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Article

# THE EMERGENCE OF AN ARCHITECTURAL ANTHROPOLOGY IN ABORIGINAL AUSTRALIA: THE WORK OF THE ABORIGINAL ENVIRONMENTS RESEARCH CENTRE

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Colonial ethnographers commenced compiling records on Australian indigenous shelters and camps from the 1870s and this work was extended into more complex settlement models by a small number of anthropologists and archaeologists in the mid-twentieth century. Building on this earlier work, a distinctive architectural anthropology has been developed and practised by researchers at the Aboriginal Environments Research Centre (AERC) based at the School of Architecture, University of Queensland, since the 1970s. The broad focus is on the nature of people–environment relationships of Australian Aboriginal and Torres Strait Islander peoples, but the resulting theories and methods may contribute to ongoing developments in the field internationally. This paper (with the aid of a case study) demonstrates how various research tools in the AERC theoretical frame have been incorporated into design processes, including the constructs of the “intercultural”, “recognition space”, “personhood”, and “cultural landscape”.

**Keywords:** Architectural anthropology; aboriginal Australia; aboriginal environments research centre; people environments; behaviour setting

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## ETHNOGRAPHERS AND ANTHROPOLOGISTS ENGAGING WITH ABORIGINAL ARCHITECTURE

Although the 1970s brought the first systematic professional engagement of architectural practitioners and academics with Aboriginal culture, the foundations of architectural anthropology

in Australia were established much earlier through the pioneering observations and records of late-nineteenth-century ethnographers. R. Brough Smyth (1878) and Thomas Worsnop (1897) generated early interest in the comparative studies of settlement patterns by collating written descriptions of shelters, houses, and camps from the journals of early marine and terrestrial explorers of the continent.<sup>1</sup> Walter Roth (1897) attempted to understand the continental diffusion of shelter styles and technologies based on his empirical research in north-west Queensland and Cape York exploring architectural properties, materials, and uses.<sup>2</sup> Short descriptions of Aboriginal camps, shelters, houses, and domiciliary spaces were provided by late-nineteenth and early- and mid-twentieth-century ethnographers and anthropologists,<sup>3</sup> but few considered these subjects of primary interest to anthropology, with the mainstream preoccupied with kinship, social and local organisation, economy, religion, and ceremonial life.<sup>4</sup>

An exception in the 1930s and 1940s was anthropologist Donald Thomson who executed significant research in Cape York and Arnhem Land, finding that different architectural types were contextualised within complex models of indigenous knowledge. These models combined environmental ethnoscience, material culture, seasonal economies, lifestyle patterns, and religious practices and obligations. In his work with the Yolngu of north-east Arnhem Land, Thomson documented Aboriginal people's domiciliary and ceremonial architectures through photography, drawings, and film.<sup>5</sup> He developed a methodological approach to understanding the diverse forms of Aboriginal architectures in the region, providing a systematic understanding of their uses, meanings, and properties, and was the first researcher to document Aboriginal dwelling knowledge from an indigenous (emic) perspective.<sup>6</sup>

Thomson's published typology of seasonal shelters for the Wik Mungkan in western Cape York (1939) was highly influential,<sup>7</sup> and subsequent architectural anthropologists have developed similar typologies of seasonal architectural types within cultural landscapes for the Nunggubuyu of Blue Mud Bay, the Darling River basin groups, the Lardil of Mornington Island, and the Warlpiri in the central-west of the Northern Territory.<sup>8</sup> Thompson's work was to inform ethno-archaeological research in the 1960s and 1970s in Central Australia, the Kimberley, Sandover River, Western Desert, and eastern Arnhem Land,<sup>9</sup> which was then extended by Margrit Koettig in 1976 to produce the first continental analytic overview of Aboriginal ethno-architecture and settlement behaviours, though primarily for archaeological use.<sup>10</sup> This body of research detailing domiciliary and spatial behaviour patterns was useful to later architectural researchers concerned with the culturally appropriate design of Aboriginal housing.

## ARCHITECTS BRIDGING INTO THE SOCIAL SCIENCES AND ANTHROPOLOGY

Whilst other international scholars interested in architectural anthropology based in Europe and the USA largely bypassed the developments of these Australian ethnographic studies from social anthropology, there emerged one early and significant bridging scholar. The architect and anthropologist, Amos Rapoport, who taught at the Department of Architecture, University of Sydney, after publishing his seminal book, *House, Form and Culture*, in 1969, produced a breakthrough paper on Australian Aboriginal people's use of space and place attachment in 1972.<sup>11</sup> Rapoport migrated to the USA where he remained influential in this field for 40 years.

Architect Peter Hamilton was one of Rapoport's earliest postgraduate students at the University of Sydney and was the first to engage in empirical architectural anthropology in Aboriginal Australia, living in a remote traditional camp of Yankuntjatjara people at Mimili in the early 1970s. Here, Hamilton pioneered research on the documentation of Aboriginal architecture, studying the interdependence between social, ritual, and domiciliary behaviours and the physical environment of the settlement, and he was the first Australian architect to employ the anthropological method of participant observation as a field research method.<sup>12</sup> Hamilton's writing and mentorship were to have a strong influence on later AERC scholars.

Meanwhile, another form of developing transdisciplinary scholarship in Australia was that initially called "architectural psychology" in the UK and the USA during the 1960s (later transforming to "environmental psychology"), with various branches termed "man–environment studies", "people–environment relations", and then "environment-behaviour studies", to use Rapoport's own preferred term.<sup>13</sup> This interdisciplinary field arose in a period of social unrest, environmental concerns, and a desire for new visions. It was originally inspired by general systems theory and was intentionally multidisciplinary, incorporating anthropologists (e.g., Edward T. Hall, Amos Rapoport), geographers of place (e.g., David Lowenthal, Yi-Fu Tuan), ethologists (e.g., Adam Kendon), sociologists (e.g., Robert Sommer), psychologists (e.g., Roger Berker, David Canter), and architects (e.g., Kevin Lynch, Christopher Alexander). In Australia, people–environment research first became established around 1972 at the Architectural Psychology Research Unit, School of Architecture, at the University of Sydney, under the leadership of architect Associate Professor Ross Thorne. Here, English psychologist Dr David Canter presented a short course in Architectural Psychology and presentations were made by various visiting Americans: Hans Esser (physical anthropologist), Claire Cooper (geographer/planner), Adam Kendon (ethologist), Wolfgang Preiser (architect), as well as Amos Rapoport.<sup>14</sup> These scholars studied a wide range of human responses to environments, including individual sensory responses, combined sensory responses, cognitive responses, emotional responses, behavioural responses, spatial responses, as well as physical changes made in the environment. The study and balanced integration of all of the human psychological and behavioural adjustments made in response to the environment, together with all those changes to the environment made as a result of human behaviour and activity in it, and the dynamics of the transactions between the two, generated a total scholarly field of people–environment interactions, one that arguably has more explanatory powers than was formerly achievable from within either of the separate and isolated (even at times competing) disciplines of architecture and the social sciences.

### **ARCHITECTURAL ANTHROPOLOGY EMERGES AT THE UNIVERSITY OF QUEENSLAND**

These early architectural anthropology and people–environment studies during the years 1970–1976 influenced the establishment of the Aboriginal Environments Research Centre (AERC, formerly Aboriginal Data Archive) in the School of Architecture at the University of Queensland (UQ) in Brisbane in 1976. The process was initially catalysed by requests in 1972

for senior architecture students to engage in issues of Aboriginal housing design at Cloncurry and an Aboriginal Community (or Cultural) Centre in Mount Isa, north-west Queensland. At this time, not only were the Aboriginal housing models contentious and often failing, but the majority of research on Aboriginal Australia lay in the field of anthropology, with none in architecture. The Australian government's Aboriginal policy was moving from assimilation to self-determination and it was clear that a theory of appropriate indigenous architecture had to be framed within a theory of cultural change, one which would account for the diverse patterns of residential change from metropolitan to rural to remote Australia. Again, the only available theoretical tools at that time lay in anthropology.

Professor Balwant Saini became the Head of the School of Architecture at UQ in 1973 with a mandate to found its first postgraduate research cohort. He had several exploratory publications in Aboriginal housing and an openness to cross-disciplinary research, quickly forging a link with the first UQ Professor of Sociology, John Western, and the ethologist, Professor Glen McBride, to implement a "Man-Environment"<sup>15</sup> agenda at UQ with frequent visits by international scholars. A key challenge was to explore how this new discipline, which aimed to establish improved congruencies between designed environments and human behaviour, could be applied in the cross-cultural context of Aboriginal Australia.

One of the co-founders of AERC in 1976 was UQ architectural graduate Peter Bycroft, who had travelled to the University of Surrey in 1973 to join the intake of the world's first postgraduate course in architectural psychology run by David Canter. He returned to UQ to take up a lectureship under Saini and ran the Architecture School's first course in Man-Environment Studies; he also imported the latest applied theoretical tools from the UK, including behaviour setting theory, cognitive mapping theory and method, and post-occupancy evaluation (POE). The other co-founder of AERC was one of the present authors (Memmott), who had enrolled as the first full-time postgraduate student in the UQ School of Architecture and undertook remote Aboriginal community fieldwork commencing in 1973, driven by an interest in cross-cultural use of space and incorporating the constructs of territoriality, proxemics, conceptual space, and setting theory.

In the mid-1970s, Memmott participated in the University of Queensland anthropology honours course, where the newly emerged fields of cognitive anthropology and sociolinguistics were being studied. The concept of "ethnoscience" was one of the popular topics at the time together with a separation of the "emic" perspective of indigenous knowledge from the etic perspective of Western science.<sup>16</sup> Memmott and Bycroft applied the latter to generate the term "ethnoarchitecture" in relation to their fieldwork findings on self-constructed Aboriginal fringe camps, pastoral camps, and mission villages.<sup>17</sup> It would take another 30 years before the description "Aboriginal architecture" became an accepted term within the architectural profession.<sup>18</sup>

The type of architectural anthropology developed in the AERC was then drawn from theories and practices sourced from social anthropology and the evolving field of "people-environment studies". Anthropology provided the broad theoretical constructs of culture, material culture, social behaviour, enculturation, acculturation, cultural identity formation, cultural change

processes, power and control, and, most importantly, the construct of “person” or “self”. In specific reference to Aboriginal Australia, AERC scholars drew on a variety of topics such as Aboriginal space and territorial constructs, kinship, social organisation, land tenure, seasonality and economic use of environment, cultural landscape, place constructs, and ethno-botany. Applying these theoretical constructs, a lens of “culture” was placed over the top of architectural research projects to differentiate culturally-specific lifeways and world-views, and to establish the extent of the congruency or “fit” between architectural models and culturally distinct behaviours and values as well as forms of service delivery policy and style.<sup>19</sup>

In developing a form of architectural anthropology, researchers in the AERC also sought to adapt conceptual and methodological frameworks from the emerging field of environmental psychology (and its predecessor disciplines).<sup>20</sup> In particular, a transactional model was developed that viewed people–environment relationships as a dynamic two-way process. This approach enabled a balance between understandings of how people find (or decode) meanings in their environments and how people implant (or encode) meanings into their environments; or, said another way, it enabled multiple perspectives on how people use their environments and how people design their environments as well as the interrelation between the two.

It is worth mentioning that in the late 1990s and early 2000s, there was also a body of research and writing on Aboriginal public architecture that came out of the University of Melbourne, generated from a competitive research grant won by Dr Kim Dovey. This research had a strong focus on urban environments and was initially informed by Dovey’s earlier grounding in phenomenology and place theory,<sup>21</sup> neither of which, however, were central planks in Australian anthropological theory at the time. Key texts critiquing authorisation of meanings and identity in Aboriginal cultural centres and museums were written by Kim Dovey and Mathilde Lochert, which were later followed by some applied architectural work by Graham Brawn on the cultural design parameters of contemporary justice and court architecture in Australia.<sup>22</sup>

During the late 1990s and early 2000s, AERC postgraduates were maintaining the practice of empirical field research using participant observation as a primary data collection method, an approach not shared by the emerging cultural studies field, and a point of debate between anthropology and cultural studies scholars as the former defended their turf.<sup>23</sup> The divergences of the two paradigms had further separated AERC and University of Melbourne scholars in the nature of their approaches by the 2010s.<sup>24</sup>

### ARCHITECTURAL ANTHROPOLOGY IN THE 2000S

Much primary research has since been undertaken on the traditional settlements and architectures of the world and their processes of cultural change under the impacts of colonialism and globalisation.<sup>25</sup> The theory of architectural anthropology has branched and merged into such study fields as Vernacular Architecture Studies (VAS), Environment Behaviour Studies (EBS), Ethnoarchitecture (EA), and Space Syntax Settlement Theory, and is regularly showcased at international conferences such as the International Association for the Study of Traditional

Environments (IASTE), Seminar on Vernacular Settlements (SVS), International Association for People and their Surroundings (IAPS), and Environmental Design Research Association (EDRA).

The re-emerging interest in architectural anthropology as a discipline in its own right saw, in a 2001 book publication titled *Architectural Anthropology*, the juxtaposing of one form of ethologically-oriented architectural anthropology, as promoted by Nold Egenter (which starts with understandings of the socio-spatial and nest-building behaviours of the great apes), with that of Environment Behaviour Studies, as promoted by Amos Rapoport, positioning them as quite different paradigms.<sup>26</sup> Rapoport, despite being an anthropologist, rejected architectural anthropology, taking a narrow reading of its definition as essentially a bi-disciplinary proposition with limited explanatory power, and arguing instead for the necessity of a multi or trans-disciplinary approach that went beyond the two disciplines in order to address the full field of people–environment studies. However, the editor of this book (Amerlink) argues for taking a broader definition of anthropology to reconcile the two paradigms, one which addresses both the biological and the sociocultural aspects of humankind along evolutionary lines. One of the significant contributions of the AERC’s approach to architectural anthropology has been to borrow, adapt, and integrate from both of these paradigms for application to complex Aboriginal social problems. As introduced above, this multidisciplinary approach started with a place-and-space approach to domiciliary, family, and group settings in Aboriginal Australia,<sup>27</sup> drawing upon the spatial behaviour theoretical influences from the 1960s (such as ethology, proxemics, and territoriality), various theory and practice components from ethnography and social anthropology, and, finally, environmental psychology. This synthesis has provided a multidisciplinary investigative framework in which to address the environmental and social challenges of indigenous settlement and housing design, housing management and service delivery, and issues of crowding and homelessness.

The transactional model of people–environment implicitly assumes that the sciences of people (especially social sciences, including anthropology) can inform environmental appraisal and design, and that the study of architecture can inform understandings of human behaviour. Drawing on these two skill sets, teams composed of both architects and anthropologists can be formed to address complex research problems. This approach corresponds with what has now come to be termed in the literature as “design anthropology”.<sup>28</sup> In design anthropology, an anthropologist typically works within a medium or large architectural or design practice, moving from observation, participation, and interpretation to eventually engage in the co-creation of designs. Design is recognised as a major site of cultural production.

A converse transdisciplinary exercise is to produce anthropology by way of architecture, a proposition repeatedly posed by Tim Ingold (2013), encapsulated in his phrase, “what and how to learn from making”. This is also a part of the AERC agenda, where it is recognised that “there appears to be a genuine affinity between design and ethnography as a process of inquiry and discovery that includes the iterative way [by which] process and product are interconnected and the reflective involvement by researchers and designers”.<sup>29</sup> For example, through the process



of making traditional *mija* (customary dome structures) alongside Aboriginal builders in the Australian wet tropics, AERC researcher Tim O'Rourke recorded a complex system of cultural landscapes and people–environment transformations that challenged reductive models of classical Aboriginal building traditions.<sup>30</sup>

### THE AERC FRAMEWORK AND ITS ELEMENTS

The AERC's architectural anthropological framework developed through regular engagement with Australian indigenous people and their environments includes: the transactional people–environment relationship model, constructs of “person”, religious beliefs, and the environment; a model of classical Aboriginal geography; the concept of the “intercultural” in indigenous governance and service delivery and the concept of the “recognition space”; and the Aboriginal behaviour setting.<sup>31</sup> We now outline brief summaries of some of these elements.

#### The Transactional People–Environment Model

In a transactional people–environment model, study is made of the physical environment and the human behaviours within it, and their interplay. The transactional people–environment model is very effective as a tool for analysing the role of environmental sites, territories, and spiritual entities in shaping individual and group identities and constructs of self (or person). These beliefs inform behavioural values and practices, as well as systems of social capital that have potential for addressing social problems; however they generally lie outside the perspectives of government policy makers who are preoccupied with more directly manipulable variables to adjust and measure as key performance indicators (KPIs) in attempting to impose or generate behavioural changes. This transactional frame enables consideration of the ways in which people encode meanings into environments and decode meanings from environments. It also supports the examination of behaviours on a variety of scales. Utilising a combination of observational and interviewing techniques, what people actually do in their environments can be studied alongside what they say they do and why they do it. The transactional world-view simultaneously accommodates social and psychological properties in places and objects as well as environmental properties in consciousness and identity.<sup>32</sup>

#### Construct of “Person”, Religious Beliefs, and the Environment

Theorists concerned with personhood have explored the dichotomy between “relational” personhood as a characteristic of indigenous societies and totemic religious traditions, and the “individualistic” personhood or “possessive” personhood characteristic of Western societies.<sup>33</sup> While possessive individualism exists amongst traditionally-oriented indigenous peoples, ownership rights may move within a tension between autonomy and social relatedness.<sup>34</sup> Social identity is valued and attained through the sharing of possessions such as housing, clothing, food, weapons, even cars;<sup>35</sup> what is most valued, however, is identity with sacred sites and associated rights, ritual power and knowledge acquired through stages of initiation during one's



life. Place-based identities are transmitted down through generations. An essential aspect of the Aboriginal construct of person is the religious belief system of the Dreaming and “the Law” (the latter having been established within the Dreaming) that defines authority for daily events and sets codes of behaviour and ceremonial obligations for humans.<sup>36</sup> Aboriginal intellectual Noel Pearson argued that despite the passing of the “traditional mode of life [...] demand sharing remains a strong feature of indigenous kinship and identity”, and that “whether in traditional remote areas or in the more settled areas of the country, the power of this culture is compelling”; none are exempt.<sup>37</sup>

### **The Model of Classical Aboriginal Geography**

When British colonisation of Australia commenced in 1788, the most common indigenous land-holding group was the patrician, holding religious, hunting, fishing, and food-and-material gathering rights in its estate. An estate typically contained numerous named places or locales. The named places contained recurring place types forming an ethno-classification of geography. These place types included seasonal campsites, water sources, dance grounds, ceremonial grounds, managed fighting (or tournament) venues, protected seasonal food harvest sites, concentrations of resources (e.g., quarries, timber stands, medicine plants), hunting sites for large game, and, most importantly, sacred sites (the building blocks of land tenure). This pattern of distributed named places of various types within estates was repeated across the landscape, albeit of varying character in different terrains and biomes, but with a schematic and logical consistency to comprise cultural landscapes. Overlaid on this classical geography are numerous other places which have been created during colonial and post-colonial times and which are also of significance to contemporary Aboriginal people. All these place-properties construed in such a cultural landscape model (often glossed as “country”) can provide potent components of any design intervention in any piece of Australian environment. Conversely, as noted before, they often provide significant elements within the identity systems of indigenous persons and groups.

The models of Aboriginal geography and land have, of course, their own history of evolution and contestation within anthropology, a notable turning point being the Hiatt and Stanner debate around “estate” versus “range” and “clan” versus “band” in the 1960s. Of huge significance has been the impact of State land rights legislations and Native Title legislation, also complemented by State Cultural Heritage legislations, which have all generated professional work for anthropologists in documenting sites, estates, and land tenure models, and challenging and defending them in court as expert witnesses. This kind of work was carried out by Memmott from 1980, and he then trained AERC researchers and postgraduates over three decades to participate in such consultancy work, ensuring that models of Aboriginal place and cultural landscape were topics of regular research debate at AERC. Another aspect of this work, which was also theoretically contested in anthropology, was whether the cultural change of traditions and customs could be upheld in court on behalf of claimant groups within narrow conceptual frameworks of law that demanded claimants to have maintained customary practices since colonial contact.<sup>38</sup>

### **The Concepts of the “Intercultural” and “Recognition Space”**

Although still a contested theoretical construct in Australian anthropology, the concept of the “intercultural” also relates to the idea that in particular contexts, through cultural change processes, Aboriginal people can identify with multiple subjectivities, Aboriginality being just one component of their construct of self. The concept of the “intercultural” can be applied to either the integration of and switching among cultural identities and cognitive styles by a single individual, or to the interaction in a social setting of participants who come from diverse cultural backgrounds. Intercultural analysis is also a useful concept when exploring service delivery models developed by the State for indigenous peoples.<sup>39</sup> Focusing on service delivery from an intercultural perspective introduces a related concept (or principle), that being the “recognition space” which prescribes the recognition and appreciation of the respective cultural positions taken by government agents, other corporate agents (e.g., NGOs), indigenous individuals, and their community-based organisations. This requires an acknowledgment of inter-cultural differences, similarities, and potentials and a willingness to find common ground in fulfilling different sets of responsibilities.<sup>40</sup>

### **Indigenous Governance and Service Delivery**

In terms of service delivery to indigenous population groups at the settlement or regional scale, the concepts of “intercultural” and “recognition space” necessitated another critical area of analysis, that of local governance. Local governance in contemporary Aboriginal communities now involves multiple agencies of local, state, and federal government departments, non-government organisations (NGOs) and indigenous units or organisations, encompassed within political, legal, and bureaucratic frameworks. However, it may also be overtly or covertly underlaid by customary governance and decision-making practices, which may have been revitalised and/or in certain ways reified through Native Title claims in the Federal Court that require groups to form “prescribed body corporates” to enact the governance of matters affecting the environmental rights of the traditional owners (this in turn requiring understandings of the anthropology of customary social organisation).

Effective service delivery, including in relation to architectural procurement and management, may require understandings of how to engage with these various modes of governance and their agents and how to design and implement decision-making processes that enhance Indigenous governance and build social capital.

### **Concept of the Aboriginal Behaviour Setting**

The broader construct of the “behaviour setting” originated from within psychology in the 1950s,<sup>41</sup> and has been refined from within architectural psychology and environmental anthropology over six decades. In our day-to-day lives, we select and access various combinations of behaviour settings (such as shops and theatres) from within which we accomplish a great diversity of activities and goals due to the inherent stability, safety, and predictability of those settings and the consequent guarantee of their outcomes. A school room is a good example

of a behaviour setting from which we can elicit the essential components and properties of a behaviour setting. The “milieu” consists of the building, its furniture and equipment (student desks, teacher’s table, projection screen, etc.), and the system of time used to structure the day’s teaching activities (periods and bells). The “standing behaviour pattern” involves students sitting in rows at their desks attending at times to their computers, and at times to the teacher and the whiteboard, as they systematically carry out their lessons. “Control” of the setting is in the hands of the teacher, perhaps with support from the headmaster. “Setting deviancy” by the children is dealt with by warnings, intimidation, and punishments. The behaviour setting puts people in the situation of contributing their personal behaviour to setting maintenance. At the same time, their individual lifestyles and life spaces are shaped by the setting. This is what comprises the “synomorphy” of the setting.

The behaviour settings is thus an ecological unit consisting of an interaction between behaving persons and things, time, and the immediate built environment. The physical things and time properties (or the “milieu”) are supportive of the behaviour and surround it. There is an interdependent relation between the two, hence the term “synomorphic”, meaning “fitting together”. “Standing behaviour pattern” implies that the behaviour is persistently “extra-individual”, i.e. there may be a turnover of individuals in a setting, but even though they come and go, they display repetitive or recurring characteristic patterns of behaviour in that particular setting.<sup>42</sup>

Thus, the structural qualities of the setting are generally maintained independent of individual personality, except in exceptional cases of social deviancy. Behaviour settings involve forces which coerce individual behaviour to conform to the recognised setting models of what is the correct or appropriate behaviour to carry out in the circumstances. However, when a person deviates from the social rules of the setting, there is usually some force of control that corrects or removes the deviant behaviour.

The properties of behaviour settings can vary in a range of ways between the environments of different cultural groups.<sup>43</sup> And when persons of one cultural background are required to use the settings of another culture, unexpected stress can arise due to conflicts between values and understandings of how settings should operate, which in turn may lead to a reluctance to use such settings.<sup>44</sup> On the other hand, optimal quality settings display a congruence between architectural design, setting control, behavioural patterns, and underlying generative values.

Recent cross-cultural application of behaviour setting theory by AERC researchers has highlighted the significance of contemporary settings created by Aboriginal people, using their own intercultural frameworks, for the positive maintenance of their well-being,<sup>45</sup> settings such as health clinics, transitional accommodation types, educational and training facilities, homeless refuges, meeting places, etc.

Defining an “Aboriginal service setting” as one that is largely controlled by Aboriginal people and is designed to be “comfortable” for Aboriginal consumers, researchers at the AERC have found this is achieved through a combination of indigenous-managed behavioural patterns, and environmental and artefactual features and physical setting controls that are relatively predictable, culturally secure, and conducive to use by Aboriginal people. Aboriginal service settings

also reflect a sense of cultural identity with and even ownership by Aboriginal people when the service is being delivered in an effective way; setting maintenance as a safe and effective place is thus enabled by Aboriginal social capital.<sup>46</sup>

### **APPLIED ARCHITECTURAL ANTHROPOLOGY IN SOCIAL FIELDS**

The transdisciplinary theoretical framework and its constituent elements presented above are tools used by architectural anthropologists in the AERC for addressing complex social problems. To exemplify how the applied architectural anthropology approach can be operationalised, we present a case study led by Dr Shaneen Fantin, a practising architect who is an AERC alumna. Fantin had undertaken her PhD research during 2000–2003 with a supervisory team in AERC drawn from architecture, anthropology, and environment-behaviour studies. Her doctoral topic was culturally appropriate housing design for the Yolngu in the north-east Arnhem Land of Aboriginal Australia. She investigated a range of cultural imperatives that she found was significantly impacting on housing design and settlement planning, including beliefs in sorcery and malevolent practices, traditional land ownership rights, mortuary practices, and social avoidance behaviours, but she also drew part of her theoretical framework for cross-cultural analysis from environmental psychology, particularly the theories on crowding, privacy, and socio-spatial behaviour. It was her study of avoidance behaviour in the Yolngu kinship system which particularly added new theoretical knowledge to anthropology. Dr Fantin applied her unique findings on architectural anthropology through working on housing projects for Arnhem Land communities from within Darwin-based architectural practices.<sup>47</sup> She then established her own architectural and research practice in Cairns named People-Orientated Design (POD), and switched her attention to remote Aboriginal communities in North Queensland and Cape York.

#### **Supported Accommodation Innovation Fund Project, Cairns**

In 2015, the Supported Accommodation Innovation Fund (SAIF) Project, a centre for indigenous people with acquired brain injury, was planned in Cairns.<sup>48</sup> The design process used in the creation of this building was distinctive, extending the applied architectural anthropology approach. The centre offers a rehabilitative residential environment for indigenous people with an acquired brain injury, most of whom have been homeless and living “rough” in public places in the urban environment of Cairns. The design features a central service facility encircled by eight one-bed residential units in an integrated landscape of plants significant to indigenous people in the region. The health provider client was Synapse (formerly Brain Injury Association of Queensland) and the design was strongly informed by a culturally-appropriate philosophy and model of care which stressed a supportive and personalised health-care approach encouraging independence.

The architectural design project was unique with a strong team commitment to incorporating indigenous ways of doing business into a traditional delivery model. This commitment to project governance included maximising the involvement of indigenous people in the

project, with almost half the professional services provided by indigenous architects, ecologists, design managers, and trainers. Non-indigenous architect Dr Shaneen Fantin worked as a sub-consultant to an Indigenous Design Manager – GudjuGudju Fourmile, the Director of the Indigenous Construction and Training Company (ICTC) at the time – and, instead of operating under a traditional role as architect and project manager, flipped her role and was instructed, led, and guided by an Indigenous design team. Fantin and Fourmile have described this collaborative and participatory experience as a form of “intercultural design practice”.

Prior to her involvement on the SAIF Project, Fantin had many years practising as a professional architect, working on indigenous design projects, and can be described as a leader in the field of participatory design. In her experience, two elements of existing design methodologies aimed at increasing indigenous people’s participation in architectural projects are problematic for all participants: firstly, the challenge of ethnocentric cultural and social assumptions related to non-indigenous building and development legislation and time management, and secondly, the “unavoidable presence of emotions and feelings” as part of design discussions and transactions. The aspects of intercultural design practice used to create the SAIF Project addressed these challenges by working more collaboratively, challenging government funding time constraints and project management methodologies, and sharing an emotional understanding and commitment to the project. Emotional engagement in the project was recognised in an explicit and positive way, like one might do at church, i.e. by participants talking about their feelings in the style of a testimonial.<sup>49</sup>

How did the team members work differently, aside from creating an indigenous-led design, governance, and management process, and maximising the professional involvement of indigenous people? Incorporating indigenous ways of doing business, or “indigenizing” the project management methodology, included the following practices that created a cross-cultural “recognition space” and fostered receptive listening: acknowledgement of traditional owners at every meeting; clear communication protocols that gave the Design Managers control and veto over design decisions; allowances in project time-frames for meetings with traditional-owner design and ecology groups, as well as for cultural family business such as “sorry business” (mourning rituals); and being respectful during meetings and allowing everyone space and time to talk without being interrupted or spoken over.

Fantin also incorporated her own design engagement methodology, running workshops with indigenous stakeholders on incorporating culture into design, a process she describes as a “two-way learning environment” (having a transactional character) that needs to be underpinned by:

Respect for existing practices and beliefs; understanding and recognition of existing traditions, history and experience; willingness to work together, to listen, to apply, to refine the thinking and the work as it progresses.<sup>50</sup>

Some of the indigenous design features that have been incorporated into the SAIF Project as a result of these processes include: the Centre’s orientation and layout responding to cultural and scenic vistas within the surrounding cultural landscape; the use of traditional Aboriginal

rainforest architecture from the region to influence the form of each residential building; integration of a barbecue area and healing herb garden into each residential unit; the roof form inspired by leaves and traditional water carriers from the region; careful spatial organisation of the rooms and buildings to incorporate kinship avoidance relationships and balance privacy with the need to pay respect to family members; and an intricate landscape design providing planting areas for five different seasons, native bush foods, vegetables, and medicinal plants. In recognition of Aboriginal personhood and well-being comprising relationships with unseen ancestral and totemic spirit beings, 90-degree corners in the residential sleeping rooms have been eliminated (rather, the walls join in a gentle “bull-nosed” curve), which is believed to remove potential resting places for malevolent spirits.<sup>51</sup> The overall complex is arguably a set of Aboriginal behaviour settings (although this claim needs to form the subject of a separate paper).

Fantin believes that by “trying to do business in a way that allowed for indigenous decision-making processes”, the design method was innovative and effective in supporting the incorporation of indigenous knowledge and identity into architecture. In terms of acknowledging indigenous identity in design consultation, Fantin argues that this project challenged non-indigenous design practices and moved beyond “ cursory references” in the built environment through colour schemes and motifs to a more authentic form of Aboriginal architecture. She reflected, “I continue to believe that to create indigenous architecture, indigenous leadership, involvement and engagement in the process should be implicit. It should be how we do business on indigenous projects, not an additional consideration”.

## CONCLUSION

This paper has introduced an Australian version of architectural anthropology developed at the Aboriginal Environments Research Centre (AERC), University of Queensland. The chapter was premised on the proposition that 100 years (from c. 1880) of intermittent interest in the use of domiciles and camps by anthropologists in Australia has not only developed into a sub-discipline of anthropology called “architectural anthropology”, but has also seeded a theoretical and methodological convergence with architectural theory combined with people–environment theory. This came to maturity in the AERC through the period from the early 1970s to the present time, and has a wider significance of addressing socio-environmental, behavioural, and intercultural issues in contemporary Australia as well as architectural practice and scholarship.

Indeed, some other Australian architectural researchers and practitioners have made contributions for limited periods with anthropologists.<sup>52</sup> However, the AERC, through its transference of a knowledge and practice base from all three of these disciplines, has produced a substantial corpus of alumni with a distinct set of practice tools, who are making their mark on both scholarship and applied research.<sup>53</sup> The case study presented an example of how key theoretical constructs developed in an Australian form of architectural anthropology have informed contemporary architectural practice that places high value on Aboriginal people’s leadership, governance, and knowledge systems in design processes.



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**About the Authors:** *Paul Memmott* is an anthropologist/architect and Director of the Aboriginal Environments Research Centre (AERC), a research and resource centre based in UQ's School of Architecture, with staffing and logistical support from the Institute for Social Science Research (ISSR). The AERC has been constructed within a theoretical framework combining behaviour–environment studies and environmental psychology that emerged in the 1960s and 1970s with social anthropology. Memmott's major research interests are in architectural anthropology and material culture, Aboriginal housing and institutional architecture, indigenous homelessness and public place dwelling, indigenous family violence, and indigenous geography of place and cultural landscape. Memmott has over 250 publications, including his prize-winning book, *Gunyah Goondie and Wurley: The Aboriginal Architecture of Australia* (2007). *Cathy Keys* is a Research Fellow in the Aboriginal Environments Research Centre, School of Architecture, University of Queensland, Saint Lucia, Australia.

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## NOTES

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4. Paul Memmott, *Gunyah, Goondie and Wurley: The Aboriginal Architecture of Australia* (St Lucia: University of Queensland Press, 2007), 315–316.
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13. For an historical overview of the birth of this field of research, see Robert Bechtel, *Environment and Behavior: An Introduction*, (Thousand Oaks, CA: Sage Publications, 1997), Ch. 3. The UK epicentre was the Strathclyde School of Architecture, where the psychologist David Canter was engaged in understanding people's values and attitudes through building appraisals, more commonly now referred to as Post Occupancy Evaluation (POE). The approach synthesised in an "Architectural Psychology Conference" at Strathclyde in 1969. Canter moved to the University of Surrey where he established the first postgraduate Master's course in architectural psychology in 1973 and published *Psychology for Architects* in 1974. (In 1972, Canter co-authored with Ross Thorne at School of Architecture in University of Sydney, who founded the Australian branch of

the movement). Meanwhile, on the west side of the Atlantic, the scholar John Archer had started the *Architectural Psychology Newsletter* in 1967–1968, which transformed into the journal, *Man-Environment Systems*. It remains an ongoing serial publication published by the then formed (1969) Association for the Study of Man–Environment Relations, despite a cringe over its name arising from concurrent feminist politics. Simultaneously, the Environmental Design Research Association (EDRA) was formed in the USA led by Henry Sanoff (1968), aiming to transcend disciplinary boundaries, and whose conferences are still ongoing. A number of USA epicentres emerged in this research field at this time, the most long-lasting of which was at City University of New York where Proshansky, Ittleson, and Rivlin later published *Environmental Psychology* in 1980. The European equivalent of EDRA was founded in 1981 as the International Association of People–Environment Studies (IAPS). Prominent early scholars of influence in EDRA and IAPS were psychologists Rogen Barker with his behaviour setting theory, anthropologist Edward Hall with his “proxemics” and analysis of personal space, Robert Sommer extending the proxemics theory into territoriality, the Australian anthropologist Amos Rapoport (who moved from University of Sydney to University of Wisconsin), Kevin Lynch with his approach to the cognitive mapping of the city, and Christopher Alexander at Berkeley with his pattern language of the city.

14. David Canter, ‘A Short Course in Architectural Psychology: Proceedings of a Five Day Course’, ed. Architectural Psychology Research Unit (Sydney: Department of Architecture, University of Sydney, 1974), cited in Paul Memmott, “Aboriginal People–Environment Research: A Brief Overview of the Last 25 Years”, *People and Environment Research*, no. 55–56 (2000), 87–115.

15. This term then transformed to People–Environment Studies as the feminist movement swept through the Western world seeking reforms to achieve gender equity.

16. Thomas Barfield (ed.) *The Dictionary of Anthropology* (Oxford: Blackwell Publishing, 1997).

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20. This was assisted by AERC’s Adjunct Professor Joseph Reser, an environmental psychologist, during the 1990s and early 2000s.

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Aboriginality in Architecture”, in L. Lokko (ed.), *White Papers, Black Marks: Architecture, Race, Culture* (London: Wiley, 2000), 218–235; Graham Brawn, “The Changing Face of Justice: The Architecture of the Australian Courthouse”, *Architecture Australia*, 98, no. 5 (2009), 39–42.

23. For example, see Signe Howell, “Cultural Studies and Social Anthropology: Contesting or Complementary Discourses?”, in Stephen Nugent and Cris Shore (eds), *Anthropology and Cultural Studies* (London/Chicago, IL: Pluto Press, 1997), 103–125.

24. None of these University of Melbourne scholars have published regularly in Australian anthropological journals or texts, nor have they employed the standard anthropological methodological approach of empirical field research using participant observation. There is a later body of work in the 2010s from the University of Melbourne by Dr Janet McGaw and Dr Anoma Pieris, but it is similarly grounded in place theory and cultural studies theory.

25. See Lindsay Asquith and Marcel Vellinga, *Vernacular Architecture in the Twenty-First Century—Theory, Education and Practice* (New York/London: Taylor and Francis, 2006).

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30. Timothy O’Rourke, “The Well-Crafted Mija: Traditional Aboriginal Building Skills and Knowledge in the Australian Wet Tropics” (Doctoral dissertation, University of Queensland, 2012).

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51. Fantin, Lecture to architecture students, ARCH3241 Aboriginal Architecture, November 2015.

52. For example, Julian Wigley and Michael Heppell (RAIA's Aboriginal Housing Panel), Paul Pholeros and Stephan Rainow (Healthabitat), and yet others have made particular contributions drawing on both anthropology and people-environment research, e.g. Kim Dovey (University of Melbourne).

53. For example, still active in the field of current research are Kelly Greenop, Tim O'Rourke, Carroll Go-Sam, Cathy Keys, Lester Thompson, Elizabeth Grant, Angela Kreutz; and active in architectural practice are Stephen Long, Karl Eckerman, Andrew Lane, Stephanie Smith, Shaneen Fantin, Kevin O'Brien, James Davidson; yet others are active in other fields of service delivery to indigenous people (e.g., Mark Moran, Malcolm Connelly, Jenine Godwin). The reader is invited to Google the PhD writings and practices of these individuals.