On Theory

Exploring a Cross-Cultural Theory of Architecture

PAUL MEMMOTT AND JAMES DAVIDSON

This article contributes to the development of a theoretical framework to address and explain all human behavior toward or linked with buildings, dwellings and settlements, in terms of both creating and using such environments. In promoting such a project, it is not our aim to demote Western architecture or elevate indigenous architecture, but to seek a theory that can be objectively applied to understanding interactions between the architectural values and building traditions of different cultures. Such a unifying theory of architecture must initially treat all forms of building as having intrinsic value within their own cultural contexts, without unreasonably biasing one form over another.

This article argues for the configuration of a theory of architecture that can serve as a tool for understanding the nature of all designed, arranged, and/or constructed environments used as human habitats across all cultural contexts. A corollary effort involves questioning why the Euro-American concept of architecture, sometimes referred to as “high-style,” and which the current authors refer to as “capital-A architecture,” has so far failed to achieve such a position, at times excluding non-Euro-American and indigenous building traditions. If we are going to contemplate the qualities and properties of building as a universal human activity, then surely our attention, as well as our sample of data, needs to address all human cultures in all historic periods.

The authors acknowledge the difficulty in this undertaking, but believe that such a unifying position is already embedded within the theoretical debates in vernacular architecture, architecture, people-environment theory, and anthropological (material-culture) research. Indeed, in assembling his Encyclopedia of Vernacular Architecture of the World (EVAW), Paul Oliver demonstrated that not only are there many differing patterns of human built or modified environments, but there are many similarities. It is within these similarities that we must look for order, and attempt to build a theory of architecture.

Paul Memmott is a professional anthropologist. James Davidson is a Ph.D. candidate in architecture, whose thesis is bi-disciplinary, connecting architectural and anthropological theory and method. Both are registered architects in Queensland, Australia.
debate on this issue through a series of case studies that are both cross-cultural and cross-disciplinary. These examples may seem marginal to those preoccupied with canonical architectural history, but they are representative of the more modest building traditions of many non-Western cultures.

In assembling these examples, we have drawn upon a cross-section of indigenous cultures that are the subject of research in our part of the world, and are commonly sourced in the publications of the Society of Architectural Historians Australia and New Zealand (SAHANZ). As well as some Polynesian and Melanesian examples, we have also drawn heavily on our own empirical research — viz., Paul Memmott’s study of Australian Aboriginal ethno-architecture and people-environment relations carried out since the early 1970s, and James Davidson’s more recent work on the house architectures of Maya peoples of Guatemala and Mexico. We have grounded these examples, some of which have a history of being labeled “primitive,” within a set of constructs established by leading architect-anthropologists, particularly Amos Rapoport, Paul Oliver, and Nold Egenter.

Using this framework of sources, we have then selectively reached back to choose and revisit a range of theoretical ideas put forth over the last forty years that seem both persistent and potent in their explanatory powers. However, the stimulus for this article was equally the IASTE 2006 Conference on “Hyper-Traditions,” which grappled with contemporary re-creations of architectural traditions in the face of globalization forces of cultural conflict, and which highlighted the dynamic properties of people-environment relationships.

One value in attempting to reconfigure the definition of architecture in this way lies in popularizing the discipline so that it may have a greater relevance to all peoples and their cultural landscapes. This responds to current global conditions, in which “registered professional architects” design only a small portion of the total built environment. In 2003 Paul Oliver estimated that there were likely a billion dwellings in the world, and it was unlikely that even 1 percent had been designed by professional architects.1 This calculation reveals how, if it is to be used effectively in a cross-cultural context, a new construct of architecture cannot be dominated by period aesthetics or popular Eurocentric philosophies. It must be useful for both theoretical and practical application to all human settlements. As Stephen D. Houston has written:

Many definitions, particularly traditional ones, sit firmly in the Euroamerican tradition, which defines vernacular buildings mostly in terms of what they are not: they are not created by professional architects, they are neither “high-style” nor monumental, and they do not result from individual genius.2

A wide range of scholars writing on indigenous building traditions have commented on various aspects of this problem. For example, writing from a Polynesian perspective, Mike Austin has noted the inappropriateness of suggesting that all “primitive” vernacular styles share some kind of common identity, especially when such inclusiveness is not based on comparative analysis but on contrast to metropolitan, “civilized,” Western traditions.3 Amos Rapoport has suggested a split in the etymological distinction between vernacular and primitive traditions, with the “primitive” remaining unspecialized and isolated from “great traditions.”4 And in discussing the vernacular traditions of the Classic Maya, Houston added that the vernacular is generally characterized by diversity, specialization and heterogeneity, and “lies closer to high-style on the continuum of building traditions.”5

Reflecting on Melanesian traditional architecture, Martin Fowler wrote:

Others’ architectures more generally were acknowledged and valued by anthropology and other disciplines, but were usually marginalised or simply ignored by Architecture. . . . [The] theoretical issues raised by Architecture’s continuing cultural discrimination provide[s] a context for re-asserting the need for modernity to understand, respect, and value Others’ cultural productions. Such works embed cross-cultural richness that contributes to the universal cultural heritage. . . .6

One may ask why the realm of Euro-American architectural discourse has been so reticent to share its epistemological domain with non-Western and indigenous building traditions. Instead, it appears to have been easier to place such traditions out of the way, in the realm of the “vernacular” — a term which originated in the Western linguistic tradition to signify the language of the commoner, or the common language.7 But are such indigenous building traditions any less significant in the value systems of their respective peoples than Euro-American architecture is to Westerners? And why should these traditions not hold equal billing in status and importance to the “capital-A Architecture” of the Euro-American tradition in a program of research?

We share the view of Lindsay Asquith and Marcel Vellinga, who have recently called for the Western tradition to rid itself of the stigma of underdevelopment, poverty, and the past that clings to the idea of vernacular building, and create a forward-looking vision for vernacular architecture in the twenty-first century.8 Houston has made this case bluntly:

The available literature on vernacular buildings tends to cleave modest dwellings from palaces or “great houses,” a humble chapel from a cathedral. High-style buildings . . . form the preserve of other disciplines such as art history. For our purposes this is poor anthropology. We need sound theory that will . . . establish better understandings of . . . systems of design, patronage, and construction.9
One might well ask whether the theoretical position we seek already exists within the study of vernacular architecture. Indeed, the need for such a unifying position has been discussed on many occasions. But a final resolution has yet to be reached.

In a recent treatise, Nezar AlSayyad framed similar questions, asking if everything in the twenty-first century will simply become classified as vernacular. He then explained the etymological and epistemological limitations of such an approach. In contrast, we are asking if everything built by humans and other species should simply be classified as architecture. This follows Egenter, who (drawing on the work of Yerkes and Yerkes in the 1920s) defined “architecture as all that hominids built and build.”

Perhaps the answer lies in the establishment of a revised disciplinary approach which goes beyond the epistemological limitations of the current thinking on both architecture and the vernacular. Whatever the case, even when a unifying categorical label is adopted, there will still be a need for internal classification. Bundling highly diverse phenomena under one label is potentially confusing without the possibility of finer distinctions between types. Nevertheless, all variants need to be included in a unifying theory.

In the Encyclopedia of Vernacular Architecture of the World, Oliver had no difficulty combining the term “architecture” with “vernacular.” But he assigned “architect-designed architecture” and “vernacular architecture” (as well as “popular architecture”) to separate categories. He provided no explanation for how these separate traditions might be commonly defined as sub-branches of architecture, whatever the latter construct might prove to be; nor did he clearly address the definition of architecture in a cross-cultural sense. In a more recent book, Oliver lamented that

As yet there is no clearly defined and specialized discipline for the study of dwellings or the larger compass of vernacular architecture. If such a discipline were to emerge it would probably be one that combines some of the elements of both architecture and anthropology with aspects of history and geography. The need for a multi-faceted approach has probably accounted for the limited number of comparative studies in the subject, for anthropological enquiry is not customarily a part of architectural education, and architectural principles have rarely been considered a significant aspect of the training of an anthropologist.

It is thus not accidental that our propositions here draw on the particular work of a number of architect-antropologists. In our view the groundwork for an encompassing, cross-cultural theory of architecture has already emerged, and lies largely within the multidiscipline of people-environment (or environment-behavior) theory.

Working across cultures, Rapoport laid the basis for this theory by pointing out that the extraordinarily large number and diverse range of built human environments, both contemporary and past, accommodate a significantly lesser range of human activities. That is to say, many human behaviors (and units of such) enacted in architectural settings recur across cultures and historic periods. Rapoport’s premise to the theory of environment-behavior relations therefore posits that built environments are created to support desired behavior, and that “activities” can be taken to be specific units of enactments of behavior.

What we are suggesting here is that the theory of environment-behavior studies, the “EBS” of Rapoport and others, provides part of the necessary theoretical framework to understand the nature and diversity of human built environments. This framework must capture both the requisite dynamics of people-environment interactions as well as the cross-cultural diversity of behaviors, values, customs and meanings associated with built environments and physical constructions.

In exploring what the dimensions and elements of a cross-cultural theory of architecture might be, and what principal theoretical issues should be addressed, we have chosen to explore the following themes that not only recur in the literature, but in our view must be central to such theory: (i) the architect-builder distinction and the significance of where authority lies in building and design decisions; (ii) behavior settings theory and the idea of such settings as constituting architecture; (iii) meanings in buildings and environments and the subsequent role of meaning as a property of architecture; and (iv) the change of architectural traditions and their time properties set within human social evolution.

In attempting to explore such a range of properties, we shall see that contributors to this complex issue draw on social anthropology, human geography, cognitive and environmental psychology, ethnology, household archaeology, material culture, and philosophy in their efforts to secure a theoretical framework.

ADDRESSING THE ARCHITECT/ BUILDER DISTINCTION AND “AUTHORITY”

Bill Hillier has formulated one of the more recent dissertations about what architecture is, and what separates it from “building.” His definition is explicitly cross-cultural and posits a process that rises above the concept of culture. Hillier’s theory is that architecture arises from within a process of “intellectual choice and decision exercised in a field of knowledge of possibility that goes beyond culture into principle.” Thus, a building is architecture when we can observe the successful accomplishment of a systematic, “abstract and comparative manipulation of form within the general realm of architectural possibility.” This definition also establishes a dichotomy between the “active” building systems of “architecture” in the Euro-American sense, and the “passive building systems” that reproduce a cultural template of vernacular design.
The strength of Hillier’s approach (as opposed to other more socially and culturally oriented theories) is its emphasis on the creative agency of the individual as a proponent of architectural change. Architects have had a recurring professional role in creating novel solutions to human needs. Nevertheless, when we analyze this aspect of human-environment interaction, it is important to recognize that (a) the architect is a member of a cultural group and has been enculturated within a given social value system; and (b) the architect has encoded social meanings into his building (for if such were not the case, his or her buildings would fail to be recognized, used or valued by others, no matter how unique or controversial). While architects encode socio-cultural meanings into buildings, users decode such meanings from them. Therefore, no matter how much cognitive originality and creativity is brought to bear on a design problem, the process still occurs within a broader cultural context.

In developing this position, Hillier downplayed most so-called vernacular architecture as merely “building,” asserting that “phenotypical variety is normal” within vernacular traditions. He argued that under certain circumstances, often in times of acute social or cultural change, a level of innovation may occur within a cultural group, which will catalyze a creative production of true “architecture.” At those times (to use Hillier’s technical terms) the spatial codes of a culture underlying the generation of their architectural phenotypes will be changed through the design process engaging at the level of the “genotype.” Others might call these innovations and creative cultural productions “hyper-traditions.” This is to say, designers will experiment with space/form permutations that extend beyond the customary limits experienced within their own cultural context. However, despite the validity of these observations, we must ask, is this a sufficient theoretical definition of architecture?

Hillier’s persistence in largely confining the definition of, and the distinction between, genotype and phenotype to spatial configurations ignores the possibilities of creatively manipulating materials, construction and structural systems, artifactual configurations, meanings and behavioral usage as other legitimate components of architectural process. To consider an example: analysis of the largest collection of photographs of the customary shelters of a single group of Australian Aborigines taken in a restricted time period (sixteen months) at a single locale reveals an immense diversity of structural variation of dome and platform types, despite little variation in space/form configuration.” Can this creative variation be dismissed as simply phenotypical variety?

Trevor Marchand has provided a pertinent case study from the Sahelian mud town of Djenne, where a professional association of masons, by training its apprentices, has preserved its building and design traditions. However, significantly, the apprentices have learned in the process to negotiate the boundaries of the tradition and inject innovation to generate reinterpretations of architectural meaning in local contexts.” Marchand emphasized the sociological significance of the masons’ knowledge base and its mode of transmission, and the desirability for them to be engaged in a more holistic decision-making role in urban design and sustainability.

We argue that a cross-cultural definition of architecture must systematically address this issue. “Architecture” is about the possibility of making choices between different combinations of spaces, artifacts, colors, textures, behaviors, ideas, meanings and identities, and the relatedness of such permutations to surrounding landscapes and different constructs of place and time. A challenging aspect is the downplay of physical components and the reliance on site properties, artifacts and meanings as a dominant sub-set of potential properties. In this regard, W.R. Lethaby has described architecture as “thought embodied in form,” comprising “durability, utility, and the cosmos.”

Notwithstanding the shortcomings of Hillier’s dichotomy between “building” and “architecture,” what does seem most important from this debate is the necessity to understand the spectrum of relationships between architectural design outcomes and differing social systems of authority in directing, controlling and designing buildings and places. Seldom in the Euro-American arena, is the expert, capital-A architect able to wrestle total control of his or her project from the client’s (whether private or bureaucratic) political and economic parameters to ensure its architect-perceived design integrity and innovation. In the Western world architects usually work for large corporations, wealthy patrons, project managers, and builders who may and usually do override their design decisions and limit choice in the decision-making process. However, the authoritative figurehead of the “star-architect” is equally not a recent phenomenon in Western architectural discourse. According to Jacques Derrida:

When Aristotle wants to give an example of theory and practice, he quotes the “architekton”: he knows the origin of things, he is a theorist who can also teach and has at his command the labourers who are incapable of independent thought. And with that a political hierarchy is established: architectonics is defined as an art of systems, as an art therefore suitable for the rational organisation of complete branches of knowledge.

Perhaps this is why the architectural profession continues to struggle with accepting the importance of others’ traditional built environments. And perhaps a key to this debate lies in the origin of the term “architect.” According to Oliver:

Architecture has been frequently defined as the science (or art) of building, the word being derived from the Latin architector. In turn this stems from the Greek architekton, the combination of archos, chief, and tekton, builder, thus placing the emphasis on the master builder and the product of his design and construction."
In the EVAW Oliver also stated that “vernacular builders” (note that he does not say “architects”) are customarily drawn from the communities that use the structures, and are frequently “owner-builder-occupiers.” However, Austin concluded that the idea of traditional building being executed by everyone in a society is not correct for Oceania. His examples of more specialized practitioners included the Maori architect (tohunga), a skilled carver knowledgeable in myths and traditions, and a Samoan guild of builders (tufunga) who constructed the complex geometries of the fale and left the installation of only final building elements to the local people. A number of colonial-era Maya dictionaries also refer to the role of an “architect” in traditional constructions. Thus, Suzanne Miles has discussed the Pokomam Maya term ah noah, or “master architect.” Meanwhile, in colonial Tzotzil Maya, the term for architect is “official builder,” jch’ubajel or ch’ubavil, or “man who makes walls.”

Oliver’s position on this matter appears to hold true for most Australian Aboriginal societies in pre- and early contact times, with every individual being versed in shelter construction. Nevertheless, there is anecdotal evidence to suggest that certain individuals excelled and would then specialize in more permanent shelter construction. For example, among the Wongkanguru and Dyeri, who utilized a variety of dome forms throughout the arid surrounds of Lake Eyre, certain builders were in such demand that they were borrowed from one camp by another and recompensed. Later we shall discuss the special role of Aboriginal elders in reproducing ceremonial architecture. However, we note that Oliver also qualified his general proposition by stating that craftsmen at times become more specialized and may occasionally be organized into guilds.

From the discussion above it can be seen that in many cultural contexts — vernacular or high-style — specific people within a community may either be given or may take the role of form-maker, creator, and guardian of building traditions. A relevant question for the current argument is on what “authority” do these people base their decision-making processes for the built environment? Our perspective is that this is the one area where it is possible to see a distinction between capital-A architects and their “ethno”-architect counterparts. It appears from the authors’ research of Maya and Aboriginal architectures that authority referents for form-making predominantly take on extra-ego forms (ancestral heroes or god beings); this differs from capital-A architectures, where the decision-making process is clearly centered on the architect’s ego-driven ability to make the correct and wisest decisions within the realm of the political and social status quo presented by clients and the powers-that-be.

This concept of authority in the decision-making process becomes a cultural and place-specific referent. It is this specificity and cultural sensitivity that leads the authors to believe the question of authority holds a key to an eventual configuration of a theory of architecture which is able to encompass what is currently thought of as vernacular environments. The sociology of environmental power and the authorization of environmental change and architectural construction are thus also topics which we believe should be included in a cross-cultural theory of architecture.

A DYNAMIC DEFINITION OF “TRADITION”

Associated with the documentation of so-named vernacular architecture is the concept of tradition. At the outset, we wish to establish a working definition of this concept from among competing theoretical positions.

For fifteen years in Australia, anthropologists have been revisiting and reexamining in forensic manner the definition of tradition (as well as that of “custom”) in response to intense programs of Native Title Claim litigation. We shall thus utilize the definition provided to the court by the expert witness Bruce Rigsby.

In Standard English, the term tradition has, I submit, the core sense of signifying the process(es) of transmission or passing on of culture across the generations. In this sense, tradition is no more or less than the normal process of cultural change, as Kroeber . . . recognised when he wrote of “the passing on of culture to the younger generation” and said that “the internal handing on through time is called tradition.” Tradition has a second (metonymic) sense of signifying the product or products of this process, so that we can identify those elements of culture, e.g., customs or whatever, which have a history of inter-generational transmission to be traditions as well. Note then that the term tradition has two senses: a process and the product of the process. For their part, customs are simply patterns of behavior which are shared by members of a social group, i.e., they are social, not individual phenomena. In plain English, traditions (as products of the process of tradition) seem simply to be old customs, handed down across the generations from the past.

We note the emphasis within this definition on cultural transmission between generations. If applied to the phenomena of buildings and architectural activity, it implies concepts of enculturation, conceptual encoding and decoding of meanings, as well as adaptation to sites and landscapes, socioeconomic contexts, and user group needs. In this sense, traditions are all dynamic properties of architecture. Rigsby himself noted that “tradition” must be viewed as the normal process of cultural change.

Far from identifying the vernacular as a static architectural concept, this article is concerned with the dynamic qualities of building traditions, and of the many dimensions of people-environment interaction that characterize the various cultural categories of architecture. We shall return in due course to the concept of “tradition” in relation to “change.”
AUSTRALIAN LESSONS: THE TRAVELERS’ CAMP

It is useful here to draw on research on the vernacular architecture of Aboriginal Australia, carried out at the Aboriginal Environments Research Centre, University of Queensland, Australia. This institute maintains that Aboriginal architecture is an expression of highly complex and diverse relationships between the physical, social and cosmological environment. This is of special interest because Australian Aboriginal architecture has regularly been portrayed during the colonial and postcolonial periods as little more than primitive huts, and certainly not deserving of the label “Architecture.” To do so would threaten the status quo (the profession of capital-A architects). The nature of most Australian “Aboriginal architecture” thus poses a number of theoretical questions concerning the role of built form in Australian indigenous cultural traditions.

Leaving aside Aboriginal villages and seasonal and short-term camps, perhaps the most striking example of a culturally distinct nature. There are clear parallels here with Austin’s description of “Pacific Architecture” as a “primitive” as some might call it because the campers retain a shared understanding of the sacred meanings attached to the cultural landscape in which the campsite is located.

Australian Aboriginal architecture can be defined as one that is a selected, arranged and constructed configuration of environmental properties, both natural and artificial, in and around one or more activity spaces, combined with patterns of behavioral rules and meanings, to result in human comfort and quality of lifestyle. This definition includes selected environmental features, mental and behavioral rules, spatial properties, hearths and artifacts. It can also include buildings — but not necessarily. It incorporates such concepts as socio-spatial settlement structure, avoidance behavior, diversity of construction detailing and its impact on spatial experience, and ceremonial spaces imbued with meaning and theatrical moment. There are a range of cognitive, invisible, ephemeral and symbolic properties that instill Aboriginal Architecture with a culturally distinct nature. There are clear parallels here with Austin’s description of “Pacific Architecture” as

. . . an architecture of spaces open to the sky rather than closed rooms, or sticks and grass as against mud and stones, poles as against walls, of single cell pavilions rather than labyrinthine complexes, of buildings raised in the air on stilts rather than sunk in the ground, of temporariness

P.W.’s preferred campsite location is in mulga woodland. He will be grumpy if there are not any mulga tree communities available on the late afternoon route at which to camp for the night. In other types of tree communities, there is more likely to be prickles, brurs, grass and ground cover which can shelter snakes, centipedes, scorpions or the nests of stinging ants; whereas the floor of the mulga forest is free of grass and easy to sweep clean of loose dirt and needle leaves with a branch. Mulga is also a superior wood for cooking and warming fires as it produces long-burning, ash-free hot coals. In the mulga camp one notices the whirl of certain fast flying flocks of birds that adopt the mulga as their habitat. There is also a constant familiar and secure sound of wind in mulga.

Campfire discussion ranges across many topics but includes reflection on local Aboriginal history in the region surrounding the campsite, e.g., the totemic history and creation of sacred sites by Ancestral Beings, the history of mortals from past generations in perpetuating the Dreamtime history in ceremonial performance and sacred site maintenance, and the violent contact clash with white pastoralists who settled in the region during the period from the 1890s to the 1930s. P.W. tells gruesome stories of his boyhood during this “revolver time.”

. . . P.W. and S.B. sleep side by side with a small mulga fire burning between them. Several mulga limbs protrude to one side of their sleeping area, and are gradually fed into the fire through the night. P.W. travels with a “swag” of two thin frayed blankets — one blanket laid under and one over him. He always sleeps in his clothes and points his head to the east and feet to the west to prevent the infiltration of bad spirits during sleep. In the early morning, P.W. warms and smokes the inside of his hat over the fire; his first activity after sitting up. S.B. blows and fans the embers to produce flames for boiling tea.

Consideration of the properties of this camp illustrates the various elements required for human comfort — surface, vegetation, sound, smell, warmth, security, spatial definition, customary domiciliary behaviors, and connection with nature (FIGS.1A,B). In the circumstance of a strong wind, a wind-break is quickly constructed of mulga limbs. If there is a rain shower, the fire is stoked up, while persistent rain results in stretching a plastic sheet or blanket over a tree. This is “architecture” at its most minimal; but it is not “primitive” as some might call it because the campers retain a certain level of comfort. Security partly stems from a shared understanding of the sacred meanings attached to the cultural landscape in which the campsite is located.

Leaving aside Aboriginal villages and seasonal and short-term camps, perhaps the most striking example of a culturally constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.” This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.” This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35 This is a quickly constructed domiciliary setting which employs minimal (if any) structure is that of a “travelers’ camp.”35
as against permanence, tension and weaving rather than compression and building, an outdoor existence and ocean voyaging as against a life grounded in the land.37

Writers in the cultural studies field appear to be moving toward similar positions. Bob Hodge for instance, has acknowledged that Aboriginal residential camps utilize “space as walls,” and are organized using “semiotic strategies,” which he defines as “signs and laws” in relation to “centers.”38 A more expansively cross-cultural position is taken by Gulsum Nalbantoglu and Wong Chong Thai, who challenge the primacy of visual properties, which they claim dominate contemporary architectural studies.39 Definitions of cross-cultural concepts of space draw on different combinations of sensory inputs and need to be incorporated into a theory of architecture for such a theory to be fully encompassing. For example, Fowler has classified Melanesian traditional architecture according to tectonic languages (weaving and binding) as well as form/space relations.40

FIGURE 1A (TOP), 1B (BOTTOM). Aboriginal men from the Alyawarr and Wakaya tribes, Central Australia, awakening from their overnight camps while traveling on ceremonial business in the 1980s. They are surrounded by their portable bedrolls and cooking utensils, and located within groves of gidgea trees. S.B. and P.W. are in the top photo. Photos by Paul Memmott.
SETTINGS AS ARCHITECTURE

To accommodate the above case study within a theory of architecture, we draw on environment-behavior relations, and have selected “behavior setting” theory as a powerful and useful theoretical construct. According to Roger Barker and Herbert Wright, certain attributes of people-environment interaction, such as territoriality, boundaries, ecological structure, and time properties can be observed to combine in a complex way to form a special class of places known as “behavior settings.” The behavior setting is “a standing behavior pattern together with the context of this behavior, including the part of the milieu to which the behavior is attached and with which it has [a] synomorphic relationship.”

As can be seen in the case of P.W.’s overnight camp, it is an ecological unit consisting of an interaction between behaving persons and things, time, and the immediate environment. The physical things and time (or “milieu”) are supportive of the behavior and surround it. There is an interdependent relation between the two, and hence the term “synomorphic.”

“Standing behavior pattern” implies that the behavior 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 characteristic patterns in that particular setting. Thus the structural qualities of the setting are maintained independently of personality, except in cases of social deviancy or creative individuality (however, such cases are relatively few in most settings). Such settings involve forces which coerce individual behavior to conform to recognized models of what is correct under the circumstances. However, according to Rapoport, the “boundaries of [the] milieu, how they are marked, by whom they are penetrated, and so on, vary with culture.”

Settings are designed through the selection of particular environmental properties and the articulation of the setting space with artifacts, structures and meanings. Various members of a cultural group will share an understanding of the ways and rules of how to create the setting, such that new settings can be established throughout the lands (and sometimes seas) of the particular group — although once again we may find a contrast between those settings that any cultural participant can create and those that require a specialist designer and/or builder. The setting also has a position in a cultural landscape, with meaningful connections to other settings and place types to ensure its effective interactive functioning.

In relating settings to architecture, Rapoport has stated that “architecture” is composed of activities, settings and meanings, with these three elements interwoven, whereby “meanings” are a function of “activities,” and “activities” are a function of “settings.” In an adaptation of Hall’s proxemics theory, Rapoport also proposed a theory of the built environment as “consisting of fixed-feature elements (buildings, floors, walls, etc.), semi-fixed-feature elements (‘furnishings,’ interior and exterior of all sorts), and non-fixed-feature elements (people and their activities and behaviors).” We agree that any definition of “architecture” should incorporate the activities, settings and meanings of people, in conjunction with the varying degrees of permanency — i.e., fixed, semi-, and nonfixed elements of the built fabric specific to its local context. Here we see the capacity of the theoretical framework to encompass both buildings (fixed) and those environments articulated with human spatial behaviors combined with the most minimum of artifacts and physical adjustments (semi- and nonfixed).

In line with our earlier Aboriginal case study, we suggest the need to incorporate this entire range of possibilities in a construct of “architecture.” We argue that behavior settings, whether designed or evolved through a process of selectionism, to use Rapoport’s term, are a form of architecture, facilitating a high degree of congruence between human needs and environmental attributes.

MEANING AND ARCHITECTURE

The idea of the authorization of environmental change and building can be extended to that of the authorization of meanings attached to particular pieces of environment. Architects and builders from all cultures encode meanings into buildings and environmental configurations. Whether those meanings take on widespread social currency and are regularly decoded by users depends on the social extent and intensity of the education with and authorization of those meanings. As the types of meanings that can become attached to environments vary enormously, their classification for analysis presents a challenging problem.

For example, a range of semiotic references have been recorded in the ethnographic literature on Australian Aboriginal ethno-architecture. Among certain groups (e.g., the Lardil of Mornington Island and the Warlpiri of the Western Desert) enclosed wet-weather shelters form an element in a myth or sacred history, albeit without any special symbolism attached to them. In an Eastern Arrernte sacred history, there is also a reference to secretive gender-specific knowledge on the construction technology of wet-weather shelters being derived from certain events in the Dreamtime.

Likewise, in Arnhem Land and Cape York can be found ethno-architecture rich in meanings and symbolism; in fact, structural forms and shelters were used as ritual components in a variety of initiation contexts. In the Lardil and Yolngu sacred histories, flaming dwellings act as “vehicles for change,” in which ancestral beings are metamorphosed into another state and then continue their respective journeys. In the “Wagilag” story from Arnhem Land, the shelter can represent the womb and its regenerative qualities, among other meanings. A number of Aboriginal groups clearly thought of their houses and shelters as bodies, and named their architectural parts after both human and animal anatomies.
Dwelling names can also act as mnemonic devices alluding to the ancestral histories in which they feature. 49

In a further analysis of meaning and its influence on human environments, Rapoport has persuasively argued that meanings permeate people-environment relations in three significant ways: “the human propensity to impose meaning on the world; the built environment as influencing behavior through meaning; [and] meaning as an important mechanism linking environments and people.”50 Rapoport also provided a threefold categorization of meanings.51 “High-level” meanings relate to cosmologies, cultural schemata, worldviews, philosophical systems, and the sacred. “Middle-level” meanings are those communicating identity, status, wealth, and power — that is, the latent rather than the instrumental aspects of activities, behavior and settings. Finally, “low-level” everyday and instrumental meanings comprise mnemonic cues for identifying uses for which settings are intended as well as the associated expected behaviors of such social situations, making co-action possible. We can refer to these three levels or categories of meaning as respectively ideological, social and behavioral.

Rapoport has conceded that his threefold classification of meaning is overly rigid, and requires a more flexible capacity so that meanings may shift.52 A theory of architectural meaning must explain the ways in which the different levels of meaning are generated and transform from one another.

The propensity for semantic shift can be illustrated with an example from the Maya. The construction of traditional Maya dwellings in Guatemala, Belize and Mexico has always been intimately linked to elements of Maya cosmology and socio-religious philosophy.53 However, in contemporary Maya settlements, Euro-

**Figure 2.** Layout of an Aboriginal dance-ground in the Wellesley Islands, Gulf of Carpentaria, showing socio-spatial arrangement of seated sub-groups of spectators from the geographic divisions of the Lardil tribe. This is an example of a “behavior setting” with minimal physical structures. Illustration by Paul Memmott.
American-style cottages constructed of concrete and galvanized iron are proliferating through processes of both directed (imposed) and voluntary cultural change. Maya peoples in many communities now aspire to the ownership of such housing, which has supplanted traditional housing stock in status and security. Davidson’s findings show that people now prefer to adapt aspects of their customary behavior to these Euro-American-inspired dwellings, despite their not being architecturally accommodating of such behaviors or being climatically responsive. Maya traditional domiciliary architectures are gradually diminishing in use. Indeed, they now stand as reminders of a time past, as well as signifying poverty in the contemporary circumstance of Maya peoples in Guatemala and Mexico (Fig.3).

In his treatise on levels of meaning, Rapoport placed “cosmology” and “status” as high-level and middle-level meanings respectively. The contemporary Maya preference for concrete cottages does not imply that the once high-level meanings of “cosmology” have been “lost” due to the transformation of the traditional domiciliary environment in the latter twentieth century. The majority of Maya families, who previously lived in traditional dwellings, still maintain a strong connection to traditional cosmologies and religious philosophies, even if these are no longer expressed in their architecture. Thus the role of traditional socio-religious philosophy in domestic architectures appears to have been “eroded” as a high-level meaning, and replaced by “status,” which appears to have shifted from its former position as a middle-level value, and now seems to exist at a higher plane as a primary symbol (authority in decision-making) in relation to the contemporary cottages.

During fieldwork, Davidson found a limited number of cases where certain individuals overlaid their contemporary cinder-block houses with historical symbolism (numerological cosmology of structure spacing). These individuals were mostly those “traditionalists” who followed the old ways. These individuals were also more than likely to be Catholics as well as believers in traditional shamanic religion. The built environment is therefore not static with regard to its attached values and meanings, but very much dependent on the cultural milieu of place and time. Transformations of the extent, intensities and nature of these values and meanings under conditions of cultural change must also be a key dimension of research for a program of cross-cultural architecture theory (Fig.4).

The “shifting” levels of meaning presented above underscore one of the major distinguishing premises of this article — the influence and role of cultural change on architectural traditions. We believe that a theory of architecture must consider the historical, socioeconomic and political circumstances which have influenced and continue to influence the transformation of the built environment. Understanding moments of cultural change in architecture present useful opportunities for the architect and the social scientist to establish a common and useful dialogue.

In another comparative study, James Fox has assembled and compared ethnographies of Austronesian houses that were drawn from Malaysia and Sumatra in the west, to New Zealand and Goodenough Island in the east, and from Southeast Asia to Melanesia and the Pacific. He noted that most Austronesian homes possessed what he called a “ritual attractor,” or a preeminent structural element of the house’s architecture. This is usually a focus of ritual or at least acknowledged in ritual, and generally recognized as such from the time of construction. It represents the house as a whole in a concentrated or symbolic form. This clearly corresponds to Rapoport’s higher-level meaning category. For Austronesian houses, Fox concluded that the ritual attractors most frequently encountered were the post, the ladder, the ridge-pole, and the hearth within an encompassing roof.

In a separate study from northern Australia, Shaneen Fantin has elicited evidence for the symbolism of the archetypal forked-post and cross-pole in Arnhem Land and Cape York, indicating that these components were also “ritual attractors.” In her study of the Yolngu people of Arnhem Land, she examined the creation of religious architecture through ceremony. A creative synthesis of song, dance, ground sculptures, ceremonial artifacts and shelters thus becomes imbued with ancestral presence and power, and constitutes a temporary Yolngu religious architecture which contains ancestral aesthetic qualities. Yolngu elders are the architects of the ceremony and oversee the preparation of the

**Figure 3.** Cosmology associated with traditional Maya house architectures. Four main timber structural columns represent the cardinal points of the earth’s surface. Maya houses also contain an internal three-stone hearth representing a fifth invisible “column,” or axis mundi, metaphorically seen as raising the sky-roof and connecting the heart of heaven with the heart of the earth. This particular house is from the Pokomchi’ Maya of Las Pacayas, Guatemala. Illustration by James Davidson.
ground, the creation of the appropriate structures to be used, and the enactment of the songs and dances, all carried out in a highly ordered process.\(^5\) It is significant that this ceremonial architecture is constructed of semi-fixed and unfixed features, since all traces of it are usually removed or erased after performances to safeguard its perceived potency (fig. 5).

In seeking to construct a cross-cultural theory of architecture that places “meaning” at a high premium, it also seems sensible to draw on phenomenology, which is preoccupied with producing theory “and concepts of human science which are more in tune with human behaviours and actions as they happen and exist in the world of human experience.”\(^57\) One goal of phenomenology is thus deepening the experience of environment.\(^58\) The phenomenological method can provide descriptions of events or situations as they are lived, and the intrinsic properties and various meanings of such, from the perspective of the participant’s mental experience and understanding.\(^59\)

We note, in passing, Rapoport’s repeated rejection of phenomenology as being less useful for theory building than the conventional sciences of psychology, cognitive science, and cognitive neuroscience. But we humbly suggest that phenomenology nevertheless has a valid contribution to make (fig. 6).

Phenomenology has shown that people always try to be at home in a place, regardless of how poor conditions might seem to the outsider.\(^60\) A potential of phenomenology is thus to explore and describe what Husserl has called the “life-world,” the everyday world of taken-for-grantedness, which includes surroundings, artifacts, gestures, behaviors, events and meanings.\(^61\) Underlying this focus on life-worlds is the wider concept of “dwelling,” which joins people with environment and provides a link across time.\(^62\) However, the temporal properties of architecture require separate discussion and necessitate reconsideration of the dynamic qualities of “tradition.”

**CHANGING ARCHITECTURAL TRADITIONS**

Within the study of cultural change, anthropologists have identified a range of types of change processes, although this field of study is by no means coherent or unified. A wide range of studies have addressed processes of acculturation and syncretism in architecture, and these have contributed to an understanding of cross-cultural architectural exchanges, borrowings and appropriations which result in blended patterns and transformations of architectural forms, structures, meanings and other properties.

In considering the nature of cultural change, it is useful to return to the construct of tradition, as defined earlier. A closer examination of the literature reveals two competing theoretical paradigms of what tradition is as a scientific construct. The first paradigm considers tradition naturalistically, as a bounded entity made up of constituent parts that are themselves defined properties. In this atomistic paradigm, culture and its constituents are regarded as entities having an essence apart from any interpretation of them. Anthropologists may prescribe, for example, which traits are old and which are new innovations, and show how such traits fit together to make up the abstract concepts that we call “tradition” and “culture.”\(^63\)

If we return to Rigsby’s point about change occurring to traditions within the processes of intergenerational transmission and enculturation, we note that a key reason for this is that, as Edward Shils has pointed out, “interpretations are made of the tradition presented.”\(^64\) The alternate paradigm, then, is
that tradition is an interpretive process, and that any tradition is continually reinterpreted. According to Shils, unchanging traditional societies have never existed. And since all cultures change regularly, there can only be what is new — although, as Handler and Linnekin have argued, what is new can take on symbolic value as “traditional” in reference to what is perceived as being “old.” Our view is that the above paradigms of “tradition” can usefully coexist, and that our task in configuring a theory of architecture is both to explore the attributes of cultural traits and to understand the interpretative styles and methods of cultural participants in their daily processes of creative cultural production, including architecture.
The combination of findings from several papers presented at the 2002 “ADDITIONS to Architectural History” Conference of the Society of Architectural Historians Australia and New Zealand provides an interesting overview of the transformation of architectural constructs over several hundred years within a Polynesian context of colonial encounter. One of these papers, by Albert Refiti, considered the appropriation of a Western architectural construct, the European Christian church, and accompanying Christian ritual by the Polynesian people of Samoa in the nineteenth century. Refiti pointed out that this was accomplished within the intellectual terms of the Polynesians, with neither a comprehensive understanding of the Christian culture nor an attempt to authentically create a facsimile Christian religion. Only particular Christian ideas were selected and integrated with the local belief system, as these churches became local idealized versions of Christian spirituality. Refiti analyzed the transposition of that architectural form to the contemporary urban context of New Zealand by a nonindigenous New Zealand architect who attempted to use it to reflect a Pacific identity. “Pacific architecture, is a New Zealand European architect’s fantasy of what a Pacific heavenly paradise might be, based on a Pacific fantasy on what a European missionary paradise might be,” he wrote. He described the overall process of transformation of architectural properties as “a double movement of cultural exchange.”

Bill McKay also wrote on appropriation, but his case study began with the appropriation by colonists of selected indigenous architectural stereotypes. He examined the stereotyping of Maori architecture by Anglo New Zealanders through the media of politics, museums and texts into a single genotype, that of the Meeting House, or “Marae.” Any post-contact architectural acculturation by Maori was seen by the colonists to represent a loss of indigenous identity and to be somehow nonauthentic. However, McKay provided examples of the mixing of “Pakeha” (European) and Maori motifs by Maori builder-architects as a distinctly New Zealand form of bicultural expression, and certainly not as an outcome of assimilation. These examples demonstrate the cyclic nature of the transformation and dissemination of an architectural construct between two cultural groups.

There is one further point that needs to be made from these Polynesian studies. We note that the examples of cultural change processes vary in their type, intensity and scale from the individual-inspired change (the New Zealand architect) to the promulgation of change through a specific medium. It is the technological power of a new medium (e.g., the printing press or the computer) that can result in far-reaching global impacts and changes of tradition at an unusually large scale. Perhaps it would be appropriate to apply the term “hyper-traditions” to this category of cultural change (FIG. 7).

**TEMPORAL PROPERTIES OF ARCHITECTURE**

The dynamic qualities of architecture introduce the properties of time into any reading of buildings and their settings. Here we need to discount those architectural theorists and historians (e.g., Bannister Fletcher) who have separated “modern” society from the “primitive vernacular world,” with the latter being fictionalized as existing in a vacuum of timelessness. As Anderson wrote, indigenous cultures are “dynamic societies, in a continual process of adaptation, choice, and constraint.” Any understanding of the dynamic nature of vernacular or traditional architecture must therefore, for completeness, consider temporal properties.

The types of change associated with architectural settings include their articulation with activity (involves a time, frequency and duration of usage); their internal transformation during periods of characteristic place-bound activity; the mental
association of beliefs, values, names, and other meanings with them (a mental change which does not necessarily occur at the place under focus); and externally imposed changes to them (directed cultural changes, natural catastrophes). However, as Memmott has noted, a constancy of setting or architectural character is often maintained, together with repetitive internal change, due to the stabilizing or equilibrating effects of the internal forces which control setting form.76

Indigenous constructs of time tend to integrate natural time orders which are dynamic in their own right, displaying cyclic changes of properties caused by natural environmental rhythms (solar rhythms and associated diurnal/nocturnal rhythms, seasonal cycles, changes in climate, flora, fauna, lunar rhythms, and associated tidal movement and animal behavior). For example, natural time orders play a significant role in the traditional time concepts of Australian Aboriginal hunter-gatherers, with seasonal influences affecting local movement patterns, campsite selection, choice of settlement and shelter form, and campsite behavior and lifestyle. Aboriginal constructs of time often emphasize the social quality of an event and its sequential and causal relations to other events.77 There are then no abstract units of time and space that indigenous people use to measure distance between events, i.e., no quantified geometry of space or chronology of time. The overall result is the possibility of expanding or compressing time and/or space in historical and geographical thought. Scale is thus less important than the sequential correctness of events in space and time, and the nature of causal links between them. Such concepts of space and time correspond closely to the topological concept of space.78 To cite one Polynesian example from McKay:

... the Maori space and time construct can be thought of more like a constellation with the past and the people of the past always felt in the present, like the constellations of the sky — enmeshing, surrounding — always before you, always behind, forming patterns that can be interpreted in various ways.79

Similarly, in the case of Aboriginal elder P.W. in his “traveling camp” presented earlier, there is a sense of the presence of Ancestral Beings from the Dreamtime having an active presence at the campsite, linking the ancient past to the present. The imposition of Western space and time structures and concepts has disrupted traditional Indigenous structures. Nevertheless, in many cases those traditional structures have been transformed and may well prevail in contemporary situations. Contemporary experiences of space and time in relation to architecture and place are often based upon multiple cultural constructs.80

RECONCILING VALUES

Drawing on the foregoing framework of theoretical ideas, which we could collectively call architectural anthropology, we now return to our earlier definition of architecture as one that is a selected, arranged and constructed configuration of environmental properties, both natural and artificial, in and around one or more activity space or behavioral setting, combined with patterns of behavioral rules and meanings, as well as incorporating cultural constructs of space and time to result in human comfort and quality of lifestyle — all within a wider, large-scale system of cultural landscape and settlement. Within this broad definition sits the entire genre of Euro-American architecture, as well as many other genres from all of human societies and cultures, past and present. Within these diverse cultures there are a range of cognitive, invisible, ephemeral, spiritual and symbolic properties that can instill architecture with a culturally distinct nature, in addition to the physical attributes of buildings (fig. 8).

Central to the task of accommodating the world’s diverse cultural traditions is the development, analysis and comparison of case studies, which, when integrated, generate several robust explanations: (i) of the dynamic properties of architectural activity occurring both within and between cultural groups and longitudinally and cyclically through time; (ii) of the study of the environmental, social, economic and cultural origins of places and buildings; (iii) of the full complexity and range of architectural articulation from the minimalistic adjustment of natural environments to highly complex structures with multiple overlays of properties; (iv) of the full range of properties of people-environment transactions that might contribute to what or how architecture is defined; and (v) of the sociology of power and authority in environmental decision-making, and the ways that different authority systems can result in culturally distinct differences in architectural design. It has been beyond the scope of this article to execute such a program of analysis; we have merely begun to sketch out some of the central topics, which we believe such a program must address.

One key issue of nomenclature and definition is whether it is more theoretically useful to broaden the definition of architecture to encompass all human building and place-making, or to broaden the definition of vernacular architecture to incorporate all capital-A architecture. We have chosen the former path, arguing that non-Euro-American cultures need not be burdened with the idea that “architecture” must be presupposed as being a success word when compared with mere “building.” If other cultures can be recognized as having their own law, medicine and art, why cannot they also have architecture?81

One strong proponent of a differing nomenclature is Rapopoort, whose views nevertheless share much with our theoretical proposition. Whereas we have argued by way of a revised and broadened definition and theory that all
designed, arranged, constructed and selected environmental configurations could be included as “architecture,” Rapoport has classified all such environmental types under the category of environmental design, which he subsumes within his Environment-Behavior Studies (EBS) approach. Rapoport also included cultural landscapes, which in the case of Aboriginal Australia would consist of sacred sites believed to have been created by both stationary and traveling ancestral heroes — what might appear to the scientific mind to comprise imposed cognitive properties of landscape meaning.

Rapoport’s theory has been criticized as being “extremely deterministic and . . . [eliminating] the agency of the individual member of society, leaving little if any room for improvisation and innovation.” However, there is no reason why ongoing research could not target this specific problem, perhaps drawing partly on Hillier’s work, in an integrative approach. We also converge with Rapoport insofar as recognizing that the full range of historical built environments needs also to be included in such a theory.

We also converge with Egenter in that animal architecture needs to be included, covering topics such as habitat building and the socio-semantic elaboration of such. However, unlike Egenter, we would cast the net wider than primates and extend the scope of theory on the social properties of places and structures to other species, as enlightened ethologists engaged in earlier people-environment research have already done. For example, consider the contribution of Glen McBride. Based on his earlier empirical research on chickens and pigs, he engaged in the construction of a general theory of social organization and behavior that applied to all animals, including humans. His later work then moved to the specific application of this theory to people-environment interaction (attention, perception, behavior and social process) and the challenge of therapeutic architectural design for institutional settings.

One of the ongoing theoretical tasks is how all environmental types and productions may be classified under such a revised definition of architecture and be distinguished and sorted into subcategories that are useful in understanding their design properties and values. We hope that this analysis will further the current debate and prompt or provoke others to challenge and add to the overall treatise.

The purpose of this article has been to commence the development of a theoretical framework of architecture with strong explanatory power that addresses and explains all human behavior oriented toward or linked with buildings, dwellings and settlements — both in terms of creating and using such environments. As we pointed out at the beginning, it is not our aim to demote Western architecture or to elevate indigenous architecture, but rather to create a theory that can be objectively applied to explaining or understanding interactions between the architectural values or building traditions of different cultures. With the acceleration of globalization and its inherent conflicts and dilemmas between urban development, tourism, and preservation of cultural heritage, such interactions are becoming increasingly commonplace. Such a theory must (initially, at least) treat all cultural forms of building and architecture as having intrinsic value within their own cultural contexts without unreasonably biasing one form over another. But it must also explain the many processes of cultural change whereby architectural traditions interact, are merged, and become synthesized in varying configurations.
REFERENCE NOTES

The authors are affiliated with the Aboriginal Environments Research Centre, School of Geography, Planning and Architecture, University of Queensland. This paper builds on earlier work, an introduction and overview of a set of papers presented under the theme “Architecture + Building Traditions” at “ADDITIONS to Architectural History,” the XIXth Conference of the Society of Architectural Historians, Australia and New Zealand (SAHANZ), held in Brisbane, Oct. 4-7, 2002. An overview of the conference, abstracts of individual papers, and biographies of participants are available at http://www.sahanz.net/papers/webpages/frameset.html. The edited conference proceedings are available on CD-Rom through the Society of Architectural Historians, Australia and New Zealand (SAHANZ), held in Brisbane, Oct. 4-7, 2002, by contacting Andrew Leach (SAHANZ Secretary) at www.sahanz.net.

19. Ibid., p.48.
20. Ibid., p.62.
23. Ibid., p.62.
27. Ibid., p xxii.
32. Ibid., p xxii.
23. Ibid., p.62.
27. Ibid., p xxii.
40. In “Five Types of Traditional Melanesian Architecture of Papua New Guinea,” Martin Fowler presented a strong position on what constitutes Melanesian traditional architecture in East New Guinea. He developed five primary architectural types, each based on distinct concepts of form-making and tectonic technique.
42. Ibid., p.9. This unit was devised by Roger Barker and Herbert Wright in Midwest towns of the U.S.A., and elaborated on by Barker in his book Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior. Many researchers have studied it since. Its theoretical significance has been revisited and reemphasized by Amos Rapoport on many occasions.
43. Ibid., pp.7–9.
44. Rapoport, Culture, Architecture, and Design, p.26
45. For a case study of an Australian Aboriginal behavior setting that does not involve buildings, see P. Memmott, “Lardil Properties of Place: An Ethnological Study in Man-Environment Relations,” Ph.D. diss., Dept. of Architecture, University of Queensland, St. Lucia, August 1979, pp.106–16.
47. Ibid., p.13.
49. This overview of Aboriginal ethno-architectural meanings is drawn from Memmott, Gunyah, Goondie and Wurley, Ch.10.
52. Ibid.
53. James Davidson’s doctoral research (at the Aboriginal Environments Research Centre, University of Queensland) of Maya domiciliary architecture relates to the documentation of building transformation associated with the 28 Maya language groups of Guatemala, Belize and Mexico.
54. For further information on this subject, see James Davidson’s paper “Authority in Maya Domiciliary Transformations: A History of Hypertraditions,” presented at the 2006 IASTE Conference.
61. Ibid., p.19.
65. Ibid., p.19.
67. Mike Austin has addressed the concept of “hybrid architecture,” as “bicultural architecture,” being a syncrétization of customary and Western elements. Elsewhere, Michael Linzey has defined biculturalism as the phenomenon of two cultures co-occupying one place. See M. Linzey, “Bi-Cultural Architecture: Evaluating the Contribution of Te Kooti,” in Making: Architecture’s Past (the collected and edited proceedings of the 18th annual conference of SAHANZ, Australia, Sept/Oct 2001), pp.103–10.
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73. McKay, “Looking at Maori Architecture.”  
75. The authors are indebted to our colleague, the philosopher Dr. Gregory Bamford, for this point (personal communication, Nov. 2, 2004) and for commenting on this article.  