ECHOES OR WHISPERS: INTERIOR VOICES IN THE SUBTROPICAL DEBATE

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ABSTRACT
Are the concepts subtropical city and interior design connected? This paper seeks to explore the role of interior designers in the discourse of sustainability in a subtropical context. The current debate frequently engages those involved in urban design, planning, architecture and engineering. However, what is the value and consequence of the other design disciplines to the debate? Insights into the level of engagement of interior designers with the sustainability debate in the subtropical context are presented with the intention of fostering awareness and debate. A need for increased engagement by interior designers is proposed with the intention of improving subtropical urban environments.

Keyword: Subtropical Context; Environmental Design; Sustainability; Interior Design

INTRODUCTION
1.1 Interior Design and the Subtropical City
Are the concepts subtropical city and interior design connected?—and if so, what significance does or could such interconnections have for the improvement of cities? Interior Design is not visible as a discipline actively involved in such discussions. This paper, therefore, will reveal the nature of the apparent silence through a survey of two key publications as a pilot study to a larger review of practitioners in South East Queensland. The intention is to raise awareness and foster debate among both interior designers and the broader design and planning communities. In order to commence the discussion, the constructs of the nature of subtropical city and interior design need to be revisited to set the scene; and, to introduce key characteristics of contemporary interior design that demand that the Interior Design Profession take a more vocal position and stronger leadership role.

The simple definition of subtropical is: zones of the Earth immediately north and south of the tropic zone, which is bounded by the Tropic of Cancer and the Tropic of Capricorn, at latitude 23.5 ° north and south (en.wikipedia.org/wiki/Subtropical). However, subtropical cities reflect not only locale but lifestyle. The principles of subtropical design (Kennedy, et al. 2005) include informal and relaxed lifestyle; appropriate responses to the local weather patterns; connections to outdoors; contribution to neighbourhood, as well as respecting local resources and the importance of water. Although generated from a study of detached housing, these principles reflect a mode of thinking about design that understands the house—or any building—as more than the creation of an artefact but rather involves, in association, a way of living. As a result, subtropical built environments reflect an intersection with the natural environment—air, light, water—that create shadowing, light patterns, breezes, humidity, sounds, colours, textures and odours that influence ambience and a sense of place. Designers translate these phenomena into strategies that reflect, capture and/or generate these effects: for example, passive design, thermal comfort, passive ventilation, cross ventilation, solar gain, overhangs and eaves, thermal mass, and lightweight construction.

Interior design is understood most simply as the creation of the inside of something—such as a building. However, interior design is much broader. The creation of environments or places facilitates relationships between people and their environments; and therefore, reflects engagement in psychological, physical and emotive ways. Spatial planning, materiality, functionality and symbolical value are all aspects which influence the interior experience. Due to the role of interpretation and experience, the interior exists as a locale on a continuum between being completely outside and deeply inside. For example, the intersection of the interior with the physical edge of a built form reflects...
a form of engagement with the natural environment—light enters or is inhibited, breezes flow or are diverted, views are captured or concealed, vegetation is embraced or absent depending on the relationship established through design and usage. The boundary is only fixed in its physical dimension. As a result, the ambience and the potential interpretations of the interior environment are directly influenced by the context in which it is located: and in turn, it influences the context in which it is located.

Therefore, the interior is not something removed from but is an integral part of the subtropical city. The nature of the interior itself can reflect or ignore its context. A decision to not engage with context will have long-term repercussions in terms of social and environmental responsibility.

1.2 The impact of Interior Design on the subtropical city

Two aspects of interior design centrally position the discipline as important in the planning and resolution of cities in the subtropics. The first is the increasing number of non-residential and residential interiors that are located within medium to high rise buildings in cities (including Brisbane). Associated with this trend is the creation of internal environments to live, work, and play in. The second aspect is the acceptance that interior fitouts are transient in nature and need to up-dated on a regular basis. As Horrocks states: ‘Tenancies come and go. How long will Toasted be there? Not long, and it knows’ (05/02:67). This belief has become more pronounced in the contemporary world where consumerism and branding define the interior as a commodity.

The effect of these two characteristics is potentially significant. In 1997, the prestigious Interior Designer, Sue Carr (CARR), stated that 200 years previously, 80% of the cost of a building was allocated to constructing the external fabric and creating an architectural presence. By the late 1990s the situation had changed dramatically. Less than 15% was spent on the envelope, 40-50% on services, while 35-40% is invested in the fitout. Therefore, in a contemporary society, the interior is not an ‘add-on’ but is a significant component. Associated with the economic investment are the resource and energy costs. Therefore, the conversation about subtropical cities also intersects with issues of sustainability and environmentally sensitive design. This intersection is captured in Figure 1.

Sustainability is defined by the Brundtland Commission as meeting the needs of the present without compromising future needs (Bonda, 2008); that is, ‘a community’s ability to meet the environmental, economic, and social equity needs of today without reducing the ability of future generations to meet their needs’ (American Institute of Architects, 2008). Other terms such as green design and environmentally responsible design are also used. The former refers to the design that ‘protects people’s health and wellbeing’ (Miller and Kato, 2006:52); although its meaning has been diversified by politicians, manufacturers, media and the like (Bonda, 2008). Environmentally responsible design deals with both—and in addition, involves both efficiency and effectiveness or eco-effectiveness. Eco-effectiveness aims to also reduce harm (Miller and Kato, 2006). The Renewable Energy Policy Project highlights the advantage of sustainable practice in both residential and non-residential settings; and is particularly relevant to interiors. The estimated saving due to health and productivity is 30-170 billion American dollars per year (Miller and Kato, 2006).

In relation to interiors design, the intersection between subtropical context and sustainability/environmentally responsible design is particularly evident in regard to the two aspects introduced above in subtropical cities such as Brisbane. These will now be discussed.

a. Internal lifestyles in a subtropical context
Due to the increase of highrise and medium scale buildings to live, work, and/or play, there has evolved the acceptance of environments which are air conditioned and depend on artificial lighting. The acceptance of this as a prevailing lifestyle in a subtropical context leads to a lack of exploration and debate that could potentially challenge the way we work or reside. Research into efficiency of energy use can be seen as tweaking the known rather than initiatives that challenge and/or drive lifestyles and their embedded assumptions. Interior designers, as the creators of these environments, are driven by client needs and budgets. Is there an opportunity whereby interior designers can challenge preconceptions while being cognisant of client needs? The designer can no longer be passive but must strive to inform and educate clients and users while simultaneously addressing their needs.

Current conceptions and presumptions held by Interior Design need to be addressed. For example, as Elliot (2002) states, concepts such as recycling needs to extend to entire rooms, ceilings, floors, linings, furniture, and furnishings. ‘New’ practices need to become the norm for students as pre-professionals so they can lead once practitioners. This complements concepts such as Disassembly (Crowther, 1995) which is proposed as a driver for designers—interior designers and architects.

Fundamental to all interiors is the need to recognise the role of context. The interior does not stop at the lift or the outer wall. The experience, which is the interior, is influenced by what enters/exits physically (such as natural light) and with the person (such as memories). A subtropical context provides unique opportunities due to locale and lifestyle. Architects at present are embracing the indoor/outdoor interface with decks, balconies and the like – even in highrise buildings—(for example, Brisbane Square, inner city Brisbane). Interior design teams can be involved at the design development stage to influence such moulding and articulation of the form, layout, and services.

**SUBTROPICAL CONTEXT**
unique conditions = opportunities and constraints
geographical location, history, belief systems

**SUBTROPICAL CITY**
Environment – People – Lifestyle

**SUBTROPICAL DESIGN**
Passive Design
(light, ventilation, temperature)
Local Resources
Respect Water
Contextual sensitivity

**ENVIRONMENTALLY SENSITIVE DESIGN**
(SUSTAINABILITY)
Lowering resource demand
Lowering energy usage
Reduce embodied energy
Reduce redundancy
Reduce wasteage

**Fig1:** Intersection
between subtropical cities and environmentally sensitive design /sustainability

**b. Temporality of interior fitouts in a subtropical context**
Gaining a market edge is linked to brand in the contemporary world. The image and style of the interior is accepted as a valuable commodity to attract, identify, and
consolidate the business, service and/or product to potential consumers. Unfortunately, the perceived need to keep ahead, and to reflect flexibility and innovation, has also resulted in the continual turnover of interior fitouts. Associated with turnover is the wastage and energy costs associated with the existing fitout and materials, the cost incurred during design and construction of the new fitout, and the cost of the new fitout once completed and its maintenance. Is this practice still acceptable when research reveals a shortage of resources and long term impact such as global warming?

As well as rising energy costs, are the significant economic costs to Australia. According to the industry research company, Macromonitor (2007), Australia’s industry is booming with total construction sector costs increasing by 4.2% during 2007; and Queensland is likely to surpass Western Australia. Although, this growth was tipped to slow, from 2003-2007, construction materials costs increased 6.5% per year and are forecasted to rise 4.4% in 2008. The Building industry is a huge consumer of resources and generator of waste. It is listed by the Australian Government (2007) as one of three ‘major sectors of material resource consumers in each urban centre…where many thousands of individual material products are assembled as buildings and infrastructures (Newton,2006) As AIUS (2007) states, buildings (including residential buildings) are not considered to be ‘polluters’ because emissions aren’t visible like cars. However, AIUS also state that buildings emit 36% or 36 Mt CO2-e of Victorian greenhouse gas emissions in1999—‘equivalent to the greenhouse gas emissions of 7.2 million cars’ (Australian Institute of Urban Studies,2007).

As the interior (and associated services) account for such a significant percentage of the construction, (approximately 85% according to Carr in 1997) the onus is on Interior Design to take a leading role in research, practice and education to generate immediate and long term change. The potential to respond to context is a logical place to start. In the case of Brisbane, this is the subtropical context (Refer Fig 1).

3.0 ECHOES AND WHISPERS : THE PREMISE

Therefore, the question is implicated: What is the potential value of interior design taking a more prominent role in the discussions of sustainability and the subtropical city? It is acknowledged that there are individuals and organisations who contribute to the debate. However, the Interior Design profession as a whole appears to be silent. Questions arise in regard to this low level of engagement.

On first impression, it would appear that current discussion has two main characteristics—Echoes and Whispers. Echoes refer to the discussion of aspects and elements embedded in the broader debate which is initiated by others. Whispers are defined as discussions that occur at a personal, local or in-house level – for examples within the office, at dinner parties, or in passing.

Is this premise true? In order to identify if, how, and where interior designers are joining in the debate and/or leading discussions and innovations, an exploratory study was undertaken. This will now be described.

4.0 PROMINENCE OF DEBATE

This study aims to identify what discussion relating to subtropical design and sustainability/ESD principles is being engaged in by Interior Designers; and to identify in the way these issues are being discussed.

4.1 Methodology

Study a.
In order to establish how prominent the debate concerning subtropical design and sustainability is, two recognised and contrasting journals were surveyed. The first is the design journal *Artichoke* which is distributed to all members of the Design Institute of Australia and sold on the news stands. In issue 01, Artichoke is described as the ‘…voice of the professional design industry’ (–: 01/02:8). Industry updates, reports and reviews are included. In particular, six to eight reviews of interior environments are the dominant feature of each addition. A designer statement is included with each review article. The second journal is produced by the Interior Design Educators/Interior Architecture Educators Association. The *IDEA Journal* contains research articles concerning interior design. Although it originally targeted design education, it has expanded to include issues associated with interior design per se.

Past editions of both journals were surveyed to identify the frequency of discussion about sustainability and/or subtropical environments. The objective was not to critique the designs portrayed or research projects discussed. Instead this paper identifies the level of discussion about the two issues of concern—subtropical design and sustainability. The review articles were read and any issues relating to these two topics noted (Fig. 2). Both topics were largely ignored and when mentioned the content was not detailed and/or specific. Content noted in Artichoke included:

- Reclaimed ironbark (02/02:54) Interior Architect Lab Architects/Bates Smart
- Tiles laid to reduce wastage: Recycled ironbark counters (02/02:56) Lab Architects
- Avoid trendiness - fitout here for the long haul (04/02:62) Faman Findlay Architects
- Abundance of natural light (06/02:50) Buro Architects
- Loose fit – spaces lend themselves to multipurpose (06/02:57) H2o Architects
- Retention of building’s original thermal mass—minimum heating and cooling has been required (06/02:59) H2o Architects
- The time of workday breaks …were plotted and mapped for soltices – light shafts through occulus into courtyard (06/02:99) H2o Architects

It is obvious that the topics were given very little consideration. It should also be noted that within the above articles, the Interior Architect was noted once and Interior Designer not at all. There were no relevant articles within IDEA journal.

<table>
<thead>
<tr>
<th>Journal</th>
<th>No. Articles – Total</th>
<th>No. Articles – Subtropical Design</th>
<th>No. Articles – Sustainability</th>
<th>Topic Area relevance Scale 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTICHOKE</td>
<td>92</td>
<td>0</td>
<td>4</td>
<td>1- 3</td>
</tr>
<tr>
<td>IDEA Journal</td>
<td>77</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Content Scale:**

- 5 Philosophical debate and strategic modes of operation
- 4 Total environment approach
- 3 Services and energy costs + lifestyle
- 2 Product and integration with o/all space
- 1 Product information

**Figure 2: Number of Articles dealing with topic or principles**
Study b:

The above finding was surprising. As a consequence a literature search was carried out to identify if the debate was occurring through other forums. The QUT library was used to simultaneously search twenty multidisciplinary databases for the following terms: Interior design + subtropical; Interior architecture + subtropical; Subtropical design; Interior architecture and subtropical design; and, Subtropical and design + Australia +interior and design. The hits were then browsed to ascertain how many were about the topic.

Although a number of papers were grouped under the headings, it was found that very few were dealing with the topic area discussed here. Content varied and the main ones are listed below.

- Solar heat gain and implications in subtropical regions
- Solar application on building daylighting strategies in subtropical regions
- Sunshading to enhance subtropical classroom daylighting illumination

Therefore the articles relevant to the subtropic context were also relevant to sustainability.

<table>
<thead>
<tr>
<th>Topic keywords</th>
<th>Total articles available</th>
<th>No. papers on topic</th>
<th>Level of relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior design + subtropical</td>
<td>71 articles</td>
<td>3 flagged</td>
<td>0 relevant</td>
</tr>
<tr>
<td>Interior architecture + subtropical</td>
<td>0 articles</td>
<td>0</td>
<td>0 relevant</td>
</tr>
<tr>
<td>Subtropical design</td>
<td>8 articles</td>
<td>6 flagged/2 duplicates</td>
<td>4 relevant</td>
</tr>
<tr>
<td>Architecture + subtropical</td>
<td>3 articles</td>
<td>0</td>
<td>0 relevant</td>
</tr>
<tr>
<td>Interior architecture and subtropical design</td>
<td>0 articles</td>
<td>0</td>
<td>0 relevant</td>
</tr>
<tr>
<td>Subtropical design, Australia</td>
<td>3184 /1duplicates</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Subtropical and design and Australia; interior and design</td>
<td>459 total/20 duplicates</td>
<td>None post 2000</td>
<td>0 relevant after 2000</td>
</tr>
</tbody>
</table>

Figure 3: Database search

In addition, a Google Scholar search was undertaken with the intention of identifying articles not necessarily captured through the traditional databases.

<table>
<thead>
<tr>
<th>GOOGLE SCHOLAR SEARCH</th>
<th>No of Articles</th>
<th>First No.</th>
<th>Content/relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior design + sub tropics</td>
<td>1610</td>
<td>20 articles</td>
<td>4–1 article 3– 5 articles 1–1 article Possible – 1 article</td>
</tr>
<tr>
<td>Interior design + sub tropics / 2008</td>
<td>184</td>
<td>50 articles</td>
<td>4 – 2 articles 3 – 3 articles Possible – 3 articles</td>
</tr>
<tr>
<td>Interior architecture + sub tropics</td>
<td>519</td>
<td>20 articles</td>
<td>4 – 1 article 3 – 1 article Possibles – 3 articles</td>
</tr>
</tbody>
</table>
5 Philosophical debate and strategic modes of operation
4 Total environment approach
3 Services and energy costs + lifestyle

Discussion Forums are avenues whereby interior designers can contribute or lead the debate. However, through the web search very few were indentified that specifically targeted interior design/architecture or the designers relevant to subtropical contexts. In addition, interior designers were not key players in identified forums. For example, in the workshop, *Principles of Subtropical Design for Detached Houses*, (Kennedy, Hockings, Webster-Mannison, 2005) workshop participants’ were drawn from a number of professions and disciplines. These were librarian (1), student architects (2), architects (9), marketing (1), landscape architects (2); and the organisation representatives, BSA (2 architects and 1 planner), YBE (1 architect, developers engineering 1, project management 1); EPA (environmental science 1); Dept of Housing (unspecified). Although interior design was flagged as a relevant domain, interior design participants were not noted. Interestingly, key principles identified related to the inside/outside interface and to indoor living per se. The principles also embraced the relationship between the user and place—a key attribute of interior design (the person environment relationship). This implies the important input that Interior Designers would have as part of the workshop, and more broadly, to other forums.

**CONCLUSION**

**Consequences of absence**

Through this paper it has been established that Interior Designers have an important role to take in the debate and subsequent planning of subtropical cities. Due to the integration of the subtropical lifestyle and good practice for sustainability that reflects environmentally sensitive design, Interior Design’s input is mandatory. From the above pilot survey, the voice of interior design is at present limited although current interior design practice has the potential to have major impact through change.

The consequences of not participating include:
- Non-reflective practices will be perpetuated and the acceptance of current rules of engagement will continue
The interior will be conceptualised as ‘the inside’ and isolated from context without deep consideration being given to the implications for the city and beyond.

Practices deemed to be ESD or sustainable will simply relate to picking materials, specifying luminaries to reduce energy levels and the like, rather than taking an holistic position.

The critique of ‘the interior’ is led from an outsiders’ perspective which will be less informed, and potentially, dismissive.

Where to from here?
The time is here when Interior Design needs to engage purposefully and loudly in the discourse of subtropical cities—neither as an echo or whisper. This involves organisations, practitioners, educators and researchers discussing issues that intersect with the debate concerning both the influence of the subtropical context for Practice and the impact of Interior Design Practice on the context. At a minimum:

- Organisations such as the Design Institute of Australia and Government Bodies need to facilitate forums, continuing education, and projects to increase communication and research.
- Likewise Interior Design Practice and practitioners can facilitate the above but also lead research and development that forges change and that aims to educate clients to positively influence design outcomes. Practitioners need to lead by example but they also need to seek and create new knowledge to enable real and sensitive change. The appointment of sustainable interior managers (such as in the design firm, HDR (Bonda 2008b) can facilitate the development and application of relevant principles.
- Interior Design Educators need to consider how students will be challenged through projects to influence values and to take action that is informed and avoid the perception of context and sustainability as being a transient ‘style’. It cannot be assumed that educators and students share the same values and attitudes (Ruff and Olson, 2007). Elliot (2002) proposes that students need to understand ecology, and where materials come from, so that they develop insights into their actions and a holistic understanding of interior design within its wider context.
- Interior Design Researchers need to seek and communicate knowledge in a manner that facilitates uptake by practitioners. Researcher need to move beyond what is needed now to explore visions and processes that can also facilitate positive changes.

Collaboration across all of these stakeholders, and with the other Professions and Disciplines, is also needed.

The current study has indicated that the need to raise awareness that the interior ‘silence’ exists. As a result, practitioners in South East Queensland will now be surveyed to identify their personal beliefs and practices. In association, perceived role models and experts who are drawn from Interior Design will be identified. It is time to reconsider the interior within the context of the subtropical city.

REFERENCES