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CONTENTS

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EDITORS' NOTE

This issue of JRAP has five papers, an interview and a book review. The most of the papers included in this issue were presented in the First International Conference on Urban and Regional Planning (CURP), organized by Department of Architecture and Planning, NED University of Engineering and Technology; around the theme of Urban Resiliance.

The first paper focuses on the issue of social housing in the west and discusses the concept of urban resiliance with respect to mass social housing. This paper was presented in CURP.

The second paper is a discussion and analysis about the teaching pedagogy in Basic Design course, as part of the B.Arch curriculum. This paper reviews the contents and objectives of this course, and analysis its outreach using quantitative survey methods.

The third and fourth papers were presented in CURP 2017, and they explore the concept of urban resiliance in Havana and Thailand respectively, in relation to tourism and natural disasters.

The last paper included in this volume is an analysis of a landmark heritage building, the Empress Market, using the value assessment tool.

An interview of David Gloster, Director of Education, Royal Institute of British Architects, is also included in this volume.

This volume also contains a book review of 'Architectural Styles: A Visual Guide', authored by Owen Hopkins.

Editorial Board

(SELF-MANAGED) URBAN RESILIENCE AND MASS SOCIAL HOUSING

*Evandro Holz**

ABSTRACT

The outlook on urban resilience has gone through significant evolution. Its concept has been broadened from an emphasis on endurance of functions, through a focus on adaptability of systems, towards transformative capabilities in the face of uncertainty of events. Most notably, new visions acknowledge both short-term 'shocks' (e.g. hurricanes) and longer-term 'stresses' (e.g. inequality), recognising crises as intrinsic to the complexities of the world we live in, and actually necessary for our progress. To encompass the uneven and unpredictable circumstances that are experienced, it is essential that we acknowledge the empowerment of citizens, along with the tangible and intangible assets (e.g. infrastructure and education, respectively), as the main drivers of change (which are refered to as 'self-managed resilience').

Social housing programmes present a great opportunity to build on this new perspective on resilience. They allow the transformation of a set of issues (including shocks, e.g. natural disaster, and stresses, e.g. poverty) into an opportunity to embrace change and evolve from it. However, they often cause a big disruption in the city fabric and, in the long-term, even replicate the problems beneficiaries faced before it. This paper shows how the application of new urban resilience perspectives in social housing, particularly via self-managed practices, can minimise the occurrence of these issues. Drawing on experiences in Brazil, it describes the positive effects in social, economic and environmental resilience derived from beneficiaries' engagement in all project phases. Moreover, it provides a forward-looking conclusion, including recommendations to further improve self-managed resilience and housing practices.

Keywords: urban resilience, self-managed housing, social housing

INTRODUCTION

Cities face a multitude of perils, of both anthropogenic and natural origins – from tornadoes to food shortages, from fires to social segregation. They are progressively concentrating wealth and societal functions with increased intensity, amplifying their centrality in the modern world, but also making them even more susceptible to these threats. Within this context, the concept of 'urban resilience' has gained ample prominence, referring to the ability of a city to deal with the problems to which it is exposed, whilst preserving its essential structures and functions.

Resilience frameworks have been developed and employed around the globe, with the use of diverse approaches. These outlooks are built on the different understandings of the hazards cities are exposed to, and associated time and spatial scales involved.

Within these new trends, there is a movement towards empowering people to take action more pro-actively in building theirs, and their cities' resilience. This perspective is the recognition that achieving 'resistance' against all disturbances people are exposed to is an unrealistic hope (Brudermann, Rauter and Yamagata, 2013). Nevertheless, allowing people to not only manage but to also reach a wider spectrum of assets (e.g. jobs, infrastructure and public services) leads to long-term sustainable resilience by adapting and transforming in the face of increasing uncertainty and unpredictability of events.

This article aims to cover urban resilience from the perspective of people's capacity to anticipate, overcome, adapt and transform whilst facing disturbances. More specifically, the growing topic of 'community resilience' is advocated as the one embodying more closely the idea of 'self-managed resilience'. Such approach is portrayed in the case of the self-managed social housing arrangement case of Modalidade Entidades (MCMV-E) within the Minha Casa, Minha Vida Programme (MCMVP) in Brazil, and its potentials to increase resilience in housing – in an individual, community, neighbourhood and at the level of the city.

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URBAN RESILIENCE APPROACHES

The field of urban resilience has seen substantial developments, both in theory and practice. For the purposes of this research, the concept is categorised into 'traditional approaches' and 'emerging trends'. The differentiation is made via its underlying theories, and its application ranges in terms of hazard types and spatial and time scales.

Theory

In very broad terms, resilience refers to the ability of someone or something to recover from a shock or disturbance. As a concept, it has been utilised in a variety of fields, such as economics, engineering, physics, psychology and ecology. Within an urban context, the engineering and ecological models are the ones more widely employed.

The main difference between the engineering and ecological perspectives is regarding equilibrium states. The engineering one, in which the traditional approach is based on, considers only one equilibrium condition, and "refers to the rapidity with which a system returns to its equilibrium after a disturbance" (Wu and Wu, 2013: 213).

The (socio-)ecological vision, on the other hand, understands that a system can have multiple stable states, and evolution is possible as long as the system remains functional, serving as the basis for emerging trends (Wu and Wu, 2013).

The change of states can occur through gradual and continuous (e.g. long-term minor social issues) or abrupt and dramatic (e.g. natural catastrophes) processes.

In addition, slow processes can also incur in sudden events (e.g. long-term social issues resulting into social unrest events) and vice-versa (e.g. flooding event leading to longterm increase in inequality). These are the main characteristics of ecological-systems going through such processes: coping capacities, which are hazard-oriented, and refer to reducing the vulnerability of a system to a certain threat; and adaptive and transformative capacities, which are system-oriented. Adaptation, in this sense, relates to adjusting a system towards minimising impact of future disturbances – in a sense, improving coping capacities; transformation denotes deeper changes, and the reconfiguration of system's dynamics in social, economic and environmental aspects on the long-term, not aiming at addressing a specific issue (Redman, 2014).

The socio-ecological perspective is further described with the concept of Complex Adaptive System (CAS), which implies that the reorganisation of sub-systems due to a shock, ideally prepares the larger system for better adaptation for future events, increasing its resilience (Rodinand and Garris, 2012). In addition, it understands that, whilst the overall city functions are maintained, the structure itself might not be. This can be observed both in terms of components of a larger system (e.g. a disruption in a transmission line leading to an upgrade in the electricity infrastructure), or different spatial and organisational scales (e.g. a community that enhances its capabilities after suffering from flooding events can increase the overall resilience of a metropolitan area).

In summary, CAS embraces change – fighting against it would actually decrease resilience, since its main goal is to adapt, not to prevent.

CAS usually goes through a dynamic and ongoing process of renewal and regeneration which is known as 'adaptive cycle' (Wu and Wu, 2013). Adaptive cycles, in their turn, occur on a broad spectrum of spatial, temporal and organisational scales; the nested hierarchy of adaptive cycles arranged according to their characteristic scales is termed 'panarchy'. Although consisting of a hierarchical structure itself, panarchy is also seen in deliberate contrast with 'hierarchy'. It suggests that slowchanging, large-scale processes influence nested sub-systems, but do not exercise control over them, as dynamic cities are understood to present as well.

Traditional and emerging approaches on urban resilience can be further distinguished through the debate over specific versus general resilience. Specific resilience relates to the particular response of a system towards a known disturbance – the resilience 'of what, to what' (and, more recently, 'for whom'), usually referring to the engineering perspective (e.g. resilience of a neighbourhood to flooding events). In contrast, general resilience is a broader concept, considering the capacity to withstand unforeseen shocks, with no relation to a specific stress or response, related to the ecological view (Wu and Wu, 2013).

Emulating theory, the scales of application of traditional and emerging urban resilience approaches also entail substantial differences. The debate on specific and general resilience is the one that most influences the spectrum within which urban resilience is assessed. In addition, the incorporation of adaptive and transformative capacities, which include more strongly social and economic factors, is an important determinant. These scales are evaluated in three main instances: hazards, time and spatial scales.

Cities face both acute and one-off (on a short-term) threats, termed 'shocks', and longer-term perils, or 'stresses'. The traditional approach on urban resilience has a focus on shocks, i.e. mainly events of big magnitude caused by 'external' forces (e.g. floods, storms, hurricanes) and, to some extent, manmade threats (e.g. fires and terrorism), being particularly relevant in natural disaster reduction policies (Beilin and Wilkinson, 2015). New developments have broadened the scope to comprise long-term issues, both from internal and external agents, including more emphatically those of anthropogenic origin. Some examples are problems resulting from ongoing rapid urbanisation, such as segregation and poor housing conditions, migration, tourism, health risks, desertification, declining water quality, etc. In addition, there is a vision towards augmenting a system's capacity towards manifold hazards – embodying the concept of general resilience, rather than focusing on solving issues associated with specific events (Arup and The Rockefeller Foundation, 2014).

Regarding time ranges, two main aspects are considered: the hazard itself, and the associated resilience capabilities/measures involved. As described above, shocks are sudden events and short-time occurrences, characteristic to the traditional approach. Stresses, on the other hand, are long-term issues, or events leading to or resulting from a shock, and have been incorporated by the new vision on urban resilience. Likewise, coping features tend to be short-term, with closer relation to shocks (e.g. financial resources for reconstruction), while adaptation and transformation (system-oriented) tend to be long-term developments, and more linked to stresses (e.g. improving educational levels). In this case, however, there is no clear distinction – the building and 'use' of such capabilities usually overlap significantly.

Concerning spatial scales, urban resilience entails both cities' sub- and supra-systems, as well as their linkages. Sub-systems include territorial subdivisions (e.g. households, neighbourhoods, districts), infrastructure components (e.g. electricity network, solid waste management system, housing, industrial facilities) and populations (e.g. individuals, groups, associations), amongst others. Supra-systems refer to higher level of governments and institutions, international agents, consumers in a different country, etc. In this sense, the traditional approach focuses in the resilience 'of what', i.e. of a particular system, with limited acknowledgement of the linkages between it and other systems; emerging trends, on the other hand, incorporate the understanding that systems are interconnected, horizontally and vertically, and that they influence and are influenced by the others, referring to the concepts of CAS and panarchy.

Although significant evolution of the conceptualisation of urban resilience has been seen, as described above, both traditional and emerging trends still tend to achieve somewhat limited efficacy. Overall, although there is greater consideration of socioeconomic features and linkages between and within urban systems, developments do not properly reflect the pluralistic environment people live in, and that events affect and are affected by people in different ways, bringing uneven level of resilience needs and potentials . A change of paradigm, addressing appropriate scales, and recognising citizens, as individuals and groups, and their assets as systems, and therefore the main drivers of change, is thus deemed necessary. In this study, the concept of 'community resilience' is advocated as the one that better incorporates elements brought by both the traditional and new approaches on urban resilience, but including socio-economic matters more effusively and being able to work on particularities of individuals and communities.

COMMUNITY RESILIENCE

Community is a social entity with a greater meaning than the number of people located in a particular territory. It embraces their social and economic relationships, and the sharing of ideas, customs, goals, institutions and services in distinct levels of conformity and conflict (Uriarte Arciniega, 2013). These variables largely determine their strengths and weaknesses, consequently influencing socio-economic impacts of shocks and stresses and coping, adaptive and transformative capacities. Therefore, the concept of community resilience is advocated here not only because it incorporates these aspects more strongly, but also because it embraces the empowerment of citizens and communities to take the lead in "self-managing" resilience.

Community-based organisations and their individuals can offer a particularly valuable set of skills towards building resilience. In general, they leverage their participation with grounded experience and practical knowledge, portraying relevant features such as: organised, informed, experienced constituencies, with a strong commitment to address challenges faced by their communities; field-test practices and solutions; holistic, multi-dimensional approaches to resilient development, due to their already vulnerable conditions, being able to bundle themes and prioritise win-win strategies; and improved responsiveness and accountability of government programmes to their priorities, via ongoing engagement.

The concepts underlying community resilience can be directly linked to socioecological resilience. From CAS, it takes the vision that change should be embraced, by focusing on adaptive and transformative capacities. From adaptive cycles, it gets the notion of the community as a system within an ongoing process of renewal and regeneration. Drawing on panarchy, it builds on the fact that self-organised actors and processes can affect higher-order system properties. Therefore, the focus on community reflects the acknowledgement that resilience manifests at different levels: individual, household, community, and higher-level systems (e.g. cities, nations and ecosystems) (Frankenberger, Mueller, Spangler and Alexander, 2013).

Several initiatives define characteristics that a resilient community should portray. The outlook provided by Red Cross (IFRC, 2012), for example, defines that a resilient community is the one that…

- …is knowledgeable and healthy, having the capacities to evaluate and monitor its risks, whilst acquiring new skills.
- …is organised, and capable of identifying issues, define priorities and act.
- …is connected, interacting with external stakeholders that can provide support in terms of goods and services, for example.
- …has infrastructure and services, such as adequate housing, transport, energy, water and sanitation, and associated means to maintain and upgrade these systems.
- …has economic opportunities, including alternatives for employment, income and financial services, which are flexible, resourceful and reflective to change.
- …can manage its natural assets, recognising their value whilst protecting, maintaining and improving them.

The societal factors that enable people's accessibility to assets majorly encompass intangible features. The most common denomination describing those is 'social capital', acknowledged as the foundation of collective action, collaboration, and self-organisation.

Social capital can be divided into three types (Frankenberger, Mueller, Spangler and Alexander, 2013):

- **Bonding social capital**: defined as the links between community members, including principles such as trust, cooperation, and solidarity.
- **Bridging social capital**: refers to the connections of one community/group to other communities/groups. It can facilitate access to a broader range of external assets and it can cross physical and cultural barriers.
- **Linking social capital**: depicts more 'vertical' networks between individuals and groups interacting with institutionalised and formal entities in the society.

Resilience, as a discursive formation, can provide a powerful tool for establishing power relations with these institutions.

Assets and resources alone, however, are not sufficient to characterise community resilience – it is their quality that determines it (IFRC, 2012). Additionally, the capacity of persons to cope with threats and learn from them, whilst adjusting to future crises, is not only based on their own willingness. The case study described next assesses to which extent such characteristics can be present in (self-managed) social housing programmes.

RESILIENCE IN SOCIAL HOUSING

Massive social housing programmes such as the MCMVP tend to represent both a shock and a stress to the community itself, its surroundings, and the city as a whole.

They have the potential to destroy the continuity and resilience of cities if not adequately planned and implemented. They characterise a rapid and possibly brutal transformation of urban fabric, due to the sudden increase in population in an area, and consequent demand for public services and infrastructure. In addition, they derive from and can result in long-term stresses, since such settlements accommodate populations facing socio-economic struggles, and due to potential issues with the settlements (e.g. limited connectivity to the city), can lead to similar or new stresses (e.g. loss of job due to increased commuting distance).

Self-managed arrangements as the one provided by MCMV-E have the potential to minimise the issues described above whilst improving their beneficiaries' resilience in social, economic and environmental terms. This potential mainly derives from the collaborative nature of such provisions,

which allows beneficiaries, through participation processes, to have a say on several aspects of the project, such as location, design, settlement layout, engagement with municipality and surrounding communities, amongst others.

In the case of MCMV-E, the structure revolves around an entity (entidade) which is responsible for the management and development of the housing project. Works are supported by two committees – one accountable for the financial management, the other one for the construction oversight. Both of them have their members decided on an assembly and should include at least one beneficiary of the programme (Caixa, n.d, 2016). In addition, technical assistance groups tend to play a big role as well, providing support in going through bureaucratic processes, assisting in technical aspects of the project, offering capacity-building activities, etc. Government backing is provided by municipalities (although limited due to usual shortage of resources) and national level, particularly regarding financing and subsidies, and technical compliance, all conducted by the national bank Caixa.

Social works are another big part of the programme, involving capacity-building activities throughout the project lifecycle, as described below (Caixa, n.d, 2016):

- Pre-construction: education on basic concepts of community organisation alternatives and possibilities for representation of the beneficiaries, management of the housing estate, budget administration and cost saving strategies.

- During construction: as a minimum, education on community organisation, environment, heritage, planning and management of household budget, and job generation and income.

- Post-occupancy: consolidation of the processes implemented during previous phases; completion of the activities conducted by monitoring committees; empowerment of the implemented organisations; evaluation of the conducted processes and associated products; information regarding the beneficiary satisfaction with the housing unit and local infrastructure, urban insertion, and social development of the community.

The opportunity to actively participate as the main agents, as decision-makers of the project and to engage in capacity-building are the main drivers of increasing bonding capacities between the beneficiaries (NEPAC-Unicamp, 2015; Lago et al., 2012). Such activities greatly increase their social networking and can be directly linked to adaptive and transformative capacities, since they empower people to proactively take decisions over matters of their interest, capacitate them to use existing assets with more proficiency, and pursue new assets if needed.

In terms of bridging social capital, the networking of a MCMV-E community is seen as particularly relevant with four agents: surrounding communities, similar housing initiatives, construction companies and technical assistance groups. The widening of the network of the community is also important in building adaptive and transformative capacities, by allowing people to capture assets from a wider spectrum of possibilities. As examples, good relationship with neighbours allow the use of additional public facilities and increased bargain power when demanding better public services, and better-planned settlements can be developed in cooperation with contractors and technical advisors (Lago et al., 2012; Jesus, 2015).

Furthermore, the relationship of the community and the entity with formal institutions, in particular government bodies, is vital for the building of transformative capacities. The MCMVP, in its core, is drawn on a decentralisation process, providing autonomy to local governments in the institutional and legal realms to set up initiatives in housing and other urban related matters (UN-Habitat, 2013). In theory, the greater closeness of the local government to the entity and to project brings the possibility of a more tailored relationship, enhancing the openness for the negotiation of demands, for example. In addition, a good engagement with the local government, including its support in negotiating land, can be of significant aid by, for example, establishing credibility for the entity towards the land owners, since selfmanaged housing initiatives remain relatively unknown (Lago et al., 2012). In reality, however, the low technical and political capacity of most municipalities has not led to substantial levels of support in this regard (UN-Habitat, 2013).

In economic terms, although MCMV-E faces similar issues in accessing affordable and decently located land, it has great potential to increase resilience of the beneficiaries. In the beneficiaries' selection phase, for example, there is a priority for people that work close to the new settlement, or currently live in unaffordable houses (Caixa, n.d, 2016). Also, there are possibilities (although limited due to availability of land) of beneficiaries selecting the location, taking into consideration the proximity to jobs, developing scattered units, or redeveloping existing housing states

(sometimes donated by the government) (Majcen, 2015). During the construction, capacity-building programmes allow residents to apply the newly acquired knowledge in their professional lives. Post completion, in addition to taking advantage of the actions from previous phases, residents can engage in economic activities within the settlement or in public services (e.g. new schools or health facilities) made available nearby the settlement (Observatório das Metrópoles, 2011). Moreover, the programme is highly subsidised, and instalments can be covered to up to 90% by a fund designated by the federal government. Furthermore, there is a zero interest rate over payments and a grace period of thirty six months after the signature of the contract, amongst other benefits which greatly reduce the burden over beneficiaries.

Compared to socio-economic factors, environmental aspects appear to be the lowest priority at the MCMVP, at least directly. Understandably, socio-economic issues tend to be the focus since these characterise more urgent matters, and budget is naturally severely limited. Nevertheless, the better infrastructure encountered in MCMV-E settlements does present lower environmental impacts and contribute to health improvements, for example through improved waste disposal and potable water access. Another major role played by MCMV-E is the prioritisation of families living in risk areas, or that have been displaced, most notably due to environmental issues.

Overall, as depicted above, if properly implemented, MCMV-E (and similar selfmanaged arrangements) can provide an ample range of opportunities for increasing the resilience of its beneficiaries, their communities and their cities. In a scenario of crisis and change – entailing socio-economic issues, lack of adequate housing and moving to a new settlement – it provides people with an opportunity to utilise such context to improve their capabilities and broaden their access to tangible and intangible assets. The main driver for such potentials lies in the collaborative nature of the programme: it allows not only physical structures but also management and capacity-building activities to be tailored according to the particularities of the community and its individuals. Naturally, implementation of self-managed initiatives presents several challenges; the main ones are already well-known: achieving good levels of inclusive participation; juggling with limited resources among several priorities; and shortage of technical knowledge and resources in the entity and associated institutions, particularly in local governments.

CONCLUSIONS AND WAY FORWARD

The evolution of the conceptualisation and practice of urban resilience reveals remarkable insights. Its concept has been broadened from an emphasis on endurance of functions, through a focus on adaptability of systems, towards transformative capabilities in the face of uncertainty and unpredictability of events (Keck and Sakdapolrak, 2013). Interestingly enough, this evolution has not ruled out the need for the employment of more traditional approaches – and it is highly unlikely it will within the foreseeable future. The combination of both traditional and emerging practices, and/or the utilisation of a point in between these two, depending on local circumstances, appear to be an enduring rule for implementation of such initiatives.

The improvement of resilience in communities is in the struggle for stability, recovery, adaptation and transformation. In this sense, resilience refers more to communities' inherent capacities than to the external resources they can obtain. In addition, it is often during crises that the most positive qualities thrive, including those that had not been previously acknowledged, in particular in terms of individual strength and collaborative work towards a common good (Uriarte Arciniega, 2013).

First and foremost, resilience is about governance. At the same time, we expect governments and organisations to do things for people, but we mistrust them to deliver (Multinational Resilience Policy Group, 2015). Resilience is already built on a dailybasis – when people engage in improving environmental conditions in their neighbourhood, participate in responsible consumption or human rights initiatives, and so on (Uriarte Arciniega, 2013). In this sense, governments have to be institutions that support communities to perform things for themselves, enabling them to be in charge and strengthening what already works well.

Making use of the attention that has been given to resilience whilst combining its concept with other developments (as social housing) seems to be the most viable way to increase the feasibility of such practices. This can be envisioned as a two-way process: in the case of self-managed social housing, for example, 'increasing resilience' can serve as an argument to encourage the utilisation of self-managed housing; likewise, housing itself, usually being more easily politically accepted, can indirectly assist in boosting resilience practices.

In general, urban resilience does not substantially differ from many city-related practices. A constant struggle for political and financial support exists, reinforcing the need for combination of resilience with other developments to strengthen arguments towards achieving overarching objectives. Above all, there should be great consideration over the diversity of people and the distinct environments they live in, and the fact that circumstances are always bound to change. Allowing for continuous progress in face of shocks and stresses, whilst taking into account people, community and city limitations and potentials, appears to be a most feasible way forward.

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EXPERIENCES OF TEACHING BASIC DESIGN AS FOUNDATION COURSE TO BEGINNERS WITH NO BACKGROUND IN DRAWING SKILLS: A CASE OF ARCHITECTURE DEPARTMENT AT NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

*Saadia Bano**
*Safia Asif***

ABSTRACT

Primary and secondary school education in Pakistan has virtually no component, module or dedicated course to enable students to learn and practice drawing as a skill. However, many aspiring young people join architectural studies and are exposed to challenges that are common in this discipline. The major obstacle is the lack of sufficient background to help in creative thinking and design process. Despite the struggle, a sizable number of students perform well in the Basic Design Studio, which is part of Bachelors of Architecture curriculum in first year studies in Pakistan and later phases of work. This paper deals with the concepts and methods used in training the fresh minds towards architectural realm and explores the commonly found factors responsible for adequate performance and later stages of work in design studios.

The methodology of this research is based on observation and experience gained after conducting basic design studio for couple of years at the Department of Architecture and Planning, NED University of Engineering and Technology, Karachi, Pakistan. In the later part of the research, a survey was conducted to evaluate the course via student feedback in the form of questionnaires, in order to understand the role of Basic Design course in helping students' creative thinking and approach towards design solutions. Lastly, interviews were conducted of various basic design instructors in order to analyse their experience and pedagogy of teaching students who have no background in fine arts studies.

Keywords: Basic design, non-art background, design exercise, design pedagogy

INTRODUCTION

The keystone of architectural education is the basic design studio. "Basic design studio serves an important purpose of initiating creativity and thereby appreciation of art in many forms" (Parashar, 2010). In Pakistan, the eligibility criteria for admission to architecture departments in public sector engineering universities, is based on purely science subjects instead of drawing and sketching skills. 'The Public sector universities attracted students of highest academic merit from all across sections of society irrespective of income brackets and aptitude (Naz, 2011:4). In this setting, exposure of a new realm of art and architecture is an immense challenge, because of the diversified backgrounds of students.

Basic Design Studio, within the curriculum of Bachelors of Architecture (B.Arch.), is an initial step where students are exposed to the terms creativity, observation, imagination and critical thinking. "The key to coming up with creative, innovative ideas is to think without being inhibited. Think unconventionally!" (Salvan, 1999:207). The purpose of the Basic Design Studio is to unlearn and deviate students from the predefined and traditional mind set. It exposes students to the possibilities of re-learning by experiencing, observing and appreciating different art forms that surround them, which they have never acknowledged before joining the B.Arch program as evident through our survey.

Studio teachers act as a driving force in empowering individuals of diverse backgrounds. "Design studio is a social environment where the interaction among students and studio masters is the back bone of design education" (Ledewitz, 1985).The role of design teacher is very subjective. He/she has to deal with different individuals belonging from different ethnicities, races and income groups having different exposures. "The educationalist shall understand the particular background of student, thus bringing the cultural evolution of the student in to the centre of discussion, in order to direct the particular knowledge construction and to understand the particular knowledge transfer" (Munasinghe, 2008:30).

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In the studio the students are familiarized with creative as well as critical thinking which prepares ground for a broader pedagogical tool, thus assists to develop the design concepts of students and enhances their own diversifying design capacities.

The major objectives of this research are:

- To investigate whether Basic Design studio facilitate the students having no background of fine arts studies and lay a foundation for Architectural Design Studio ahead.
- To find out whether Basic Design exercises enhance observation and design capabilities of students.
- To inquire the role of Basic Design in improving visual communication and presentation skills.
- To examine whether brain storming and problem solving strategies are helpful in critical and creative thinking.

This research was initiated with a literature review in order to discuss the said questions related to Basic Design Studio within a theoretical framework. Secondly Basic Design curriculum at the Department of Architecture and Planning NED University, Karachi, Pakistan, was studied in order to relate the reviewed literature with the current practice. Later on quantitative research approach was adhered to in the form of field survey and interviews to expedite the role of Basic Design Studio in Architectural Studies. For this purpose a questionnaire was floated among students and academicians to investigate the aforementioned queries. Lastly, survey findings were discussed and analysed in order to deliberate the research questions and generate a set of conclusions.

Basic Design Pedagogy

Basic Design is the first encounter of the students with design. This course is highly subjective and its broader spectrum is to open up students' mind. "There is an experiential learning process in design education within the studio environment from the very beginning to the end of any design problem. So, it is hypothesised that different stages of design studio learning require different learning styles" (Demirbas and Demirkan, 2003). The teaching methodology of basic design studio is to accelerate curiosity and anticipation of what is being asked. It is about a journey from unknown to known. In order to make students independent learner, they are engaged to think and ask questions. In general practice tutors often tell students of design solutions instead of preparing grounds for them to develop their own design options. This kind of studio teaching does not facilitate students to nurture their creative and critical thinking, rather just replicates the pre-defined solutions of the trainer. "In the conventional sense and application, the design studio has become a process of knowledge transfer without new knowledge construction, thus becoming as threatening as a cloning process" (Munasinghe, 2008:32). "Creativity needs a "positive attitude". So don't dismiss your own or another's ideas too quickly. Articulate them listen to them fully and if possible add other ideas to them" (Salvan, 1999:206).

Basic design studio is actually an experimental lab where students learn by doing and generally by using trial and error approach. Students are encouraged to come up with unique and distinctive but unified ideas. "Order without diversity can result in monotony or boredom; diversity without order can produce chaos. A sense of unity with variety is the ideal" (Ching, 1996:320). The most important part of the studio is that exercises are not always result oriented, process of the design and composition are equally significant. The aim of the assignments is to enhance their skills and design aptitude. Designing basic exercises in itself is a big challenge and in this global world, where everything is on finger tips, have made it even more puzzling. Daily and weekly tasks are designed ranging from the simpler to more advance level in order to foster the capabilities of student in architectural domain. Over the years of experience it is concluded that every year there is a new set of students having different psyche, attitudes and challenges. The strengths and weaknesses of one class are different from the other, thus, needed to be dealt accordingly in order to enrich their capacities. For this purpose the mode and mediums of each exercise kept different in order to:

- Avoid monotony, repetition and cloning of ideas from the previous batches.
- To bring innovation and versatility to the course.
- To intact the 'challenging' aspect of the exercises i-e experiencing mind-boggling and brain-storming stage.
- To stimulate, anticipate and motivate the trainers to accept and prepare for new challenges.

Basic Design Studio at the Department of Architecture and Planning NED UET

Basic Design course at the Department of Architecture and Planning NED UET is divided into two semesters. During spring, this studio course AR 101 develops an attitude towards problem solution through different expressions, intuition, creative ideas and concepts in two dimensional graphical forms. Basic elements (such as line, form, shape, pattern, texture, volume, spaces) are introduced to recognize and understand the basic principles of design (such as symmetry, balance, hierarchy, repetition, dominance, rhythm). Students are exposed to the basic mediums, such as pencil, pastels, markers, water/poster colours, collage, mix-media, photography, pen and ink to explore their ideas. Students are asked to keep in mind the visual balance, compositional layout, positive/negative spaces while executing their graphical formation on the sheets.

During the fall semester the studio course extends the competence and understanding gained in spring semester. The studio builds upon the core contents, next higher level of exercises based on three dimensional forms and sculptures. In this semester new mediums are explored for model making exercises i.e. card sheets, grey board, clay, wax, thermo pole, metal wires, wood etc. In the later stage various drawings (plans, elevations and sections) of models are developed in order to enhance the understanding of the architectural drawings.

Basic Design studio is a step by step process which spans over a year. In order to streamline the learning process, Basic Design Studio is divided into following modules:

- Module-I: Brain Storming and Warm up Sessions
- Module-II: Graphical Composition and Visual Perception (Elements and Principles of Design)
- Module-III: Color Exploration – Color Theory
- Module-IV: Design Exploration in 3rd Dimension
- Module-V: Architectural Analysis and Design

Module-I: Brain Storming and Warm up Sessions

The process of creativity and cognitive thinking is initiated through brainstorming sessions. Curiosity and experience of performing unknown tasks enhance the imaginative spirit of the students. In this domain where students appear with varied backgrounds and no drawing and sketching skills, initial brainstorming and warm up exercises play a vital role to lay a foundation for the proceeding tasks. These exercises stimulate the mind to opt for more imaginative and innovative options, thus helps in awakening the intellect of students. Table-1 lists down a few initial brain storming exercises with their outcomes (Figures 1 and 2).

S. No.	Exercise	Outcome
1.	Free hand lines (Horizontal, vertical and diagonal) on 20”x30” sheet (Figure 1).	This exercise helps in building up the confidence to draw straight lines without using tools. It also eliminates the fear of holding pencil and drawing on large sheets.
2.	Stage 1: Composition of Free hand 2”x2” squares on 20”x30” sheet	Stage 1: This exercise helps in developing the sense of scale and proportion since students are not allowed to use any measuring tool.
	Stage 2: Title the composition	Stage 2: This part enhances the cognitive thinking while summarizing the whole composition in a single title.
3.	Un-orthodox drawing: A graphical composition by using un-conventional and non-generic mediums of drawing (Figure 2)	This exercise stimulates the thinking process and encourages students to reflect other than the persisting norms.

Table 1: Few initial brain storming exercises and outcomes

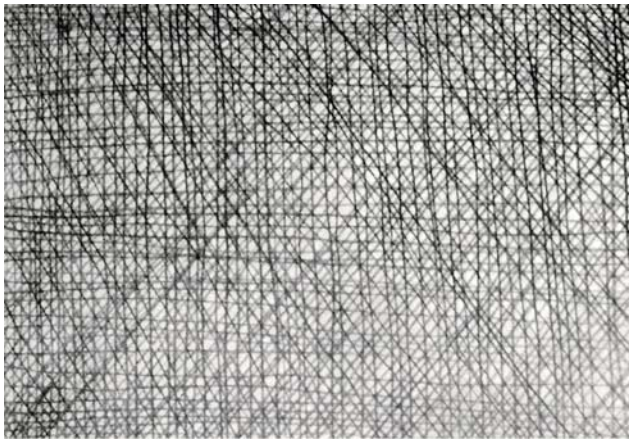

Figure 1: Initial warm-up exercise, lines.

Figure 2: Brain-storming exercise: Exploration of un-orthodox materials.

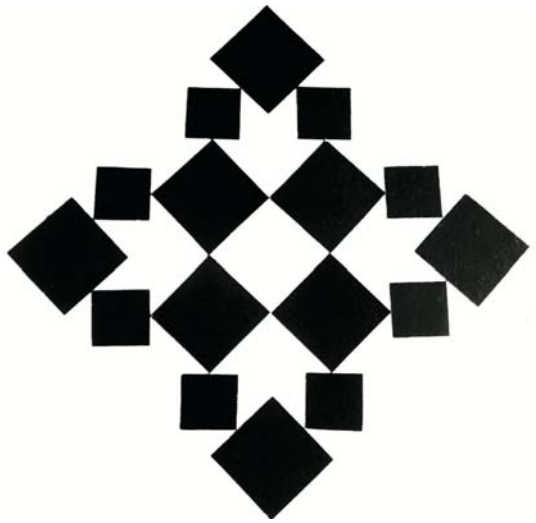

Figure 3: Elements and Principles of Design: Bi-Axial Symmetry.

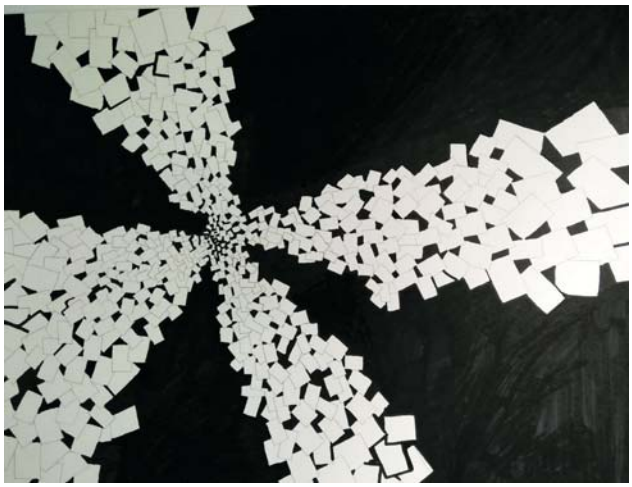

Figure 4: Graphical Composition: Focal Point

Figure 5: Graphical Composition: Rhythm, Harmony, Repetition

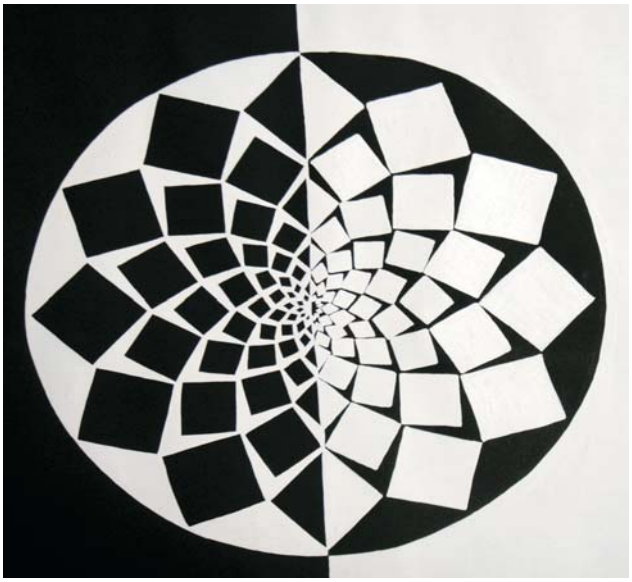

Figure 6: Graphical Composition: Interdependence

Module II: Graphical Composition and Visual Perception (Elements and Principles of Design)

This module comprises of understanding of elements (line, shape, forms, colors, textures) and principles (symmetry, asymmetry, focal point, rhythm, repetition, and hierarchy) of design (Figures 3 to 6). This module is very significant not only in Basic Design but also in Architectural Design projects. This orients students, where to begin, how to analyse, proceed and justify the design assignments.

Students are asked to produce compositions to achieve assigned design principles with the help of several design elements. They are instructed to use previously gained knowledge in terms of theory and skills to enhance their designs. This module facilitates creative thinking and prepares ground for more rationalized output (Figure 7).

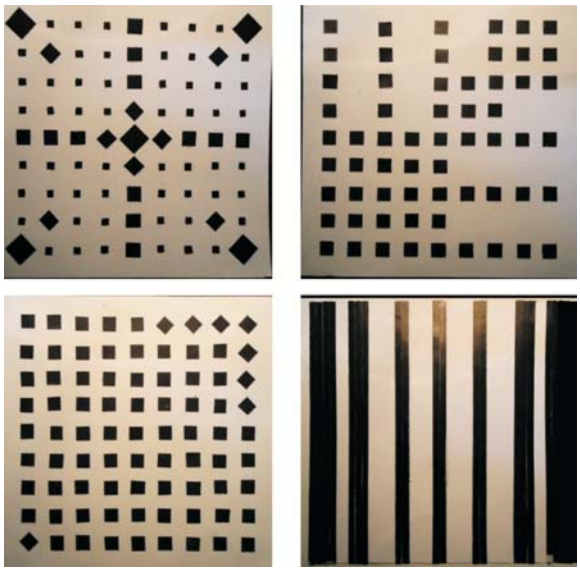

Figure 7: Grids and Squares

Module III: Color Exploration – Color Theory

Colour is a powerful tool to stimulate the feelings and play a vital role to draw or divert the attention of the viewer. Appropriate colour selection make huge difference in overall composition of any design. Colour theory and application knowledge is highly important for students of architecture. Initially it is observed that students generally opt for personal colour preferences in their design exercises regardless of their composition, meaning and psychology. In order to curtail this weakness, one complete module of Basic Design course is designated towards the understanding and application of colours. This module comprises of understanding of basic terminologies, colour theory and psychology. Overall this module helps in improving students' colour choice and related vocabulary (Figures 8 and 9).

Figure 8: Exploration of different color schemes.

Module IV: Design Exploration in 3rd Dimension

The major focus of this module is on 'transformation' of a theory, illustration and two dimensional graphics into three dimensional models, sculptures and life size product design. Figures 10 and 11 illustrate the outcomes of this module. Table-2 documents some of these exercises.

Module V: Architectural Analysis and Design

This last module is a transition from Basic Design to Architectural Design and it deals with basic architectural analysis and small scale design projects. Architectural analysis is a basic tool of understanding the design language, spatial character and material consideration of any building. In this assignment students analyse the specified buildings in terms

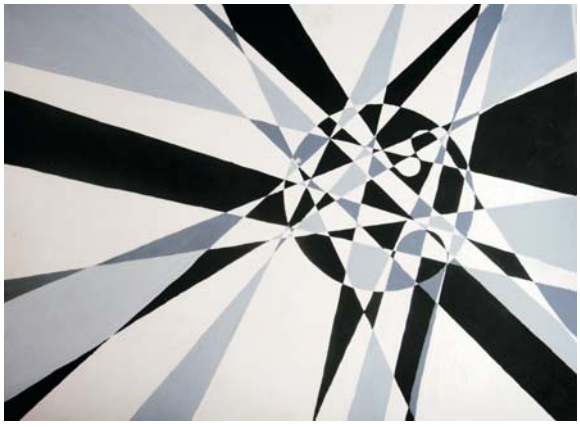

Figure 9: Achromatic color scheme.

of horizontal/ vertical compositions, circulation pattern (both horizontal and vertical), proportionating system, focal point, regulating lines, basic solids/ form of the building, zoning, and materials specification. The aim of this project is to make students understand the documenting, analysing and interpreting phase of architecture at a very basic level. They also comprehend various presentation techniques of architectural analysis in different views (plans, elevations, sections) (Figures 12 - 14).

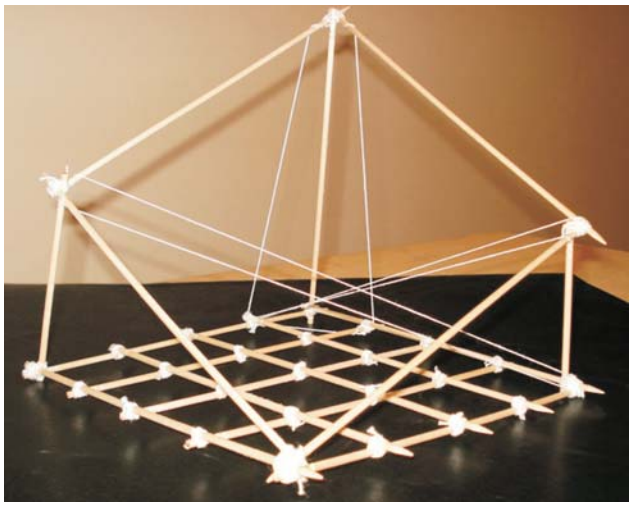

Figure 10: Exploration of design principles in third dimension.

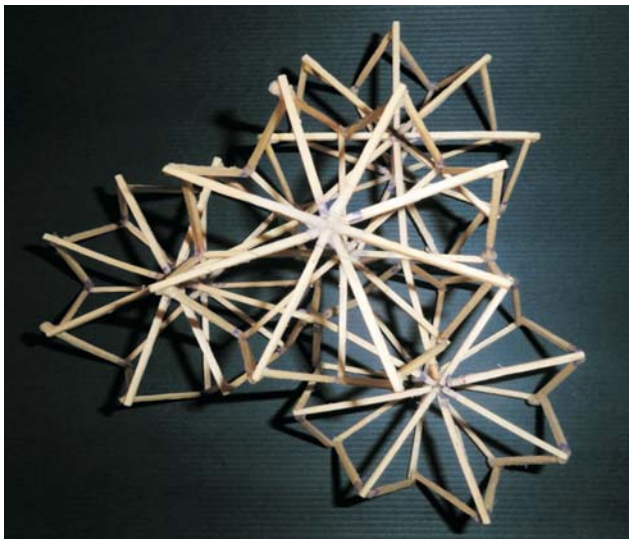

Figure 11: Exploration of finite growth in third dimension.

S. No.	Exercise	Outcome
1.	Sculptural Transformation of Logo: Stage 1: Formation of logo with the help of initials Stage 2: Designing of corporate style letter head, visiting card, and envelope with the help of logo. Stage 3: Extrusion of logo into three dimensional form	Stage 1 and 2 helps in building up the compositional skills, on the contrary stage 3 facilitates in exploring model making skills with a variety of materials.
2.	Time and space model: a sculpture design on which a ping pong ball can move for 10 seconds	A very exciting and target oriented exercise which stimulates skills in various domains in terms of material selection, stability and aesthetics. This exercise builds an aptitude towards learning by doing (Trial and error approach).
3.	Customizing Art Movements: Transformation of theories and ideas into products cum sculptures	This assignment provided first encounter with practicality and functionality in terms of material selection, anthropometry and stability to create various product design ranging from life size chair to small tableware like, pen holder (Figure 12, 13, 14).

Table 2: Design exploration in 3rd dimension.

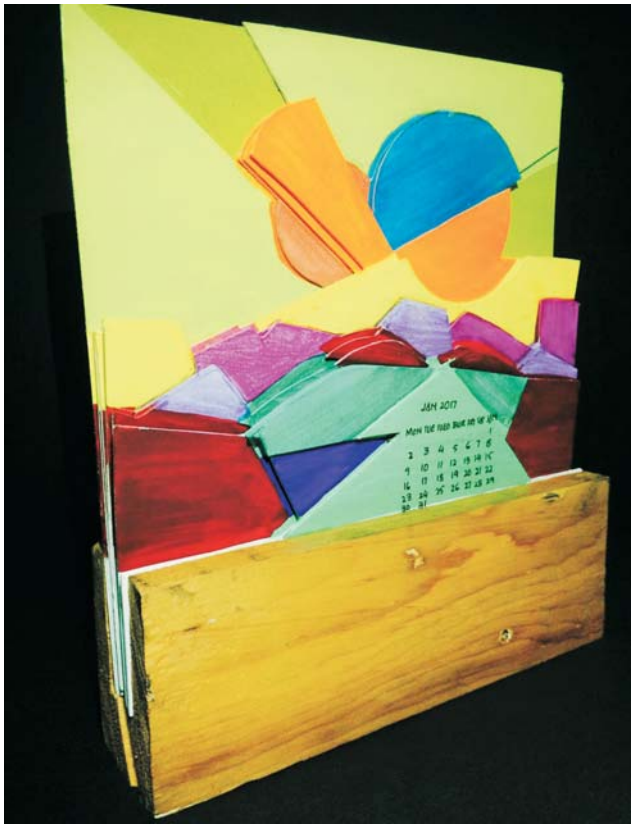

Figure 12: Transformation of art movements into product design: Table calender design based on Cubist Principles.

Figure 13: Pen holder based on Pop Art.

Figure 14: Wall clock based on Pop Art.

In the later stage students are asked to study various master architects individually and then transform their design philosophy, concept and principles into a small scale design project, for example pavilion, bus stop and boundary wall designs (Figures 15 and 16). The insight of this project is to develop creative thinking, design centred problem solution and architectural presentation skills.

Research Findings

In order to understand the role of Basic Design in stimulating the architectural essence, a questionnaire was distributed amongst thirty academicians and hundred students from various batches at DAP NED. Academicians, who replied to the questionnaires, included alumni being involved in academics for last few years. The major agenda of the survey was to get an idea that to what extent the Basic Design course facilitates beginner design students to learn and excel in architectural education.

When the replies of the question regarding the change in design approach after qualifying the course was considered, it was observed that both students (80%) and academicians (75%) responded positively and only 10% students and 15 % academicians negated the idea. About 10% of both thought that it partially had any influence on the design approach (Figure 17).

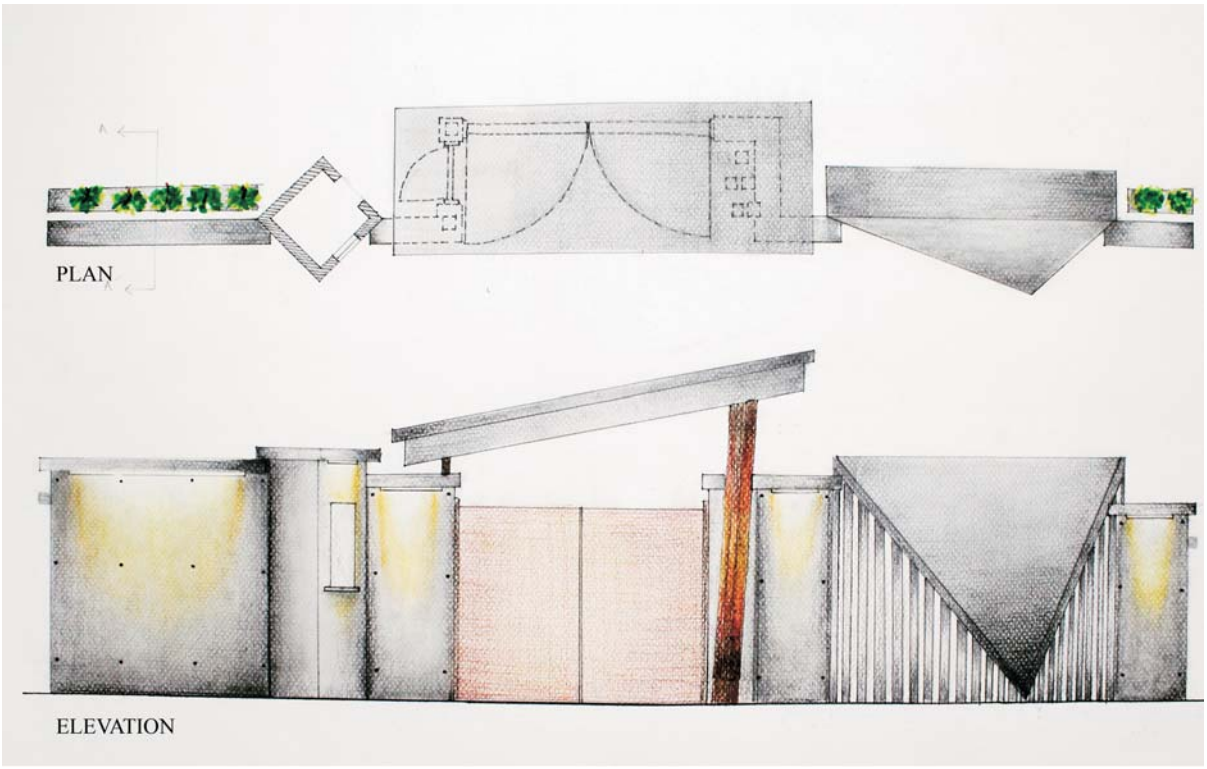

Figure 15: Transition from Basic Design to Architectural Design: Small scale project of a 'Boundary Wall' based on Principles of famous Architect Tadao Ando.

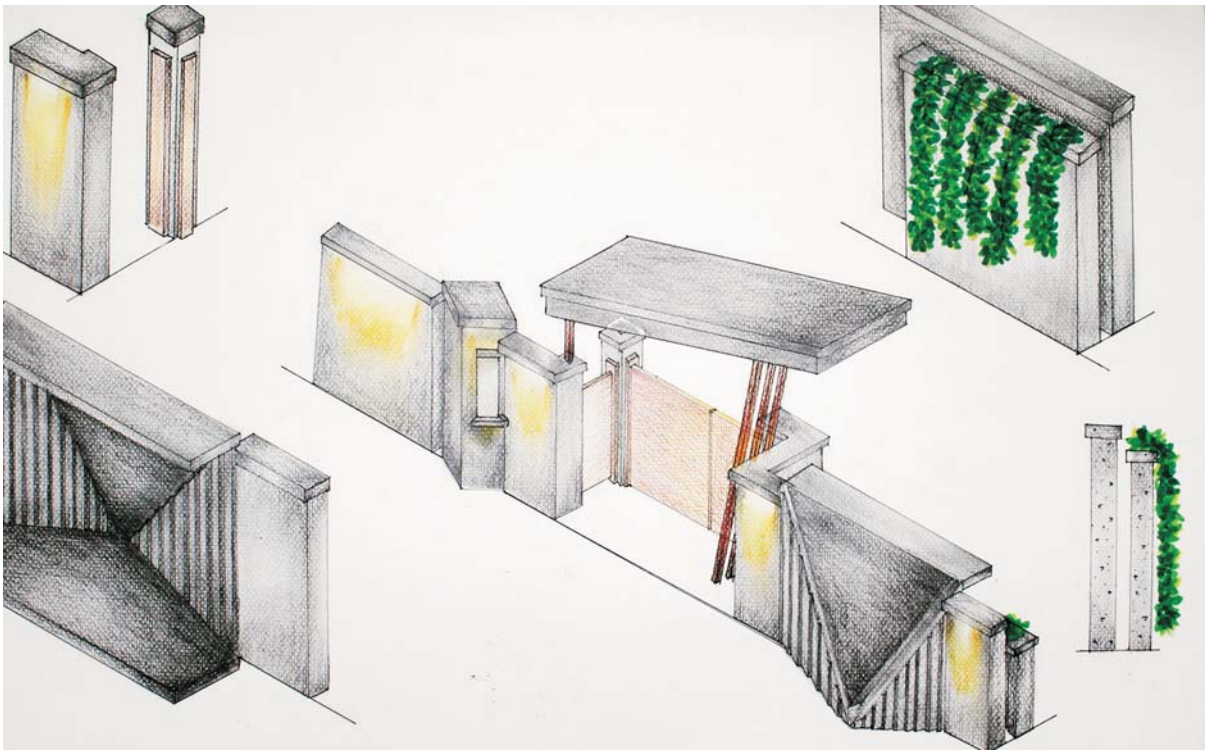

Figure 16: Transition from Basic Design to Architectural Design: Details of 'Boundary Wall' based on principles of Architect Tadao Ando.

Almost all the academicians (95%) agreed with the idea that Basic Design studio plays a significant role in enhancing architectural vocabulary and presentation skills. About 82% students replied in favour of the question. Only 8% students denied the impact and about 5% of them thought that it partially had an effect on their architectural presentation skills (Figure 18).

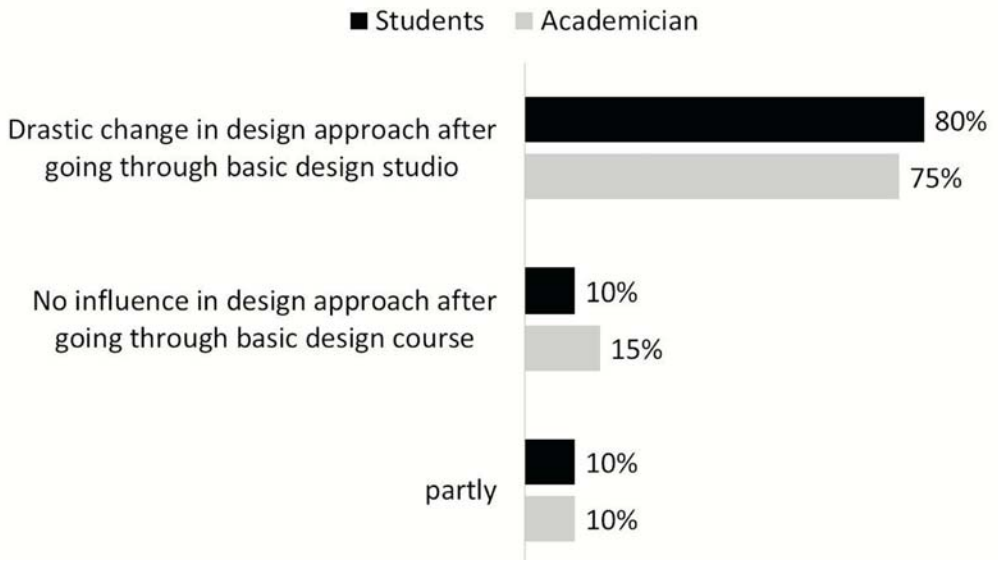

Figure 17: Change in design approach after going through Basic Design Studio.

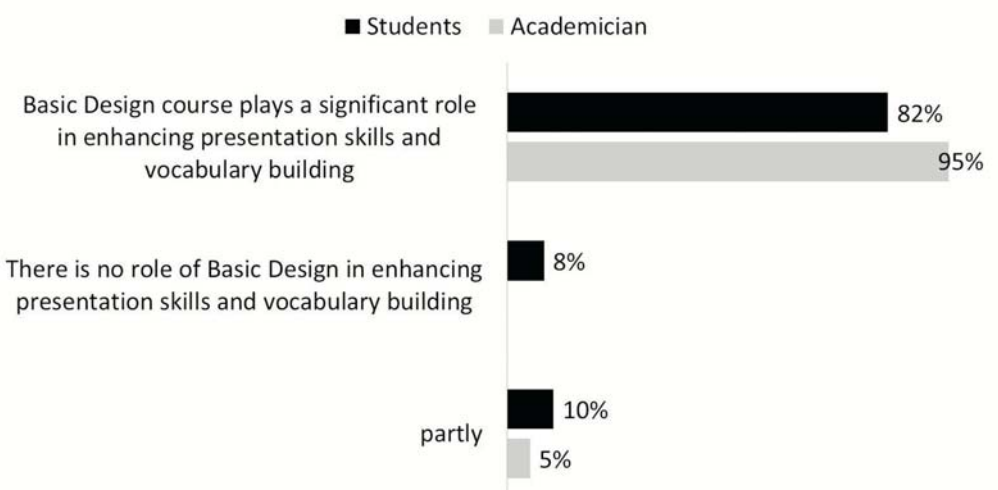

Figure 18: Role of Basic Design course in enchancing presentation skills and vocabulary building (survey feedback).

About 90% academicians and 70% students replied positively when they were asked about the effectiveness of problem solving strategy and brain-storming sessions in creative and critical thinking. 8% of the students contradicted the aforementioned question and about 12% of them were not sure of what was being asked (Figure 19).

During this survey it was also inquired from students and academicians if Basic Design course was responsible for making students realise that Architecture is not the correct field for them and they must move to another discipline, because of brain twisting/ mind boggling exercises which students may find them difficult to grasp. About 80% academician and 60% students agreed with the relationship, whereas 30% of the students and 10% academicians denied the fact. About 10% of both were not sure of what was being asked (Figure 20).

Most of the academicians and students (90% and 78% respectively) believed that there would be an adverse impact of quitting Basic Design course from architectural education. A few among both of them (20% students and 10% academicians) thought of no major impact if Basic Design Studio was removed from the B.Arch curriculum (Figure 21).

Through the survey it was realized that majority of the students at DAP NED belonged to HSC intermediate

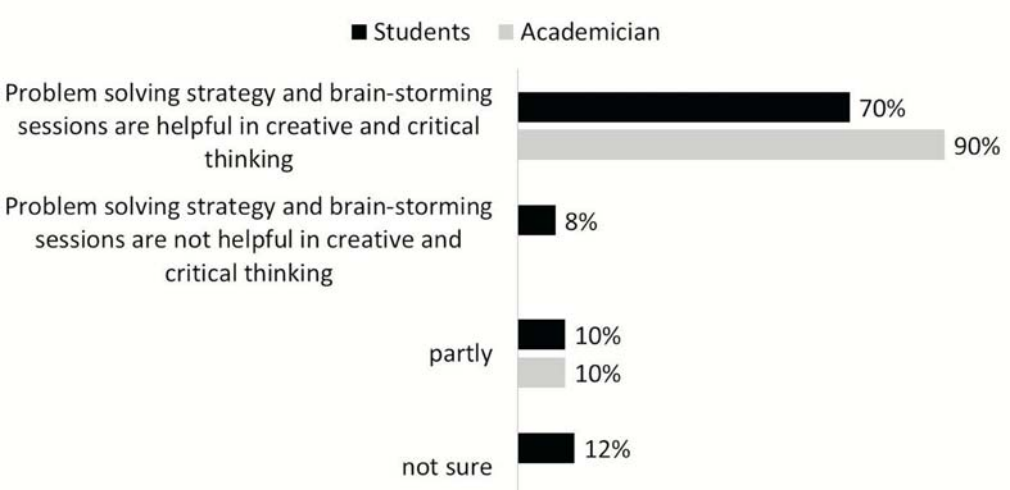

Figure 19: Role of problem solving strategy and brain-storming sessions in cretaive and critical thinking.

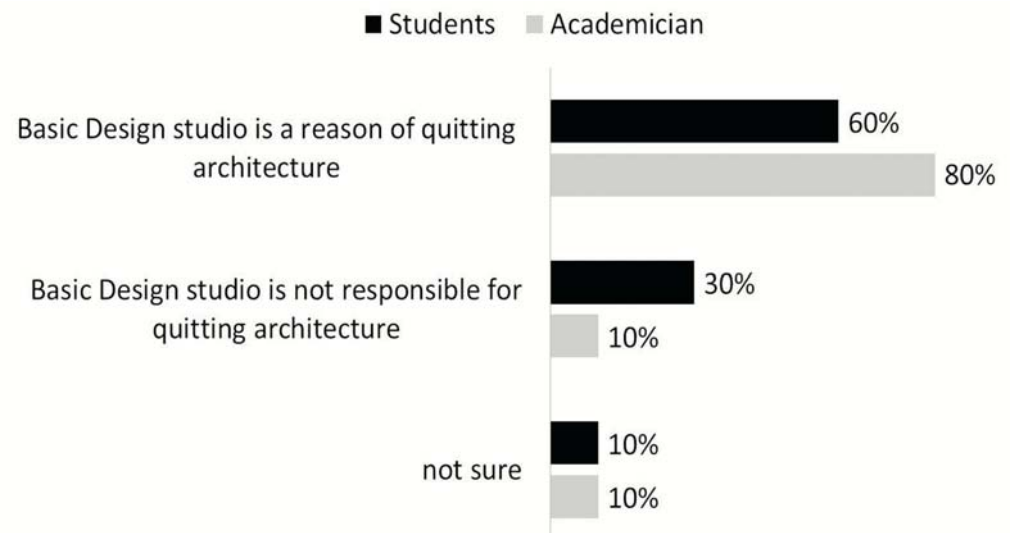

Figure 20: Role of Basic Design Studio in leading to quitting architecture.

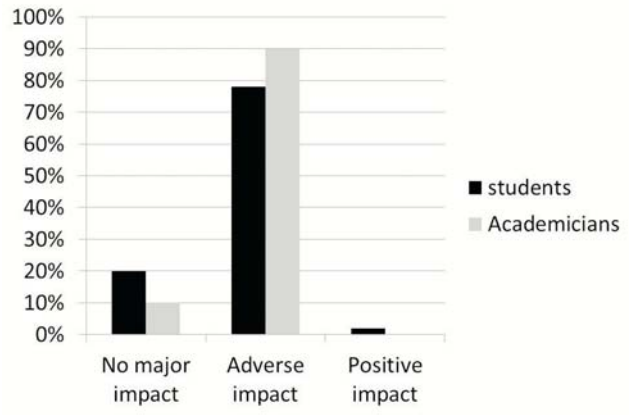

Figure 21: Consequences of omitting Basic Design Studio from architectural curriculum.

background thus, they had non-fine arts backgrounds. On asking, if the Basic Design course acted as a transition from higher secondary education system to architectural design or not, 70% students and 90% academicians replied in the affirmative. On the contrary 20% students were not in favour of the statement. 10% of both categories partially agreed to the question asked (Figure 22).

Most of the students found Basic Design course as an important tool for improving their artistic skills. Basic Design course helped about 73% students in improving their color sense. More than 50% of students gave credit to the course for their improved critical analysis skills, design sense and observation (i.e. 64%, 66% and 73% respectively). Overall 43% of the students found Basic Design as an overall improvement device for all of the above skills (critical analysis, strong observation, improved colour sense and deign sense) (Figure 23).

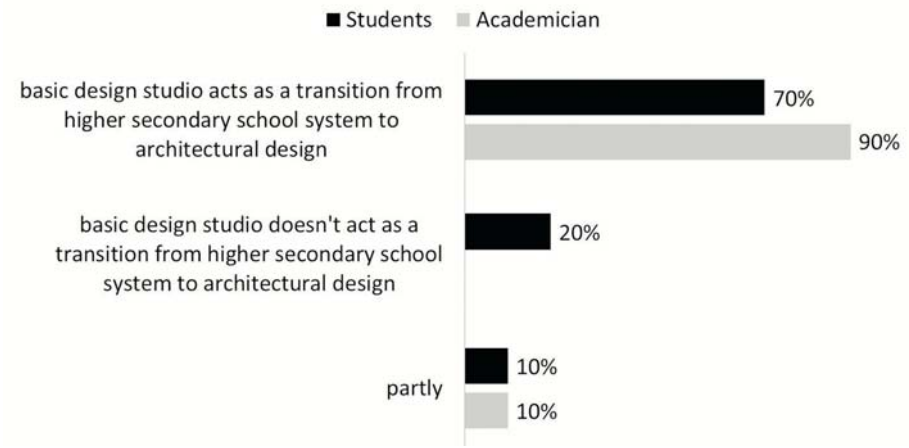

Figure 22: Status of Basic Design Studio as a transition from higher secondary school system to architectural design.

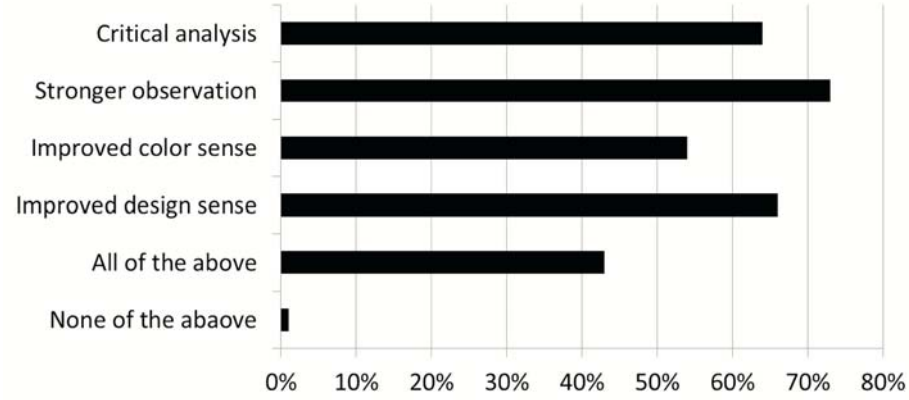

Figure 23: Major changes in the personalities of students after going through Basic Design course.

DISCUSSION AND ANALYSIS

Role of Basic Design Studio in Architectural Education

It is evident from the response of the survey that majority of the students agree with the idea that Basic Design Studio helps in the development of their design thinking process in proceeding years. In this course students are familiarized with design principles for example balance, proportions, articulation, axis; which helps them in moulding their design approach. It stimulates their imagination and creative thinking, thus helps in materializing the concepts and ideas into spaces.

Presentation Skills and Vocabulary Building

Almost all the students and academicians agreed with the fact that Basic Design Studio plays a vital role in enhancing the presentation skills. There are regular training sessions in terms of juries where students present their work and learn from the feedback. During these juries it is reinforced that the students must use architectural vocabulary (which they learn through parallel theory sessions) to express their ideas and concepts.

Problem Solving Strategy and Brainstorming Sessions

Basic Design Studio is quite challenging for students having no drawing and sketching experience. For this purpose problem solving and brain storming sessions are strategized to enhance their skills. It is also obvious through the survey that this strategy is very helpful in opening up minds and enhancing design capabilities.

Reason of Quitting Architectural Studies

During the first semester it is observed that some students quit this discipline. As the survey revealed that Basic Design Studio is one of the reasons for quitting architectural studies. The teaching-learning process of this discipline is self-exploratory, in contrast to text book oriented conventional curriculums. Most of the newly admitted students are un-aware of this fact thus, unable to face the challenges because of its rigorous studio activities.

Impacts of Skipping Basic Design from Architectural Curriculum

The survey findings pointed towards the fact that vast majority of students and academicians accept the fact that there would be an adverse effect if Basic Design course is omitted from the B.Arch curriculum as it stimulates the cognitive thinking which fills the void that persists because of non-art based education. This course is quite challenging, but on the contrary it lays a foundation for Architectural Design Studios.

Role of Basic Design Studio as a Transition towards Architectural Studies

Basic Design Studio is an initial step to enter into architectural realm. It aims to cover up the vacuum and acts as a transition from conventional higher secondary education to Architectural Design (as reflected by the survey findings). This studio liberates the students' mind and orients them to a new paradigm of architecture, through brain storming sessions and self-exploratory tasks. This course includes basic skill sessions, (sketching, modelling, architectural lettering) which are the pre-requisites for Architectural Design Studios ahead. One of the major constitute of Basic Design Studio is project based juries in which students are supposed to defend their work using desgin vocabulary. This practice helps in refining their presentation skills for architectural design projects in the proceeding years.

Major Change in Design Related Capabilities after taking Basic Design Course

According to the survey, students having their first encounter with architectural design admitted that foundation year course (Basic Design) substantially helped them to meet the demands of architectural studios. This course assisted them to build upon their capability for critical analysis, strong observation, sensible colour choice and overall architectural design approach.

CONCLUSION

Basic Design Studio is the first encounter of new comers to architectural studies. The major aim of this studio is to lay a foundation for the students having varied and non-art background (with no drawing and sketching experience).

This paper analyses the role of Basic Design course in introducing a new dimension of study. Overall the Basic Design course and its pedagogical tools are quite unconventional. According to the survey module-wise sequential training of students at DAP-NED-UET sizably helps in combating their weaknesses and inhibition. The course modules are sequentially organized introducing brain storming sessions, which works as an introduction to the course. This module draws a complete picture of overall studio pedagogy in terms of its methodology and deliverables.

At this stage they are introduced to new assessment criteria in the form of jury sessions. This helps in building up the capacities to justify projects in the proceding years. The second module consists of two dimensional exercises, based on elements and principles of design which helps in transmitting architectural design thinking and building up design vocabulary at a very basic level. In the third module colour theory and its application is introduced. This training adds more design diversity and purposeful colour selection in the later design projects. In the fourth module, the design exploration enable students to transform theories, illustration and two dimensional graphics into three dimensional models and sculptures. It enhances their cognitive thinking and model making skills. After completing four pure Basic Design modules, there is a smooth transition towards the final module that is architectural design.

Conclusively, Basic Design pedagogy is very different from other design studios. Exercises are designed after analysing the potentials and weaknesses of the students, which enriches their thinking capacity and visual perception. Overall problem solving strategy is further adopted to inculcate the basic structure of design thinking in students.

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UNDERSTANDING URBAN DISASTER RESILIENCE THROUGH A MORPHOLOGICAL APPROACH: A CASE STUDY OF SETTLEMENT UPGRADING AND FLOOD RESPONSE IN BANGKOK

*Pamela Sitko**
*Avar Almukhtar***

ABSTRACT

A city can be difficult to analyse. However, approaches such as urban morphology (the study of urban form) can assist with understanding what the city is by reflecting how urban form is influenced by interdependent social, governance and economic factors that contribute to building resilience. To illustrate how urban morphology can be used as an approach for understanding disaster resilience in cities, a case study of informal settlement upgrading impacted by a flood in Bangkok, Thailand is presented. A study of the Bang Bua Canal in Thailand's capital city is used throughout the paper to demonstrate how disaster resilience can be analysed by using four morphological layers. The paper identifies key dimensions of resilience within each morphological layer. The dimensions highlight patterns of social, governance and economic influence on the built environment. Generalisable lessons from using morphology as an approach for understanding disaster resilience include: that resilience can be a way of building upon the existing capacities of low-income neighbourhoods; the concept is a positive when it helps neighbourhoods 'bounce forward' and that, crucially, resilience can act as a bridge between development and disasters.

Keywords: Disaster, resilience, urban morphology, Bangkok, upgrading

INTRODUCTION

Cities are diverse, dense and complex. Represented by only two percent of the earth's land, cities host over fifty per cent of the world's population (Allen et.al., 2012) generate eighty per cent of global gross domestic product (GDP) (World Bank, 2015) and are responsible for seventy per cent of global energy consumption (UN-Habitat, 2011). By 2050, it is estimated that sixty six per cent of the world's population will be urban, with as much as ninety per cent of the increase in urbanisation taking place in Asia and Africa (United Nations Department of Economic and Social Affairs, 2014).

Initially this paper describes the methodology, it then defines urban disaster resilience, after which it presents the ways in which urban morphology can inform our understanding of disaster resilience. In section five, four morphological layers are analysed through the case study and key dimensions of disaster resilience. Generalisable lessons are provided in the concluding remarks that explain why morphology is a useful approach for understanding urban disaster resilience.

METHODOLOGY

This paper is a presentation of qualitative and morphological data analysis following a literature review of academic papers and grey literature such as assessments, evaluations and lessons learnt reports from non-government organisations (NGOs). Key informant interviews were held with fifty people from aid agencies (international and local, agencies from the United Nations), government, think tanks, academia, the private sector and the media. A total of ninety one semi-structured interviews were undertaken with people from the three neighbourhoods. The key informant interviews and FDGs were coded using NVivo software in order to identify patterns within the data. The findings for each morphological layer were then presented to neighbourhood residents from the case study through seven focus group discussions (FDGs) in order to validate the findings.

DEFINING URBAN RESILIENCE

Resilience (Sanderson and Sharma, 2016), is a newer manifestation of many years of holistic development and disaster management thinking. Within the concept of resilience one can see echoes of concepts such as the livelihoods approach, which combines analysis of chronic stress (reoccurring stressors that reduce one's ability to cope)

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and disaster shocks (Scoones, 1998). The concept of Linking Relief, Rehabilitation and Development (LRRD), which focuses on the links between short-term humanitarian assistance and longer-term development interventions (Buchanan-Smith and Fabbri, 2005) is also present. Other attempts to bridge disasters and development thinking are also present in resilience such as disaster mitigation and preparedness (DMP), a concept concerned with minimising the effects of disasters while taking precautionary measures to prepare for risk (Christoplos et.al., 2001) and disaster risk reduction (DRR), policies and practices that prioritise long-term prevention (Twigg, 2015).

The appeal of resilience is its diverse application. Tanner *et al.,*(2015) argue that the broad applicability of resilience is precisely what makes it a difficult concept to operationalise. Based on that critique, this paper finds it is crucial to define resilience for whom, and to what, as a means of clarifying the concept. Defining resilience for whom is important when interrogating resilience in cities because one hazard such as flooding, may identify traditionally vulnerable groups i.e. people living in low-income settlements on a canal bank, while another hazard such as earthquakes, may identify some non-traditional groups i.e. middle class people who build multi-storey homes without adhering to building codes.

Resilience has a history of being criticized for promoting the status quo by enabling communities to 'bounce back' (Twigg, 2009). Some scholars believe that bouncing back and maintaining the same core functions can be reckless, and sometimes even dangerous, when the status quo is one of corrupt governance, flailing economic policies and restricted civil rights (Pelling, 2011). When the state of return is undesirable, transformation is sometimes suggested as an alternative. Therefore, proponents of resilience prefer to talk about 'bouncing forward', suggesting disasters as a potential opportunity (Folke, 2006) for adaptation to future risk.

Another advantage of resilience is the opportunity it affords people to build upon what already exists. Resilience frames problems in a positive light while concepts like disaster risk reduction imply a need to 'reduce'. Perhaps one of the biggest arguments in favour of resilience is the way in which it has the potential to bridge disaster and development paradigms. Resilience, it can be argued, is a cost-effective way to save lives and protect development gains, thereby integrating two paradigms (Combaz, 2015). This paper argues that in order to be effective, resilience ought to be built both before and after a disaster, and that the disaster itself is a test of how the built environment has learned from history to cope with and adapt to shocks and stresses.

URBAN MORPHOLOGY'S COMPLEMENTARITY TO DISASTER RESILIENCE

In this paper, urban morphology is defined as the study of urban form and the actors and processes that shape it (Almukhtar, Forthcoming). The primary concern of urban morphology is to create an understanding of the evolution of form in order to guide appropriate future adaptations and transformations of the built environment based on people's social, economic and governance needs.

Through a disaster resilience lens, urban morphology can be used to investigate patterns of vulnerability, capacity, risk and opportunity (Sitko, 2016b). Within those patterns, morphology enables the identification of social, economic and governance factors that influence and shape the built environment. Identifying the factors provides neighbourhood residents, urban planners and designers, humanitarian and development actors, various levels of government, the private sector and other urban stakeholders with entry points for transforming the city in ways that build resilience. Urban morphology compliments, and perhaps even strengthens, the concept of disaster resilience in three key ways described below.

Memory

Urban morphology engages with history, seeking to draw connections between historical and modern day transformations at different scales and resolutions of urban form in order to identify underlying factors that shape a place (Warner and Whittenmore, 2012). Without morphology, resilience does not have a memory of what it is bouncing 'back' to or 'forward' from. When components of a neighbourhood or city are analysed through morphology, it allows people to judge the patterns as positive or negative, useful or impeding, equitable or oppressing among other things in order to identify where transformations could occur.

Scale

Urban morphology provides the opportunity to study patterns of vulnerability, risk and capacity at scale, revealing different degrees of power dynamics and control by a plethora of actors. Power and the types of internal conflicts revealed are different at various scales of analysis (Massey, 1993). Who is and is not included in decision-making bodies is a strong indication of power relations that influence the wider geographical context.

Time

Time, an essential element of urban morphology, may go some way in explaining changes in resilience across different cultural contexts at different scales over time. The temporal changes in a city can be identified by looking in particular at changes in maps and town plans as they transform across different periods of time. Triangulating changes across scale and time provides a better understanding of human settlements (Kropf, 2009) and is particularly important in research in low-income settlements where power dynamics often force poorer people to live on marginalized land with a number of natural and man-made risks.

In summary, urban morphology offers an understanding of scale, time and history, providing granular details about the influences that shape urban form. When viewed from a resilience lens, morphology can be seen as a holistic approach to disaster prevention and mitigation that builds upon existing capacities instead of focusing on vulnerability reduction through a disaster risk reduction lens.

MORPHOLOGICAL LAYERS

The layers of urban form used in this paper to identify patterns of vulnerability, capacity and risk are topography, public open space networks, plots and buildings. These layers study urban form at different scales of resolution, acknowledging that each layer changes at different rates across time with topography seeing the slowest changes (across centuries) and buildings seeing the fastest rate of change (across intervals as shorts a months and years). Figure 1 shows the four morphological layers used in this case study.

Morphological analysis highlights changes within the built and natural environment. Morphology analyses the quality of the urban built and natural environment, and serves as the basis for asking, how did the neighbourhood become what it is today and what are the key patterns of change that can be identified? To this end, urban morphology, when used as an approach for understanding and building urban disaster resilience, can address the critique by Levine *et al.* (2012) that resilience lacks a historical dimension, which leads to mistakes being repeated. Urban morphology is an approach that can help build a memory of capacity, vulnerability and risk. The case study below is used to explain how disaster resilience can be analysed within each morphological layer.

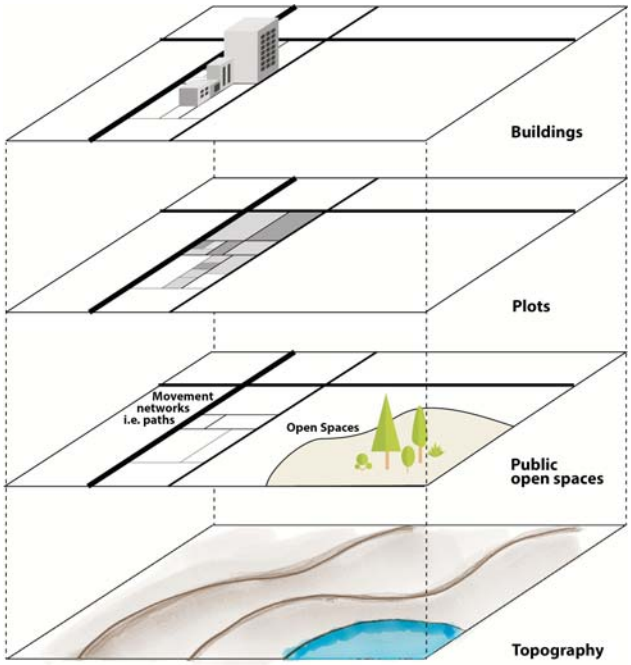

Figure 1: Morphological layers

Topographical Layer

Topography is the largest and the most permanent morphological layer where changes take place across centuries, and is considered the basis for influencing change in other morphological layers due its ability to influence a city's layout. The topographical layer is investigated first because it is comprised of macro landscape features observable in nature such as land, water and other notable features of a specific terrain (Bolio Arceo, 2012), including pre-urban structures. Analysing the topographical layer means examining large-scale historical changes and influences on physical topography over time (Conzen, 2010). The topographical layer is important when analysing disaster resilience because it accounts for changes in climate and the resultant hazards and risks, such as drought and flood cycles.

Dimensions of disaster resilience within the topographical layer

The topographical layer reveals two dimensions of disaster resilience in the Bang Bua Canal. These two dimensions are not necessarily positive and require transformation over time to build a safer environment. The dimensions are: a pre-disposition to flooding, and weak governance.

The Bang Bua Canal Case Study

The Bang Bua Canal is located in northern Bangkok on a three-kilometer stretch of land where settlement upgrading opportunities were offered to 12 neighbourhoods with an estimated 17,000 people. The National Treasury Department owns the land and 2004 communicated plans to evict Bang Bua Canal residents in order to construct a new highway to alleviate growing traffic congestion. The eviction was expected to decrease flooding downstream, which was being blamed on river-based houses for restricting the flow of water. Increasing levels of water pollution were also blamed on canal dwellers due to the practice of dumping untreated sewage and wastewater directly into the canal.

Eviction was avoided by joining the national government's slum and squatter upgrading programme, *Baan Mankong,* which translates as 'secure housing' (Wungpatcharapon and Tovivich, 2012). Each of the neighbourhoods participating in the Baan Mankong upgrading programme agreed to three conditions: to form a neighbourhood savings group and then register as cooperative; for the cooperative to pay rent for the land; and for the houses to move off the canal and onto proper land.

In 2011 a flood struck Bangkok, impacting the Bang Bua Canal. The activities undertaken in the upgrading determined the effectiveness of each neighbourhood's response to the flood. While each of the neighborhoods had its own challenges and successes in the upgrading and flood response, some generalisations about the overall disaster resilience of the canal can be made by exploring patterns of vulnerability, capacity and risk common to the neighbourhoods there.

Figure 2: A description of the Bang Bua Canal settlement upgrading and flood response case study in Bangkok, Thailand.

i. Pre-disposition to flooding

Topographical analysis of Bangkok shows that historically Bangkok has a pre-disposition to flooding thereby creating a complex web of risk and exposure in present day Bangkok. Bangkok is rooted in an agricultural past of rice farming (Roachanakanan, 1999). Much of the delta city is below sea level (World Bank, 2010), with some parts as low as 1.5 meters (Philip, 2011). This results in seasonal flooding, which was traditionally utilised in annual rice farming. Throughout Bangkok's history, its canals were used as domestic water sources, a method of irrigating paddy fields and as a means of transportation (Roachanakanan, 1999). Over the years, new canals were dug, accompanied by dikes and levees designed for flood prevention (Roachanakanan, 1999). Analysis of the topographical layer suggests that Bangkok's history of flooding may continue with climate change, rising sea levels, coastal and soil erosion, as well as shifting clay soil all of which are modern ecological threats that expose the city to flood risk.

ii. Weak governance has increased exposure to floods

Over the years, Bangkok's natural environment has been shaped by weak governance networks that have increased exposure to floods. For example, a significant number of canals are now home to poorer people encroaching on canal banks or have been filled and turned into roads (UNESCAP, 2014). Urbanisation has decreased the percentage of permeable surfaces that can absorb rainfall. Decades of weak urban planning and lack of enforcement of land use regulations has led to the uncontrolled growth of under-serviced neighbourhoods such as informal settlements (UNESCAP, 2014).

Public open space network layer

The second morphological layer in this discussion is the public space network layer. It investigates public open spaces used for movement such as highways, streets, small pedestrian lanes and water channels. The design of movement networks has the potential to impact the safety and permeability of an area while increasing or decreasing connectivity (Almukhtar, 2016). Today, many of those living along the Bang Bua Canal are daily wage earners, such as vendors, labourers, shop assistants and to a lesser extent, government, military and office workers (Wungpatcharapon and Tovivich, 2012). The canal's population rapidly grew when the first international airport was built in Bangkok, which acted as an economic driver, attracting migrant workers and transforming paddy fields into highways.

The public space network layer also analyses open spaces used by the general public for social and economic activities (Carmona et.al., 2003). Open spaces can be formal or informal and include squares, playgrounds, parks and market places (Kropf, 2013). Analysis of the public open spaces layer identifies how patterns of use have evolved over time, the innovative trade-offs between private and public space (Dovey and King, 2011), the types of people who use public spaces and the risks and opportunities they face in crisis and non-crisis periods. Today, the Bangkok Metropolitan

Authority (BMA) considers the space along the Bang Bua Canal 'open space' or 'green space' where building is not permitted. However, much of the open space around the canal has been taken over by low-income housing settlements due to a lack of enforced planning laws.

Dimensions of disaster resilience within the movement networks and public open spaces layer

The movement networks and public open spaces layer reveals three dimensions of disaster resilience in the Bang Bua Canal: safety, inclusivity and income generation.

i. Safety

The upgrading process prioritised the creation and improvement of roads and public open spaces, which contributed to an overall greater sense of safety and security in the Bang Bua Canal. For example, major pedestrian lanes were introduced while others were expanded, creating more permeability. Installation of street lights provided better visibility. Smaller alleys were designed with a high degree of connectedness to the major pedestrian lane in two of the neighbourhoods, arguably contributing to safety by increasing footfall in previously isolated areas. Jacobs (1961) writes that public peace is kept by the public itself through people having 'eyes on the street' when there is 'continuous use', which turns human activity into interesting activity to watch. In terms of public open spaces, the right to play in safe, child-friendly spaces was prioritised through the design of public open spaces at the centre of all three neighbourhoods. Prior to the upgrading children used to play in parking lots, at risk of vehicular related accidents and within reach of strangers.

ii. Inclusiveness

Social inclusion is the second dimension of disaster resilience identified within the public open spaces layer. The increase in pedestrian lanes also increased the capacity for socialising. Canal dwellers parked their motorcycles in pockets of open space when visiting one another and often sat on street furniture observing neighbourhood activities. The neighbourhoods with public open spaces at their centre became more inclusive for children and their elderly caregivers who could walk short distances to gather, socialise and supervise younger children.

iii. Income generation

The pedestrian lanes better enabled neighbourhood residents to generate income; therefore, income generation is included as the third dimension of disaster resilience at the movement networks and public open spaces layer. More pedestrian lanes resulted in an increase of vendors accessing the area with goods to sell. Some residents used portions of the road for storing goods related to income generation, such as vending carts or materials for recycling.

In summary, thoughtfully designed and well maintained pedestrian lanes and public open spaces can become a panoply of social and economic activities that promote safety, inclusivity and generate income for users, demonstrating key dimensions of urban disaster resilience.

Plots

Once movement patterns have been established, plots begin to appear (Koster, 1998), hosting people living or working on parcels of land (Whitehand, 2001). Plots are defined by land use and their physical form (Kropf, 2009). It is widely recognised that many towns and cities lack regulated plot dimensions (Whitehand, 2001), and thus they vary in shape and size. Since plots are usually objects of ownership, analysis of ownership and control provides an essential insight into socially defined relationships between the controller and the user (Kropf, 2009). It can be helpful to analyse plots as a separate layer when studying urban disaster resilience in order to identify changes in access to and quality of a piece of land, its use and ownership. In the case of the Bang Bua Canal, analysis of the plots layer reveals three key dimensions of disaster resilience.

Dimensions of disaster resilience within the plots layer

The plots layer reveals three dimensions of disaster resilience in the Bang Bua Canal: land tenure, governance structures and social capital.

i. Land tenure

The first dimension is secure land tenure. In the Bang Bua Canal, chronic stresses and sudden shocks prompted the need for canal residents to rethink tenure security. In late 2000, twelve neighbourhoods illegally squatting on the land owned by the national government were threatened with eviction. After a great deal of negotiation, the twelve neighbourhoods were offered the opportunity to rent the land from the national government and participate in an upgrading scheme. The neighbourhoods that agreed to pay rent for the land invested the most financially in buildings, roads and public spaces because of their legally binding

contract that grantees the neighbourhood's permanence.

ii. Governance structures

The second dimension of disaster resilience within the plots layer is governance structures, which links very strongly to land tenure. The case study shows that governance structures are most successful when they are transparent, accountable and equitable, regardless of whether they are formal or informal. The upgrading required fair leadership. In some neighbourhoods new governance structures formed and displaced old power structures. In one particular neighbourhood, the new power structure was built on a conflict of interest with a husband standing as the formal elected leader of the neighbourhood, his wife as the leader of the upgrading activities and their daughter as the accountant of both structures. In a different neighbourhood, the introduction of the upgrading created two separate and often antagonistic governance structures – those who opted in for the upgrading and those who were against it. In a third neighbourhood (potentially the largest of the twelve) transparent, equitable governance structures resulted in strong social cohesion between the leadership team and neighbourhood residents. Land sharing was agreed to within a period of one year of negotiations in this neighbourhood all home upgrading activities were completed within two years.

iii. Social capital

The third dimension of disaster resilience identified at the plots layer is social capital. Here Archer's (2009) theory of three levels of social capital – bonding, a function of intra-communal relations; bridging, inter-communal relations; and linking, a function of community relations with the State – offers a means for understanding the ways in which social capital impacted the plots layer.

The first level of social capital, 'bonding', is evidenced most when neighbourhoods worked together to plan new pedestrian lanes, redistribute plots of land and develop public open spaces. Each neighbourhood also created its own social welfare system to assist families whose financial assets were depleted. The 'bridging' form of social capital, a horizontal linkage between neighbourhoods within the canal, is demonstrated through what is known as the Bang Bua Canal Network. The twelve neighbourhoods in the Canal Network worked together to reduce river pollution and start anti-drug campaigns in an effort to reduce drug use and trade in the area. Evidence of the 'linking' form of social capital whereby the Canal Network or neighbourhoods link with the State was observed when leaders from low-income settlements across Thailand visited the Bang Bua Canal in order to undertake peer learning about the multiple approaches and challenges of upgrading.

In summary, the plots layer demonstrates that plot transformation occurs when land tenure is secure; a transparent and accountable governance system is in place and strong social dynamics drive bonding at different scales.

Buildings and services layer

Finally, the buildings and services layer is the most rapidly changing of the physical layers, and arguably one of the most fundamental layers in morphological analysis for understanding the social, political and economic factors that influence a neighbourhood (Bolio Arceo, 2012; Whitehand, 1987). So important are infrastructure and services, that UN-Habitat describes them as the 'bedrock of prosperity' in its 2012-2013 State of the World's Cities Report, arguing that 'inadequate infrastructure is a major impediment to the prosperity of cities' (UN-Habitat, 2013, p.xvii). Traditional approaches to analysis of the building layer includes mapping the types of building in order to ensure future urban development takes into account historical transformations and cultural traditions (Whitehand, 2001). While this is important, the main focus of analysing buildings and services in relation to urban disaster resilience is to ascertain opportunities for improving quality of life and well-being. According to UN-Habitat (2013), access to adequate housing and residential services promotes competiveness and economic growth; improves urban connectedness; reduces poverty and contributes to safer, more sustainable cities. Investing in, and maintaining critical infrastructure and services is listed by UNISDR (2015) as one of ten essentials in its "Making Cities Resilient" campaign.

Dimensions of disaster resilience within the buildings and services layer

The quality of buildings, access to financial capital and planning and reconstruction processes at a macro level are identified as key dimensions of disaster resilience in the buildings and services layer.

i. Building quality and the politics of participation

In neighbourhoods, housing accounts for the majority of the typologies of buildings (Arendt and Alesch, 2015). In the Bang Bua Canal, homes that were single storey, built on stilts and containing wooden flooring and walls were most vulnerable to flooding, and in the 2011 flood such houses were completely destroyed. The poor quality of building materials can be traced back to financial vulnerability – inexpensive building materials such as bamboo, corrugated iron and timber are often used to cope with the weather, offer privacy and accommodate construction on marginalized land.

Meanwhile, well constructed two-storey homes that met planning regulations and risk reduction measures, were instrumental in enabling flood survivors to live at home, often with access to running water and electricity.

ii. Access to financial capital

The second dimension of disaster resilience within the plot layer is financial mechanisms that enable poorer people to construct homes of adequate quality. In the Bang Bua Canal savings groups were important mechanisms for poorer people to collectively pool resources in order to access low interest loans. Such loans were then used to re-block plots, reconstruct homes, invest in common infrastructure as well as initiate a social welfare fund. The savings groups worked as a mechanism for building social capital because of the collective ways in which people worked together to manage money. Transparent and accountable processes and management committees earned trust amongst savings group members. Those who did not participate in savings groups either had alternative means of accessing finances (through loans from employers or family members, for example) or felt they could not afford to participate because the investment cost was too high. However, the evidence from the case study suggests that poorer people who participated in collective financial mechanisms were able to afford to transform their individual homes and communal services.

iii. Inclusive planning and reconstruction processes

Thirdly, the planning policies at a city and neighbourhood scale greatly influence the buildings and services layer. Flexibility in the planning process was important and directly contributed to a more effective building process. Neighbourhoods with permission to legally occupy the land sought special planning permissions. For example, the municipality legally permitted houses in the Bang Bua Canal to be built more closely, waived on-site sanitation regulations and made an exception to Bangkok's Comprehensive Plan's land-use controls (Usavagovitwong et.al., 2013). Moreover, the process of planning, which was run by the neighbourhoods themselves, was flexible and allowed people
to join the programme when they felt ready to.

In summary, analysis of the three case studies at the building layer demonstrates that high quality buildings, access to pro-poor financial mechanisms and flexible planning mechanisms and processes at a neighbourhood and city-scale are key dimensions of disaster resilience within the building layer.

CONCLUSION

In conclusion, morphology is a useful approach for understanding urban disaster resilience, mainly because the approach assists with the identification of persons at risk, the types of risks they face and whether that person, neighbourhood or city needs to adapt or transform the ways in which different social, economic and governance patterns occur. In summary, disaster resilience is most helpful as a concept when it defines resilience for whom and to what (Sitko, 2016a; Sitko, 2016b).

Crucially, vulnerable communities must be the drivers of adaptation or transformation interventions as demonstrated throughout the four morphological layers of analysis within the case study. Moreover, input from built environment professionals such as urban planners and designers, architects could further strengthen disaster resilience interventions undertaken by local residents. However, it is important that built environment professionals are concerned about disaster and development challenges in equal measure. Vulnerable people do not separate hazards into 'development' and 'disaster' categories and neither must the professionals who design and support the city.

It is argued here, through the example of case study of the Bang Bua Canal, that urban morphology can assist with understanding patterns of social, economic, governance and physical vulnerabilities and capacities within a city. Understanding these patterns provides people with the ability to identify key dimensions of resilience in order for neighbourhoods to 'bounce forward' by addressing the chronic stresses of today and preparing for the inevitable disasters of tomorrow.

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A SYMBIOTIC RELATION OF COOPERATIVE SOCIAL HOUSING AND DISPERSED TOURISM IN HAVANA VIEJA: DEVELOPMENT MODEL AND ARCHITECTURAL PROTOTYPES

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ABSTRACT

It is common knowledge that Cuba's inhabitants struggle with huge daily-life challenges. One of the biggest problems is the housing-shortage, with up to 30% of the society awaiting housing provision (Rodriguez, 2014). They are not literally homeless, as Cuba has adhered to a communits system of governance and grants housing by accommodating people mostly into existing, often extremely overcrowded houses with even four generation of families living in two-room apartments (Rodrigvez, 2014). Havana, and especially its Old Town (Havana Vieja), struggles with extremely high levels of deterioration of its urban fabric and houses. In 1990, two collapses of buildings were recorded by UNESCO every three days (PDHL, 2000). The housing market is in clear crisis on both an economic and a social level. On the other hand, a very dynamically growing part of Cuba's economy is tourism (Peters, 2014). To decrease the pressure of hotel demand on the national governed sector and implementing a subtle change in dealing with entrepreneurship to regenerate the city, Cubans are now allowed to rent rooms to tourists. Since 2010, the government introduced an updated bill, allowing individuals to move from a national-employment to self-employed sector choosing from a list of one hundred and eighty one permitted professions. This paper explores the development of an alternative growth model for urban and social resilience to regenerate the city-center of Havana. It is based on a research-stay, interacting with local actors next to data-mining. This paper is the result of a search for development-patterns combining solutions addressing the housing shortage through integration of small scale tourism entrepreneurship within it and proposing architectural prototypes to implement the model. The proposal seeks to deal with the urban, economic and social aspects of the productive and regenerative city, empowering the local community, to obtain the necessary tools to face the challenging future of Havana and its inhabitants.

Keywords: Havana Vieja, dispersed tourism, housing shortage, research-by-design, development model, new models of productivity.

INTRODUCTION

Cuba is a country of eleven million inhabitants. The Cuban government officially acknowledges that in order to grant its people access to humane housing conditions it needs to build five hundred thousand new housing units (20% of which in Havana). Outside sources suggest that this number can be as high as a million (Rodriguez, 2014), theoretically making one third of Cubans homeless. Currently excessive number of inhabitants live in existing flats and houses, under very poor living conditions. Due to difficult economic condition of the country, people no longer get financial help from either the Soviet Union nor Venezuela, which is also taking its toll on the countries ambitions of dealing with the housing shortage.

Cuba, being a Communist country, faces the issue of managing private property, as private property is very limited. Land and housing policies are such that majority of the locals get access to housing through a system where private property ownership is discouraged. The Cuban government has recently experienced with legalizing market mechanisms for ownership of private housing.

Historically Cuban households have legally owned their homes but with some limitations. In November 2011, the Cuban government legalized free market sales and other measures aimed at bringing to the surface an underground market that was largely unregulated. Some of the measures

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undertaken by the government included expansion of self employment and the start of urban worker cooperatives.

The new system requires the buyer and seller of property to complete necessary paper work before a specialized lawyer, payments are to be made through banks, income and property transfer taxes are to be paid and residents are only allowed to own one residence and a second property in a vacation area.

According to National Housing Institute figures released in September 2013, Cuba needs to build 60,000-70,000 new housing units per year to alleviate its housing deficit. But only a fraction of that number is being built, which is 16,000 units per year by the state at the current rate, and 8,000-10,000 by homeowners themselves. Natural disasters destroy homes every year, for instance Hurricane Sandy alone destroyed 22,396 homes in eastern Cuba in 2012 (Peters, 2014).

Although, since 2011 Cubans can sell and buy houses in the open market but Cuban banks don't give out loans bigger than $40 or so, when a modest housing unit costs thousands of dollars (Grein, 2015). Additionally Cuban cities, especially Havana, are facing great deterioration of its urban fabric, leading to common building collapses.

A combination of age, decay, neglect and other elements threaten important nineteenth century neoclassical villas and Spanish colonial mansions, along with some of the world's finest examples of twentieth century architecture, Art Deco palaces from the 1930s and modernist structures from the 1950s' (Sanchez, 2009).

Cuba introduced programs like the Office of the Historian of the City of Havana (OHC) that deals with this problem. Additionally in 2010 a small part of the economy was opened for private business initiatives in order to repair the national budget. Since then over half a million Cubans moved into self-employment related to the tourism industry.

Since 1997 tourism is the biggest, and most dynamically growing drive of Cuban economy (Figueras, 2003). In 2015 over three million people visited the island. Touristic infrastructure is not prepared for that many tourists and the hotel shortage is visible. Due to a renewed diplomatic relations between Cuba and United States, American tourists will be travelling to the island with ease, which will surely lead to a even more dynamic growth of visitors. The government is not willing to simply allow international companies to enter the island and deal with the growing demand of tourism as it is afraid of them feeding on this financial potential, leaving Cubans aside.

Mass tourism is also threatening Cuban cities, especially the district of Old Havana which is the main touristic attraction of the country. Negative impacts of gentrification may lead the oldest Cuban housing district into becoming a theme park, pushing original inhabitants out to the outskirts and destroying the authenticity of this district.

This paper explores the alternative growth model for urban and social resilience to regenerate the city-center of Havana and looks into the relationship between housing and touristic shortage in Cuba.

NEW STRATEGIES FOR OLD HAVANA

Housing shortage in Cuba is caused mostly due to the fact that Cuba does not have money to build or renovate houses. The present hotel industry in Cuba does not suffer from financial issues, but is not allowed to grow freely, especially in Havana Vieja, as it is expected that the impact of mass tourism can be dangerous, if not checked by the government.

What if one were to merge those two into a typology that could create both housing and hotel capacity? A mixed typology could prevent from big companies ruling the market of Cuban tourism, which could fuel polarization. At the same time this way of addressing the issue would not stimulate gentrification of the district, which Havana Vieja is at a huge risk of. Lastly, this idea, through its flexibility, could address the changing dynamics of the touristic demand in a sustainable way.

Buildings in areas that attract tourists would consist of regular flats for Cubans and a proportionate number of hotel units weaved into the landuse plan. This would become a source of income for the locals to pay off the loan taken for the construction of the building itself. Cuban inhabitants would be able to make a living through the hospitality business.

This kind of typology could lead to a network of guest houses dispersed among the housing fabric of the whole district, avoiding unnecessary attention hubs around hotel premises. The touristic income would spread more evenly among its inhabitants and the streetscape could maintain its scale and character. Competition between the touristic Old Havana and the non-touristic localities would be minimized, as the whole district would become mixed use leading to sustainable outcome.

Additionally the political reality in Cuba is characterized by a great level of governmental control of the market so the government can adopt this measure and resist the temptation of fast and lucrative solution of inviting international hotel chains into the country.

HAVANA VIEJA

The restoration of Old Havana, a 0.826 square mile district containing some 3,370 buildings and 66,750 residents, which was declared a UNESCO World Heritage site in 1982, has been carried out under a unique model of self-financing and sustainability, that has achieved worldwide recognition. Since 1993, the Office of the Historian of the City of Havana has had broad authority over all planning, land use, development, and investment activities within the historic district, including the ability to develop and operate stores and hotels, tax businesses, carry out construction projects, and use its earnings to finance housing renovations, community facilities, and social services for local residents (Achtenberg, 2013).

Despite the rightful actions of the OHC, Havana Vieja is still struggling with housing and hotel shortage, as well as deterioration of old structures. About fifty percent of the Old Town's buildings are classified as being in a bad condition (Coyula, 1997).

Satisfying the hotel demand at peak point of the touristic boom, with the typical hotel typology will lead to many empty buildings in the months after the peak season. Furthermore, the pace in which OHC is dealing with the housing shortage is not satisfactory. The idea of merging both housing and hotel units in one typology is capable of creating new housing quicker. In the face of coming changes on the island, the fact that Cubans are living in humane conditions and have less access to steady salaries is very important in order to empower the society in the challenging times of the transformation.

"Tourism may bring about irreversible losses and distortion to the city, but it is also one of the few affordable means to garner the capital necessary for urban conservation" (Coyula, 1997).

In 1997 the Cuban government allowed Cubans to rent out rooms in their houses or apartments to tourists, providing Cuban families with new sources of income (Hunt, 2016). As previously, any other type of accommodation in Cuba such as hotels and motels have been owned by the government, the term "casa particular" can be used to highlight that this kind of paid lodging is privately operated. It will create a network of smaller guesthouses, that will evenly spread among the urban fabric, giving access to this kind of income to many families. At the same time, the relation between the tourist and a Cuban will become much more valuable than the one in a typical hotel. Cubans can become hosts and visitors will have a chance of feeling little less as a tourist and more like a part of a real city.

FINDINGS

Spatial Dimension of the Context

Havana Vieja is one of the densest district on the island, with 24,000 inhabitants per square kilometer. The question then arises, if there is enough space to built both the necessary missing housing and fit additional hotel units in the district? (Figure 1).

Havana Vieja is home for 97,000 people what makes of 4.6% of Havanas total population. Havana as a whole needs to generate from 100,000 to 200,000 housing units in order to eradicate the housing shortage. With the highest shortage estimation, Havana Vieja proportionally would need to generate 9,200 new housing units.

For this calculation an area representative of twelve city blocks was selected.

By cross-checking the maps of building heights and vacant plots, a simplified volumetric model of that area was created on which the following calculations were conducted (Figures 2 and 3).

Each building's footprint was multiplied by the amount of floors it has, than the total floor area was calculated.

1 or 2 floors - $33.763m^2$ x 1,5 = $50.644m^2$

3 floors – $6.685m^2$ x 3 = $20.055m^2$

4 or more floors - $9.061m^2$ x 5 = $45.305m^2$

vacant plots - $1.945m^2$ x 0 = $0m^2$

Ruins- $1.500m^2$ x 0 = $0m^2$

Outcome: the area of $52.954m^2$ generated $116.004m^2$ of floor area.

Figure 1: Havana Vieja and the case study area (white outline).

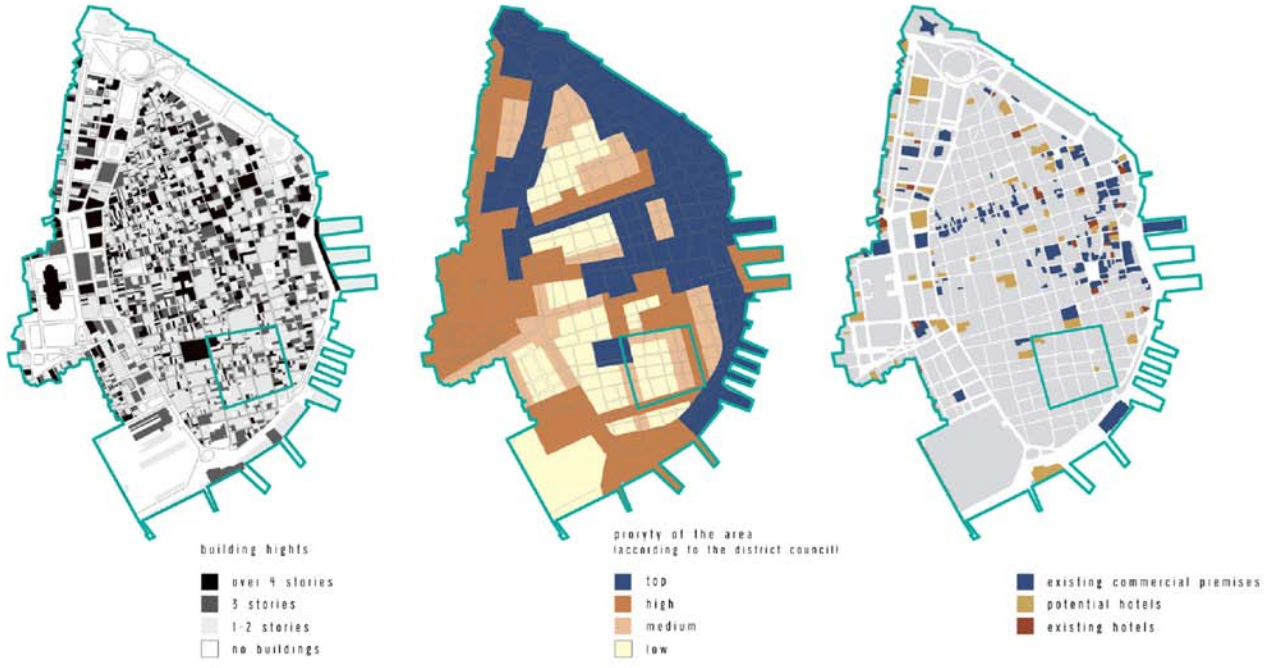

Figure 2: Havana Vieja and Case study area placement

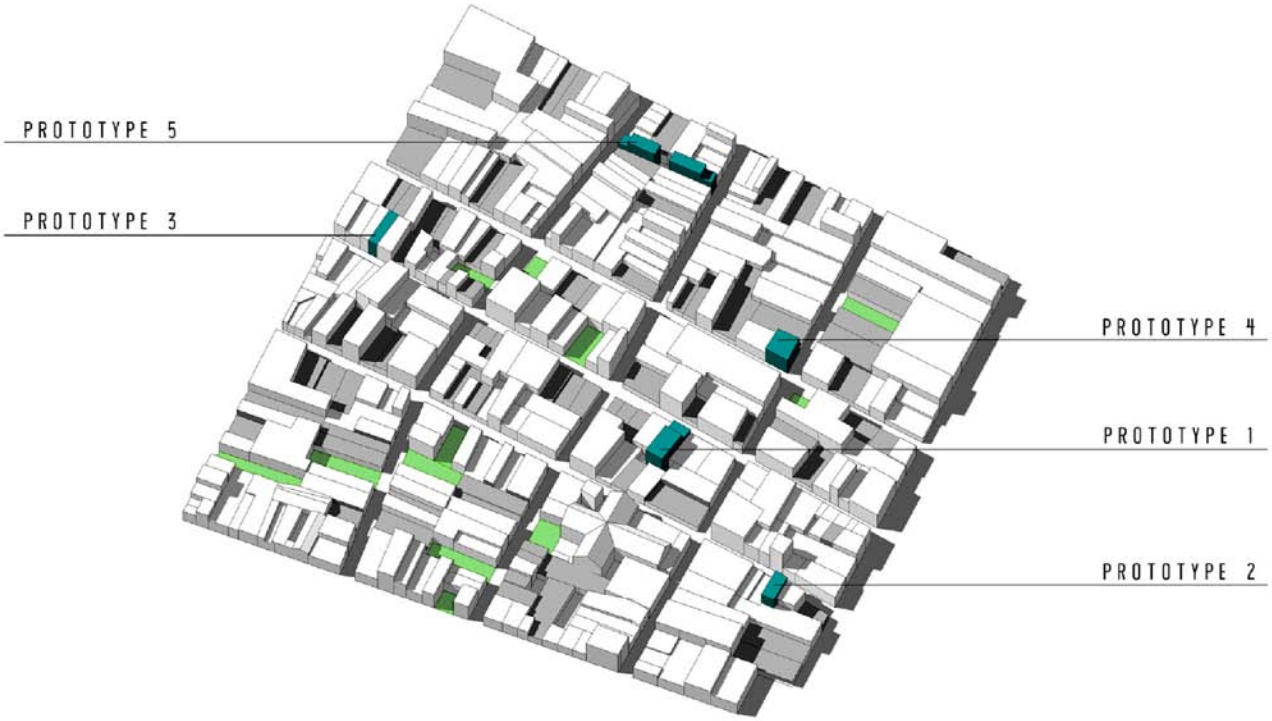

Figure 3: Prototypes

Possible Efficiency

Following the previous calculation, the existing situation was confronted with the hypothetical model, where on average all the buildings were assumed to be four storeys high.

Now: 116.004m^2 = 100%

If 4 floors high: 221.816m^2 = 182%

Next step was to calculate how many new housing units would need to be created within the boundaries of these twelve city blocks, in order to succeed in building 9,200 new housing units in Havana Vieja.

Housing area of Havana Vieja = 1,266,100m^2 = 97,000 inhabitants

Housing area of the twelve blocks = 60,396m^2 = 4.7% of Havana Viejas housing area.

9,200 new housing units x 4.7% = 432 new housing units would need to be created in the boundaries of the analyzed area.

An average of 70m^2 for a housing unit was assumed.

432 units * 70m^2 = 30,240m^2 of additional floor area needed.

If these 12 blocks would achieve the average height of 4 floors, than additional 105,812 m^2 (221,816m^2 – 116,004m^2) of housing area would be generated.

Result

The estimations were made on the assumption that 20% of all plot would consist of patios, in order to provide proper ventilation, and 20% of the building floor area will be circulation. The number decreased to 60% of 105.812m^2, giving 64.545m^2 of new floor area for housing. As the calculated area needed was 30.240m^2, it was clear that Havan Vieja could generate the additional 9200 new housing units within its boundaries, by achieving the average height of building of four floors, still leaving additional space for hotel units also (Figures 4 and 5).

Figure 4: Sections of prototypes.

Figure 5: Section of prototype 1.

Financing Calculations and Demand

As the capital city is the main touristic attraction on the island, 90% of tourists visiting Cuba spend on average two nights in Havana. For this calculation it is assumed that in 2017 Cuba will be visited by 3,500,000 tourists. One needs to remember that this number most certainly will dynamically grow much higher in coming years (Associated Press in Havana, 2015).

This statistically meant that on average 17,260 tourists would be in Havana every night for a full year. To continue the estimation, an assumption was made that 33% of tourists visiting the capital city would like to be accommodated in Havana Vieja district. This gave a demand of 5,753 beds in Havana Vieja alone (nowadays 600 bed'n'breckfast rooms exist in Havana Vieja) (Feinberg, 2013).

Income, Costs and Program Proportions

Prices on AirBnB (website for holiday rentals) for a room in Havana Vieja varies from US$30 - 110 per night. For the following calculations an average price of US$50 per person per night was taken.

A double room occupied for 50% of the year, 183 days, would generate US$ 18,300. 10% of that would consist of wages for Cuban hosts. That would supply two people per family with wages four times higher than the current average salary. Next 10% would be granted for the operational costs. This will lead to a room creating as much as US$ 14.640 of income annually.

The building proportion calculated was set with every apartment for Cubans being balanced with at least one hotel unit. 70m^2 of housing was accompanied with 20m^2 of hotel unit and 10m^2 of circulation.

The cost of construction of 1m^2 of social housing in Chile is US$ 500. Cuba has a cheap work force, but building in a context of the Old Town requires a little more than the lowest possible budget. For the following calculation an average budget of US$ 1000 per m^2 is assumed.

Thus, 100m^2 of construction would cost US$ 100,000, with an income of US$ 14,640 yearly it would pay itself off in 6.8 years. By adding unexpected costs and loan interests, it is safe to assume that this kind of typology in Havana Vieja has a good chance of being able to pay itself off in under ten years.

Dispersed Tourism

One of the question that arises is how would Havana Vieja look without chained-brand nor other big sized hotels? If one was to fulfill this demand only with the use of guest rooms woven into the housing fabric, an average of 1.5 tenant buildings with four hotel units each would be required for every city block of the district.

This unusual approach was with success adopted by a Chilean City of Valpariso and one can see a lot of advantages of those decentralized tactics. Often big sized hotels are destructive for an old town fabric, where dispersed hotel units could be gently integrated within it. The income is spread more evenly among the society and more workplaces are created. Tourism industry, if integrated appropriately and hidden, can decrease any destructive capabilities. Finally this kind of market is more flexible and can react do the dynamics of the fluctuating demands and be more sustainable.

Cuba has a strong history in cooperative housing, as cooperation is a core value of the Revolutionary Cuba. For decades, Cubans have gathered and created different types of cooperatives.

The proposed project is trying to learn from these lessons and build upon this tradition. A structure of Housing Cooperative is proposed, where all inhabitants of a built tenement will be part of a group, collectively responsible for taking care for the hotel units and its guests. They would also be collectively responsible for generating the revenue that will pay off the loan taken to built the tenement itself.

The project proposes a solution that will prevent the outflow of original inhabitants from their long inhabited neighborhoods, thus prevent gentrification. In order to achieve this a choice of inhabitants would be structured as an open-call. After the district defines the localization suitable for this type of social housing construction, families would apply for an apartment. Social workers would analyze the applications and create a cooperative group of families (where proximity to their original apartment and the necessity of them being moved, would be prioritized).

The other possibility is a group of families to come together, create a housing cooperative and apply for a participation in the program, after which the municipality will look for a plot and assign a loan for construction, that can later be paid off by the income from the hotel units.

Space Negotiation

Due to a magnitude of the Cuban housing crisis, the proposed apartments cannot offer residents high spatial comfort. Apartments would be planned to be useful and efficient, and despite their limited size would offer comfort and privacy. The project proposes to add territorial layers to the housing typology, by offering a set of bigger multi-use collective spaces that both tenants and guests would be a part of. Most of the ground floor of each building would be an open space with planted areas, with sun light entering inner courtyards. In between them an open kitchen and living room would be planned. Guests could be offered meals there or on the roof terrace. Tenants could use this space on a daily basis, as well as for special occasions like common tenement meals, fiestas or for example sports event celebrations, which Cubans love to follow. At the same time, if that space would be used like an extension of each apartment, a sense of community would be enhanced and social control of the entrance zone would be created.

A second collective zone proposed would be on the roof. In its front part a roof terrace with a view on the panorama of the old town would be created. The rest of the roof would be designed for the Cuban residents as it would include a common laundry station and an urban farming element.

In the proposed design the front part of the ground floor addresses small Cuban emerging private businesses. Rooms for rent of ten to twenty square meters are proposed. In front of them, a space for the smallest scale of business is created, addressing street sellers. Simple benches, protected from sun and rain by the canopy of the first floor, are provided so that street sellers could prosper in comfort and do not block the already narrow sidewalks of the Old Town. The same benches can become Cuban social spots, where people can gather on the sidewalks to play domino in the evening. Offsetting of the front facade on the ground floor from the street in order to provide space for these activities can enrich the territorial sequence, adding a zone where street and domestic activities mix (Figures 6 and 7).

Figure 6: Possible facade expressions of prototype 1.

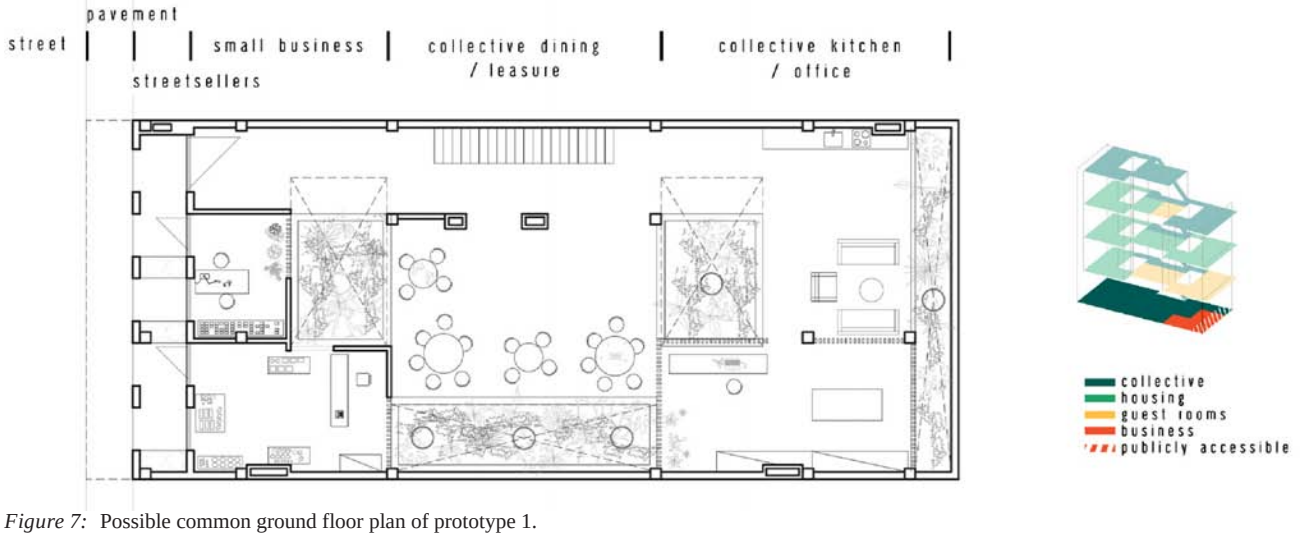

Figure 7: Possible common ground floor plan of prototype 1.

Process of Emerging: Cooperative Design Process

On basis of the list of people awaiting a housing unit, the municipality is to initially define an area that requires intervention the most. After that suitable locations for a new housing building can be cataloged by the OHC.

Later on, on each location a project that defines the structure, placement of patios, shafts and circulation can be prepared by an architect. This project will act as a base for defining the number of people that can be accommodated on given plot, and the amount of loan needed for the construction.

Next a call for participants in a housing cooperative in the area can be introduced by the municipality. On a base of received applications a suitable amount of people from a local area can be grouped into housing cooperatives, with the help of social workers.

Afterwards, based on the estimatory project, a detailed design of apartments can be created in cooperation with each future tenant, where architect is not a decision maker but an advisor. This step can be introduced in order to engage future tenants in the design process, as tenants will identify with the project strongly. Moreover, in this way more personalized apartment plans can be created.

At the same time the cooperation between the architect and future tenants is to be educational for both parties, where tenants can follow professional advice and an architect gets to understand tenant needs in more depth.

All crucial and fully permanent elements of the building would be designed by an architect, and his or her decision will shape the frame, in which a set of personalized infills would be placed. An architect will be fully responsible for the design of the main structure, circulation, placement of patios, technical shafts and the design of the front facade. As every tenant will finally be responsible for his/her own apartment design and construction, the formal outcome of the inner facades will be emergent. This possibility of expression will help tenants to identify with the project and hopefully create unexpected adjacencies of shapes, material and colors, abundant in and typical for Cuban streetscape.

As a result, a duality of facade expressions between the front and inner facades of the building will appear, and hopefully distinguish the representative front from the more introvert, domestic collective courtyards.

When construction begins, solid parts of the building designed by an architect (main structure, technical shafts, circulation and the front facade) will be constructed by a commissioned construction company, in order to grant and control its satisfactory efficiency, quality and pace.

Afterwards each tenant can be assigned with a proportional part of the budget and become responsible for the construction of personalized infills, consisting of his or her apartments, interiors and the corresponding number of hotel units. This model not only focuses on how to generate money in order to be able to build in Cuba, but also on how to spend it. The shift of responsibility for the execution of the apartments from the architect and the main construction company to the tenants will activate smaller, private service providers from bricklayers, electricians and plumbers to interior designers, that tenants will need to hire. This will allow money to trickle down to wider group of professionals, empowering the emerging Cuban private sector.

Finally when the construction process is finished, tenants can move in, and guest rooms can be registered, and this process can start to generate the money necessary to provide for the tenants and paying off the loan.

THE PROPOSAL

Case Study Area

The idea explained above was tested by proposing a couple of implementations in a south part of the Havana Vieja - the area around the Jesus-Maria Street. This area is rated the lowest priority by the OHC and is characterized by abundance of suitable locations. This project proposed in the first place, to build on plots that are empty or occupied by a single story building and are adjacent to taller buildings. At the same time residents of this area are known for their strong attachment to the district, and are characterized as eager to create cooperative initiatives strong in collective spirit.

In order to test the idea a set of possible locations in the chosen neighborhood around Jesus-Maria Street were defined. From those, five were chosen to represent the most common situations met in Havana Vieja context: a small plot of a front width of only 4.5m, a medium size plot of a front width of 7m , a big plot of a front width of 10m, a corner plot and plots joined by their back borders were created.

Plans were designed in a way that allowed easy transformation or incorporation of hotel units into housing. This gave tenants the possibility of expanding their apartments after the loan is paid off and create more housing units, further helping to ease the housing shortage.

Architectural Expression and Building Technologies

New building designs should blend in with the extraordinary fabric of Havana Vieja. Thus, each building will be designed individually in respect of the existing situation on the plot. If the plot is empty and there are no documented sources of the architecture present on that spot in the past, or it does not represent any heritage worth preserving, new designs will create quality and beauty with respect to the context of the Old Town and create architecture that seamlessly blends in within the Havana Viejas streetscape.

Buildings, in order to keep the cost and time of the realization low, will be designed using simple building technologies, that are commonly used on the island. In the designed prototypes a prefabricated concrete structure with masonry infills will be used.

CONCLUSIONS

Housing crisis among other issues is preventing Cubans from living in conditions that would allow them to prepare for and deal with challenges of today's dynamic period of Cuban history. However, if mass tourism and housing shortage is addressed in a certain way, they can complement each other financially and socially. Havana Vieja is in a great need of regeneration, both physically and socially. This change should not only reconstruct but also evolve the city towards sustainable solutions in order to create resiliency. Proposed alternative growth model for urban and social resilience to regenerate the city-center of Havana through a relation between housing and hotel shortage can, with the right help and investment, provide Havana inhabitants with necessary housing and tools to not only pay it off but also grant them a steady income source by addressing the touristic demand. This might not only make possible dealing with the housing issue sooner than currently practiced tactics, but also create an urban setup, which with the use of evenly dispersed guesthouses, decrease negative impacts of mass tourism in Havana Vieja.

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USING VALUE ASSESSMENT AS A TOOL FOR SAFEGUARDING BUILT HERITAGE "THE CASE STUDY OF EMPRESS MARKET IN KARACHI"

*Tania Ali Soomro**
*Mohsin A. Soomro***

ABSTRACT

Understanding and documenting the value of a heritage property is of utmost importance. The value of built heritage is basically referred to as an intangible aspect that characterizes its importance, worth, usefulness or the benefits in various dimensions. Heritage is valued not as an intellectual enterprise but it also plays instrumental, symbolic, and other functions in society (Tidwell, 2002). This research paper focuses on analyzing the historical and architectural value of Empress Market building in Karachi, which in 1995 was declared protected heritage of Pakistan. To understand the worth of the building and authenticity of that worth, a value based analysis is carried out with the help of applying Nara Grid to its various aspects. Nara grid is an evaluation scheme that helps measure authenticity of a building. A historical timeline of the building has been developed to understand the complexity of the structure. To gain a better understanding of the building, the architectural value assessment is carried out on the basis of research, architectural works, construction techniques and the structural systems. It also includes an inventory of the significant architectural attributes.

Keywords: Value assessment, built heritage, Empress Market, Karachi

INTRODUCTION

Value assessment is an elementary instrument to apprehend the substance of any building. It aids to prioritize the conservation efforts, as limited resources put constraint on the magnitude of efforts. The notion of value is tough to express in measurable terms it is an intangible aspect that is associated with the structure. It may be discouraging to signify the value in economic or financial terms only, as there are numerous attributes of values such as cultural, historic, economic, political and aesthetic, that a building can possess which may change over time, overlap or be contested. The values are strongly molded by the contextual factors of the place where the buildings exist and may differ from one another.

The prime purpose of this paper is to know how the value of a built heritage can be defined, and in this order the building of Empress Market; which bestows a characteristic elegance of a domestic Indo-Gothic Style has been selected as a case study. The value network of the market is broken down into layers, that has assisted to comprehend the present state of the building with respect to its form, design, material and present occupancy.

Empress Market – A Case Study

The Empress Market building in Karachi was designed in a symmetrical manner around an open to sky courtyard by James Strachan, the Municipal Architect then in 1889. It is situated in one of the eighteen historic towns of the present day city in zone Karachi-south. Its location in the heart of the city of Karachi makes it an outstanding monument, easily accessible in terms of both private as well as public transportation. The main entrance space serves as a vestibule that further provides connection to the other wings via huge pointed arched opening. It further opens up into an open terrace that connects it to the courtyard. The entrance is flanked by a 140' high clock tower which is accessed through a spiral metal staircase, that ends up in the open terrace (Figure 1). The façades of the building are punctured at regular intervals to provide window openings and are decorated with the twin pilasters. Following the characteristic of a Gothic form, entire series of doors and windows have pointed openings. The façade adornment is done in similar manner for both outside as well as the façades facing courtyards except for the number of window openings. Initially each of the wings of the market building was

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Figure 1: Image showing the south-east (front) facade of the building.

Figure 2: Image showing the aerial view of the market building before the fire damage.
Source: International Design Group, 2011.

dedicated to separate functions, such as the egg and butter section, mutton section, beef section, bread and grocers section, fruits and vegetables sections. Even today most of the functions exist, but a lot of new shops have been introduced without taking care of the section margins. At each four corners of the building Strachan provided square chamber like rooms, slightly bigger in the space and height as compared with the rest of the wing. According to an interview with Architect Altaf Hussain (Site officer at the KMC office of Empress Market), this chamber was exclusively devoted as the 'area for the placement of beef' and was enclosed by the curtains to respect the Hindu customers (Hindus worship the cow as a goddess). Strachan not only designed the building following the technical and aesthetical design principles, but the ethical value of all the ethnic groups were also considered.

Figure 2 represents the densified neighborhood context of the market building today. The semi-circular gardens at each of the corner of the building, named as the Empress Gardens have been converted into mini markets. Apart from the markets, the major part of the rest of space is occupied by the roadside vendors. These vendors play a key role in serving the transit population. Empress Market is also a major junction of public busses, thus the area receives a large number of commuters throughout the day.

The British acquired refinement through a kind of evolutionary process of method of construction in Britain, and applied it here in Karachi and facilitated the wide range of individual designs; with Empress Market being one of them. The robustness and the sturdiness of form that the building offers is an indication of structural advancement of the British. The structure of the market building is load

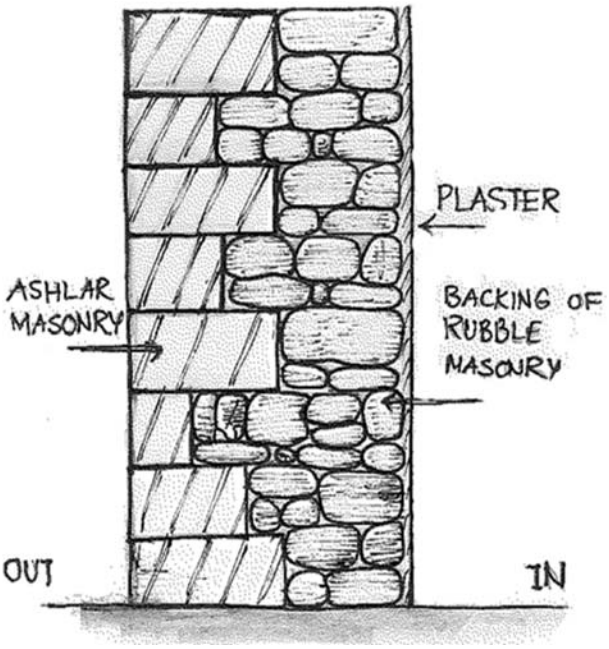


Figure 3: Sketch of the composite wall.

bearing with 20" thick walls, made of Gizri limestone. The external façades of the building have fair finished stones laid in Ashlar masonry whereas the internal surfaces of the walls are plastered with lime (Figure 3).

A comprehensive knowledge about the structure is of utmost importance to evaluate the value system associated with it. Therefore a detailed historical and an architectural study is developed that has assisted in applying the Nara Grid for evaluating the authentic value of the building.

Figure 4: Showing the trams on Preedy Street in front of Eduljee Dinshaw Charitable Dispensary building.
Source: Archives 150 - year 1940.

Figure 5: Showing the now demolished historic buildings on Preedy Street namely, Mandviwalla building constructed in 1910 (SB 8/8) enlistment no: 1995-044 and the Biramji building (SB 8/11) enlistment no: 1995 – 046
Source: Archives 150 – year 1900.

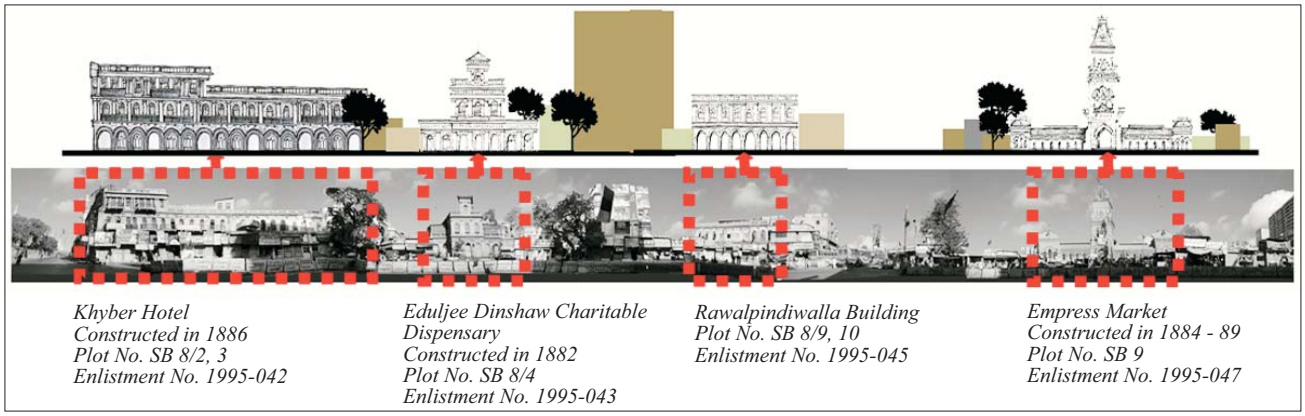


Figure 6: Street montage of Preedy Street showing existing historic properties.

HISTORICAL VALUE – ANALYSIS OF THE CHRONOLOGICAL DEVELOPMENT OF THE BUILDING

The neighborhood of the market building used to house a number of historic buildings (Figures 4 and 5.) But over time these historic buildings have gone through several changes, including complete destruction and replacement with new structures. Preedy Street, where the Empress Market is situated, remains under constant development pressure, like the rest of the historic cluster of the city. Most of the plots which housed old structures now have high and low rise new structures. Figure 6 shows the street montage of Preedy Street from Empress Market till the building of Khyber Hotel. It clearly illustrates the ratio between the heritage properties and the new construction. Both ends of the street are crowned with the British era buildings. On the south side lays the magnificent Khyber Hotel and to the end of the Preedy Street is situated the glorious building of Empress Market. As shown in the figure 5 there used to exist two historic buildings namely Mandviwalla building and Biramji building. Both these buildings were declared protected in 1995 and demolished sometime after 1995. This led to the complete change of the landscape and at the moment in this chunk of the Preedy Street there exist only four historic properties (Figure 6).

Study of the Historic Timeline of Empress Market

The Empress Market was constructed between 1884 and 1889. The Market is remembered as one of the famous and historic structures built in the British Raj era. It evolved from a high class mercantile to a mere whole sale market. The following timeline of the market building apprehends about the decline of the market, and states the causes of decay that led to present situation of the building (Figures 7 and 8).

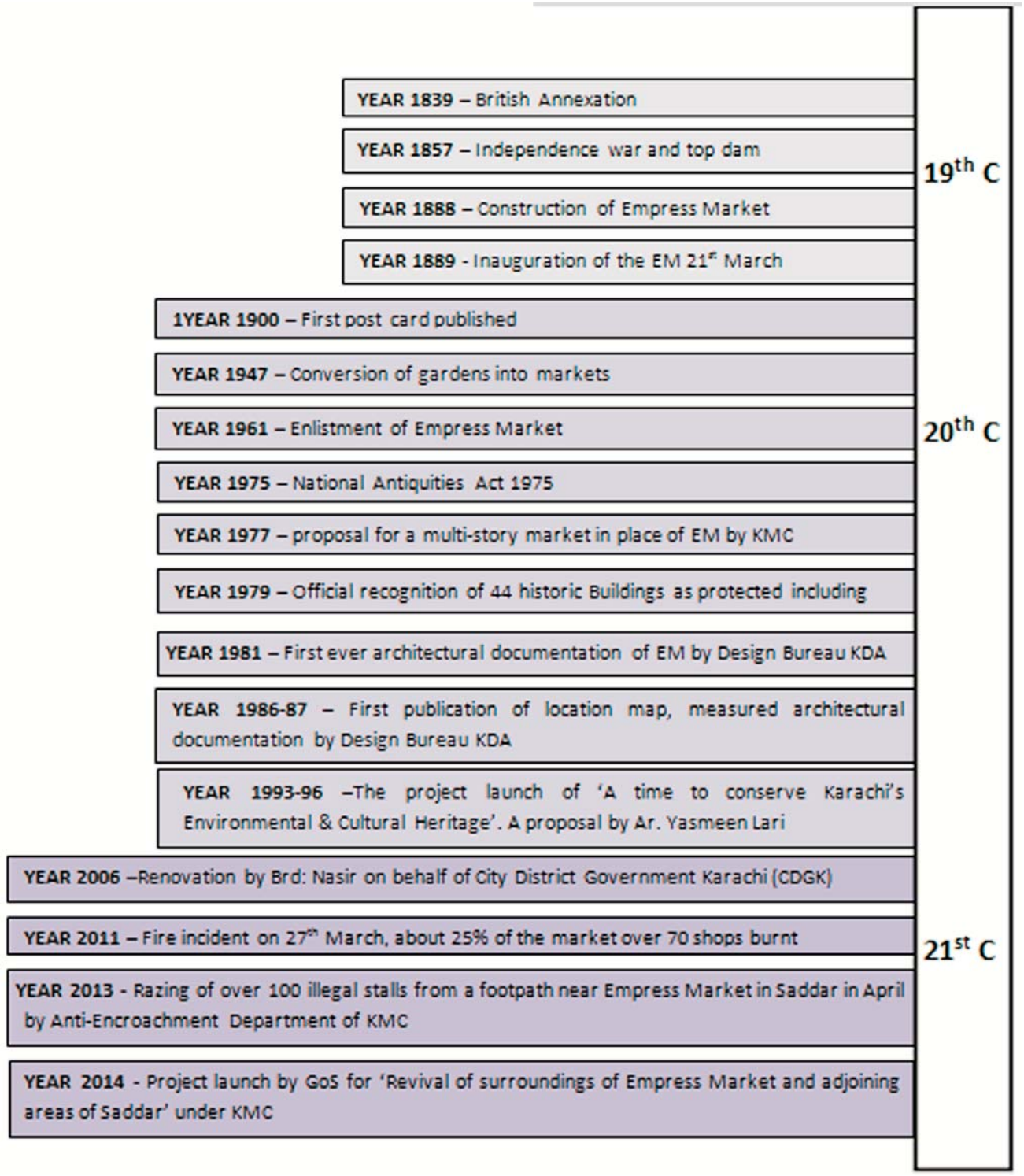


Figure 7: Historical timeline of the Empress Market building.

YEAR 1857: Images showing the location of TOPDOM (R) Year 1957
Source: http://www.dostpakistan.pk/wp-content/uploads/2013/05/Top-dam.jpg "accessed 06-06-16".

YEAR 1888: Boulton Market
Source: Archives 50

YEAR 1888: Lambert Market
Source: Archives 50

YEAR 1888: Mesham Lea Market
Source: Archives 50

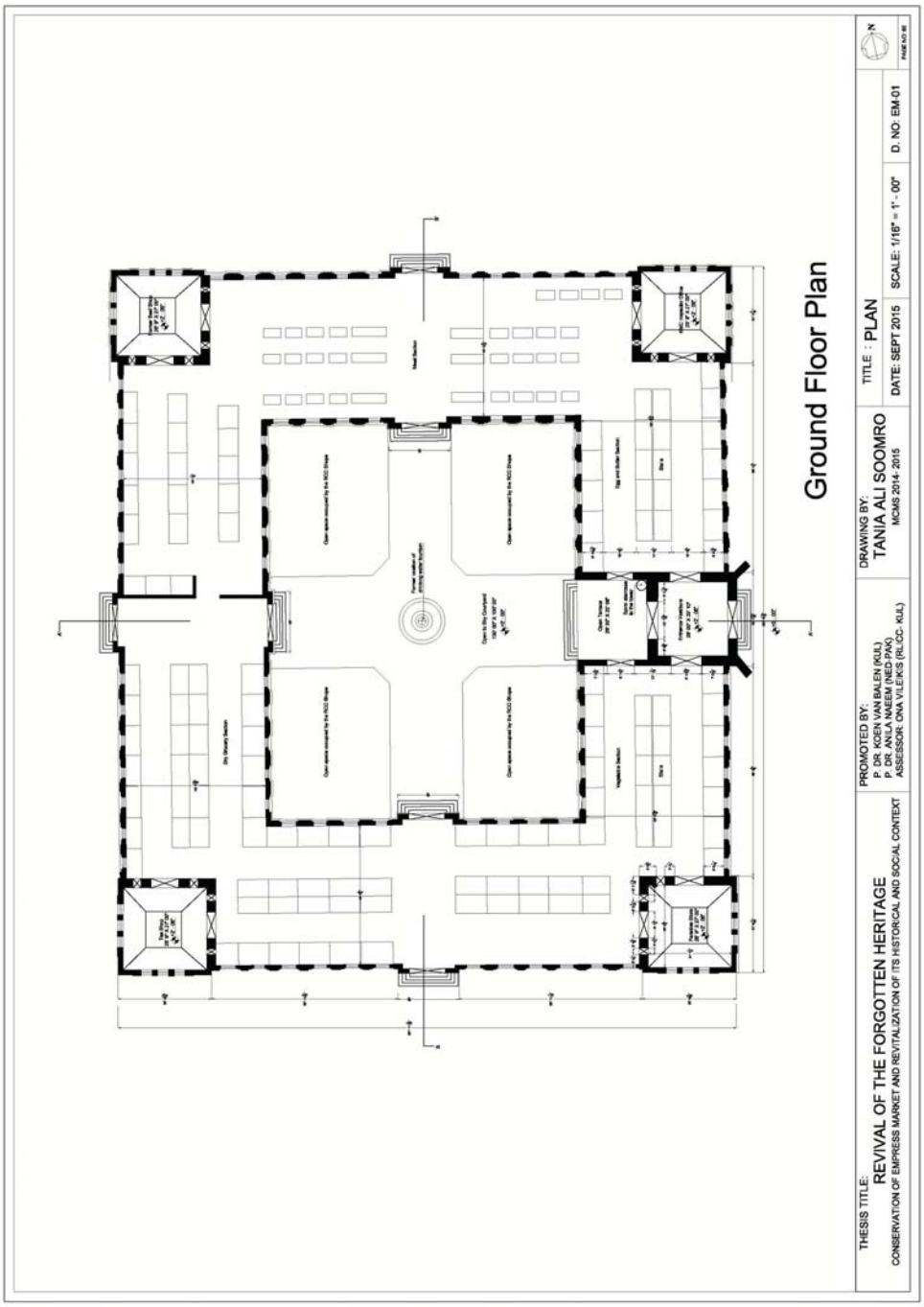
YEAR 1947: Situation of Empress Gardens
Source: Archives 50

Images showing the fire incident of 2011 and the proposed parking plaza project in 2013 behind Empress maket.

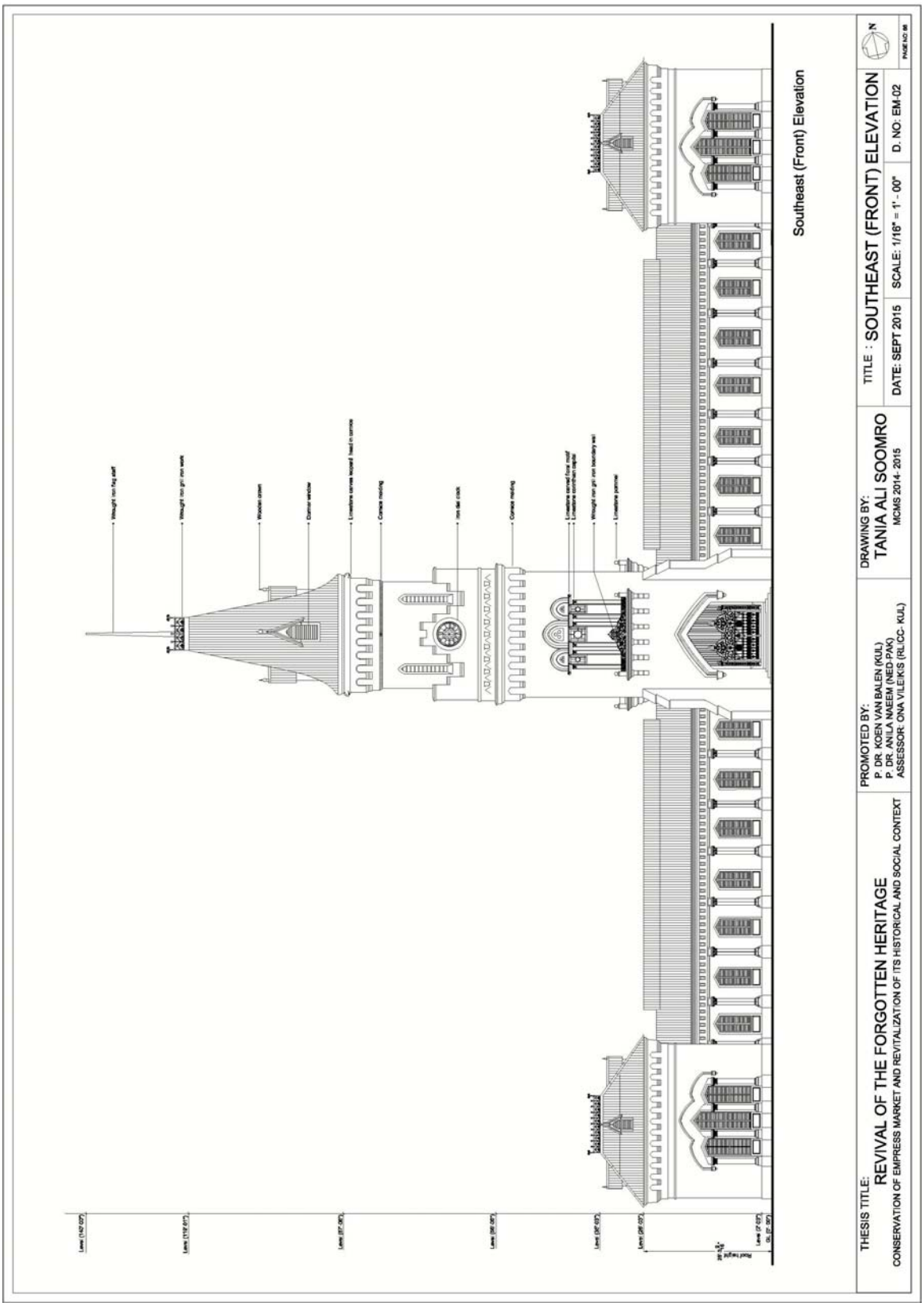
Figure 8: Collection of images describing the timeline of the Empress Market.

ARCHITECTURAL DOCUMENTATION

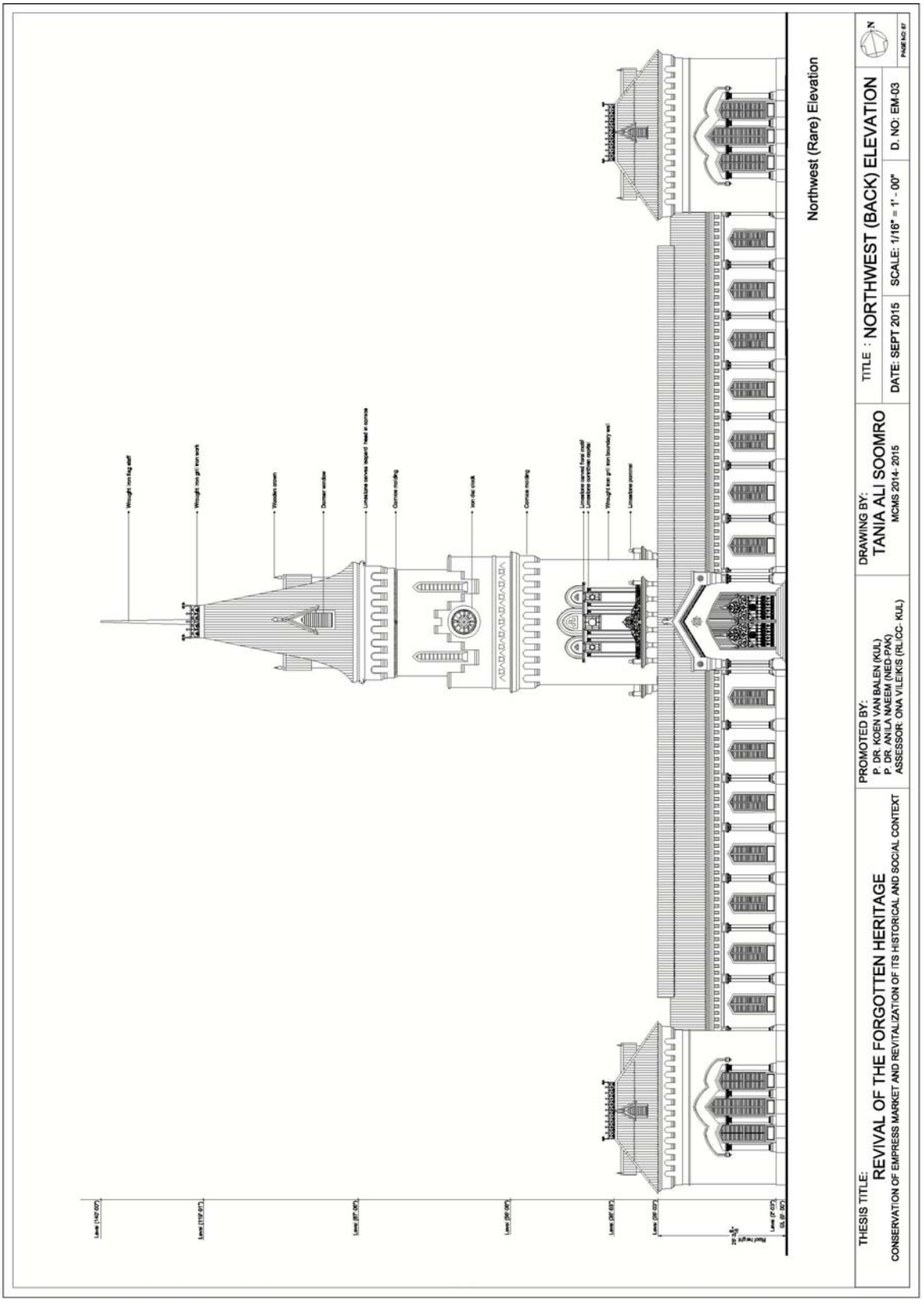
Apart from the architectural drawings a detailed inventory of the significant architectural components of each façade was developed as part of this research. It was developed in the form of a table that not only contained the drawing of the components but also the current image, to have a clear understanding about each component of the building. With the drawing a detailed image and a small description of each component was also added. This inventory was useful in viewing and understanding the craftsman details in the architectural works of the building and to help analyse the building (Figures 9 and 10).



9a

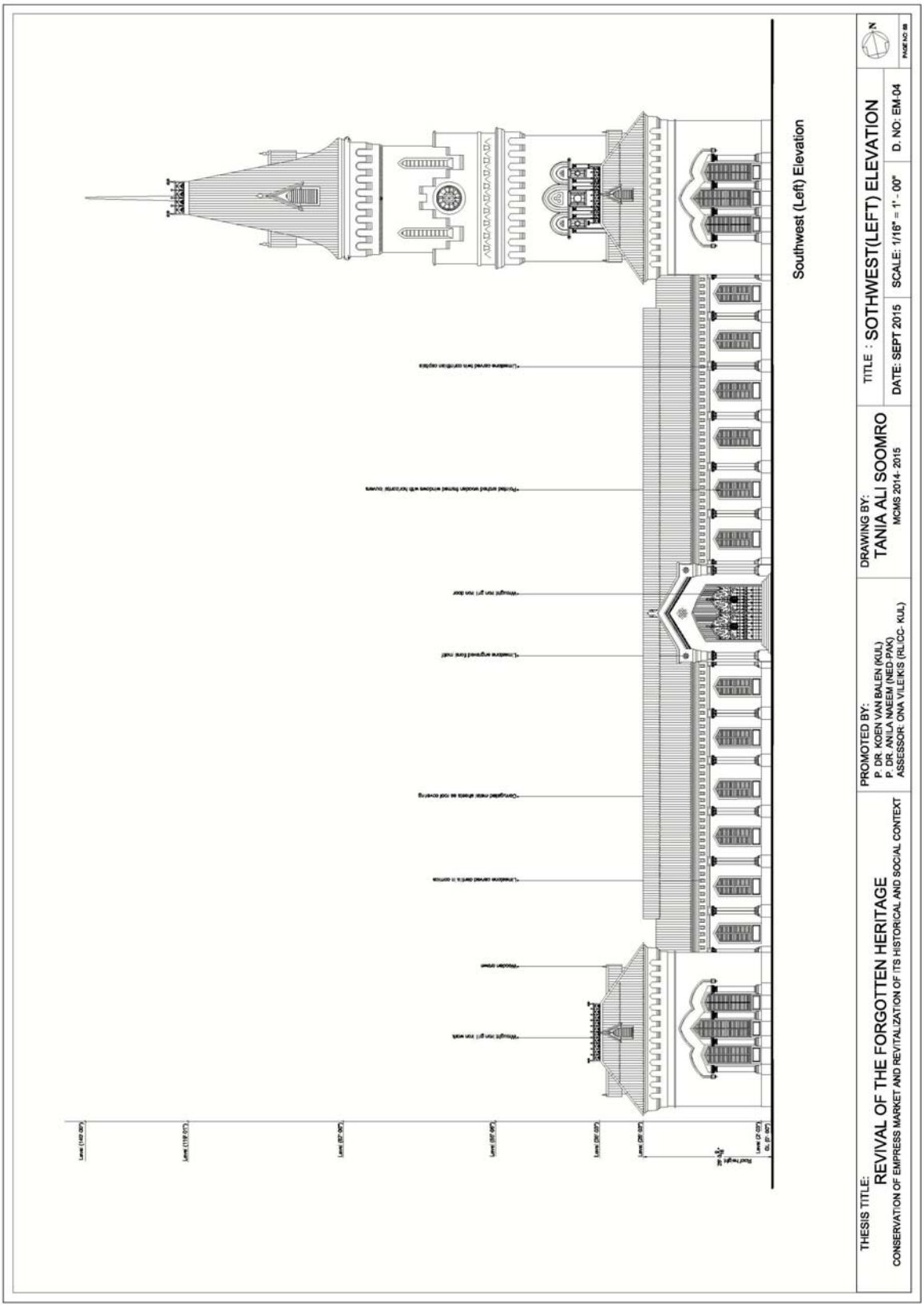

Southeast (Front) Elevation
THESIS TITLE:
REVIVAL OF THE FORGOTTEN HERITAGE
CONSERVATION OF EMPRESS MARKET AND REVITALIZATION OF ITS HISTORICAL AND SOCIAL CONTEXT
PROMOTED BY:
P. DR. KOEN VAN BALEN (KUL)
P. DR. ANILA NAEEM (NED-PAK)
ASSESSOR: ONA VILEIKIS (RLICC- KUL)
DRAWING BY:
TANIA ALI SOOMRO
MCMS 2014- 2015
TITLE : SOUTHEAST (FRONT) ELEVATION
DATE: SEPT 2015
SCALE: 1/16" = 1' - 00"
D. NO: EM-02

9b

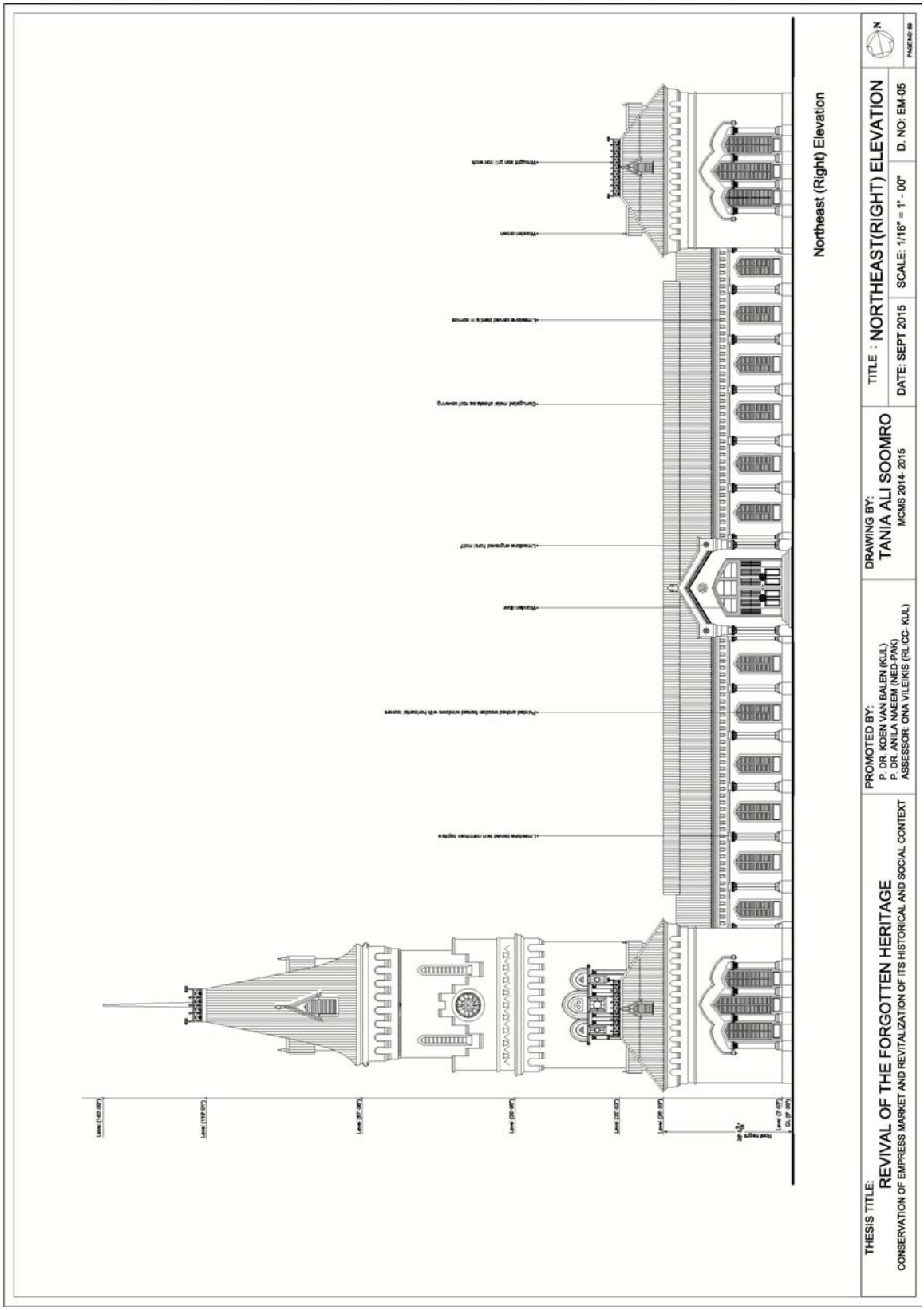


9c

Figure 9(a-f): Architectural drawings of the market building.

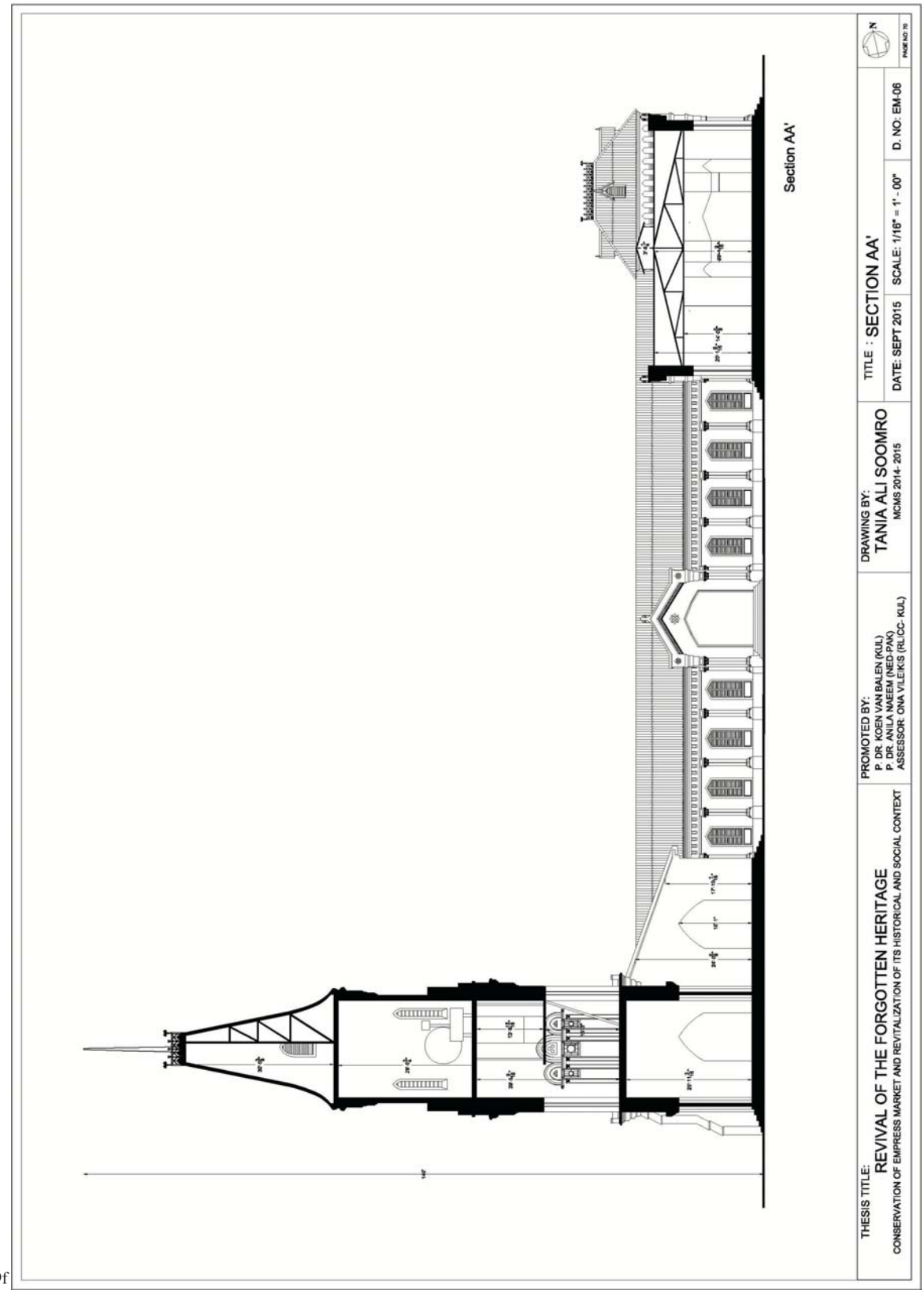

Southwest (Left) Elevation
THESIS TITLE:
REVIVAL OF THE FORGOTTEN HERITAGE
CONSERVATION OF EMPRESS MARKET AND REVITALIZATION OF ITS HISTORICAL AND SOCIAL CONTEXT
PROMOTED BY:
P. DR. KOEN VAN BALEN (KUL)
P. DR. ANILA NAEEM (NED-PAK)
ASSESSOR: ONA VILEIKIS (RLCC- KUL)
DRAWING BY:
TANIA ALI SOOMRO
MCMS 2014- 2015
TITLE : SOTHWEST(LEFT) ELEVATION
DATE: SEPT 2015
SCALE: 1/16" = 1' - 00"
D. NO: EM-04

9d

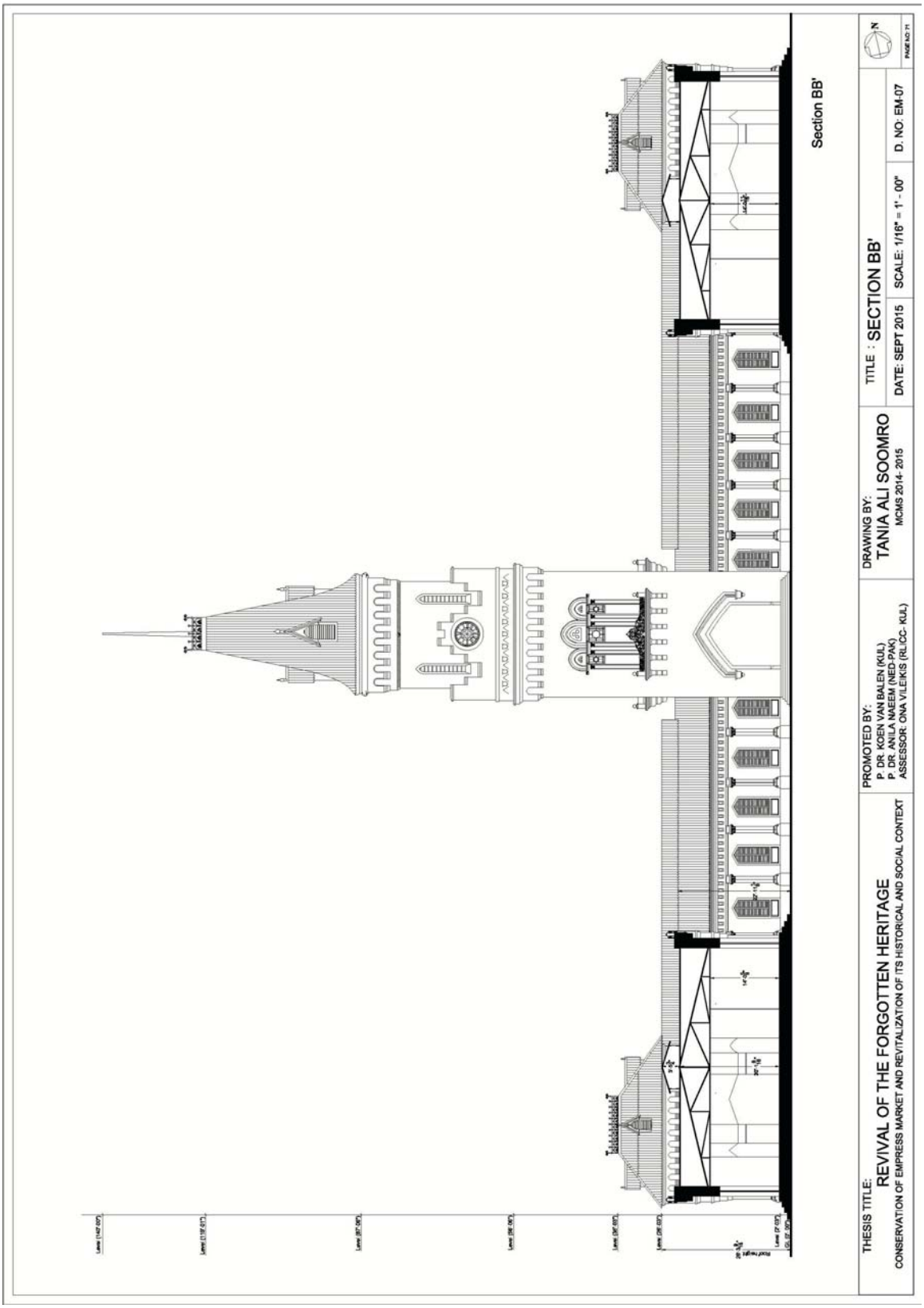


9e

Figure 9(a-f): Architectural drawings of the market building.


Section AA'
THESIS TITLE:
REVIVAL OF THE FORGOTTEN HERITAGE
CONSERVATION OF EMPRESS MARKET AND REVITALIZATION OF ITS HISTORICAL AND SOCIAL CONTEXT
PROMOTED BY:
P. DR. KOEN VAN BALEN (KUL)
P. DR. ANILA NAEEM (NED-PAK)
ASSESSOR: ONA VILEIKIS (RLICC- KUL)
DRAWING BY:
TANIA ALI SOOMRO
MCMS 2014- 2015
TITLE : SECTION AA'
DATE: SEPT 2015
SCALE: 1/16" = 1' - 00"
D. NO: EM-06

9f

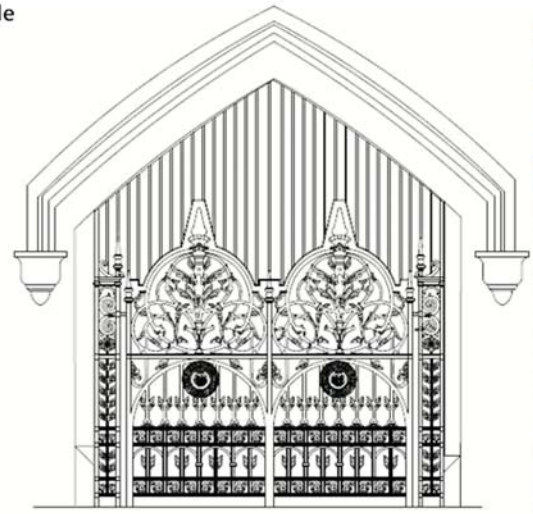


9g

Figure 9(a-g): Architectural drawings of the market building.

South East (Front) Façade

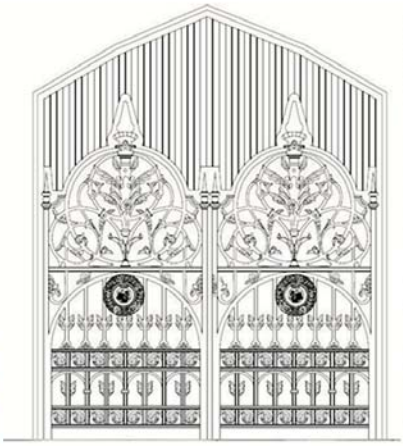
Entrance door in the south-east (front) façade is fifteen feet tall and twelve feet wide. It is a double door made of wrought iron grill based on floral patterns. There are two garlands in the centre of each door panel. The above part of the door (straight bars) is fixed.



10a

NORTHWEST (BACK) FAÇADE

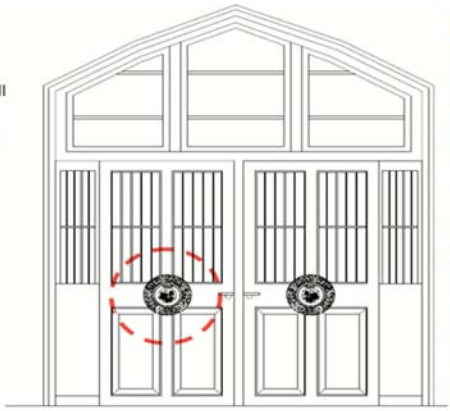
Pointed arched door in northwest (back) façade

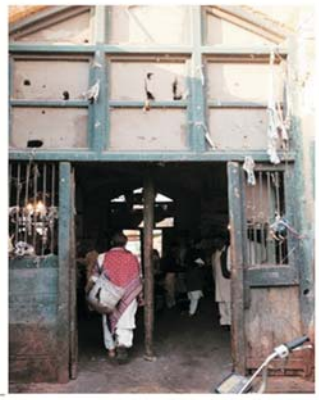


10b

NORTHEAST (RIGHT) FAÇADE

There are special doors in the butchers section. They are installed not under the wall but at the right angle to the wall, giving more space for maneuvering. The metallic garland depicts the logo of Karachi Municipal Corporation (KMC).



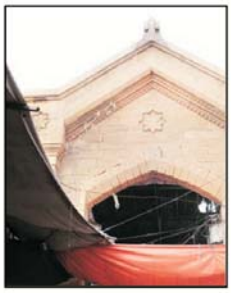


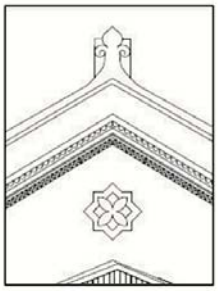
10c

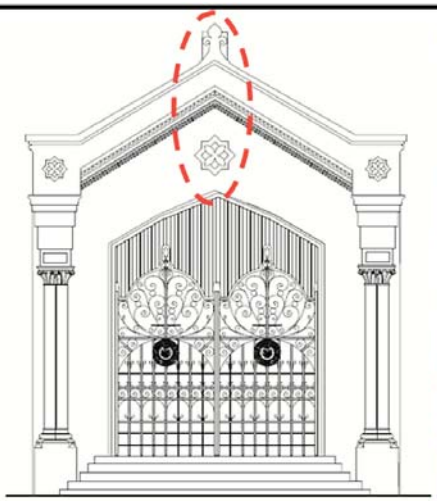
SOUTH-WEST (LEFT) FAÇADE

Pointed arched door in southwest

(left) façade

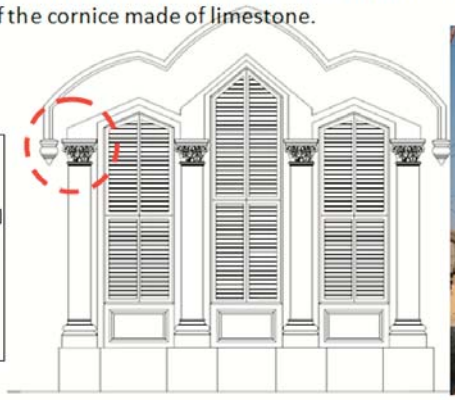






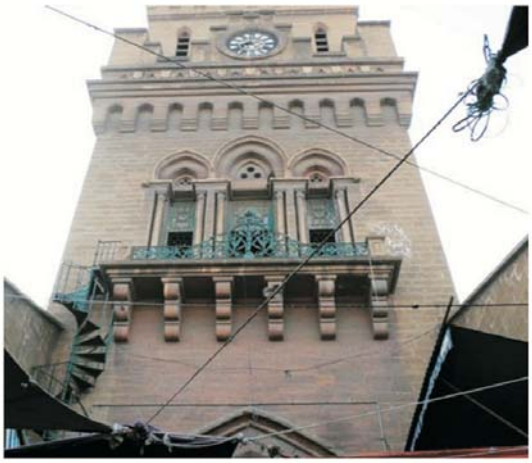
10d

The corner chambers of the building have triple pointed arched windows separated by pilasters flanked with the Corinthian capital. These capitals are different from the ones installed in between the windows in the main façade. The windows are topped by the triple layer of the cornice made of limestone.



10e

The same design of balcony exists on all four sides of the tower. The boundary wall is made up of the same material as that of the doors. Small pedestals that hold the boundary wall had pommels on top, that have been lost due to neglect.

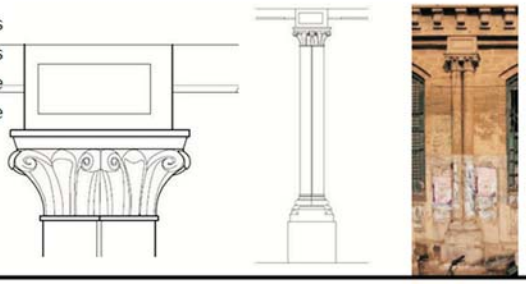


10f

Following the Gothic style of architecture all the openings of the building are of pointed shape. The façades have single pointed arched windows with wooden shutters and vertical iron grills.

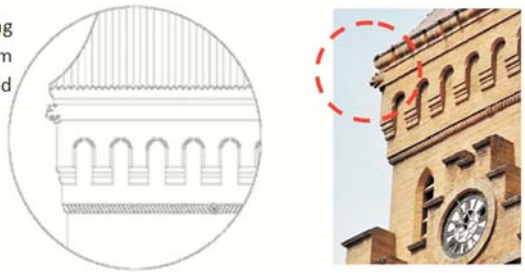
10g

Windows in the façades are separated by the twin pilasters topped by the Corinthian capitals decorated with acanthus leaves and scrolls. The entablature is in the form of a simple rectangular block placed in between the capitals and the cornices.



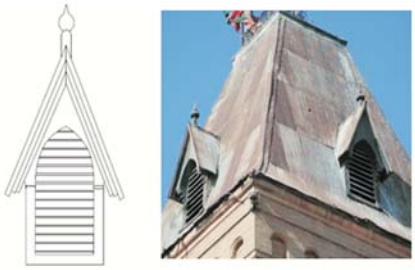
10h

Leopard heads are found at the cornice under the tower ceiling in the four corners of the tower made of limestone. Apart from this, the building has several styles of cornices as decorated façade ornamentation.



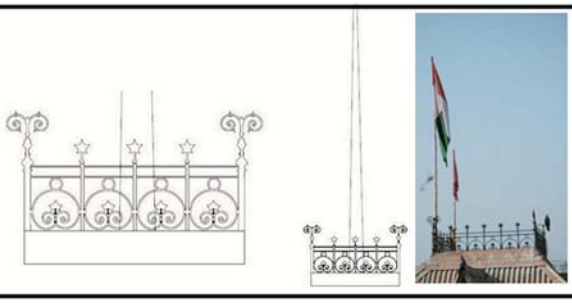
10i

Dormer window exists on all four sides of the roof of the tower and the corner chambers. There are total of twenty dormer windows in the market building. The sizes and design is the same everywhere. The dormer windows are topped with wooden crowns.



10j

Flag staff post is no more existing, as seen in the image, thus a drawing was created to mark its exact location. Both the boundary wall and the post are made of wrought iron work with elaborated design based on geometrical patterns.



10k

Figure 10(a-k): Detailed documentation of different building components

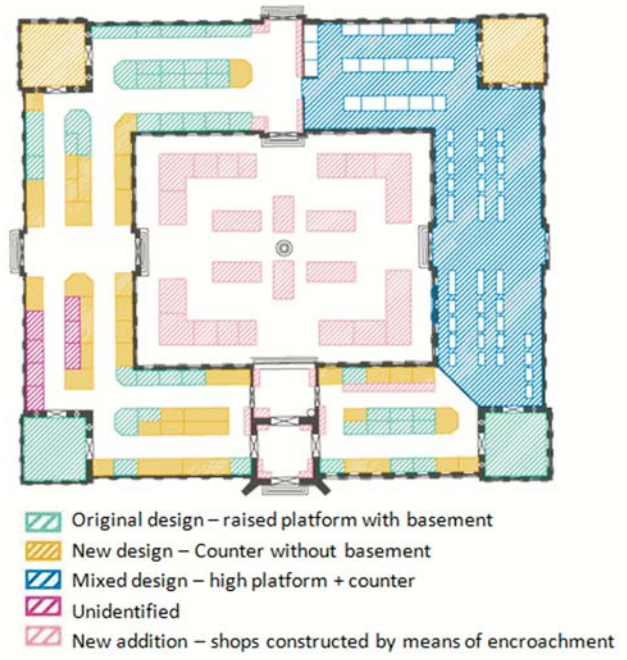
ARCHITECTURAL VALUE – ANALYSIS OF THE ARCHITECTURAL DESIGN OF THE BUILDING

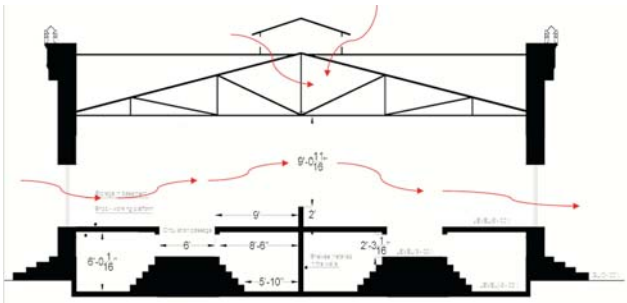
Shop Design

Different sources quote different number of shops in the building (shops: 258, stalls 347 (Lari, 1996), shops: 280 (Baille, 1890). The building was primarily designed with the capacity of 280 (Lari, 1996) built shops and stalls, but over the period of time this capacity has altered. At certain locations the shops have also been split into two. Originally the shops were designed as working platforms with no canopies, (covering) and partitions in between and with a storage in the basement. They were set in a unique layout of four shops in a row, central two rows back to back and next to the walls facing each other. The shops in the front were in form of raised platforms and were set in this particular style to avoid any visual obstacle and to receive better light and ventilation. One could see the end of the wing while standing in the middle of the wing. With the passage of time the shop design has evolved. They were added with canopies and shutters. The space above the ceiling was used for dumping storage (Figure 11).

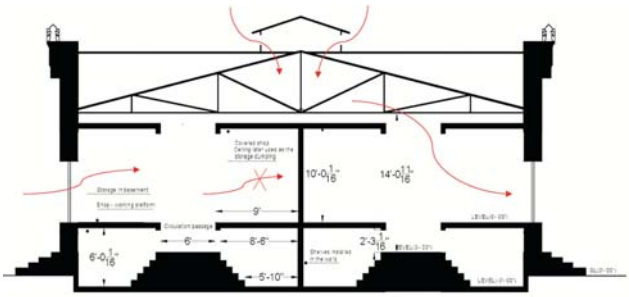
Clock Tower

As a signature style of Strachan, he designed the façades of the tower exactly the same in all four sides on a square plan, till the height of 140'. In general the style of the tower can be distinguished in three stages. The lower most stage is till the height of 20', consisting of a huge 12' wide pointed arched opening to allow access to the building. It is provided with decorative buttresses at the front two corners. The top level starts where the buttress ends, and the lower cornice of the balcony starts. The second stage gets narrow from the centre, however the corners are still of the same width as that of the first one. It is provided with a large chiming clock with iron dials each 6' in diameter which regrettably is not working anymore. At the junction of second and last stage, small yet delicate leopard heads at each four corners of the tower confirm the finest of craftsmanship skills (Ali, 1983). The last stage of the tower culminates with a gable roof covered by the corrugated aluminium sheets and crowned by an iron grill boundary wall with floral patterns. At that point is the location for the flag post, which unfortunately fell down in 2013. The tower is accessed through a spiral staircase (Figure 12).





The original design included 3' raised platforms used as the working decks accessed by the steps. The shops in mid were divided by a small wall and the storage was in the basement that were closed by double shutter very small doors (like windows). This design was appropriate to have maximum exposure of natural light and air. Air circulation is marked in red color.



The raised platforms later were provided with covered ceilings and the shutters as most of the shops removed their basements due to rising dampness problem. The space above the ceiling was used as storage dumping. This space later was properly designed with storage cabinets. The air circulation is stopped due to the high walls of the shops.

Figure 11: Images showing the plan layout and the sections of the market.

Figure 12(a-d): Images showing the details of the clock tower.

Pilaster

Usually the pilasters are used to articulate an edge of the wall but in the case of Empress Market, outer and the façades facing courtyard are ornamented with circular twin pilasters. The pilasters have round bases and are placed on top of a two leveled pedestal of almost 2' height. The top of the pilasters are flanked with the Corinthian capitals decorated with leaves and scrolls. There is split architrave in the form of a simple rectangular block placed in between the capitals and the cornices. The front and back façades of the building are divided into two parts, left and right of the entrance gates. Each of the part has six sets of pilasters and two cantons (pilaster in the corner) at a consecutive distance of 8' - 9' approx bordering the pointed arched windows on both sides of the central entrance. On the other two sides there are five sets of pilasters and two cantons on either side of the entrances (Figure 13).

Figure 13(a-c): Images showing pilaster on the facades of the building.

Courtyard

Empress Market is a symmetrical building enclosing an area of 130' X 100' as a central courtyard (Lari, 1996). The provision of courtyard indicates the influence of vernacular architecture over the Gothic style of construction (Ali, 1983).

The building surrounding the courtyard has four wings each 46' wide, connected through an entrance in the center of each wing. The floors of the courtyard used to be paved with stone blocks, that later were replaced by concrete cement tiles. At the moment the courtyard is entirely occupied by the shops. At each of the corner, shops have been added as permanent additions, whereas the rest of the open space has temporary shops like vendors. There used to be a drinking water fountain in the middle of the courtyard, which does not exist anymore. Figure 14 represents the original design of the fountain that was installed over a stepped platform to mark it as a central point of the market. Currently the space of the fountain is occupied by a tall lamp post (Figure 14).

Figure 14: Images showing a drinking water fountain in center

Figure 15: Images showing balcony, brackets under the balcony platform and pommel on top of the pedestal.

Figure 16: Images showing various ornamentation details.

Balcony

The clock tower of the Market building has four symmetrical balconies on all sides as a small platform projecting 2'-08" from the wall and supported by six stone-carved brackets. The parapet of the balcony is a 2' high wrought iron grill that is fixed within two stone posts of same height on either side. These stone posts are supposed to be topped by round pommels each but unfortunately only one pommel on the northwest (back) side exists. The entrance to the balcony is through a set of triple arched door openings (Figure 15).

Ornamentation

The building has minimalistic ornamentations. The noteworthy adornment is in the form of cornice moldings that are used on the façades in various styles. Cornice runs as the multiple layers of bends at the top edge of the building. The openings are crowned with similar form of cornices as that of their design. The architrave above the capitals is in split form and the frieze above is decorated with dentils. Apart from the cornices there are other small elements of interest in the building, such as the delicate leopard heads at each four corners of the tower, buttresses at the entrance, stone carved brackets and floral patterns engravings on the secondary entrance portals of the building. The corners of the entrance tower are chamfered to enhance the delicacy of the corners. Another important element of ornamentation is the use of different designs of grill iron work in doors, windows and the parapet walls of the balconies. Each of the doors has unique design of the grills, although the basic design is extracted from the leaves and scrolls patterns. All four balconies have the same design of the grill iron work but different from that of the doors (Figure 16).

Pointed Arched Openings

Following the Gothic style of architecture the entire openings of the building are of pointed shape. The façades have single pointed arched windows with wooden shutters and vertical iron grills. The corner chambers of the building have triple pointed arched windows separated by a pilaster flanked with the Corinthian capital. At the moment the original wooden shutters are removed from these triple windows and the openings are replaced by the wooden/ metallic planks, often not openable, because of the function occupied by them currently. The doors are also designed on the same pattern having the pointed arch. There are special doors in butchers' section. They are installed not under the wall but at the right angle to the wall, giving more space for maneuvering (Figure 17).

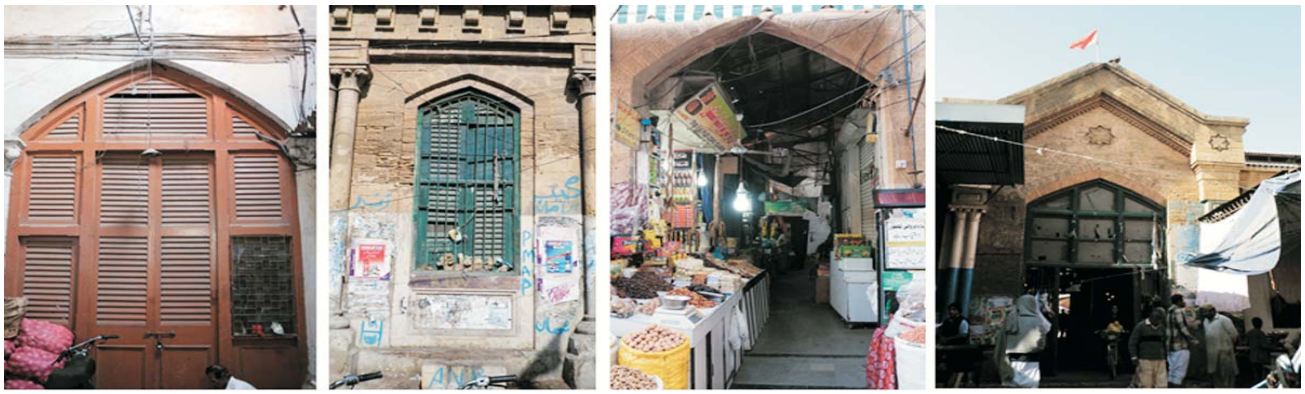


Figure 17: Images showing various pointed arched openings

Interior

Over the period of time the internal spaces have changed a lot. The walls from inside are plastered with lime plaster and painted. At certain locations cement plaster is used as an attempt of restoration. The arched openings in the corner chambers in the original design were initially open for all, but at the moment are closed and the chambers are accessed via a single opening. Chipboard is seen at various locations as the material used for closing. These arches are supported over the round columns with Corinthian capitals that are still intact and in original form except for their surface finish. The floors are redone as white and grey marble tiles with black borders. Each of the doors of the secondary entrances into the building has unique type of floral patterns and the spiral designs that differ from each other completely (Figure 18).

Figure 18: Images showing various location of the interior of the market building

VALUE ASSESMENT OF EMPRESS MARKET VIA APPLYING NARA GRID

Nara Grid

The spirit of the process of documentation is totally connected with the authenticity of the buildings, and depends on the various values which bestow the feeling of this authenticity. Therefore the authenticity has been defined as a layered concept of multidisciplinary values (Balen, 2003) and Nara Grid is a tool to measure this layered concept of authenticity. Nara-grid is an evaluation scheme; to measure authenticity in terms of the multidisciplinary value systems in the framework of education and research. It was developed at the Raymond Lemaire International Center for Conservation (RLICC), at the University of Leuven based upon the 'Nara Document on Authenticity' that is a byproduct of the 'Nara Conference on Authenticity in Relation to the World Heritage Convention', held at Nara, Japan in 1994. It is based upon the 'Aspects' and the 'Dimensions' identified in the article 13 of the Nara Document that is:

"Depending on the nature of the cultural heritage, its cultural context, and its evolution through time, authenticity judgments may be linked to the worth of a great variety of sources of information. Aspects of the sources may include ***form and design, materials and substance, use and function, traditions and techniques, location and setting and spirit and feeling*** *and other internal and external factors. The use of these sources permits elaboration of the specific* ***artistic, historic, social and scientific*** *dimensions of the cultural heritage being examined."*

It basically forms an axis of six aspects, as mentioned in the article, as form and design, material and substance, use and function, tradition and technique, and the location and spirit that are measured in terms of the dimensions of the cultural heritage as artistic, historic, social and scientific dimension. Before using the grid, the cultural property needs to be well documented. Moreover the additional aspects and the dimensions can be added and the grid can be adapted or extended to the special and unique values a particular property can contain (Jaenen, 2008). The comprehensive knowledge (about the specific area to be analyzed) helps in developing a guide to future treatment and monitoring without compromising the valuable aspects of the property.

The Process of Applying Nara Grid

The template of Nara Grid is applied to the Empress Market building. Each of the aspect of the grid is analyzed with respect to each dimension which resulted in, a well-structured informative table. Initial stage of applying the grid was to acquire all the necessary information - historic and architectural. The value system associated with any historic property is often considered to be relative varying across cultures and belief systems which can further be acknowledged by an appropriate documentation.

NARA GRID – APPLICATION OVER THE EMPRESS MARKET BUILDING

Form and Design

Artistic

The plan of the Empress Market is unique for a market building; the concept follows the idea of shopping of various items under one roof. The building has minimalistic yet artistic ornamentations. The noteworthy adornment is in the form of cornice moldings that are used on the façades in various styles. Apart from the cornices there are other small elements of interest in the building such as the delicate leopard heads at each four corners of the tower, buttresses at the main entrance, stone carved brackets and floral patterns engravings on the secondary entrance portals of the building.

Historic

The form of the building refers to the domestic approach of the Gothic architectural adaptation in the colonial region of Karachi by the architect James Strachan. This is evident from the provision of an auspicious courtyard within the building which signifies the influence of vernacular architecture over the Gothic style of construction.

Social

The presence of open to sky courtyard within the rectangular form of the buildings enhances the communal feeling. It is not only used by the shop owners or the shoppers but also as a short cut to get to the other sides of the building through the intermediate entrances. Moreover, there is one tea shop inside and couple of them attached to the building, which also play a vital role in community interactions.

Scientific

Design refers to the well ventilated and well lit alleys of the market. Presence of a 140 ft. clock tower and gable roof with a proper ventilation system is an indication of the scientific approach of the craftsmen at that time.

Material and Substances

Artistic

The masonry is done in ashlar, using fine Gizri yellow limestone. In ashlar masonry the stone blocks of same height in each course are used. Every stone is finely tooled on all sides. The moldings attached to the building are also done in the same material. The attractive patterns of grill iron work refer to the artistic approach of the craftsmanship.

Historic

Lime mortar is used as the binding material in the form of uniform thickness of joints. Outer surface of the masonry blocks is treated distinctively, referring to the early 19th century surface finish approach in subcontinent. Each block is treated with the chisel dressing in the center and plain margins are used in outer surface finish.

Scientific

Scientific investigation of materials gives craftsmen input into the choice of materials and practices used. Use of lime mortar in internal walls is to incorporate the impact of local climate.

Use and Function

Artistic

The form of the building is based upon a conventional design of markets in British India. It is simple, less artistic yet very functional in design. Each section is properly located according to the use, such as the dry grocery item at the front and the meat section at the side wing keeping in mind the function as well as the aesthetic sense of the users.

Historic

The building has sustained its original function; it was built as a market and it still is being used as a market building. Although the use of market that was exclusively for the British elite was changed to be used by all soon after its completion.

Social

The market building is deficient in some of the very indispensable services such as the toilets. These were missing in the original design, although were added later, but not in appropriate manner and location. Toilets for women are still not there. The courtyard acts as a common meeting space for all shoppers and the shop owners. There used to be a drinking water fountain in middle of the courtyard which sadly does not exist anymore.

Scientific

The building represented a unique design of market buildings; 'a concept of under one roof shopping' in the region. Its design was contemporary to the other markets in the region.

Tradition and Techniques

Artistic

The use of various striking patterns of cornice moldings as surface ornamentation refers to an artistic approach of the craft and workmanship.

Historic

Building construction techniques used in history provide an understanding of the construction systems in use in or before 19th century. Use of different types of natural stones as main building component forming simple load bearing or the compound walls was very common. To cope with the prevailing weather condition courtyard and the open spaces within the dwellings were commonly used.

Scientific

The design of the market building helps in understanding the construction techniques of the 19th century architecture.

Location and Setting

Artistic

The position of Empress Market was set on a prime location on a main road making it an approachable premise from different parts of the city and worth landmark value.

Historic

Empress market was contemporary to six markets built by British at that time. It is included in the list of one of the early (first) listings in the city of Karachi. The area where the Empress Market is located was previously used as the punishment ground for the mutineers of 1857 independence war, and called as "Top Dam".

Social

To eradicate the memory of Top Dam, the city municipal government decided to build something in its place, something that would be of universal value and accessible to all. It was decided to construct a Market to commemorate the jubilee of Her Majesty the Queen Victoria, the Empress of British India then.

Spirit and Feeling

Artistic

The building represents artistic attributes of the Gothic architecture incorporated within the domestic approach. The clock tower in the middle of the façade gives an impression of a central focal point and a feeling of symmetry, while looking at the equally distributed windows at its either sides. The enormous structure of the market building bestows a feeling of grandeur and sumptuousness.

Historic

The façades and the interiors are in need of conservation. The signs of neglect give a feeling of abandonment. The high gable roofs display a character of elegance.

Social

The interior of the building gives a lost spirit of openness and natural lightness due to the change in the style of shops and also due to the encroachments within the shops. It shows neglect in some of the parts of the building and the loss of original features, giving a run down impression that can be mended by small interventions.

Additional Value

Apart from the six aspects of Nara Grid, 'Accessibility and Visibility' is taken as an additional value to be added in the grid. For a landmark building accessibility and visibility is of utmost importance for its significance and for the sustenance of its function. In case of the Empress Market this concept can be viewed as the direct and easy ability to access it through various forms of transportation from each corner of the city. Therefore along with the rest of six important aspects of value, it is also considered as a unique value.

Accessibility and Visibility

Artistic

The form of the building is designed to be well connected with the surrounding markets to have a homogeneous commercial activity in and around it. Apart from the main entrance, each of the four wings of the building has their own entrance which permits the building to be a well accessed property.

Historic

The British built separate settlements next to the native walled city; Saddar Bazaar is one of them. The quarter developed as a thinly populated low-rise settlement, with wide thoroughfares, green space and little plantation with Empress Market erected on a large open land with a 140' tall clock tower. Due to its location within a low rise neighborhood it was visible from far.

Social

The Empress Market is referred to as having a landmark value due to its magnificent structure. It's a hub of Karachi's mercantile associations.

The above mentioned aspects helped in identifying the value of the building from artistic, historic, social and scientific perspective. Empress Market is one of those structures that has managed to stay intact and avoid destruction, vandalism, and other damages through natural and manmade disasters. It has however seen the neglect and change in attitudes and has been subjected to go through difficult changes. The building has however sustained the architectural and the landmark value, unlike the ambiance and the surrounding environment that has degraded over the period of time. The existing neighborhood landscape itself requires improvement in order to render it more pleasing to the eye, artistically more desirable, and functionally superior.

CRITICAL REVIEW ON THE AUTHENTIC VALUE OF THE BUILDING

The discussion on the authenticity and value of the building cannot be restricted to the economic or market value in isolation, the context of the historic structure also forms an integral part. The values attributed to the building are not only related to the philosophical notions of its construction,

but the public value in the overall neighborhood setting of it. In the case of the Empress Market the economic value of the building remains high despite its old character. The central location has kept the flow of customers consistent through the decades of city growth, which maintained the economic values of properties in and around the building. The complex ownership structure however, has kept the investments in maintenance to minimal. The occupants always look towards Karachi Municipal Corporation (KMC) for major maintenance and that has not proved well for the actual structure.

The social value of the building is a reflection of the overall condition of the quarter itself. Saddar Bazaar used to be an intellectual and an entertainment center of the city as most of the refuge population (1947 and onwards) came to live in the city which offered all sorts of activities, from financial to cultural. It housed number of coffee houses, bookstores, cinemas, dancing schools, theatres, pubs, clubs, etc., where the intellectuals, artists, writers, poets and people from various disciplines had their shared interactions. This enriched Karachi in cultural terms. Regrettably the present-day state of the area is entirely different from what it used to be and it lacks in social interactions. This has had an impact on the building's social standing and it has now been reduced to a whole-sale market and is generally targeting the cost-conscious segment of customers. This is quite a change from its heydays.

The Empress Market building also portrayed a strong notion of community cohesion. There is a number of old generation shopkeepers in the building that have seen the market grow to its present day appearance. Further investigation lead to identification of few old shop owners in Empress Market who willingly shared their memories and views about the market. One such account suggests that since it was one of the first covered shopping spaces, therefore the dwellers not only were facilitated by this service, but they took pleasure in the idea of shopping and relaxing under covered shade. According to them, it not only served the people related to the market but it was used as a common communal space too. Due to its access from all four sides, it created a cross axis which was used by the passer-by as a shortcut to reach to the other side of the market. In other words, it was a combined approach of a rational and a modernist intellect with an attention towards domestic features of interest. The openings are still there but due to the added markets to the outer building façades that axis is gone. They also lamented that the charm of the market has been lost long ago. Now a days there is struggle for basics, for instance the building does not even have water supply connections for shop keepers.

NARA GRID AND ITS ASSESSMENT

The use of Nara Grid assessment helps to disaggregate the value of Empress Market through a prism of various aspects. It makes a strong case for the value of the building as a historic and significant monument for the city of Karachi and its residents.

Some of the most prominent aspects of the building that come out of the structured Nara grid include its successful design, the seamless amalgamation of western and eastern styles and their ability to provide something uniquely local and of high functional value. The social-historic value that it has brought to the residents of Karachi right from its beginning to this day, embeds it in the socio-cultural fabric and the architectural landscape, making it inseparable from the city itself. Thus, any description of the building cannot stand separate from the broader narrative of the city and its historic or recent conditions.

The exquisite design by the architect successfully eradicated the violent memory of the location. It achieved its stated objectives to create a fresh memory which is opposite to its earlier reputation. It became a public place, albeit gentrified in the beginning, and of high functional utility to a wide segment of the society.

The building is important in defining the vernacular influence on a European architectural style in present-day Pakistan, though the 'localization' of Gothic style had already started in other parts of British India. The local considerations of keeping up with the warm weather helped evolve a design which focuses on good ventilation and access to the natural lighting. It is also important to note the 'communal' feel of the design where various wings of the covered market were connected through a common central courtyard, creating a right blend of modernity with the tradition. The concept of shopping 'under one roof', though contemporary to a few other modern markets at that time, was still new.

The use of Jodhpur stone provides a certain imperial character to the building and helps it rightfully boast the name that it carries. Stone was adopted by British to solidify their imperial power in the minds of the locals as it provided them the ability to erect rather large structures. The tall clock tower thus provides the building a landmark and visibility value, depicting full confidence of a colonial

master. It is only in later half of 20th century that the tower had been eclipsed by high rise buildings in the vicinity that this particular aspect lost its impact.

The building still carries high value in the story of Karachi and lives of its residents. The fact that it has retained its original function, helps provide a consistency in its mental image and thus amplifies the other characteristics of the building, particularly its landmark value. It now stands as an indispensable historical, physical, and mental landmark, with a remarkable consistency, across the generations of residents of the city. It brings a unique mix of nostalgia, pride, and functionality in the minds of those who are associated with it directly as customers or shop keepers, or indirectly as the residents of the city of Karachi. It has featured in countless chronicles of the city and it continues to do so to this day. With the proliferation of social media, the building has gained further momentum.

CONCLUSION

This whole exercise of the value analysis was concluded to understand the value system associated with the market building and the variation of this value system for various stakeholders and the users. The building has sustained its original worth as a landmark monument that reflects the British colonial supremacy, except for the degradation of the environment within its immediate context.

Empress Market which used to be a jewel in the crown of the city reflects today's socially fragmented ambience of Saddar Bazaar, which is an outcome of the process of gentrification, a process that changed the customer profile from high to low end. Its value remains tied to its surrounding and broader issues of urbanization in the city of Karachi. The unplanned management of the commuters has led to the present-day transit state of the whole quarter, affecting the value of the building negatively. Commercialization pressures on land and low-rise buildings continue to alter the environment in which Empress Market is surviving, while the need for protecting the built heritage, in general, remains indispensable.

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INTERVIEW

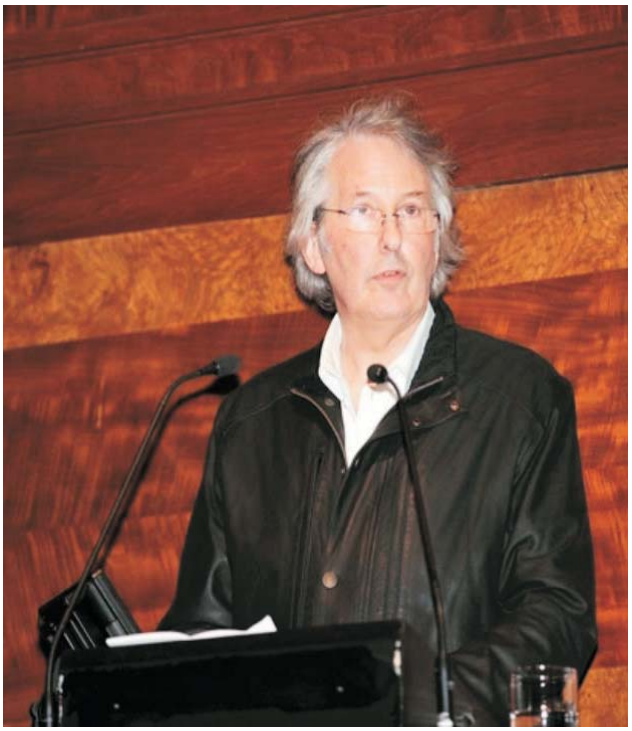
A TALK WITH DAVID GLOSTER
Director of Education, Royal Institute of British Architect (RIBA)

An Interview by Yasira Pasha*

This interview was conducted as part of an ongoing PhD research at NED University of Engineering and Technology, entitled "Investigating the Status of Culture in Architectural Education at Undergraduate Level".

How was your experience as an academician in London South Bank University, before joining RIBA as Director of Education?

I am much more sensitive to the range of design parameters, so as a designing profession we constantly seek to integrate more aspects into the design brief. I see design in an incredibly broad way; I don't see it as just formal spatial composition. I see it as something which has got a cultural, professional and technological sensibility, so I think the areas which I have always been particularly interested in is how one can develop and integrate a single narrative for talking to students about architecture. I chose really the interests that are between construction technology, history and theory of architecture and architectural design in a more traditional sense, because I have always believed that technology is an under estimated element in students understanding. Why particular choices are made, material choices, spatial choices, compositional choices, formal choices? I mean it is just a very interesting thing if you look into timber construction in America. It is classical. Unless one learns that and communicates to others, then only one realizes what it looks like. It is actually full of very profound reasons applied. My experience primarily has been in running design studio primarily at post graduate level, which I did for around ten years and I think that contextual analysis was really important for me. I think one of the difficulties which we have with modernism in twentieth century is that we have started thinking that it is being transported and can be moved anywhere globally. We move back to the statement that architecture has become a kind of a globalized profession and the specificity of the place is lost. Every space has cultural, spatial and environmental specificity and somehow the students fail to understand that to draw a model on, that actually becomes an analogue.



Yes, design cannot be a patent for every space, so the ideology has been a little lost.

Yes, I think so. We have started to think of architecture as bit like a camp, where you need amenities to cook, have a shower, make it mobile and keep the weather out. Architecture is not a camp design; architecture actually has resonances in a particular place. And where both you and I work, we will actually develop a different response, and I think that universalization of any cultural driven subject is problematic because it looses something not just new, but also remaining. And we have a ditch to work, thanks to that where ideas can go around the world that has been generated in and then it gets picked up by someone in online camera, in different continents and in different times and they don't understand necessarily the reason for the work being done.

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How do you see the gap in profession and academics? And if there is some gap then on what grounds do you see it?

I think, this gap is something that has always been there. You know, I used to see this as a joke that around the time that they were constructing the Acropolis in Greece, the masons on the site were complaining about the quality of the graduates who came to help them. I think it was probably the same with the pharos during the construction on the pyramids 7000 years ago. There has always been a tendency for seasoned professionals to criticize the young and emergent practitioner. The question is, is every graduate totally fit for the purpose of the point they graduate for? Of course not. The real synergy between academia and profession is through the work place where emergent practitioners and young graduates develop a set of parallel but highly related skills. Those who pick up an academia, it is a question of each side respecting each other's position, but having said that, our program with RIBA educational review is trying to develop a sensibility in the professional context. So we have to acknowledge the arguments of both sides which are valid. One for the academicization of architecture keeping the ideas fresh, pure, innovative, creative and speculative, and the other for the fact that architecture is a business and there are deadlines and you are spending other people's money, not your own, so it is a question of mutual respect.

Other than the respect on mutual sides, there is an issue of expectation on both sides, and this expectation is different for academic and professional sides. Academicians look forward to teach students whatever they want as the product. But at that stage professionals are not academicians, they don't want to spend their valuable time for which they can charge heavily. While at the other side the theoretical basis of the knowledge which the schools are giving is more important for the schools. They concentrate on that theoretical base of the knowledge and they don't introduce the professional skills in the students.

So don't you think that there should be a middle platform? What can that platform be?

I think it is getting back to a model where we need to have more practitioners involved in teaching. But there has to be a structure for the workplace when the graduate comes out of the school so that the expectations and time is managed and one plays with the strengths of the graduate rather than emphasizing their weaknesses. This is another problem as well. Why would you know about VIT returns, why would you know about pre-preservation rules, it is not the miller of academia to teach that, that's the responsibility of the practice. The important thing for the employer is always what I didn't know when I graduated and were there any constraints of what I did know.

How do you see the idea of graded internships during the academic sessions? Does that contribute to bridge the gap to some extent?

Yes true. Interesting. Agreed. I think that's very interesting because we have an online log for the professional experience development record which the students have to log in for minimum of twenty four months for practice. But the format of it is really a ditch to the version of analogue work of record. It needs to be modernized and I think it needs to get into a structure of the sort of thing you suggest, which is practical as it talks about the qualitative. It also is dependent on where the graduate gets to work. Because some people have an awful experience, and some people have great pleasurable experience.

What is your opinion of the idea of cultural sensitivity in architectural education, both at competency level and the taught content.

Right. I think that from the thing what I was saying earlier, for me it is fundamental. I see this as being architectural, cultural, technological, political and professional art. And that's why I am saying that it has complexities. Because I never could understand that why all architects are holding great regard until they die. They are still trying to solve the problem. They are still trying to perfect the error in a way and that's I think the nature of this curious and inquiring mind of the architect. And how you monitor the cultural sensitivity is important. Sometimes people want to work with the context and sometimes they want to work against it. Theories of architecture are very difficult, students find it very very challenging even very smart students, because they see it as potential and it is essential to develop the professional skills unless they are allowed to go on to the building site and to inspect a concrete foundation. What part of the Vitruvius can help me understand that and what part of the theory can help me understand this, what part of Alberti or Galelio is going to help me? So the cultural sensitivity has to be introduced in a very knowing, very considered and very careful way, so that theory becomes part of the intellectual equipment of the student rather than being seen as a desirable add-on. And that's why I think separating history and theory is problematic. I think it needs to…. I keep saying to my academic colleagues in the UK,

that there is no point in separating professional skills, it is all architecture. There is no point in separating technology, it is all architecture. We are educating people to become architects, what does that ever mean, whether they have gone on the TV and given a cultural comment or they become professional practitioners or they become academics or critics, whatever. They become an architect, so keeping syllabus in separate boxes is a bad idea, I think integrated teaching is the fundamental thing that will enable us to understand that there are competencies which should be dependent on cultural sensitivity and that is part of being an architect. We are 120 years from Beaux-Arts, where every graduate understood classical vocabulary and it is extraordinary how quickly we have forgotten basic principles which are still true. They don't go away, all the classical principles are still correct, harmony, proportion, proportional relationships etc etc. How we have forgotten that stuff so quickly is really problematic. Let's not say that we should turn everybody into some kind of Neo Gothic and Neo Classical architect, but the principles underlying these movements are so important that we cannot neglect them. They get pushed out because they have an economic effect on the production of architecture.

Is it only the economy that has pushed it away?

No, it is complicated, it is very complicated. If you proliferate professional education, whether it is medicine, law or architecture, you are trying to squeeze more students through the gate and so we become less discerning about basic skills which they bring to the table academically. That may be controversial, but to be a good architect one has to operate at so many different levels. The reality is perhaps that graduates of the Beaux-Arts were not very skilled, but they could be very good Neo-Classists. They might not have been able to develop that vocabulary into something which could transcend them, but they could do a good job with the basic vocabulary. And I am not convinced that we necessarily can do a good job with the basic vocabulary. That worries me.

They might not be optimizing their buildings at that time with many of the inspirations from around the world but they were self sufficient from within that they never wanted to or maybe it was not needed. Because at one point it is not only about the ornamentation of the building, if the building serves the purpose, it is good architecture.

It is functionality with a small "f", does it have an adequate civic role, does it have a relationship with the street, and does it have a relationship with human being, is it something which the community feels warm about, those functionalities have to be there, not just the plumbing work. And we have got the dial by speed, for example the time lapse video of that building in China that went up till thirty storeys in thirty days, and everybody was looking at it. But my personal view was of horror. Because it was regarded as being a triumph, but actually it was a disaster, because the building has no quality other than the fact that it was produced so quickly. Nobody even a week after it was finished celebrated the fact that it was done so quickly. If you walk around the great religious buildings of the world that may have taken hundreds of years to complete, irrespective of the space, they speak to us in some kind of language that we don't quite understand, but we do register emotionally and psychologically. These are some of the projects which were built on conviction, rather than the need to do them quickly or cheaply. We need to square the issue, demand of the twenty first century is, if you like, the kind of spiritual locus which we previously had that may have served most of the architecture.

Being an influential part of the validation process at RIBA, what discrepancies do you see in the architectural schools in terms of content taught and training methodologies adopted, especially in the UK?

I think it is difficult, we have around fifty schools in the UK and a lot more under development. In general they are quite ambitious for themselves. They are doing a good job. There are a number of things to look into, for instance the reality of the digital world hasn't doomed a lot of schools and whatever you and I discuss about the problems of the digital world, it is a reality. So we have to learn to come to terms with it, and use it creatively and profoundly. So there I see one potential problem. The whole role of technology, both as a cultural and as a practical factor, is not necessarily taught in interesting and inspiring ways, as it could be. So the students tend to regard the materiality of the buildings as something which sort of happens and that it is slightly problematic, because in the UK and in Europe generally, we have got to a stage where we build very simple structures and then we spend all of the money on the architecture which is about 5 cm, which is the skin which surrounds that very simple structure. Sound design has kind of become suitable only for a certain type of architecture, for a certain scale and certain geometry, rather than the concept of making space and developing a hierarchy of space. I don't think that this is a problem unique for the UK, but is a global issue. And so the issue with building economics and how developing economy celebrates their development through

putting up architecture is something to be looked at. Economic development frequently out strips the growth of cultural sensitivity. I mean I am not going to name geographical locations, but I am sure that you know what I mean. There are issues with this, and is incredibly complicated because cities take centuries to develop. And creating an inch of the landscape is kind of hugely problematic so again I wouldn't level it just to UK schools but see it as a global problem. At the more specific detail of design level there is a lot of strength particularly in the UK schools. One of the areas where we need to start waking up is about informality. Because UK and Europe doesn't really understand the concept of informality in the growth of cities, we have started to do a lot of work in Latin America, Middle East, and Greece. And we need somehow to develop a sensibility about this big challenge.

As a part of the validation process, do you see any role of the methodologies which are adopted in different schools, for example the training methodologies?

We can try to make a big split between education, speculative and conceptual training. So if a design methodology, in a studio for example, produces a sound result and another one in the studio produces an equally sound result, will we at a subjective level embrace it? We're not going to pick the pros and cons of whether one is better than the other. The question then arises is, if the student at part I and part II meets the graduate attributes? The graduate attributes are much more and quite ambitious, particularly the criteria set for us by Europe, which we have to use.

Are these equally valid for theoretical and studio work?

Yes very much. And certainly in terms of our approach to validation. We have an extremely broad and flexible view of what will meet the criteria. So the curriculum can be very very loose, but provision of outcomes needs to be rigorous and strong.

In that sense the schools are free to adopt their subjects and methodologies.

Provided that we can see that the students have learnt, have enjoyed learning and that there is an integrated learning and a successful representation that they have demonstrated through their portfolio.

The taught content and the methodology ultimately goes to the built environment, so don't you think that the school should be kept free for developing and contributing their own type of built environment within the city and then within the country and then within the globe.

We validate over eighty schools globally. So our view is that we're not trying to turn a one size fits all type of academy and the graduates actually work everywhere. Most of the models which are being developed under RIBA validation are for the pluralist society.

In a dialogue with Mr. James Benedict Brown in December 2011, you had mentioned all academics and practitioners as a "peer group of profession". How and to what extent do you see this idea to be implemented at par in both professional and academic sides to bridge the gap between both?

Yeah, it goes back to saying that it is all architecture. So I guess I see an academic in a school of architecture as being simply another version of a professional practitioner, and the professional practitioner being a version of that academic. The students mediate between these two interpretations of architecture.

And do they become part of one side?

Yeah absolutely, and you slowly transform from one position to another. Then your education develops throughout a professional lifetime, and you develop a series of interests and specialisms and they change all the time. As a student one has great enthusiasm towards a particular kind of work, and then interest may change our time. So, I think, the essence of all the challenges we face in education is creating a dialogue. It's about actually understanding the differences. If you are being primarily a businessman, and you want to employ five hundred people and pay their mortgages as well as your own, then that's your prerogative. You know that's fine if you want to be one or two or three person practice space, to be seeing this as being your craft which develops with time in a slow way, that's also absolutely fine. Nothing is wrong, and so what we need to do really to make our students sensitive to is the diversity of what technical practice can mean. And when I say architectural practice, this doesn't mean the building stuff, it also means writing about it, broadcasting about it, teaching about it. And all these kinds of practice need to be really respected. Whilst I believe that

we're educating for professional practice, I have a very broad fear of what professional practice should mean.

Referring to the same dialogue with Mr. James Benedict Brown in December 2011, you talked about "multiple exit points" at the end of five years bachelor degree course where you marked the currently adopted method as "a big bang at the end of five years without an exit point below the big bang". What multiple exit points you suggest?

It was 2011 and now it is 2016, I think my thinking has moved on quite considerably. One of the structural difficulties we see in the U.K. architecture education is that it's too divided. We have part I and we have part II and part III. The inference if you haven't got the full set is that you've somehow failed quite some courses. Of course this isn't the case, because you wouldn't describe a history graduate with a three year history degree as having failed because they haven't got a master's or doctorate in history. I think the structure of the course is essentially safe in the current framework, which includes two years of professional practical experience and some kind of academic education in whatever format the schools want to adopt, but we would integrate all the elements of what's currently RIBA part III within that seven years, so that part III doesn't sit out of the academic education. It's essentially trying to professionalize the sensibility of the student, so that all the super exciting things that they traditionally learnt in the school of architecture are set against the professional context, and this isn't trying to turn schools into practices. It's simply trying to make our graduates more politically and professionally astute, because they are graduating into a different world, from the one which many of us did.

But don't you think we should allow the students to practice before those seven years, as in some countries they are allowed to practice after five years and they become part of the built environment as professionals?

Oh yeah sure, that's very very useful. It is again their choice to stop their education there or go for the next two years to complete seven years, so they are already a part of the professional world. And after three years all U.K. universities will keep a bachelor's award or after four years in some cases. Now we're perfectly happy about that. That's none of our business at the RIBA. We would never challenge that it's not a model which many countries have, in the whole of Latin America the Middle East essentially they have four or five years and you can't really get off the bus. Here in the U.K., we graduate as an architect and leave the university to go for a drink with friends and they say so you are an architect, and we say, well actually no, we're legally not allowed to practice. I think this is very very frustrating and wrong, because we promise students something which we can't deliver, and on average in the U.K, it takes people may be ten years to get the registration, so we we're trying to work on the system which delivers the possibility of registering after seven years. Now then we should have an intelligent registration system which has the capacity to absorb the ambition of the graduate.

How do the students respond? How was the response in the meeting with the students in early 2015 after fifty years? It was very exciting to hear about it.

It was in March 2015 and it was a good evening. It was a good event that we had at RIBA, and we adopted all the five recommendations of the review. Now our job is to implement this. So we can foresee a ten year transition, but the interesting thing is that the two biggest schools in the country never put forward course proposals. They agree broadly with the analysis and we realized that its time to relook at the curriculum and the reaction has been positive. I think, we are developing a dialogue, and it has been hard work but its coming. And of course there are skeptics. We know this, because we have been around for 182 years. Naturally people are skeptical of all the institutions, but we want to be an old institution with new values.

In the foreword of the book "Radical Pedagogies", you have mentioned Zaha Hadid's axiom about architecture as if it does not kill you, you are not good". You seem to second this opinion by stating that all those participating in teaching of architecture should recognize this truth without feeling satisfied in making such acknowledgement.

How do you relate this idea of "good" or "not good" in teaching architecture in different schools? Do you still second the idea?

In one way I completely support the view that if it's not killing you, you're doing it wrong. That's sort of Zaha's effort. On the other hand, I think we're all entitled to a life outside architecture. I think that the reason we have long hours culture in architectural offices is often to do with bad business practice and we have to become acuter about money. We have to become smarter about valuing our services and knowing business skills. If you can produce an effective business model you can be a creative architect. I would say you are going to build the world. I saw Zaha as a student

and a teacher and so on, and her office is now building the world. Now you can argue about cultural sensitivities or otherwise in her work, but the ambition is to be the greatest practice. We have to, in education, allow our students the latitude to have this life outside architecture, because that will enrich their architecture. So one of the arguments is, do we create the long hours culture in the school and then graduates take it into practice?

Creating moderation is tough because students tend to get encouraged to create the spectacular, but we also need to understand what the qualities are of the normative and must analyze that in the right way. Looking at the user evaluation is extremely important, as well as we have a responsibility after we finish the building. There's a big sensitivity to that emerging post occupancy evaluation which must be examined, and I think again it's like this thing of resource of efficient design and structural stability. It's a must. It's not something that you belt off. It's essential. So evaluating how people feel and their experience in that six months, twelve months, two to five years after the building is complete, I think it's really important.

What direction is the architectural education around the world currently adopting? How do you see it in the Asian perspective of architectural schools?

Well we work in Singapore, Malaysia, China, Hong Kong and I think this is a massive generalized ocean. But if you look at certain education practices the further east you go particularly in the Far East, there is, a culture of learning, and this ofcourse is learning not training. The base value is that we are in the business of education, and that is open ended and speculative as well as being very practical, with defined goals that completely finite you, train you every day so that you can run faster than Hussein bolt. Because, he's the fastest guy in the world. He trained to be fastest. You know it's a very finite goal. There are some traditions of learning by the road, to run completely anti practical to a kind of speculative and hypothetical multivalent approach to architectural education. Knowledge is not about a memory game. It's about synthesis and it's the nature and quality of the synthesis which is the key, and again within every developing economy there needs to be professional classes across disciplines, which is critical. But the problem is knowledge, and judgment is required over a longer period of time. We don't create instant professional cultures within any discipline and that's a problem.

How do you relate it to the undergrad studies in architectural education? Do you rate it as education or as training?

I think acquisition of skills is important because those skills form an undergraduate course. Knowing that it's that thing of the mirror that you reflect your own image looking in it, and you can't really make a good graduate student unless they've got basic skills, so that set of tools and skills is important. A part of the set of tools is also about hypothesizing, so I guess if I was looking at it very crudely I would be at least sixty to forty percent in favor of skills acquisition. I don't want to teach a fourth year student about the plan.

For some of the schools it is not mandatory to underpin a dissertation for an undergrad degree. They can simply submit a design project and they pass. How does that work with RIBA?

Well we don't mind that. We don't mind whether the dissertation happens in place of some courses in an undergraduate program. The majority tend to run the dissertation in post graduate program, and I think we produce better structured writing that way. The students have more experience in post graduate program, it can happen either in the first or second program. The structured argument is credibly important, you understand how to research, how to reference. It's simply you're writing a movie and it has a beginning, a middle and an end. The reality is that actually structuring an argument is very important, that's got a value for the professional context.

What will be your suggestions as director of RIBA for architectural schools? Are schools culturally embedded in educating architects around the world?

I think the answer to the second question would be yes, the broad answer will be yes. In the schools we go through, all the cultural aspects of architecture are recognized as being fundamental to the development of thinking of the graduates. They might achieve this in different ways, and someone might support the idea. There is more emphasis on this in some regions than others, and I think this has to do with the state of the development of economies. It has to do with past histories. If there are old histories, I'm talking of millenia old histories, then I think that isn't a problem. You know you will see it though, it might be explicit or implicit.

But they have their ways and means?

Yes they have their ways and means, sometimes it will be very theoretical and you won't expect to see a student quoting sources to substantiate their faces in a design jury. Other times, to be very explicit, students may use that to legitimize their arguments, which is fine, but I think you can also do that through dissertation. I am very supportive of writing because you can spend 80 or 90 percent of a professional career in writing. The ability to get to use and craft the written and spoken words is incredibly gone. This is a big organization, a global organization and we have chapters in America, in Dubai, in Hong Kong and probably in the future in India and China too. We operate globally, and the international agenda is really being developed through education. We've had a relationship in Latin America for twenty-five to thirty years, we've had relationship with the ex-Commonwealth countries since the 1960s and 1970s. So they're all the established relationships, but the interesting thing is that one knows the new skills that we're talking about in Azerbijan, Kazakistan and in mainland China, these are not British universities. Turkey, Northern Cyprus, Lebanon, you know all new conversations started in the last four to five years. The idea is to introduce people to each other and to develop international collaboration at every level. I'm about to launch this big collaborative design project with maybe thirty participants with whom we have developed the initial brief and they have worked in groups of three. We started with eight U.K. schools, then we went to fourteen schools from ten different countries, and next we aim to involve thirty different countries.

RIBA, is a big institution and institutions have problems. We have traditional setups and are at times inflexible. But within our little corner, we try to be modern, if we can, at the same time that our role is actually about putting people together. It's about benchmarking standards. Mostly people come to us for recognition and validation but this aspect of benchmarking the standards has a certain reputation, good or bad. It marks the quality of what we do against some….. we are doing this for ninety two years.

Yes true one has to get that ninety two years is not a small time to accept a mistake and correct it.

No we haven't always got it right but in principle I think it's a good institution. It's growing all the time. The reputation of the system seems to be travelling, without us promoting it. We're not sales people in education but we are committed to working with other educators and that's important.

BOOK REVIEW

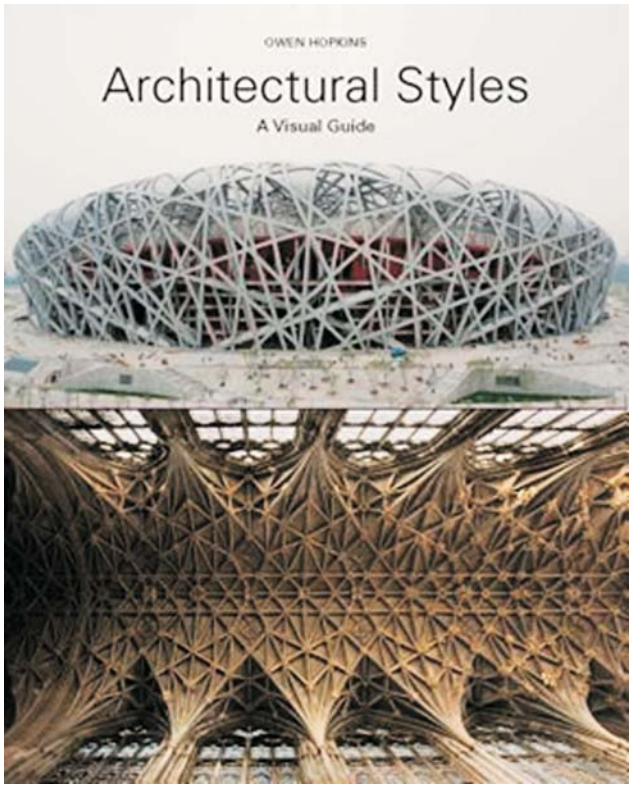
ARCHITECTURE STYLES: A VISUAL GUIDE

Owen Hopkins

Published in 2014 by Laurence King Publishing

A Review by

Huda Riaz*, Lecturer, Department of Architectural Engineering and Design (AED), University of Engineering and Technology, Lahore.



Owen Hopkins is a British author of several books related to architecture. He is also a historian and curator. He works for the Architecture Programme at the Royal Academy of Arts in London. His famous books include Reading Architecture: A Visual Laxicon, Architectural Styles: A Visual Guide, From the Shadows: The Architecture and Afterlife of Nicholas Hawksmoor. His scholarly interests range from Nicholas Hawksmoor grandeur to Alison and Peter Smithson.

The book "Architectural Styles" is an amalgamation of the architectural history and the modern architectural forms. In this book the author discusses history, culture, civilization and the architectural forms. The basic idea about 'styles' is taken from the Swiss architectural historian Heirrich Wollfflin, who made a great attempt to present all the styles of the history of architecture in the form of a chart known as the "Problem of the Development of Style".

In the beginning of his visual guide to architectural styles, Hopkins introduces the reader to the different architectural styles of the 19th century, something that helps architectural historians create charts documenting the developments of styles of buildings. Two hundred and twenty pages later, in the book's postscript, the author poses a question about the ever-increasing architectural variety and the possibilities of 'styles'. In both instances, Hopkins appears to be arguing against the validity of architectural style and the need for a book documenting one. Generally the book is a good introduction for students of architecture.

There are nine chapters in the book based on form, social and cultural characteristics, architectural manners and principle components of western architecture, from the classical age to present day. The focus is mainly on the visual aspect, i.e. there are captioned photographs of nearly three hundred buildings with a brief introduction. Through this book, readers can clearly understand the broad cultural trends and the ideologies with respect to different periods of architectural development. This book has a power to enhance the conception of style. In short, this book is worth reading for those who are interested in history of architecture. The book helps in explaining about how to distinguish between Gothic and Gothic Revival, or how to differentiate between Baroque and Neoclassical? It uses photographs to help explain and recognize the characteristic features of nearly three hundred buildings. The result is a clear and easy-to-navigate guide that identifies the key styles of western architecture from the classical age to the present day.

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According to the author the visuals communicate the design history specialists, outlining advancements in the appearances of structures after some time. “While from constantly expanding design variety...what conceivable outcomes are there for 'style'?" In both occasions, Hopkins seems to create a sense of being, opposing against the legitimacy of building style and the requirement for a book. However, he has composed a manual in which he focuses on pictorial presentation. It is a very informative book with respect to both architecture and engineering.

Hopkins provides an explanation on the everlastingly changing architectural styles with the passage of time, the process of change in terms of evolution or diminishing of styles throughout history. The decline of styles is suitably modest and prevents to dictate any sort of principles, as an alternative touching on the most commonly referenced themes for each style. This helps to get an idea about multiplicity of perceptions of design and advancement in construction technology that can be seen in history. The sub-headings offer textual interpretation that keeps the interest of the reader along with the visual information available. The definitions and depiction of the variety of details, are mainly visual, that offer a valuable insight into the diverse characters of one particular style under discussion. Through this book, readers can clearly understand the broad cultural trends and the ideologies with respect to different periods of architectural development.

This book is a blend of both the quantum of text and pictorial representation, so that the reader is able connect visual proof of architectural advancement and alteration, to clearly worded, helpful information and insights which complement their subjects. Unlike rival titles, which focus on the more superficial elements of style, Hopkins’ book is a very balanced companion and readily available visual-resource for a wide range of architecturally minded reader. Hopkins gives a ordered and knowledgeable perspective on the varying design styles that have risen and fallen through the ages. The depiction of styles is suitably modest and abstains from managing an exact arrangement of principles, rather addresses the most usually referenced topics for each style.

The book begins with a part on the Classical form of architecture and proceeds to Early Christian, Gothic and Medieval, Renaissance and Mannerism, Baroque and Rococo, Neoclassicism, Eclecticism and Modernism. The last section of the book emphasizes the possibility that style is verifiable; it is utilized to discuss what occurred before, instead of what is going on now. Hopkins incorporates Regionalism, De-constructivism, Eco-engineering, Expressive Rationalism and Contextualism in the last section of the book. He elucidates minute details about every style in depth that ranges with time and can be found in the spread. Within every section and sub-style, Hopkins emphasizes key terms that are captioned with the image of the buildings. There isn't anything essentially amiss with the approach of the book, however on occasions Hopkins goes overboard with visuals, as he does in another publication entitled “Reading Architecture”, which incorporates various drawings, numerous with marks, and photos named as a method for visual narrating. The author has made a good attempt in putting together this book and in bringing many aspects under a single title. Generally the overall structure of the book is clear and makes it easy-to-navigate. This book is compact and can be comprehended easily. This is a book that one can take to a coffee shop and read cover to cover, and feel like one has traveled through history and witnessed the evolution in architectural form and style.

JRAP 2017-18

JOURNAL OF RESEARCH IN ARCHITECTURE AND PLANNING

INVITATION FOR PAPER CONTRIBUTIONS

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Journal of Research in Architecture and Planning is an initiative taken by the Department of Architecture and Planning, NED University of Engineering and Technology, to provide a medium for communicating the research and the critique in the broader domain of architecture and planning in Pakistan and beyond. From 2011, the Journal of Research in Architecture & Planning is published biannually; covering topics related to architecture, planning and related subjects.

For our forthcoming issues of the Journal, the editorial board invites contributions from researchers, scholars, architects and planners. The papers can be based on ongoing researches or analytical and hypothetical concepts related to relevant fields. Interested authors should download and read the Instructions to Authors Manual (http://www.neduet.edu.pk/arch_planning/NED-JRAP/guidelines.html) for all details of requirements, procedures, paper mechanics, referencing style and technical review process for submitted papers.

FORMAT

Article Size	3000 words to 5000 words (please consult the journal office in case you wish to send a longer article		
Page Size	A-4	**Page Layout**	Portrait
Font Style	Arial	**Font Size**	12
Visuals	All visuals (photographs, direction maps, diagrams, Google maps etc.) shll be in Jpg/Tiff format with minimum 300 dpi resolution at actual print size, These shall be properly captioned and clearly referred in the text. please do not insert them in the text.		
Drawings	AutoCAD drawings shall be converted in tiff format with a readable size and legend.		
Submission	Article along with visuals, diagrams, maps and drawings can be submitted through email and / or posted in a CD / DVD format.		
Referencing System	Harvard Style		

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Townscapes	Vol. 1, 2001
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Transportation in Architecture	Vol. 2, 2003
Conservation and Culture Heritage	Vol. 3, 2004
Form, Design and Details	Vol. 4, 2005
Urban Design Case Based: Theory and Practice(I)	Vol. 5, 2006
Urban Design Case Based: Theory and Practice(II)	Vol. 6, 2007
Architectural Education	Vol. 7, 2008
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Journal of Research in Architecture and Planning	Vol. 10, 2011
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Journal of Research in Architecture and Planning	Vol. 18, 2015 (First Issue)
Journal of Research in Architecture and Planning	Vol. 19, 2015 (Second Issue)
Journal of Research in Architecture and Planning	Vol. 20, 2016 (First Issue)
Journal of Research in Architecture and Planning	Vol. 21, 2016 (Second Issue)
Journal of Research in Architecture and Planning	Vol. 22, 2017 (First Issue)

RANGE OF ACCEPTED TOPICS

Architectural philosophy, Building conservation, Building integrated renewable energy technologies, Conservation led urban regeneration, Eco-housing, Interactive architecture, Land use planning, Low carbon impact buildings, Secondary cities, Sustainable architecture, Urban ecology/ Urban renewal / Urban sprawl, Urban sustainablity / Urban transportation, urbanization .....and many more

BOOK REVIEW: Contributions for our 'Book Review' section are welcome in the form of a brief summary and a sample of the publication related to the field of archiecture, planning and developmen.

For Further Information, please write to JRAP Coordinator 2017-2018
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