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HARMONISING MIDDLE-CLASS ASPIRATIONS FOR LOW-CARBON HOUSING: CONTEXTUAL STUDY OF MYSORE, INDIA

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ABSTRACT

Economic Globalization is enabling India to reinvent itself as a crucible for development, and provides previously unrealized opportunities for economic transformation catering to a fast growing middle-class. The relationship between affluence and consumption makes it implicit that the Indian middle-classes have a crucial role to play in the process of sustainable development. It is proposed that the Brundtland definition of sustainable development, conflicts with a self-cantered consumerism that often characterizes rapid economic development. The consumption patterns and aspirations of some middleclass sectors are contradictory to many principles of low carbon housing design. This paper explores the challenges and opportunities in the development of low-carbon housing with relation to the growth of the middle-classes in the city of Mysore. Whilst accommodating the inevitable impacts and realities of economic development, this paper intends to trace the interwoven fabric of local, social, cultural, and climatic responsive housing in Mysore, and its contribution to a strategy of appropriate and effective design frameworks for low carbon housing.

Keywords: *carbon emission, housing, middle-class, India*

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"A technological society has two choices. First it can wait until catastrophic failures expose systemic deficiencies, distortion and self-deceptions... Secondly, a culture can provide social checks and balances to correct for systemic distortion prior to catastrophic failures." Mahatma Gandhi

It is important to understand housing as social and cultural phenomena that can allow insights in the effective formulation of localised and relevant low carbon housing strategies. Although strategies such as converge and contract (Mayer 2004, 189) seek to accommodate developing countries' valid aspirations to achieve higher levels of prosperity, there is still an imperative to reduce carbon emissions within India. Whilst a low carbon society for developed nations can be defined as "inventing low carbon technology and reducing carbon dioxide emission by the middle of 20th century" (Skea 2008); for developing nations, achievement of low carbon communities must go hand in hand with achieving wider development goals . Further, while acknowledging the role of technology, emphasis has to be given to the importance of lifestyle and social change (Skea 2008). The complex and multifaceted society of India is interwoven with caste, religion and regional disparities, where new-found economic status and affluence in middle-class segments has a critical impact in the process of sustainable development. Though the middle class are defined as not in absolute poverty in

the developed world, the Indian National Council for Applied Research has classified India's population in to five demographic groups: the very rich, the consuming class, the climbers, the aspirants, and the destitute. The primary metrics for such a classification being based on income, and spending power, we indentify the consuming class and climbers, as constituting the "Indian middle class" (NCAER 2009). Increased resource consumption and carbon emissions that are traditionally associated with higher household incomes runs counter to climate change goals. A key challenge is to research ways in which sustainable housing in an Indian context can both mitigate carbon emissions and at the same time address the material aspirations and desires of a fast growing middle class.
The residential sector in the construction industry accounts for 22 percent of global energy consumption (Parker 2003). In case of India, about 17% of emissions originate from construction activities of which 60% can be attributed to the housing sector (Tiwari 2003). Construction in the housing sector amounts to approximately 10% of total carbon emissions. in India with new build reflecting greater income and mobility amongst the population. It would be simplistic to characterise a growing middle class as being exclusively materialistic where social and cultural conditions unique to India have the opportunity to marry prosperity, property and low environmental impact. Commentators such as P. K. Varma assert that Indian society cannot remain cohesive at a basic, functioning level if it is merely measured as an aggregation of personal wants (Varma 2007).
It is estimated that middle classes constitute about 25 percent of the total population of India (Saavala 2003). There are more than 27 % of people below the poverty line and about 28% people around it (Sridharan 2004). Recent economic development has enabled the middle classes to assert greater power and influence in political and economic processes (Singh 1993). However, it is important to note that 'the middle class' is not a cohesive or singular demographic entity. Traditionally, class has been defined based on the caste or religion of the person (Kulke and Rothermund 1998). This focus shifted slightly towards status gained from land ownership in the last century. With the advent of wider access to education, there is a greater consciousness of wealth inequality and implicit in this, social standing (Misra 1961). Other factors such as religious affiliation also contribute to complex models of social stratification. The more recent growth of an affluent middle income demographic must always be viewed as emerging from a much more complex and fragmented underlying cultural structure.

In post independence India, a quite cohesive consensus dominated middle class mores and values, defining themselves through Gandhian principles of modesty and self restraint that included the avoidance of ostentatious displays of wealth such as the home (Wessel 2004). Nehru in his autobiography wrote "the rising middle classes wanted some cultural roots to cling on to; something that gave them assurance of their own worth, something that would reduce the sense of frustration and humiliation that foreign conquest and rule had produced" (Nehru 1956). In a country subject to intricate levels of social stratification – such

iconic figures such as Nehru consciously sought cohesion and shared values in a newly forged and fragile nation state. The government had some success in forming a consensus amongst middle income earners that placed value on community over the individual that held true in an introverted economy with modest levels of growth.

The provision of housing in India has traditionally been less related to income and wealth. It is proposed to explore this theme through the example of the city of Mysore. It is a useful exemplar in that it has a history that directly influenced environmental response in the built environment. Traditionally as elsewhere in the country, it featured ingrained customs of social classification based on occupation. In case of Mysore, the Royal Palace was almost the exclusive employer and source of patronage, apart from modest levels of agricultural activity. Housing was segregated according to occupation with status being derived from proximity to the Palace. Residential layouts had evolved from the prototype of the Agrahara (small Brahman villages) that were prevalent 150-200 years ago (Issar 1991). New residences were built right at the edge of the road: that were either linear with a shared party wall, or with houses distributed around an open space. There was a very tenuous boundary to differentiate the end of the road from the beginning of the house. Physically, a semi-open raised space (Jagali) acted as a transition from the road to the inner part of the house. These Jagalis, which are always in shade, were and are, a perfect space for socializing and acted as a meeting area for the inhabitants. Jagalis overlooking the street had brought a sense of physical and psychological security to these spaces, which were actively used as interaction areas. People shared their leisure activities and entertainment with their neighbours in these informal spaces. Constructed of thick mud walls (later brick) and terracotta tile roofs, the houses had small openings towards shaded areas. As the Jagali was used as an external meeting space of the house, the relatively large central hall was used as an internal meeting area. Very few spaces inside the house had a fixed purpose (Ikegame 2007). Examples of these are kitchen, bath and store. It was the occasion that decided the use of the house: most spaces were multifunctional, for example the hall was used for sitting, working, sleeping, dining, and socialising.

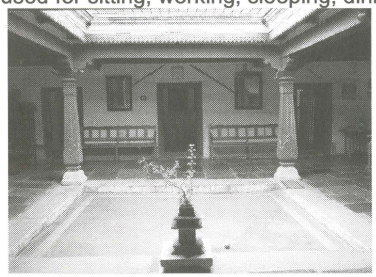

Figure1: View of internal court

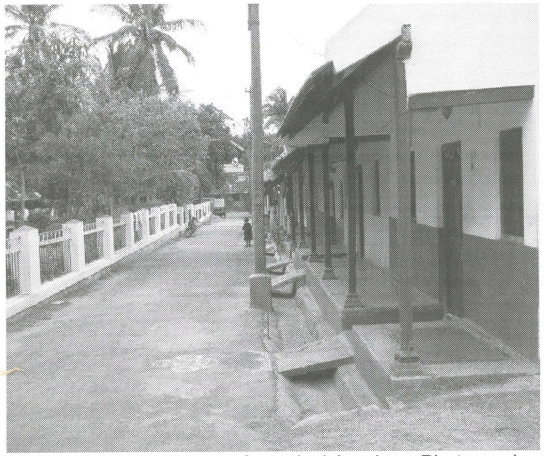

Figure2: View of external space of a typical Agrahara Photographs: Satish

Shared facilities (including party walls), the efficient use of semi-open outdoor spaces for much of the day, and the effective use of multi-purpose areas all facilitated a compact building footprint. Using locally available material within a climatically responsive layout and construction would today be regarded as a good example of efficient sustainable development. Plot ratios are dense compared to more diffuse contemporary layouts with less environmental impact because of a more efficient land use. Comparisons in Mysore of typical Agrahara settlements with contemporary middle income settlements indicate an increased dwelling footprint. Cartographic measurements of representative land parcels indicate that for a contemporary dwelling, 50% more plot area is required compared to more traditional Agrahara typologies.

The Jagali neighbourhood network of narrow roads, cluster planning and integration of community areas have successfully provided shared shading to reduce solar gains and improve environment of external spaces. A lower ecological footprint in the housing clusters is achieved by modest material consumption using shared building elements such as party walls and by using locally available, natural and processed, materials. The use of local construction materials, sustainable building practices at micro level, robust planning and clear legislation to promote local material and sustainable practices also resonated with the local agendas of the pre-independence Swadeshi. The term means 'indigenously manufactured' and was one of four key movements established by the Congress Party to campaign for independence. The industrial and commercial strategy, relieved of excessive political pressures was in Mysore implemented expeditiously of the policy by an effective political class and able

technocrats (Baweja. 2008). As a result of this, the benefits of economic progress were optimised to maximise local benefit. At the same time the conservation of parkland and the qualities of the Jagali meant that Mysore was noted for its visual amenity (Parsons 1930).

The innate sustainable qualities of the Jagali housing can be contrasted with contemporary housing typologies. Expansion of new housing has been driven by economic growth in sectors such as IT that have benefitted from economic globalisation and liberalisation. It serves an educated, aspirational and increasingly affluent faction within the middle class who have acquisitive value systems where housing is as much a reflection of individual status and wealth. Such a societal change can be traced from after the death of Prime Minister Shastri in 1966, the political climate changed dramatically, with a population less deferential and motivated to facilitate change. (Varma, 2007). This coincided with reports systemic corruption in the political classes. The electorate therefore became disillusioned with the hypocritical situation of a government promoting the values of Nehru and Gandhi whilst indulging in financial self aggrandisement (Wolpert 1989). In such a context, some many of the middle classes now prioritised success; irrespective of means, and money regardless of source (Varma, 2007). Liberalization in 1991 bought new entrants to the Indian middle class. Economic freedoms not only encouraged upward mobility within a defined middle-class, it also fired aspiration in lower income groups to progress in what were hitherto, rigid class and caste structures (Fernandes, 2000). The IT sector has driven major change in societal structures. Many citizens saw huge progress in a few decades, achieving prosperity and mobility unimaginable to their parental generation (Tim, 2006). Such disorientating wealth finds expression in a variety of ways including building design and interiors (Saavala, 2003). These new additions to the middle class started to define themselves on the basis of consumption and wealth within a perceived meritocracy (Saavala, 2003). It is this consumption pattern that is shaping the culture and identity of middle class (Wessel, 2004).

There is a paradox in that post independence India saw less localism as espoused by the Swadeshi. With priorities to establish an industrial infrastructure planning was centralised with little emphasis on urban planning strategies. Modern Movement planning and design techniques that were based firmly on European practice (MUDA 2008) displaced Jagali typologies and their lighter ecological footprint.

Housing design has fundamentally changed from previously flexible layouts to planning that clearly identifies partitioned space for clearly defined functions (MUDA 2008). Building form no longer encloses and defines external space to encourage outdoor activities. Rather housing sits, set back from a plot line with no clearly defined used for the outdoor ground. A sense of the communal is replaced by a priority to preserve privacy. Although contemporary housing

designs feature large openings, a defined and fenced plot boundary makes each building self contained and introspective (Saraswatipuram layout, MUDA, 2008). Roads, independent of houses, have pedestrian ways and are clearly segregated from the property of private individuals by fencing to compounds and supported by local planning legislation (MUDA 2008). Although in a purely functional sense, these layouts are well worked out, with a hierarchy of roads, amenities and play areas, it is a departure from the values of courtyard and Jagali forms.

It is suggested that the Jagali neighbourhood embodies a sense of the communal that reflects the values of the Nehru consensus middle class. Modern typologies mirror the ascendance of the individual over community where often competing needs for privacy and display produce buildings that are inefficient in their use of land and building materials, with little consideration given to passive methods of environmental mediation.

Figure3: View of Contemporary Housing pattern
Photograph: Satish

Consumerism has become an embedded Indian value (Fernandes, 2000). This has changed an image of a once financially cautious and thrifty middle class to one of affordable indulgence (Nijman, 2006). It is in this context that the built environment is at a crossroads, subject to two competing forces. The first is to be an important part of national and international strategies to reduce consumption and carbon emissions. At the same time however is the function of the construction sector to respond to the affluent seeking housing that reflects their status. A key to unlocking such a quandary lies in looking at successful ways in which housing has been procured in the past and finding strategies to harmonise such design principles with contemporary middle class aspirations and needs.

A key question is what virtues of pre-Independence Mysore can be revisited to offer middle income sectors sustainable and desirable housing? Obviously, an effective local government and planning framework is instrumental as was experienced in Mysore. Future research will interrogate whether the Swadeshi values of localism still resonate in the middle class and how the display of such values can confer status in a similar to the current condition of ostentatious consumption. A key challenge of contemporary house building in India lies in the disregard of open space that detracts from the visual and social amenity of the house and street. Here the lessons of the Jagali can be applied in a contemporary way to produce more sustainable housing forms that also meet the aspirations of an increasingly prosperous population.

The design of traditional Agrahara housing clusters have the virtue of enhanced density compared with contemporary layouts, that when combined with carefully designed openings, Jagalis and courtyards can contribute to greater environmental comfort with less environmental impact. However new design typologies that are aimed at the climbing and consuming classes need to reinvent the traditional yet simultaneously respond to a culture of raised expectations.

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