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Mosque Formsas Signification–Multiculturalism and the Role of the Modernist Language in Mosque Architecture

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ABSTRACT

Background: Architecture has the capacity as 'signification' i.e. a form of mass communication and the bearer of meaning to the general public. Large iconic structures such as mosques communicate not only its religious functions, but can embody a nation's aspirations, identity and ideals. In a multi-cultural nation, iconic structures must explore a new language in representing ideals and elicit emotional responses that convey the ideals and hopes of a multi-cultural society. Two national mosques are discussed in terms of their formative ideas and language as they sought to depart from conventional stereotypes. User perception is summarised from visitors' responses to form, language, and the overall ambience of the mosques. These suggest that user responses to these formal attempts highlights the role of the spiritual language of the mosque as being part of an international 'reading' of language. A third mosque was then discussed in terms of its potential language in fusing a Modernist vocabulary with architectural expression related to the local vernacular. The studies suggest the potential of Modernist language in a 'syncretic' language of fusing Modernist elements with elements of local culture and climate. Large mosques are argued as public buildings that not only perform a spiritual function and symbolism, but must be able to penetrate to the psyche of the masses and generate perceptions of national identity, inclusivity in a multi-cultural nation.

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INTRODUCTION

Umberto Eco, the renowned novelist and semiotician, asserts that architecture is a kind of semiotic system of signification (Eco, 1972); and that it has a structure similar to human language. Eco then applied semiotic theory to the question of how elements of buildings can have impact on human perception and his studies asserted that architecture is a form of mass communication, and any 'architectural style' has a symbolic dimension and a connotative ability to communicate. Ruskin (1953) the renowned English art historian, in his seminal treatise 'The Stones of Venice' said that any architecture must do two things: "A building must shelter us, and a building must also speak to us, it must speak of all the things we think are most important and which we need to be reminded of on a

daily basis." Botton (2006), the philosopher and cultural studies writer, asserts that human needs and desires manifest their ideals in architecture and highlights 'the emotions that architecture inspires in the user of buildings'. Charles Saumarez Smith, the Director of the National Art Gallery, in his article in the Observer, UK, wrote a 2006 review of Botton's book and he suggested insightfully: "...Architecture is too important to be left to the architects."

With specific reference to elements of Classical architecture, Eco (1972) claims that architectural elements are actually 'signs', or 'significations' and that these represent a system of conventions or 'codes'. A single architectural element or a group of elements are a body if such codes that can be fashioned as a 'bearer of meaning' and thus, these have associative meanings to the public. Hence like language, these elements can be organised to have a

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semantic structure of signs and elicit semi-conscious associative meanings. In the same vein, Agrest and Gandelsonas (1973) observe how Western architecture has similar connotations; and that Western architectural 'knowledge' of sophisticated 'theories' and histories of architecture; are in fact, not a neutral body of knowledge; but a knowledge which has been structured to aim, in general, as a kind of ideology serving to perpetuate the capitalist way of life and mode of production. Pevsner (1976) admits: "Every building creates associations in the mind of the beholder, whether the architect wanted it or not." As Broadbent (1978) suggests "at any time, a building can be signifier, signified or referent". A building exists as signifier in its site but as signified by photographs and diagrams". Broadbent also observes that the functionalist Modernist buildings of the 1920s are in fact, very poor in function. Le Corbusier's Villa Savoye, the epitome of the Modern Movement, was prone to flooding and overheating and thus was actually poor in function. Yet it is a magnificent symbol of the 1920s. Thus, whether we like it or not, all buildings symbolize, or 'carry' meaning.

As Saussure (1959) famously deduced, principles that structure linguistic systems can also be used as tools to understand and organise other kinds of communicative systems such as those governing the built environment. His writings attempted to highlight that buildings can be structured according to language and carry semantic meanings like language. This paper is based on this premise. Through a study of a series of modern mosques in Malaysia, elements are seen as not only functional, religious and public spaces, but as 'vocabulary' that contain certain connotations and whose meanings can be suggested through observing those comments given by the international visitors to the mosques which can be discerned through public domain media such as 'Trip advisor'.

Mosques represent a typology that has evolved essentially from 'spiritual' functional spaces to symbolic structures. Some are large undertakings that have become constructed as iconic symbols of Muslim nations (Holod and Khan 1997). Occasionally, they are ideological instruments where often, the use of the prevailing Arab-Islamic language have been predominantly used to suggest and represent the presence of an Islamic authority or government. Stakeholders and patrons are hesitant to move away from the language of the 'dome and minaret' (Eisen, 2015).

However in a multi-cultural society, the use of such language in iconic structures have been known to engender discomfort. Urban researchers have commented for example, on the highly Arabic stylised buildings of Putrajaya which have evoked criticism and even, dismay. Putrajaya's administrative precinct is replete with Arab-Islamic urban forms in its various civic buildings and these are interspersed

with modern hotels, shopping centres, commercial offices and convention centers (Nichols, 2013). She further describes: '*Putrajaya as a second major undertaking of national identity construction (after Malaysia's first wholesale nation-building exercise as a celebration of Independence in 1957) and conceived in the 1980s and implemented by 2003*'. Nichols (2013) again highlights: "*In order to stimulate national consciousness, a frenzied preoccupation with identity construction ensued in both of these cases, with new spatial and formal realisations promoted by the designers and politicians, Putrajaya assumed an identity of a pan-Islamic city with shared Islamic ideologies of global Middle Eastern centers. Imaginative 'meaning' for this new greenfield city was driven purely from borrowed aesthetics and form with a predetermined and pre-imagined sense of nationhood.*"

Moser (2010) observed how Malaysia, '*rather than drawing from local idioms, vocabulary and grammar, veered towards an importation of traditions and imagery of the Middle Eastern sources and cultures*'. King (2008) relates these to an underlying agenda: the 'advancement of Malaysia as a Malay Muslim polity, a new kind of high modernist Muslim nation'. Goh and Liaw (2009) observe '*the enmeshment of Malaysian nationalism within global Islam which led to the pre-eminence of the Islamic over the Malay identifications in cultural forms*'. The concern is how government structures can be more inclusive in its symbolic language – rather than continue borrowing classical elements of Middle Eastern design language with origins from Iran, Iraq, North India and Moorish and Spain and the Ottoman Empire. As Moser (2000) said: it is '*fantastical domes and arches that dominate Putrajaya's skyline and geometric Islamic landscape features that dominate streets*'. She again summarises: "*Putrajaya indicates a trend in Malaysian urban design and architecture to borrow from generalised traditional Middle Eastern motifs, rather than drawing on their own vernacular design traditions.*"

Vernacular Forms – Origins of the Mosque in Malaysia:

Traditional mosques in Malaysia, Indonesia, and in various Nusantara regions, are essentially, pyramid type forms. Originating from timber construction (Ahmad, Mat Zin and Arbi 2013), these quaint locally grown mosques are charming structures that arose out of the post-and-beam system of timber construction. The Masjid Nat Tanjung or Surau Aur at the Aur village, Saiburi District, Pattani, Thailand is one of the oldest, indigenous forms of mosque in the Malay Peninsula. Built more than 359 years ago at a village called Bendang Jung, it is essentially a timber, steep-roofed structure. This indirectly supports the contention that Pattani was perhaps one of the first Malay

kingdoms on the Peninsula to convert to Islam. (Bougas1992) asserts this as evidence of how the early Muslims; who had settled in Pattani; had adapted pre-Islamic forms in constructing their first house of prayer or mosques. It has a gable end with a three-tiered roof known the "peeled" roof. Its roof form was a nature outcome of its simple system of timber structure and connections. Inside the mosque, the prayer hall is a simple rectangular structure measuring 8 to 5 meters, and its rear annex resembles traditional house layout. The highly steeped roof seem to break into three layers with two sloping ventilation panels. The form recalls a system completely in tune with the climate and where architecture and nature seem to work together as one. The Masjid Kampung Laut was believed to have been built between 14-17th century, and its roof form is asynonym to the roof form of amosque and 'waqaf' ora place of rest in the Nusantara region. The entire language is timber-based; consisting of the columns, hanging column joints as well as details in Malay woodcarving. Its main pyramidal roof is supported by a number of pillars while the four main central columns are supportive of the top most part of the pyramidal roof, with columns supporting the lower middle roof.

Multicultural Representation:

A multi-racial country such as Malaysia constantly faces the issue of cultural representation in architectural identity. A 'national' architecture must be deemed not to make specific/direct referenceto the symbols of one race above another. A recurring debate in Malaysia is how to reach such consensus on what constitutes the architectural language of 'Malaysian architecture' that is acceptable and can represent all races. There were previously efforts made, from various stakeholders, since independence, to incorporate elements of a 'national Malaysian architecture' and further develop these as guidelines that can appeal to Malaysians in a neutral tone, although the Malay traditions have been acceptable as the national cultural form as it remains a source of the localised expression. Many national buildings have been inspired by Malay forms, idioms and references. The Malaysian Architectural Policy (MAP), initiated by Malaysian Institute of Architects (PAM) in 2009 towards Malaysian vision 2020, was such an effort. It was a significant policy to provide the nation with a common framework that can be used to propagate the ideas of innovation in the design and the aesthetics of buildings while in keeping with the natural heritage. It was to promote architecture as a tool towards symbolic unity, according to the level of importance depends on the building's purpose and function. The aim was towards re-assertment of the Malaysian identity, forging a pathway towards the development of a unique Malaysian architecture, and

an outcome in the search of a language of consensus i.e. for an architecture based on universal principles.

Conventionally without a dome, local authorities at times, do not perceive a mosque as representative of its spiritual function to the populations. Large mosques in Malaysia are typically expressed with the traditional Arab-Islamic vocabulary consisting of the dome and arches (Kahera, Abdulmalik and Anz 2009). Recently there have been a spate of such mosques. There is a general lethargy to depart from the conventional form although its origin does not profess such. These are equated as the primary language in symbolising Islam (Ahmad 1999).

A Mosque's Eclectic Form

And its origins:

At the theoretical level, mosques are structures that are always associated with Islam, and hence forms converge with the traditional expression representative of Arab-Islamic origins. The traditional urban and formal architectural language of mosque architecture throughout the world converge stereotypically on domes, arches, 'muqarnas' and calligraphy and arabesque decorative elements (Othman and Zainal-Abidin 2011). Their urban design, features, forms and vocabulary, are also derived from such dominant vocabulary and are almost always discussed as conceptualisations, processes and thoughts related to the Arab-Islamic origins of Islam. In the modern Muslim-state, the mosque is conventionally a typology that is seen as a representative of the official religion of the nation, Islam, along with a long association with vocabularies and grammars derived from its Arab Islamic origins (Saniei and Delavar 2012). In the case of Malaysia, and other Islamic countries, there has been a prevalence of such forms and the challenge is to counter such stereotypes. Ironically, there remain various notable and disparate efforts linked to political events, including those linked to a leader's vision and certain euphoric conditions of a certain time, socio-political event or need towards an identity of the nation. It is argued that the symbolic impact and representative signification has persisted through decades and until the present time. In a Muslim nation, the conventions of domes, arches and geometric patterns are part and parcel of expectations of the 'Islamic' form.

The Mosque's Basic Form – Derivative Of Spiritual And Functional requirements:

Based on Kahera, Abdulmalik and Anz (2009) discussion, the function of space in mosques always begins with a programme, and these depending on its scale and population catchment. Typically, a mosque aims to serve a bigger congregation than a musolla or 'surau'. A mosque/masjid is a 'jami'' mosque or congregational mosque (Aazam 2005) used for Friday prayers. The minimum layout required is a space behind the imam that extends perpendicular to

the Qiblah. The size, scale and complexity of the mosque are determined by the number of community members, brief and the finances available. Regardless of scale, there is always, an inherent differentiation between the community mosque that is typically a small mosque, funded primarily by the community and a national icon where symbolic agendas prevail (Mohamad Rasdi, 2010). The act of designing or commissioning a purpose-built mosque fundamentally begins the size of the community i.e. estimated number of worshippers or capacity praying together at any one time. Over centuries, the mosque has not only become the container and structure for prayer and community activities but a symbol for the community (Mohamad Rasdi, 2010).

The Dome:

The dome is actually a contentious feature of Islamic architecture. Rather than of Islamic origins, its history can be traced to Roman architecture. Historically, the dome was an evolution of the arch, when there was pressure to cover larger spans in masonry buildings. Hence, the technology was served towards the ambitions of patrons to go 'higher and wider'. Gradually its circular form became symbolically linked to a reflection of the Divine. The dome centric form became linked to reflections of the idea of the Unity of God (Mustafa and Hassan 2013). Such forms have become synonymous with the architectural representation of the heavenly realm. Centrally configured forms, when arranged in a relationship with other elements of space became representative of a central theme related to the 'Divine' including the Oneness of God (Mahmutcehajic, 2006). Such centrally configured patterns in art and architecture have been known to exude a certain sense of 'Unity'; these range from the typical geometric pattern adorning Islamic interiors to large-scale urban masterplans

(Bakhtiar and Ardalan, 2001). Throughout architectural history, builders, architects and innovators have derived and devised various forms to connect the square form to a dome's circular base. The Mosque of Córdoba, Spain under the Umayyad Caliph al-Hakam II was built and originated from a ribbed dome over the 'mihrab'. Caliph al-Walid had the Prophet Muhammad's mosque in Madinah reconstructed, where a modest wooden dome was installed over the square space in front of the 'mihrab', to emphasise its spiritual significance although it is not a religious requirement of a basic space of a mosque. Later the Umayyad caliphs in Syria developed a domed audience hall, known as a 'Qubbat al-Khadra' or a "Dome of Heaven."

Due to its historical evolution, the typical dome surmounting a mosque structure is now seen as a convention and even 'must-have' element of large national mosques. The convention of the dome and minaret has been difficult to steer away from, even

in the context of mosque designs in Western countries and environments (Eisen, 2015). Arguably, the spherical nature of the dome alludes to the notion of the 'Heaven' or 'Oneness'. Pressures from the site, client, iconic and cultural values and regional expression may exert their influences, but domes have persisted through time. As long as there is a dome, the overall effect is of a spiritual space in Islam. Yet throughout history, it is the central prayer hall that is crucial and outside forces may push and pull its essential form into various functions around the central hall; that synthesise into the eventual solution. Formal outcomes persist from the central form. Hence in the context of the Islamic community and its identity, the building of a mosque, as an iconic symbol is often faced with a certain difficulty in departing from a stereotype or a convention. However there are examples of such departures which come into play at historic junctures of a nation, at certain historical diffusion of stylistic influences or when political forces play a major role in the eventual architectural form and scale. (Othman, Inangda and Ahmad 2007).

Modernity in Mosque Architecture:

'Modern architecture' is always an ambiguous term. It is broadly understood as all buildings and works that are conceived, designed and built during an intensive modernisation period of a nation or country or region (Colquhoun, 2001). However it can also be understood as a series of works, whether in architecture, art or urban design, that expresses a people's consciousness and hopes of their position in the modern world or to commemorate their achievement in terms of political independence, social and technological development. Architecture becomes a means of expressing their hopes or the 'spirit of the age'. The challenge lies in the forms of such symbolic representation of a society. However, in a multi-cultural society, the potential of architecture as a uniting symbol of the people must be equally as important as representing a distinct historical moment. A Modernist language in architecture can be defined from its emphasis on 1) minimalism, 2) a propensity towards clean lines and orthogonally-based elements 3) a focus on austerity 4) an expression based on an emphasis on constructional forces rather than surface ornamentation 3) a reduction of extravagant ornamentation, 4) a heightened use of contrasting materials, and 5) the play and interspersing of orthogonal shapes. These are linked to the ideas of the 'precision'; symbolic of scientific progress, engineering accuracy, industrialisation and overall modernisation.

A Muslim nation must divest a certain identity to the world. The role of the 'modern' mosque is not merely to represent the degree of scientific progress by highlighting the objectivity and functionality of a 'modern' mind-set but must be connotative of a 'modern' cultural function and an ideological one. Its

presence and symbolic meaning can reach out not only to its own community but to the global population, and such meaning is difficult to extract from existing traditional forms and archetypes. Historically, it was known that renowned the Mughal emperor Akbar, in the 15th and 16th century of the Mughal, created and orchestrated a new architectural language in his monumental masterpiece of Fatehpur Sikri, in Agra India, which was specifically aimed at uniting the diversity of his people by syncretically combining elements of Hindu and Arab-Persian architecture into a new style. The complex is celebrated to this day, as one which represented his vision of unification and co-existence. Architecture is used as a medium to evoke emotion and a multi-cultural vision of unity of a Muslim – Hindu population that were so culturally and religiously diverse. Sikri became a monumental instrument of the state to achieve such an end and embody such aspirations. Shaukat *et al.* (2014) highlights how the elements of Sikri originated from different origins in terms of Hindu and Muslim influences. These were a process of 'modernisation' and syncretisation represented in the powerful visual communication of architecture, where different physical elements from different cultures were brought together to form a neutral structure which represents two diverse cultures, yet which neither veered overtly or dominantly towards any culture.

Two Case Studies:

Two case studies selected as 'Modernist buildings' in terms of form as these mosques represent a significant departure from stereotypical eclectic style. These are: 1) The National Mosque (Masjid Negara), 2) The Mizan Mosque (the avant-garde mosque), Case study no.3 is Masjid UTeM (the tropical modernist version of the pyramidal

mosque) which are then discussed in terms of its potentials. These styles are either a product of a historical and critical moment in the nation's history or a modern interpretation of a vernacular identity. They have different features and are located at various locations in Kuala Lumpur, Putrajaya and Melaka. The primary aim is to highlight the formative ideas and intentions, including how users and visitors perceive such forms. Comments are extracted from a Trip Advisor analysis as these are argued as representing more spontaneous observations by international visitors rather than the response to specific questions which might influence the visitors towards their answers. The three cases are of different size, scale, complexity and architectural grandeur, but each serves as an iconic purpose in their design and eventual realisation.

i) The National Mosque (Masjid Negara), Kuala Lumpur:

The National Mosque of Malaysia (Figure 2 and Figure 3), located in Kuala Lumpur has a capacity of 15,000 people and is situated among 13 acres (53,000 m²) of gardens. The original structure was designed by a three-person team from the Public Works Department: UK architect is Howard Ashley, and Malaysians: Hisham Albakri and Dato' Baharuddin Kassim. Built in 1965, it was meant as a new iconic symbol constructed with reinforced concrete, symbolic of the aspirations of a then newly independent Malaysia. Its conspicuous feature is the folded umbrella roof, a 16-pointed star concrete main roof and the 73 feet high 'closed umbrella' minaret. The umbrella, synonymous with the tropics, is featured conspicuously - the main roof is reminiscent of an open umbrella, the minarets cap a folded one (Mohamad Rasdi, n.d.).



Fig. 1: The austere and minimalist language of Masjid Negara.

The folded plates of the main concrete roof are necessary in achieving the larger spans required for the main gathering hall. Reflecting pools and fountains spread throughout the compound. On the 5th March 1958, Chief Ministers of the eleven states in the Federation of Malaya, a proposal was made to name the mosque Masjid Tunku Abdul Rahman Putra Al-Haj, in recognition of Tunku's efforts in

guiding the country to gaining independence. However, the Tunku refused this honour; and named it Masjid Negara in thanksgiving for the country's peaceful independence without bloodshed. The capping of its roof with an umbrella is perhaps one of the most significant gestures of Malaysian identity as it sought to depart totally from the predominant eclectic Arab-Islamic vocabulary of mosques

(Islamic Tourism Centre Malaysia, 2015). The basic form can be described as consisting of an interlocking cubic volume, capped by a folded roof. The influences to this form are evident from the language of Minimalist styles (Figure 1 and 2) where internal spaces dynamically flow into each other (Holod and Khan 1997). This recall the spatial quality of the icons of Modernism such as Mies'

Barcelona Pavillion or Lloyd Wright's Robie House. The minaret and roof appear to be vertical elements that grow from the horizontal 'plinth' of the cubic volumes. The spaces seem random yet on closer look; there is an internal principle of organic growth – almost like a centrifugal or tree-like extension of spaces from a central core.



Fig. 2: Conflation of modernist elements of horizontal plates, water and contrasting color and materials in Masjid Negara, Kuala Lumpur is the outcome of a 'tropicalisation' of the language of the International style.

The language of Masjid Mizan represents, in a nutshell, the need to fuse a paradox between the quest to express the technological prowess of steel - and to express a symbolic form. The architect, faced with an acute challenge of reinterpreting a traditional language and grammar of mosque architecture expressed in steel, sought to find a new language that would be a reflection of the progressive ideas and visions of the nation. The choice of steel as the dominant construction material created an impetus and a daunting challenge to search for a new that is progressive yet which can still express the iconic and the symbolic.

This mosque is the second mosque in Putrajaya catering for the multitude of office workers and visitors as they throng the city centre and the boulevard itself during working hours. Designed to a capacity of 20,000 people, Masjid Mizan or the 'Steel' Mosque has become an iconic draw to visitors in Kuala Lumpur, even pulling tourist interest towards Putrajaya as it has now become an official part and parcel of the itinerary of visits and tours. Located on an 8.3-acre site by one of the city's lakes, the mosque is aligned with the axis emerging from the Palace of Justice Building and the Perbadanan Putrajaya offices.

One of the defining features of the mosque externally is the 24m high facade made from 4300 sq.m of stainless steel spiral mesh. (Figure 3) Internally the mosque is designed based on essentially two main zones. The main prayer level is elevated from the ground to match the level of Perbadanan Putrajaya HQ - facilitating a direct access from users to the building from the surrounding

offices. This includes the construction of two bridges as an elevated pedestrian plaza called the 'Qibla Walk'.

Its principal architect, Ar Nik Arshad of Kumpulan Senireka, reminisces on how he came to the genesis and the formative ideas of the mosque by insisting on a departure from convention to the authorities and by finding inspiration from the verses of the Qur'an. This became a nexus of the essential concept of the mosque's roof. It drew ideas which alluded to the overhanging clouds as found in a verse in the Quran (Figure 3) where the roof life is curved and extended to functionally and symbolically represent a large shade the people and spaces below. The aim was for the 'Steel Mosque' to steer away from prevailing conceptions. Aesthetic effects are pursued by relying on surface decoration, and by expressing underlying principles and processes. The arch (Figure 6) is celebrated as an ornament itself; expressing stresses due to gravity. The interior decoration is moderate and not overwhelming. This position exemplifies restraint in the approach to decoration - and this underlines the meditative atmosphere in the mosque.

In Modern architecture, the ethos of 'space filled with light and air' is again expressed from an intention to create intersecting planes allowing space to flow in between (Figure 5). Basically each mesh element of the mosque's facade is 7.7m wide and up to 8.3 m long. They rise with the height of the facade and windows in a curved silhouette and in a seamless manner. Secured invisibly using hook bolts, the fabric mantle together with the roof design - under certain light conditions - result in the effects of a

semi-transparent/opaque envelope and a metallic, shimmering or even a monochrome, light-grey appearance.

The 'mihrab wall' (Figure 4) totally departed from convention into an almost transparent wall constructed in anti-reflective glass and supported by

cable net structures. The effect, according to the architect, was intended to simulate the sending of the verses of the Quran from the heavens to the earth, at one time, through its messenger. Figure 5 The glass 'mihrab'-the modern idea of transparency applied in the 'Steel' Mosque.



Fig. 3: The Masjid Mizan (The 'Steel' Mosque), Putrajaya(below).



Fig. 4: The glass 'mihrab'-the modern idea of transparency applied in the 'Steel' Mosque.

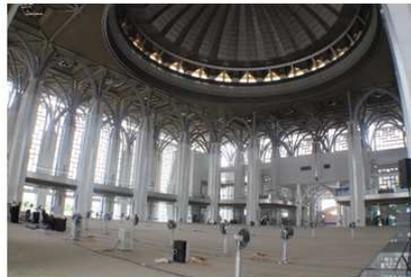


Fig. 5: Masjid Mizan, Putrajaya : The minimalist and structurally 'rational and 'austere' language of the prayer hall.



Fig. 6: Masjid Mizan : A language based on 'structural armature' and focusing on the logic of structural forces as in the arch.

Review on Visitors' Comments:

Rather than discussing architecture as a series of 'formal elements' divorced from public perception, Broadbent (1978) has discussed architecture as a language from a semiotic perspective. The aim is to move towards a more semantic study of architecture through a conventional analysis of what 'things' 'mean' to people. Broadbent also described how historically these have included attempts to measure directly what people say about cities and individual buildings by documenting their verbal responses. As an initial of a study to analyse how public members read the language of iconic modernist mosques, a content analysis on the two mosques Masjid Negara and Masjid Mizan based on tourist feedback was sourced from their respective Trip Advisor website.

Comments on Masjid Negara:**"A Nice Structure":**

"... I am non-Muslim, so only I entered in mosque but I was impressed by bold and modern approach in reinforced concrete, symbolic of the aspirations of a then newly independent Malaysia..." (Tourist from India)

"Nice pious place":

"... This mosque is different and does not have Arabic/ Mughal influence. That way much different from other mosques as it does not have typical domes or minarets. But a huge place" (Tourist from India)

"Uniquely Beautiful Non-Arab Mosque":

"This mosque has a different style of architecture to it and it is worth seeing. The roofing is similar to that of other religious temples in that it appears folded, different from that of dome-shaped Arab mosques... there are many doorways and openings to admire its beauty to the nice aesthetics of carpet, walls, and ceiling... Enjoy the nice design outside with all the pillars and pools of water..." (Tourist from New York)

"Beautiful Mosque, built in a very different style":

"What a beautiful mosque built in a style quite unique. Lots of water, fountains and greenery - very Islamic. The prayer hall is very serene and beautiful..." (Tourist from the UK)

Aspiration of Malaysia:

"The mosque is modern and unique, fitting for the aspirations Malaysia has as a nation."

i) Comments on Masjid Mizan (Steel Mosque):**"Peace.":**

"This has got to be my favourite mosque that I have ever visited. The open air structure is so peaceful and refreshing with the most incredible views of beautiful Putrajaya. The steel architecture is overall incredible and very unique. The mosque feels

so peaceful and calming and it was so easy to pass hours away at a time just reflecting and appreciating the views and open air." (Tourist from the UK)

"Excellent Unique Steel Structure makes it different from other mosques":

Very beautiful, and calming all faith people are allowed to visit, except the prayer times and if you are properly dressed. (Tourist from Saudi Arabia)

"Amazing Architecture":

This mosque is the second mosque in Putrajaya and well known as "Iron Mosque". My trip to Putrajaya will not be complete if I didn't come here to pray. You will be amazed by the main praying hall's environment and magnificent structure. This mosque is naturally ventilated, nice ambience and wonderful view. You will definitely find peace and tranquility here. There is no place peaceful enough than this "home" (Tourist from Malaysia)

Masjid Negara is 'avant-gardist' in form because it sought to depart totally from convention in order to have no prior reference to the past. Visitors commented not only how its form had symbolised 'progress' and modernity, but clearly communicate the 'aspirations' of Malaysia as a new nation. The embrace of the Modernist language was not 'cut-and paste', but was localised with a tropical sense of openness are fused with elements of water pools and fountains that elicit a feeling of peace and spirituality. Users also commented the spiritual feeling of the mosque and these were expressed openly from first-time visitors. They confessed how the form and vocabulary had strongly and effectively created the sense of calmness, peaceful and serene which is representative of a mosque. The tropical Modernist approach had elevated the spiritual function of the mosque.

On Masjid Negara, comments were also observed from the local intelligentsia and highlighted from a summary is given by MASSA (Malaysian Society of South East Asian studies) in a monograph: 'The construction of Masjid Negara is one of the most important events in Malaysian modern architecture history. It was built 40 years ago, yet its modern approach is still relevant in the context of today's' social-cultural and modern environment in the country, Its architecture emphasised functional aspects as well as the spirit of time and place. It does not imitate the Middle Eastern and Indian mosques architecture that was commonly practiced during the colonial period to symbolise the Islamic religion, It has been identified as an International Style building that does not convey any architectural references towards any ethnic or cultural values of any particular race; it reflects the effort and contribution of every level in a multi-religious and multi-racial Malaysia.

***A Modernist Version of Tradition:
Masjid Sayyidina Abu Bakar, UTeM Melaka:***

The Mosque of the University of Technical Melaka (UTeM), is a modernised scaled up version of its traditional pyramidal archetypes. Its facade treatments utilized the language of columns and openings that 'simulate' its traditional timber roots. These are tectonically expressed through enhanced narrow pilasters and window frames that slightly project from the window-wall - alluding to the post-and-beam and louvered language of Malay traditions



Fig. 6: Masjid Abu Bakar, UteM, Melaka- a modern mosque inspired by the vernacular forms yet expressed in Modernist language.

The overall language is an expression of climate and the tropical intensities as every element is highly synchronised with the tropical environment. The pyramidal roof has the practicality of dispersing hot air at its apex and thus keeping the interior cool – focusing on the central prayer hall that is in need of comfort. The space expands into a natural hierarchy, fulfilling function and utility. The hall is punctuated with skylights admitting daylight via the clerestories overhead. Light is diffused from its high intensities via these and colonnaded verandah. Climatically these surrounding semi-open areas contain all-rounded shaded areas buffering and separating the inside from the outside. The screens, brisesoleil and louvers work together as part and parcel of climatic strategies, and syntax.

Rooted in the Malay world, the UTEM mosque evokes a monumentality in terms of a vision of the traditional yet an expression of Modernity. Hence the resultant expression of the mosque has a resonance with both the global and the local, as it emerges out of the idea of representing a modern university and state.

Discussion:

Architecture can serve to protect the fragility of co-existence of different cultures and religions in one nation-state. Large structures such as iconic mosques serve as a connotation and a form of mass

(Fig 6). Timber elements are transmuted into modern concretised versions and capped with a three-tiered pyramidal form. The ratio of proportions is adhered to in elevation. The mosque is modern in its austerity yet resonates the columnar language of the Malay vernacular. The rhythms of the facade with receding 'pilasters' and windows resonate the column-based traditional language of the Malay past. The allusion of a light 'timber' tectonics and frame are fused with the use of whitewashed masonry construction.

communication of a multi-cultural nation, despite the mosque being a representation of the Islamic religion. Modernity is defined in general, as a certain threshold where a society or a civilisation become aware of significant and drastic changes brought on by massive technological developments. These may instigate optimistic conditions in the people's psyche as they find themselves entering a new chapter of their nation or a new horizon into the unknown (Curtis, 1996). In Islamic nations, mosques are instruments of identity at a crucial juncture in a nation's history yet they also must fulfil a social role. From the users and visitors' comments, the mosque became a means of communicating such messages and aspirations when there is an absence of any reference to stereotypical 'Arabised' forms. Comments from the intelligentsia such as MASSA, recall its recognition of the architectural message that signifies socio-cultural cohesion. Iconic structures speak of a nation's visions and aspirations. Architecture remains a means and a medium towards the cementing of an identity, a reminder of ideals and how to stand tall among nations.

In all three cases, the modernist vocabulary and its use of simplicity, linearity and precision – emblematic of Modernity - are used as they sought a 'radical' break with the past. These had unconsciously framed the principles of design in

avision of the 'new' and 'progressive'. The mosque thus not only signified a break with the past but a conscious embrace of the 'new'. These can be linked to their active communicative ability which are, amongst others :

- 1) The realisation of the traditional' rhetorical' functions of architecture such as the embodiment of state and the preservation of institutions and ideals;
- 2) The mosque is no longer a product of convention, but manifest aspirations outside of this convention;
- 3) They distilled design to its essence by exposing the structural armature of a building as a visually logical system
- 4) Their spatial organisation of parts were mainly according to function;
- 5) Both patron and architect agree that the imagination of the architect should be free of all stylistic conventions;
- 6) Hierarchy is primarily focused on a central dominant space and which is used as an organising tool. The idea of the center is reinforced by a heightened roof that appears to generate symbolically dominant spaces and thus are seen as 'sacred'. Spatial elements extend from this center;
- 7) External and internal elements recall of principles of minimalism and focus on reflection of light and admission of air and yet infused with an emphasis of refined materials;
- 8) A heightening of the spiritual basis of form through an emphasis of water elements and water bodies and that the human user can see from the inside; .
- 9) An awareness of the critical function of public structures and civic architecture is medium of uniting a disparate multicultural population;
- 10) an emphasis on climatic strategies and 'neutral forms' rather than references to external cultures. There is openness, and rootedness through climatic considerations and a reduction of surface decoration.

In Masjid UTEM, local tradition is interpreted and 'morphed' into a Modernist language. Masjid Negara's celebrated use of the parasol local umbrella as an analogical element for its dominant roof form, rather than the conventional dome roof celebrates both identity and inclusivity. The extended pavilions that invite airflow and speaks volumes of the intentions of its patrons to seek conflation between identity, modernity, and a democratic synthesis. The rectilinear pavillions, fuse global references to the Barcelona's Pavillion by Mies Van Der Rohe yet recall open-air tropical verandahs alluding to the idea of the 'anjung' of the traditional houses of the Malay world.

The case studies point to several conditions that can precipitate such forms, amongst others:

1. A Historical condition – the emergence of a new nationhood can spur a combination of euphoria and nationalism. Under certain conditions, these give rise

to new forms.. These are unique conditions where both patron (local or national government) and practitioner consolidated their aims to pursue a form that departs from the conventional and to represent the identity of a nation in the cusp, threshold or throes of modernization. (Ismail and Mohd Rasdi 2010).

2. An Urban condition and new materials : In masjid Mizan, the use of steel spurred the innovation; new materials must be expressed through new forms. The form of the Masjid Mizan is avant-gardist, in that the architect sought to steer away from the conventional in all features.

3. The identity of statehood – To create a modern image, with the pyramidal form yet create a departure from the curved (almost Chinese influenced) roof-forms of its predecessor, the Masjid Al-Adzim of Melaka, distinctive vertical and horizontal members, elements and pilasters allude to a Modernist tectonic-based language.

Conclusions:

Architecture does not exist in a non-ideological and neutral field. Its whole production of are outcomes of socio-cultural forces and work of individuals that act within an ideological and socio-political context. Similarly architectural and urban language is a mechanism through which societies make sense of the world and express their position in it. Meaning is not only generated and experienced, but emerge from physical structures that grow from the productive field through which social realities are constructed, experienced and interpreted. These elements can be read in terms of their intentions and yet capture their spiritual functions. These 'iconic' mosques (due to the substantial investment into their architectural preservation and construction, operations and maintenance) can carry both spiritual and cultural meanings. The departures from existing stereotypes can be a bearer of multi-culturalism and yet still exude a strong spiritual ambience. The study suggests that a more neutral language actively communicates a multicultural aspirational stance yet still succeeds in evoking spiritual overtones of a religious facility. Eco (1972) calls the main function of architecture as the 'primary function' due to its semantic ability, while its 'secondary' functions are more complex and often carry a symbolic message. In Post-modernist eras of modernity, architects are always in a dilemma or dichotomy of a choice between 'imitation' or 'invention'. As Broadbent (1978) observes; " we all share a social contract as to the conventional form'. The need is to respond to the post-modern concern on the creation and reception of new meaning. Forms must depart from prevailing conventions if they are to have the ability to communicate ideals of a nation and an awareness of their position in the modern world. These forms have the potential of becoming representative of the need to adapt symbolic structures to an increasingly

universal audience and population, and to communicate the ambitions of an increasingly diverse nation.

REFERENCES

- Agrest, Diana, and Gandelsonas, Mario, 1973. Semiotics and Architecture: Ideological Consumption or Theoretical Work, *Oppositions*, 1: 93-100.
- Ahmad, A.G., 1999. The Architectural Styles Of Mosques in Malaysia: From Vernacular to Modern Structures. Paper Presented at the Symposium on Mosque Architecture. King Saud University, Riyadh, Saudi Arabia.
- Ahmad, A.Z., A. Mat Zin and E. Arbi, 2013. Typology of Interior Architecture for Traditional Mosques in Peninsular Malaysia from 1700 – 1900 AD. *Jurnal Al-Tamaddun Bil*, 8(2): 89-100.
- Aazam, Z., 2005. The Social Logic of the Mosque: A Building and Urban Spatial Investigation. Proceeding for The 5th International Space Syntax Symposium. Cardiff University, UK.
- Bakhtiar and Ardalan, 2001. A Sense of Unity, Kazi Publications; Chicago.
- Botton, Allain De, 2006. The Architecture of Happiness; Hamish Hamilton Publishers. UK
- Bougas, A.L., Wayne, 1992. Surau Aur : Patani Oldest Mosque Archipel Année, 43(1): 89-112.
- Broadbent, Geoffrey, 1978. A Plain Man's Guide to the theory of signs in architecture, *Architectural Design*, 47: 7-8.
- Colquhoun, A., 2001. Modern Architecture, Oxford University Press.
- Curtis, William, 1996. Modern Architecture since the 1900s, Phaidon Press.
- De Saussure, 1959. F. ; A Course in General Linguistics, Wbaskin, trans. Philosophical Library, New York, London.
- Eco, Umberto, 1972. "Introduction to a Semiotics of Iconic signs", *Versus* 2, January;
- Eco, 2005. Umberto, in *Function and Sign : the semiotics of architecture in Leach, Neil (ed.) Rethinking Architecture: A Reader in Cultural Theory*, Routledge, Taylor and Francis,
- Edwards, C., 2000. Islamic Domes. In *Domes. Papers read at the Annual Symposium of the Society of Architectural Historians of Great Britain*. Pixham Mill, Surrey. The Society of Architectural Historians of Great Britain, 27-41.
- Eimen, Alisa, 2015. Mosque, Dome, Minaret: Ahmadiyya Architecture in Germany since Minnesota State University, Mankato International Journal of Islamic Architecture, 4(1) Intellect Ltd.
- Holod, R., H. Khan, 1997. The Mosque and the Modern World- Architects, Patrons and Design since the 1950s. Thames and Hudson Ltd, London.
- Grabar, O., 2015. The Islamic Domes: Some Considerations. *Journal of the Society of Architectural Historians*, 22(4): 191-198
- Ismail, A.S., M.T. Mohamad Rasdi, 2010. Mosque Architecture and Political Agenda in Twentieth-century Malaysia. *The Journal of Architecture*, 15(2): 137-152.
- Kahera, A., Abdulmalik, L. C. Anz, 2009. Design Criteria for Mosques and Islamic Centres: Art, Architecture and Worship. Architectural Press. Oxford, UK. Chapter, 1: 1-17.
- King, R., 2008. Kuala Lumpur and Putrajaya: Negotiating Urban Space in Malaysia: National University of Singapore Press.
- Mahmood, Shaukat, Z. Denan, S. Jahnkassim, 2014. Architecture as a Celebration of Multiculturalism- Revisiting the Legacy of Fatehpur Sikri, IIUM Press, Malaysia.
- MASSA monographs, 2001. Masjid Negara The National mosque.
- Mahmutcehajic, R., 2006. The Mosque; The Heart of Submission. Fordham University Press, New York, 6.
- Moser, S., 2010. 'Putrajaya: Malaysia's New Federal Administrative Capital Cities: The International Journal of Urban Policy and Planning, 27(4): 285-297.
- Nichols, J., 2013. Mapping Identity; The Rules and Models of Putrajaya, *Proceedings of the Society of Architectural Historians, Australia and New Zealand*, 30.
- Othman, R., N. Inangda, Y. Ahmad, 2007. A Typological Study of Mosque Internal Spatial Arrangement: A Case Study on Malaysian Mosques (1700-2007). *Journal of Design and the Built Environment*.
- Pertubuhan Akitek Malaysia, 2009. Malaysia Architectural Policy. Retrieved at http://www.pam.org.my/images/resources/references/ MAP_F5.pdf
- Pevsner, Nicholas, 1976. A History of Building types, Thames and Hudson, London.
- Ruskin, John, 1851. *Stones of Venice*, Kemlscott Press edition, UK.
- Saniei, M., A. Delavar, 2012. Communicational Role of Mosque Architecture. *Asian Social Science*, Canadian Centre for Science and Education. Retrieved on 10th October 2015 at <http://www.ccsenet.org/journal/index.php/ass/article/view/15385>.
- Smith, Charles Saumarez, 2006. A review of Alain De Botton's *The Architecture of Happiness, Under Home Truths*, *The Observer* newspaper, 7. UK.