Unwin, 1993), 49.

⁷⁰ Martin, 'Black'; Mitchell, 'Mackellar'; Martha Rutledge, 'Kater, Henry Edward (1841–1924)', *ADB*, vol. 5, 1974, NCB, ANU, <http://adb.anu.edu.au/biography/kater-henry-edward-544> (accessed 10 October 2018); 'The late Mr C. E. Bright', *The Pastoral Review*, 16 August 1915, 742.

⁷¹ Raoul F. Middleman, 'Pinschof, Carl Ludwig (1855–1926) and Wiedermann, Elise (1851–1922)', *ADB*, vol. 11, 1988, NCB, ANU, <http://adb.anu.edu.au/biography/pinschof-carl-ludwig-8052> (accessed 10 October 2018).

society, such as the Mayor, as well as prominent businessmen such as Auguste de Bavay (founder of Amalgamated Zinc).⁷²

Australia's colonial heritage was another key path through which the director network formed. White British settlers dominated the ranks of the elite. All except two interlocked directors had primarily British heritage. Of the fifty-five individuals whose place of birth can be identified, thirty-three (60 per cent) were born in England, Ireland or Scotland. Most were British-born Australian residents who had arrived in Australia between 1860 and 1880. They were part of a larger migration trend: between 30 per cent and 55 per cent of Australian residents were born in Britain in these years.⁷³ The predominance of British-based directors (15 per cent of the total cohort) was due to the importance of 'free-standing companies' in Australia in the late-nineteenth and early-twentieth century. These firms were headquartered in Britain – London was the location of the head office, board members, and share capital – but they operated in Australia.⁷⁴ The Bank of Australasia and Union Bank of Australia had entirely London boards, and the Bank of New South Wales, Bank of Victoria and Commercial Bank of Australia had both London and local boards. A mix of London and local boards were found in most other industries in the cohort, including in pastoral (AMA, AML&F), mining (Amalgamated Zinc, Broken Hill Proprietary Block 10 and 14; Great Fitzroy Mining), public utilities (Adelaide Electric), wholesale trade (Beath Schiess and Felsted) and transport (Buckley and Nunn, Robert Reid and Co). As with other forms of business networks, the cultural, institutional and

⁷² 'Mrs W. E. Bates, Hostess', *Punch*, 27 November 1913, 35.

⁷³ Andrew Seltzer, 'Labour, Skills and Migration', in *The Cambridge Economic History of Australia*, eds Simon Ville and Glenn Withers (Melbourne: Cambridge University Press, 2015), 178–201.

⁷⁴ Mira Wilkins, 'The Free-standing Company, 1870–1914: An Important Type of British Foreign Direct Investment', *Economic History Review* 41, no. 2 (1988): 259–82.

language similarities between Australia and Britain at the time encouraged these connections between firms.⁷⁵

The Australian corporate elite

Interlocking directorates were a key form of connection between large firms in Australia in the 1910s. The director network sat alongside industry associations and cross-ownership to connect firms and individuals to one another. Rather than emphasising atomised individuals and firms, or the overall structure of the economy, examining business networks highlights the paths through which ideas, contacts and resources travelled. Power in Australian corporations was relational, negotiated, and interdependent.

There were a range of pathways into the corporate elite, though the process was inherently selective. Two main seams of society were seen as valuable for the governance of large corporations. Business professionals – accountants, lawyers, bankers and engineers – were prominent in the network due to their valuable knowledge and skills. They had the ability to provide knowledge to the company, internalising advice otherwise provided by contracted professionals.⁷⁶ Lawyers helped with company mergers; engineers provided technical advice; bankers secured access to credit; accountants audited financial statements and monitored the firm’s activities against the interests of investors. Prominent and successful businessmen were also appointed for their general business acumen, sitting on the boards of a diverse range of companies. Expert professionals and successful businessmen were valuable for their human capital, but were also used as a signal of legitimacy and moderation. They

⁷⁵ Gary Magee and A. S. Thompson, *Empire and Globalisation: Networks of People, Goods and Capital in the British World, c.1850–1914* (New York: Cambridge University Press, 2010).

⁷⁶ Mizruchi, ‘What do Interlocks Do?’; Schmidt and Keil; Davis, ‘Agents Without Principles?’.

implicitly communicated to investors that the company's operations were in experienced and objective hands.⁷⁷

Members of the network were often from influential family and social circles. Interlocked directors were inducted into the network through family or marriage, common social clubs, philanthropy and community activities, and influence in the arts or politics. They performed the cultural markers of the urban bourgeoisie, and had access to the upper echelon of society. Similar social and cultural capital meant new members inevitably shared a similar worldview and privileges. The intersection of social, family and business connections represents an inevitable part of human behaviour – strong ties meant members could more easily communicate, trust each other, and treat each other well. It thus may have improved the diffusion of knowledge and the coordination of business operations in Australia's corporate sector.

Nevertheless, the agglomeration of power with the corporate elite complicates traditional understandings of pre-WWI Australia as a social laboratory. The director network was a much more stratified space than Australian society as a whole. While women participated extensively in the Australian economy in the 1910s, their access to the boardroom was restricted. Women developed interlocks either through hereditary access to wealth, or by developing their husbands' social and cultural capital through work in the home. People of colour and members of the working class were completely absent from this group. While this may have been a period in which the Labor movement seemed to 'civilise' the excesses of capitalism, large corporations (and, with it, enormous power to influence the Australian economy) remained the domain of those who had access to economic resources, or bourgeoisie social networks and cultural capital.

The director network also reveals some distinctive elements of the Australian business environment at this time. Political, cultural and legal similarities encouraged business connections between Australia and the British metropole. The director network supports other research in business

⁷⁷ Forsyth.

history that has highlighted the importance of British multinational enterprises for Australia's economy.⁷⁸ However, with the exception of connections to Britain, the director network suggests that Australia's business community was fairly isolated. While recent research has argued that Australia was host to a range of MNEs from continental Europe and the US in the early twentieth century, this had little impact on the director network.⁷⁹

Understanding interlocking directorates helps us reimagine economic life in Australia at a particular moment in time. In this preliminary examination of interlocking directorships in Australia in the early twentieth century, I have combined different frames of historical inquiry to reveal the presence of a corporate elite and the pathways through which the network was perpetuated. Further research is required to uncover the impact of these interlocking directorates on Australian economic life. Director networks may have helped diffuse knowledge and innovation across the economy, but they also served to maintain the wealth and interests of a select group of businessmen. The ways in which this network has been deployed; the parties it has benefited; and its intersections with political, capital and labour power are yet to be uncovered.

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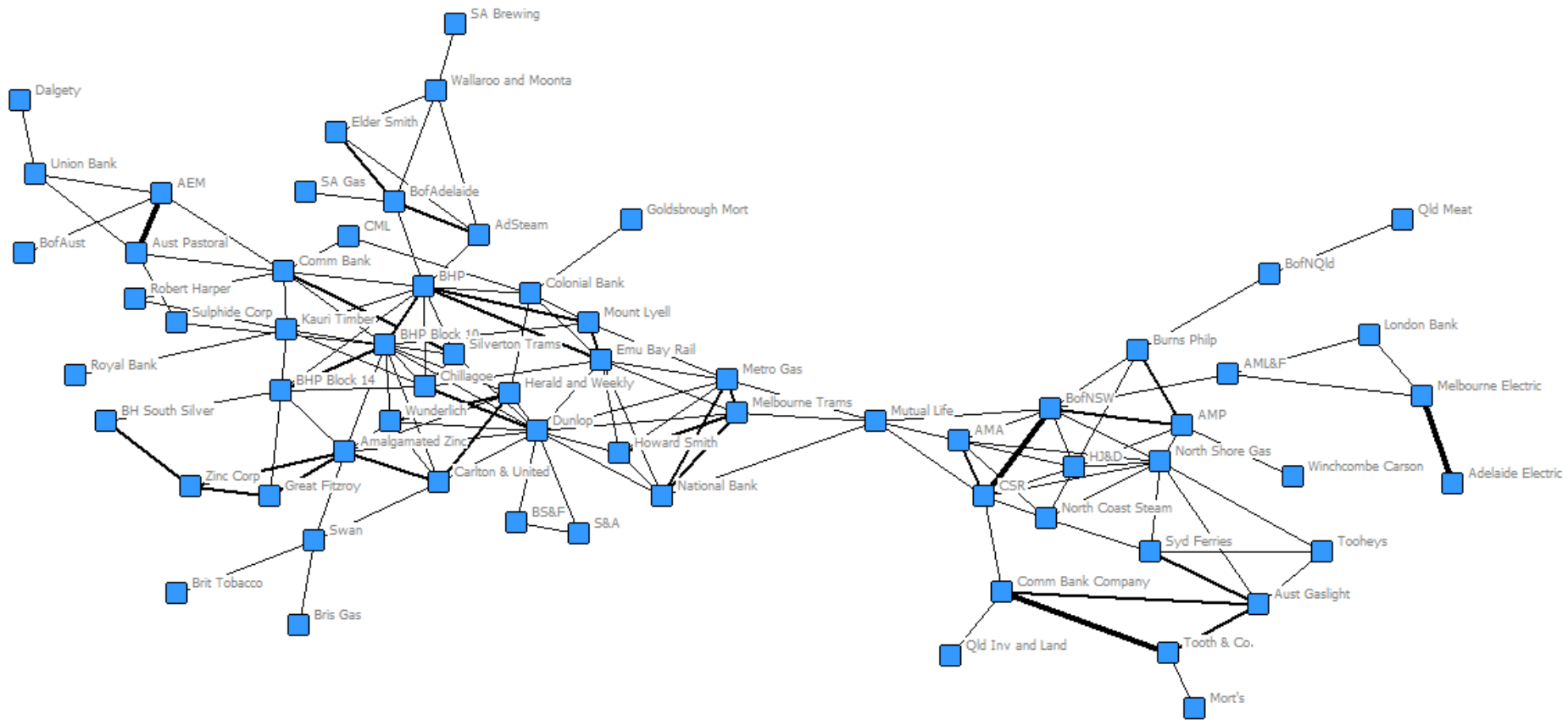
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⁷⁸ David Merrett and Simon Ville, 'International Business on the Eve of World War One', *World Economic History Congress*, Boston, USA, 30 July – 3 August 2018.

⁷⁹ Pierre van der Eng, 'A Case of Liability of Foreignness, or Something Else: Continental European MNEs in Australia', *World Economic History Congress*, Boston, USA, 30 July – 3 August 2018.

Figure 1: Network of Firm Connections, main cluster, 1910



Note: Ties indicate firms shared at least one board member. Thicker ties indicate they had more than one common board member. Based on board membership data Robert Lucas Nash, *Australasian Joint Stock Companies Year Book* (Melbourne: 1913–14). This depicts the main cluster, omitting a small number of outlier nodes and ties (see main text). Abbreviations and full company names are listed in Table 2.

Table 1: The Corporate Elite and their Board Memberships

Note: Board memberships of the top 25 financial and top 100 non-financial firms. Based on published lists in Robert Lucas Nash, *Australasian Joint Stock Companies Year Book* (Melbourne: 1913–14).

Name	Board memberships	Industries
<i>Baillieu, Hon. William Lawrence</i>	6	Mining, mineral processing, brewing, manufacturing, media
<i>Bates, W.E.</i>	2	Trade and transport
<i>Binnie, Richard</i>	2	Banking and finance, primary produce processing
<i>Black, Hon. Reginald J.</i>	3	Banking and finance, energy
<i>Braithwaite, Joseph Beavan</i>	2	Energy
<i>Bright, Charles E.</i>	3	Pastoral, banking and finance
<i>Burns, Col. Hon, James</i>	2	Banking and finance, trade and transport
<i>Campbell, Alex.</i>	2	Mining
<i>Clark, James</i>	2	Energy, brewing
<i>Clarke, F. G.</i>	2	Banking and finance, pastoral
<i>Clements, F.W.</i>	2	Energy
<i>Cohen, George J.</i>	3	Energy, manufacturing, banking and finance
<i>Cohen, Montague</i>	3	Mineral processing, brewing
<i>Cox, F. L.</i>	2	Mining, mineral processing
<i>Davis, Thos.</i>	2	Trade and transport
<i>Dawes, W. C.</i>	2	Banking and finance, pastoral
<i>Downer, A. George</i>	2	Banking and finance, pastoral
<i>Fink, Hon. Theodore</i>	2	Media, manufacturing
<i>Finlayson, David</i>	3	Banking and finance, pastoral, energy
<i>Forsyth, Adam</i>	2	Trade and transport, banking and finance
<i>Gilchrist, William O.</i>	2	Banking and finance, pastoral
<i>Goddard, William Cornelius</i>	2	Energy, public transport
<i>Govett, F.A.</i>	2	Mineral processing
<i>Green, Sir Frederick</i>	2	Banking and finance, pastoral
<i>Grice, John</i>	6	Manufacturing, public transport, energy, banking and finance, retail trade
<i>Harper, Robert</i>	3	Banking and finance, primary produce, trade and transport
<i>Hart, Alfred D.</i>	2	Manufacturing, brewing
<i>Harvey, Jas.</i>	4	Pastoral, banking and finance, trade and transport, mining
<i>Hastings, John (Richard Samuel)</i>	2	Trade and transport
<i>Henty, Henry</i>	2	Banking and finance
<i>Herring, Lesley</i>	2	Manufacturing
<i>Hicks, H. M'C.</i>	2	Trade and transport, manufacturing
<i>Hoover, H.C.</i>	2	Mining, mineral processing
<i>Howard, F.C.</i>	2	Mining, mineral processing
<i>Hughes, Colonel F. G.</i>	2	Mining, manufacturing
<i>Hyndman, W.H.</i>	2	Mining, mineral processing

<i>Jamieson, William</i>	3	Mining, public transport
<i>Kater, Hon. Henry Edward</i>	2	Primary produce processing, banking and finance
<i>Keating, Francis A.</i>	2	Pastoral, mineral processing
<i>Kelly, Bowes (Anthony Edward)</i>	4	Banking and finance, mining, public transport
<i>Kent, John</i>	2	Energy, manufacturing
<i>Littleton, Hon. H. S.</i>	2	Banking and finance, pastoral
<i>Loring, William J.</i>	2	Mining, mineral processing
<i>MacKellar, Sir Charles K.</i>	2	Banking and finance, primary produce processing
<i>MacLaurin, Sir H. Normand</i>	4	Pastoral, banking and finance, primary produce processing
<i>McBryde, Hon. D. E.</i>	4	Mining, public transport, banking and finance
<i>Moloney, James</i>	2	Banking and finance, media
<i>Moses, Hon. Henry</i>	3	Energy, banking and finance, manufacturing
<i>Moulden, Hon. B.A.</i>	2	Mining
<i>Muecke, Hugo Carl Emil</i>	3	Trade and transport, banking and finance, mining
<i>Nelson, Sir E. Montague</i>	2	Banking and finance, pastoral
<i>Newell, Andrew</i>	2	Manufacturing, banking and finance
<i>Patterson, D. W. Harvey</i>	5	Mining, primary produce
<i>Pelham Clinton, H.W.</i>	2	Mineral processing
<i>Philp, Sir Robert</i>	2	Banking and finance, primary produce processing
<i>Pinschof, Carl Ludwig</i>	2	Brewing, media
<i>Pratt, Hon. Joseph M.</i>	4	Public transport, energy, banking and finance
<i>Reid, J. S.</i>	2	Mining, public transport
<i>Reid, Robert</i>	2	Trade and transport
<i>Riley, J.H.</i>	3	Trade and transport, manufacturing
<i>Robertson, Dr. James Robert Millar</i>	2	Public transport, trade and transport
<i>Robinson, William Sydney</i>	2	Mining, mineral processing
<i>Saddler, Valentine John</i>	3	Mining, public transport, manufacturing
<i>Sellon, R.P.</i>	2	Energy
<i>Senior, E. N.</i>	2	Pastoral
<i>Sharp, William G.</i>	2	Primary produce, banking and finance
<i>Shelley, Norman</i>	2	Banking and finance, manufacturing
<i>Sprigg, W. G.</i>	2	Public transport, retail trade
<i>Stirling, Hon. Sir John Lancelot</i>	2	Brewing, mining
<i>Stoneham, Allen Henry Philip</i>	2	Public transport
<i>Swinburne, Hon. Geo</i>	3	Energy, mining, banking and finance
<i>Syme, J.C.</i>	2	Banking and finance, public transport
<i>Taylor, Patrick Thomson</i>	4	Energy, brewing, public transport
<i>Templeton, Colin</i>	2	Mining
<i>Trenchard, Edward</i>	2	Banking and finance

<i>Walker, James Thomas</i>	4	Banking and finance, trade and transport, primary produce
<i>Waterhouse, Arthur</i>	2	Banking and finance, energy
<i>Watt, W.C.</i>	5	Pastoral, primary produce processing, primary produce, trade and transport, energy
<i>Wethered, Oliver</i>	2	Public transport
<i>Wharton, John L.</i>	3	Mining, mineral processing
<i>Williamson, Andrew</i>	3	Pastoral, banking and finance
<i>Wren, Charles</i>	2	Public transport
<i>Wright, James</i>	2	Trade and transport
<i>Wynne, Agar</i>	2	Banking and finance

Table 2: Australia's Large Interlocked Corporations

Note: These are the interlocked firms, based on board memberships of the top 25 financial and top 100 non-financial firms. From data in Robert Lucas Nash, *Australasian Joint Stock Companies Year Book* (Melbourne: 1913–14).

Name	Abbreviation	Industry classification	Interlocks
<i>Adelaide Electric Supply Co Ltd</i>	Adelaide Electric	Energy	3
<i>Adelaide Steamship Company Ltd</i>	AdSteam	Trade and transport	5
<i>Amalgamated Zinc (de Bavay's) Ltd</i>	Amalgamated Zinc	Mineral processing	12
<i>Australasian Mortgage and Agency Co Ltd</i>	AMA	Pastoral	7
<i>Australian Estates and Mortgage Co</i>	AEM	Pastoral	6
<i>Australian Gaslight Company</i>	Aust Gaslight	Energy	8
<i>Australian Mercantile, Land and Finance Co Ltd</i>	AML&F	Pastoral	3
<i>Australian Mutual Provident Society</i>	AMP	Banking and finance	7
<i>Australian Pastoral Co Ltd</i>	Aust Pastoral	Pastoral	6
<i>Bank of Adelaide</i>	BofAdelaide	Banking and finance	7
<i>Bank of Australasia</i>	BofAust	Banking and finance	1
<i>Bank of New South Wales</i>	BofNSW	Banking and finance	11
<i>Bank of North Queensland</i>	BofNQld	Banking and finance	2
<i>Beath Schiess & Felsted Ltd</i>	BS&F	Trade and transport	2
<i>Brisbane Gas Co Ltd</i>	Bris Gas	Energy	1
<i>British Tobacco Co. (Australia) Ltd</i>	Brit Tobacco	Manufacturing	1
<i>Broken Hill Proprietary Block 10 Co Ltd</i>	BHP Block 10	Mining	15
<i>Broken Hill Proprietary Block 14 Co Ltd</i>	BHP Block 14	Mining	8
<i>Broken Hill Proprietary Co Ltd</i>	BHP	Mining	14
<i>Broken Hill South Silver Mining Co No Liability</i>	BH South Silver	Mining	3
<i>Buckley and Nunn Ltd</i>	B&N	Trade and transport	4
<i>Burns, Philp and Co Ltd</i>	Burns Philp	Trade and transport	5
<i>Carlton & United Breweries Ltd</i>	Carlton & United	Brewing	8
<i>Chillagoe Co Ltd</i>	Chillagoe	Mining	8

<i>Colonial Bank Australia</i>	Colonial Bank	Banking and finance	6
<i>Colonial Mutual Life</i>	CML	Banking and finance	2
<i>Colonial Sugar Refining Co Ltd</i>	CSR	Manufacturing	10
<i>Commercial Bank Australia</i>	Comm Bank	Banking and finance	9
<i>Commercial Banking Company Sydney</i>	Comm Bank Company	Banking and finance	7
<i>Dalgety and Company Ltd</i>	Dalgety	Pastoral	1
<i>Dunlop Rubber Co of Australasia Ltd</i>	Dunlop	Manufacturing	15
<i>Elder Smith and Co Ltd Adelaide</i>	Elder Smith	Pastoral	4
<i>Electric Light & Power Supply Corp. Ltd</i>	Light and Power Supply	Energy	1
<i>Emu Bay Railway Co Ltd</i>	Emu Bay Rail	Retail trade	11
<i>Finney Isles & Co Ltd</i>	Finney Isles	Trade and transport	2
<i>Goldsbrough, Mort & Co Ltd</i>	Goldsbrough Mort	Pastoral	1
<i>Great Fitzroy Mining Ltd</i>	Great Fitzroy	Mining	5
<i>Harrison Jones and Devlin Ltd</i>	HJ&D	Primary produce	7
<i>Herald & Weekly Times Ltd</i>	Herald and Weekly	Media	8
<i>Howard Smith Company Ltd</i>	Howard Smith	Retail trade	6
<i>J. Kitchen and Sons Ltd</i>	Kitchen & Sons	Manufacturing	0
<i>Kalgoorlie Electric Tramways Ltd</i>	Kalgoorlie Trams	Public transport	3
<i>Kauri Timber Co Ltd</i>	Kauri Timber	Primary produce	7
<i>London Bank Australia</i>	London Bank	Banking and finance	2
<i>Melbourne Electric Supply Co Ltd</i>	Melbourne Electric	Energy	5
<i>Melbourne Tramway and Omnibus Co Ltd</i>	Melbourne Trams	Public transport	9
<i>Metropolitan Gas Co.</i>	Metro Gas	Energy	9
<i>Mort's Dock & Engineering Co Ltd</i>	Mort's	Manufacturing	1
<i>Mount Lyell Mining and Railway Co Ltd</i>	Mount Lyell	Mining	7
<i>Mutual Life Citizens Assn</i>	Mutual Life	Banking and finance	6
<i>National Bank Australasia</i>	National Bank	Banking and finance	8
<i>New Zealand Loan & Mercantile Agency Co Ltd</i>	NZLMA	Pastoral	1

<i>Nicholson & Co Ltd</i>	Nicholson	Trade and transport	1
<i>North Coast Steam Navigation Co Ltd</i>	North Coast Steam	Retail trade	5
<i>North Shore Gas Co Ltd</i>	North Shore Gas	Energy	9
<i>Perdriau Rubber Co Ltd</i>	Perdriau Rubber	Manufacturing	1
<i>Perkins & Co Ltd</i>	Perkins	Manufacturing	1
<i>Perth Electric Tramways Ltd</i>	Perth Trams	Public transport	3
<i>Q'land Investment and Land Mortgage Co Ltd</i>	Qld Inv and Land	Pastoral	1
<i>Queensland Meat Export and Agency Co Ltd</i>	Qld Meat	Primary produce processing	1
<i>Queensland National Bank</i>	Qld National Bank	Banking and finance	1
<i>Robert Harper & Co Ltd</i>	Robert Harper	Manufacturing	2
<i>Robert Reid and Co Ltd</i>	Robert Reid	Trade and transport	4
<i>Royal Bank Australia</i>	Royal Bank	Banking or finance	1
<i>Silverton Tramway Co Ltd</i>	Silverton Trams	Trade and transport	6
<i>South Australian Brewing Co Ltd</i>	SA Brewing	Brewing	1
<i>South Australian Gas Company</i>	SA Gas	Energy	1
<i>Sulphide Corporation Ltd</i>	Sulphide Corp	Mineral processing	2
<i>Swallow & Ariell Ltd</i>	S&A	Manufacturing	2
<i>Swan Brewery Co Ltd</i>	Swan	Brewing	4
<i>Sydney Ferries Ltd</i>	Syd Ferries	Public transport	5
<i>Tooheys Ltd</i>	Tooheys	Brewing	3
<i>Tooth and Co., Ltd Sydney</i>	Tooth & Co.	Brewing	6
<i>Union Bank of Australia</i>	Union Bank	Banking and finance	3
<i>Wallaroo and Moonta Mining & Smelting Co Ltd</i>	Wallaroo and Moonta	Mining	4
<i>Winchcombe Carson Ltd</i>	Winchcombe Carson	Pastoral	1
<i>Wunderlich Ltd</i>	Wunderlich	Manufacturing	6
<i>Zinc Corporation Ltd</i>	Zinc Corp	Mineral processing	6