VISUALISING THE ARCHITECTURE OF FEDERATION:
Digital Media and Cultural Identity in Australian Architecture

Emma WILLIAMSON
Curtin University of Technology, Perth, Australia
e.williamson@exchange.curtin.edu.au

Introduction

This paper is drawn from recently completed research and a CD-Rom project entitled "Visualising the Architecture of Federation", funded by a grant awarded by the National Council of the Centenary of Federation, History and Education Programme, whose charter is to promote research on the period surrounding the federating of Australian colonies in 1901.[1] The project explores the spatial and visual history of the period using digital media.

Usual histories of Federation Style[2] in Australian architecture focus firstly on the domestic architecture of the time and secondly on generalised stylistic categories. I would argue that this type of representation does not take into account the subtleties of the architecture of the period which was distinctively Australian, encompassing a range of styles with international connections and unique local variants.[3]

This paper explores the origins and influences on Australian federation architecture, looking at the processes of collage, eclecticism and adaptation used by the architects of the day. In addition the paper will illustrate how digital media and visual manipulation were used within the CD-Rom to create a dense and image rich re-presentation of the buildings of the time, making reference to the variety of sources that were used simultaneously in the design of single buildings. This process of architectural collage reflects, as Paul Carter has more generally discussed, the 'normal' mode of constructing meaning and identity in the post-colonial context of Australia'.[4]

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[1] Co-grant holders Dr Hannah Lewi, Professor David Dolan. CD-Rom Design Kieran Wong at CODA. Programming design DUIT Multimedia

[2] Bernard & Kate Smith 1973, *The Architectural Character of Glebe*, University Co-operative Bookshop, Sydney, pp.90

[3] David Saunders August 1969 'Domestic Styles of Australia's Federation Period: Queen Anne and the Balcony Style', in *Architecture in Australia*, pp.655

[4] Paul Carter 1992, *Living in a New Country*, Faber and Faber, London, pp.187.

Cultural Identity and Federation

The issue of defence and the imagined threat of Australia's Asian neighbours was significant in the minds of many Australians and fuelled the debate for a federated nation.[5] Support for federation was based largely within the Eastern colonies with many Western Australians sceptical of the benefits it would provide to their colony. Under a federated agreement with inter-state free trade Western Australia would lose almost 90% of the state revenue that came from customs duties,[6] in addition to sharing the spoils of the recent goldrush. Although there was support for federation within the metropolitan region it was the migrant prospectors in the goldfields that swayed the vote to join the federated colonies. Despite the efforts of the government in Western Australia to influence the vote away from the federated agreement by allowing women to cast their vote for the first time,[7] at the referendum held on 31st July 1900, Western Australians agreed to join the other Australian colonies in the formation of the Commonwealth of Australia.
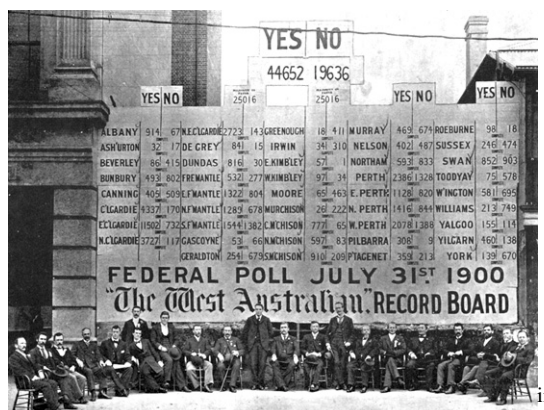
Although regional centres had been strengthened in the eastern colonies, Western Australia existed largely as a 'primitive frontier town'[8] until the beginning of the goldrushes in 1892. The goldrush created an economic boom in the west whilst the east struggled in recession. The period saw a huge population growth as 't'othersiders' from the eastern states came to find their fortune on the goldfields[9]. Amongst these were a large number of eastern states architects who came to satisfy the need for housing and infrastructure. Townships such as Kalgoorlie were literally built in a matter of years; transformed from hessian and iron shacks to permanent towns with large, classically styled, civic buildings and brick houses. As a consequence of this influx of wealth and population, and the continuing recession that occurred in the eastern parts of Australia, Western Australia became a fertile testing ground for many architects who migrated either permanently or temporarily during

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[5] Manning Clark 1969, *A Short History of Australia,* Heineman, Melbourne pp.188

[6] Manning Clark 1969, *A Short History of Australia*, pp 188 and F.K. Crowley 1970, *Australia's Western Third: a history of Western Australia from the first settlements to modern times* Heineman, Melbourne, pp.115

[7] F.K. Crowley 1970, *Australia's Western Third: a history of Western Australia from the first settlements to modern times* Heineman, Melbourne, pp.113. The vote in the metropolitan region was two to one in favour whereas the vote in the goldfield was 13 to one in favour. It was in the southern regional areas that the vote was two to one against.

[8] J.M. Freeland 1972, *Architecture in Australia*, Penguin Books, England, pp.198

[9] Margaret Pitt Morison & John White 1981, 'Builders and Building*s*', in *A New History of Western Australia,* ed T. Stannage, University of Western Australia Press, Perth, pp.533

this period. Reflecting this shift in architectural manufacture from the east to the west the CD-ROM project, and this paper, have a West Australian focus.

'The creation of a federated Australia was on the minds of the politicians in 1890, and the creation of an Australian architecture was on the minds of the architects.' [10] Vigorous national debate around issues of appropriate architectural languages and styles was played out through the various architectural Institutes and reported in the national press and publications such as *The Building and Engineering Journal* and later *The WA Building Mining and Engineering Journal*. These debates highlighted the struggle to respond to the wants of local communities (to keep the status quo) and the will amongst the profession to create a unique response to the Australian context. Therefore, conversation was largely centred around the adaptation of existing styles of architecture, following the stylistic motifs of Classical, Gothic or Romanesque, and modifying these as appropriate to a new country, culture and climate. Foreign architecture was seen more as a source than the answer to the problems of designing in Australia, with the changes necessitated by the extreme climate and the availability of local materials.[11]

Discussion surrounding the need for an Australian style of architecture began in the late nineteenth century. In the 1880's, the artist Lucien Henry devised an 'Australian Order of Architecture', and whilst his designs for the use of native flora and fauna as motifs on traditional Greek orders[12] remained largely on paper his ideas were promoted by some architects of the time. In particular E. Wilson Dobbs in an 1891 paper reported in 'News', 11 June 1892 stated that Henry's ideas were 'worthy of serious attention'[13] by all those who believed in the possibility of something original evolving from existing styles of architecture. In the same paper Dobbs referred to the process of 'eccentric eclecticism' in reference to the methods of architectural production being employed throughout the nation by many architects of the time.

Dobbs incorporated some of the ideas of Henry in the ornamentation of the façade of the South Yarra Post Office, Melbourne, completed in 1893. As a vocal admirer of the Romanesque style he sought to explore the potentials of 'combination'[14] as a method of architectural production. The building has been described as a synthesis of American Romanesque and Norman Shaw influences where the carvings in the spandrels of native flora and fauna is seen as a way of nationalising the combined influences of the Richardsonian[15], Arts and Crafts and Queen Anne styles.

[10] Myra Dickman Orth 1975, 'The Influence of the American Romanesque in Australia', *The Journal of the Society of Architectural Historians*, pp.3
[11] Conrad Hamann 1979, 'Nationalism and Reform in Australian architecture 1880 – 1920', *Historical Studies*, Vol. 18 no. 72, University of Melbourne, Melbourne pp.394
[12] Donald Johnson 1980, *Australian Architecture 1901 – 1951*, Sydney University Press, Sydney, pp.2
[13] E. Wilson Dobbs 1891, 'An Australian Style of Architecture' in *Building and Engineering Journal,* February
[14] E. Wilson Dobbs 1891, 'An Australian Style of Architecture' in *Building and Engineering Journal,* February
[15] Myra Dickman Orth 1975, 'The Influence of the American Romanesque in Australia', *The Journal of the Society of Architectural Historians*, pp.16
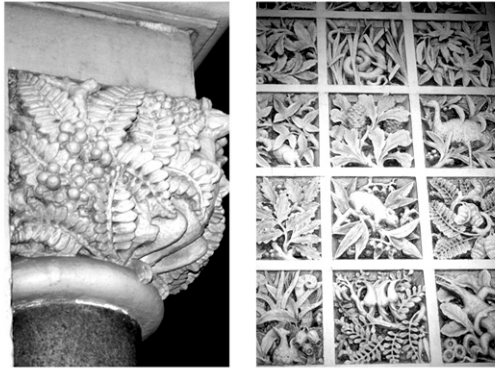
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Michael Cavanagh, president of the West Australian chapter of the Institute of Architects addressed fellow members in his opening address in 1903, raising the issue of an Australian style of architecture saying:
"We are placed here in novel circumstances in a new country which is in an absolutely primitive condition. And we are engaged in the task of attempting in our generation to graft on all the arts and conveniently and comfort of the highest stage of civilisation. If we are to do this successfully we must be equipped with the knowledge and arts of the old world, and we must also possess the practical ability to apply them to successfully meet the new conditions."[16]

Cavanagh's suggestion of 'grafting' can be likened to Dobbs' 'eccentric eclecticism'. Both advocated architectural reconciliation through the collaging of disparate elements in order to build a specifically different architectural model for Australia responding to issues of style, place, climate and materiality. This method of architectural manufacture, or 'mongrelism'[17] as more generally described by Howard Raggatt has been a critical tool in the search for a distinctively Australian Architecture throughout the twentieth century.[18]

Debate within the press encompassed the methods of manufacture of architecture and revealed emerging qualities of Australian cultural identity. In particular the desire for truth and honesty. At the "Report of the Fourth Meeting of the Australasian Association for the Advancement of Science 1892", Alan C. Walker spoke of the need for an Australian style of architecture stating that with 'logical truth and honest self-sufficiency" will come a period of 'architectural magnificence'.[19] This concern for material "truth" in architectural style may be seen as a precursor to early modernism that occurred in post war Australia.[20] Some argued that the Australian style of architecture should develop slowly through the rigorous following of existing

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[16] Michael Cavanagh, 1903, 'Architecture as an Art' as reported in *WA Mining Building and Engineering Journal*, June 20, pp.19

[17] *Collins Concise Dictionary Australian Edition* 1995, Harper Collins Publishers, Sydney, pp.859 defines mongrel 1. a plant or animal, esp. a dog, of mixed or unknown breeding. 2. *Derog.* A person of mixed race. *–adj.* 3. of mixed origin, breeding, character, etc.

[18] Howard Raggatt 1993, 'Notness: Operations and strategies for the fringe', *Fin de Siecle? And the twenty-first century Architectures of Melbourne,* 38 South, Melbourne

[19] Alan Walker 1892, *Report of the Fourth Meeting of the Australasian Association for the Advancement of Science 1892*, Sydney

[20] Conrad Hamann 1979, 'Nationalism and Reform in Australian architecture 1880 – 1920', *Historical Studies*, Vol. 18 no. 72, University of Melbourne, Melbourne, pp.393

styles and the slow adaptation to the specific Australian environment.[21] Whilst others believed that an Australian architecture would come from the combination of elements drawn from a variety of sources.

Before 1895 around 95% of architects in Australia were immigrants, and the vast majority of these were from Britain. By 1900 this British focus had shifted. As well as architects being educated within Australia, young architects came in contact with a range of international architectural styles through overseas travel and the increasing number of architecture and building journals.[22] In addition to British architectural journals a large number of American journals were held in Australian collections.[23] Australia's situation was likened to that of America; as a new country, with new conditions and new requirements and as such it provided a unique opportunity to do original work.[24] Increasingly America became a destination for their travels.[25] New American influences emphasised the expression of local materials as ornamentation rather than the intensely applied, often pattern book derived, decoration of the Melbourne Boom style in the decades preceding the Federation period. The resultant architecture came to reflect the shift in focus of Australian architects and the population more generally. Rather than the singular connection to England, the buildings of the period reflected a growing awareness of America and the combined influences of both.

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Materials and Local Contexts
As mentioned in the previous portion of this paper architects of the Federation period were able to create an Australian identity through building with the careful consideration of particular local contexts. Local influence came with the addressing of concerns of local climates, building materials and functions. The availability of materials in different locations across Australia had a great impact on the styles of the Federation period. Subtle shifts in style and texture were achieved through the employment of local materials. In Sydney buildings tended to use sandstone, in

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[21] E. Wilson Dobbs 1891,'An Australian Style of Architecture' in *Building and Engineering Journal,* February

[22] Conrad Hamann 1979, 'Nationalism and Reform in Australian architecture 1880 – 1920', *Historical Studies*, Vol. 18 no. 72, University of Melbourne, Melbourne, pp.393

[23] Myra Dickman Orth 1975, 'The Influence of the American Romanesque in Australia', *The Journal of the Society of Architectural Historians*, pp.6

[24] Michael Cavanagh 1893, 'An Architecture Racy of the Soil' reported in *The Building and Engineering Journal*, October 14, pp.156

[25] Donald Johnson 1980, *Australian Architecture 1901 – 1951*, Sydney University Press, Sydney, pp.8

Melbourne brick and render and in Perth many buildings employed limestone and other locally available stones.

The issue of material availability was nowhere more felt than in the remote and unique conditions of the Western Australian goldfields. The pressing demand for building materials in Western Australia, from Perth to the goldfields, inspired the search for locally available materials. The rapid transformation of Kalgoorlie initially required all building materials to be imported. Even bricks were sent from eastern Australia. The difficulty of transportation to the goldfields during the early years of the goldrushes required resourcefulness in material use. Timber was readily available but over time was considered somewhat unsightly and also a fire risk. The development of the railway line between the western port city of Fremantle, Perth and the goldfields toward the end of the nineteenth century, enabled materials such as brick, iron and steel to reach the goldfields townsites.

PANORAMIC VIEW   v

vi

Migrant architects from the eastern colonies brought with them styles and preferences for materials they were familiar with. This created a debate within the Western Australian community who expressed the desire to use locally available materials for reasons of economics and a sense of local pride. The development of locally produced and quarried materials underpinned this debate for regional specificity in building at a time when both regional independence and national unity was sought. With its policy to use locally manufactured products, the Public Works Department played a significant role in the development of local industries for the production of building materials.[26] During this period locally quarried stones such as Meckering granite, Donnybrook stone, Cottesloe and Rottnest limestone came to be used in large public buildings. The expression of materials and the influence of material selection upon ornamentation in buildings were intimately bound with a

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[26] Ingrid Van Bremen 1990, *The New Architecture of the Gold Boom in Western Australia: Government Buildings 'Under the Direction of G.T.Poole, 1885-1897*, unpublished thesis, University of Western Australia, Nedlands, pp.119

search for an Australian style. The same stylistic element became dramatically altered with different materials such as plaster, cement render, rough stone or brick.

a.   b.   c.   d.[vii]

The virtual Federation Museum

Within the project it was our intention to create virtual surfaces that begin to describe the rich influences of the period. This issue of surface has not been fully explored in previous histories of the period. As William J. Mitchell discussed in the essay 'Architechtonics: The Poetics of Virtuality', virtual spaces are almost entirely concerned with space and surface, not needing to concern themselves with issues of thickness, construction or structure.[27] The use of the computer allows for collage to become an illustrated mechanism in the mismatching of styles where collected imagery is recomposed to create hybrid spaces and surfaces.

The metaphorical construct of 'architecture' is often applied to the structuring of digital information systems. This metaphor was taken further in the 'Visualising the Architecture of Federation' project in the structuring and design of a 'virtual Federation museum'. The combination of the media and the metaphor created the organisational strategy for the information. A hierarchy was created through the layering of information. Although rooms are hinted at through graphic representation, the relationship between one room and another is left floating, allowing for users to navigate in non linear sequences through the virtual space of the museum. This method of re-presentation provides an important shift in the usual delivery of architectural histories where buildings are depicted as 'isolated, monotone, objects floating on the space of the page.'[28]

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[27] William J. Mitchell 1998, 'Antitechtonics: The Poetics of Virtuality', in The Virtual Dimension, ed. John Beckmann, Princeton Architectural Press, New York pp.207.

[28] Hannah Lewi & Philip Goldswain 2000, Hyper History: writing architectural histories for digital media *Formulation Fabrication: the Architecture of History Proceedings of the seventeenth annual conference of the Society of Architectural Historians, Australia and New Zealand*

The CD-Rom also provided a number of opportunities for the representation of visual information. Through the digitisation process we were able to collect and archive a vast range of information including drawings, maps, historical and contemporary photographs, materials and texts. The CD-Rom allowed for this to be easily stored, transported and accessed in the future. Important also to this project was the range of computer graphic software packages that allowed for the manipulation and re-presentation of the information. [29] The final spaces of the museum are literally collaged from the archive of images that were collected during the project.

Structure of the CD-Rom
There are a number of ways of reading and viewing the visual and textual information exhibited in the CD-ROM. The user can either follow specific works of Federation architects in the 'Architects Hall of Fame' galleries, or they can follow a series of thematic pathways, or catalogues, which reveal issues of style, material, place, type and so on. It is in the style catalogue that we focus on the notion of eclecticism and collage.

The CD-Rom contains the following rooms, foyers and exhibits:
i)Foyers: These are rooms in which the visitor explores for information and signs which lead to the access of other parts of the museum. The design of these main foyers is dense with images, information, cabinets and curiosities in the manner that nineteenth century museums were arranged.
ii) The Catalogue Room: This room contains a series of drawers, cabinets, boxes and books filled with information on particular themes including Style, Place, Material, Type and Function.
iii) Thematic Catalogues: These are the catalogue paths that organise the material content according to theme. These reflect actual modes of collection and display for example slides on a light table, material fragments in specimen drawers or images pinned in a scrapbook. Accompanying these catalogues is academic text establishing thematic pathways by which other parts of the museum can be viewed.
iv) Architects Galleries: The selected works of particular Federation architects are displayed in the walls of long galleries, viewing, reading and listening in much the same way as a contemporary museum exhibit. Hyperlinks between the gallery and the catalogue rooms allow visitors to create connections between the two.
v) Dado Cabinets: These are small drawers of detailed information which are directly linked to particular exhibits of an architects work. These are virtually accessible via the wall of the gallery.
iv) Map Rooms: A space where maps are laid out and moved across as a horizontal surface.

a.   b. [ix]

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[29] Primarily Adobe Photoshop was used for the digital collaging techniques employed in the creation of the virtual museum.

Style and Surface

We have demonstrated in the pages of the Style catalogue book that individual buildings built during the federation period, and particularly some of those built in the West of Australia, introduce a style of Australian architecture that relies on the collaging of a variety of architectural styles, and the adaptation to suit the local environment.

Reflecting this interpretation, the style catalogue is depicted as a series of interactive collages on some of the prevalent styles of the time including Romanesque, Queen Anne, Classical, Arts and Crafts and Art Nouveau. In these images, style is no longer defined by individual buildings, but as the grafting together of elements from parts of many buildings. (Users can move their cursor over the collages to get further images of where these elements and features have been derived from.) In this manner, the conventional way of cataloguing styles with almost botanical specificity is avoided.[30]

The most direct comparison to this project can be made with Apperly, Irving and Reynods' book 'Identifying Australian Architecture', where 12 styles are nominated for the architecture that occurred in the period between 1890 and 1915. As Willis and Goad comment in their paper 'A Myth in its Making: Federation Style and Australian architectural history', 'the divisions are too numerous and too prescriptive, clouding the important and significant hybrid nature of the design tradition ... ignoring the inventive borrowing and assimilation that underpins the tradition.'[31]

By contrast we reveal the hybrid and indeterminate architectural process of both reconciliation and mis-matching through the potentials of digital media. It is hoped that through the images of the CD-Rom, the potentials of multi-media histories have begun to be hinted at in finding new ways of vividly demonstrating and understanding the actual techniques by which our visual and spatial environments were created and re-created. Terms such as reconciliation, collage, assemblage, grafting and eclecticism take on new applications in multi-media, which are not merely contemporary graphic design fashions, but have deeply rooted precedents in the very architectural ideologies of the late nineteenth century; an architectural tradition that continued through out the twentieth century in Australia.

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[30] David Saunders August 1969 'Domestic Styles of Australia's Federation Period: Queen Anne and the Balcony Style', in *Architecture in Australia*, pp.655

[31] Julie Willis & Philip Goad 2000, 'A Myth in its Making: Federation Style and Australian architectural history', *Formulation Fabrication: the Architecture of History Proceedings of the seventeenth annual conference of the Society of Architectural Historians, Australia and New Zealand* pp.117

THE CATALOGUE ROOM ^xi

Illustrations

^i Virtual Museum façade. Image taken from the CD-ROM *Visualising the Architecture of Federation.*

^ii 'Federal Poll, July 31st 1900', image courtesy Battye Library 499, Passey Collection.

^iii Details taken from the South Yarra Post Office built by Dobbs in 1893. Local flora and fauna were used to nationalise the ornamentation. Image courtesy of the authors *Visualising the Architecture of Federation.*

^iv Romanesque style collage, taken from CD-ROM *Visualising the Architecture of Federation.*

^v Kalgoorlie in 1895, 'The Richest Mile in the World': image courtesy of the *Battye Cyclopedia*.

^vi Kalgoorlie Town Hall built 1908, image courtesy the authors *Visualising the Architecture of Federation.*

^vii The impact of locally available materials on the surface and ornamentation of buildings.

 A.   Brickwork, Melbourne. B. Rottnest limestone, Perth. C. Melbourne blue stone, Melbourne.

 D. Coolgardie stone, Kalgoorlie. Images courtesy the *authors Visualising the Architecture of Federation.*

^viii Foyer of the 'Virtual Museum', image taken from the CD-ROM *Visualising the Architecture of Federation.*

^ix Screens taken from the *Visualising the Architecture of Federation* CD-ROM. A. Architects Hall of Fame. B. Colour and Paint, taken from the 'Materials Drawers'.

^x Classical style collage, taken from the CD-ROM *Visualising the Architecture of Federation.*

^xi 'Catalogue Room', taken from the CD-ROM *Visualising the Architecture of Federation.*