

EPHEMERAL BUILT INTERVENTIONS FOR SHAPING THE ROBUSTNESS OF URBAN SPACES: CASE OF THOTALANGA MARKET STREET IN COLOMBO

Narmada Jayasinghe* , Janaka Wijesundara
University of Moratuwa, Katubedda, Sri Lanka

Abstract

Most certainly, architectural objects are the basis of the physical assembly of a city and they result in urban spaces with incomparable values and features. The Built environment of South Asian contemporary cities including the Capital city of Sri Lanka, Colombo, encompasses both permanency and impermanency which can be observed with an irregular spread. Ephemeral Architecture queries the idea of permanence in the way we produce architecture. As a feature, more impermanent, ephemeral built interventions assembled by people are concerted in residual city edges, commercial streets, along water bodies, and in-between solid blocks as more informal built settings. Facing numerous uncertainties due to natural disasters, lack of development attempts by the government, and clear negligence, still these urban spaces operate as more vigorous nodes within cities. Ephemeral built interventions generated by people act as the main facilitator of these spaces and street markets in Colombo are significant in this scheme.

Considering the connection in-between the operational strength of urban spaces and its built interventions, the key aim of this study is to determine the role of ephemeral built interventions in operating market streets enhancing with the robustness in cities. Multifunctionality, loose fit and social interaction are considered determinants that ensure the robustness in market streets. The study is reinforced with systematic observations, photographic studies, and maps. Questionnaire survey conducted within the case study context support the study of user' perception on robustness, examining the case of Thotalanga Market Street in Colombo. Being an exploration of the operating status of ephemeral built interventions in contemporary urban spaces, this research would be an initial step to facilitate "ephemeral urbanism" as an urban design strategy to deliver robust cites for the future.

Keywords: Ephemeral built interventions, robustness, market streets, South Asian contemporary cities, Colombo

* Corresponding Author: J. A. T. Narmada Jayasinghe; E-mail- narmadaj@uom.lk

Introduction

In South Asian contemporary cities, the fleeting experience of ephemeral architecture is due to intensified speed and acceleration of the modern world (Armada, 2012). In order to repel inside and outside compression in cities, as consequence, contemporary urban environments are mandatory to engage more with ephemeral built interventions (Mehrotra, 2015). The author further states that ephemeral urbanism thus challenges the permanency of cities and the non-permanent configuration & flexibility are valued over rigidity in the contemporary world. Sweeting (2015) states that the impermanence of urbanity has significant potential to manage uncertainties of cities and evaluates the value of ephemeral urbanism in resulting robustness in urban environments. Cities experience a life cycle, their growth and development as a result of numerous forces. Thus, cities are organic. Alexander (1977) declares that master plans fail because they are too rigid and not organic. Bentley (1985) declares “robustness” as a fact that contributes in operating fruitful urban spaces in terms of important relationships between social life and the arrangement of the built environment. Gehl (2010) affirms the sustainability of transforming urban streets as a public space on a humane scale is important in order to result in liveliness in cities.

Therefore, in South Asian contemporary cities, street markets, massed with ephemeral built interventions by people seems more effective in resulting in robust urban spaces.

Literature Review:

Ephemerality:

Durant (2003) concludes ephemerality is the impermanence that is accompanied by some form of psychological or emotional connection and has a feeling of mortality. Accordingly, an ephemeral object's fate is tied to its subsequent destruction, decomposition, deterioration, weathering, or dismantlement but also may go together with an eventual revival. Mehrotra & Vera (2015) further discuss that ephemeral is the aspect of the city that is temporary in nature. Armada (2012) remarks in her study that the brief existence and adaptive nature of ephemeral architecture are in response to the increased speed and acceleration of the contemporary world.

Built Ephemerality vs. Built Permanency:

The term ephemeral states something temporary, interchangeable, and adaptive. Ephemeral architecture is one that is designed to exist for a short period of time and then disappear, providing a short-lived experience and leaving behind a memory. Architecture as well as urban design and city planning has historically endeavored towards permanence and monumentality by practice. Inversely, Das (2014) states that Ephemeral structures have been around since mankind first existed. Armada (2012) discusses that ephemeral architecture has the ability to mediate between aspired permanence and inevitable change, sustaining cultural meaning despite a short existence.

Bishops and Williams (2012) discuss that the contemporary world should recognize, that however, the only certainty is that everything changes in today's world. (Martin, 2017) concludes that Permanence has no precedence in our organic changing world.

The quest for permanence and continuity can be traced all the way to modern times: 'sustainability' is our generation's iteration of permanence or immortality.
Armada, 2012

So, this misunderstanding leads people and the modern world to follow permanency rather than arranging the modern world with the ability to embrace uncertainties being not fixed. So, it's clear that the clarification of "sustainability" in relation to the built environment may depend on the extent of responsiveness of that built arrangement to people and its surrounding. When we consider manmade environments, the afterlife of things built once is not useful any longer if they are impotent to revamp with changes (Mehrotra, 2012). Durant (2003) discusses that ephemeral architectural interventions are proficient in creating a groundwork for new tectonic systems, materials, and construction methods.

Accordingly, vision of the contemporary cities should no longer have to be monumental or eternal, but it must be designed to become adaptive in uncertain conditions.

Properties of Ephemeral Built Interventions:

According to numerous scholars including Mehrotra (2012), Williams (2012), Das (2014), Armada (2012) & Durant (2003) Ephemerality of built interventions resulted due to a series of properties engaged. These properties could be observed either within the built form, materials, building components, or layout or the program initiated within it.

Reversibility: Reversibility means the quality of being reversible in either direction. The quality of having an obvious tendency to change due to different forces and needs is meant. And also, reversibility results in 'robustness' besides.

Openness: Openness reveals the incomplete nature of ephemerality. Ephemeral-built interventions are not completed/finished ones and are always open to change. Therefore, ephemeral interventions are errant, conflictual and non-linear due to their openness. Mehrotra (2012) states that openness is achieved in ephemeral buildings/ cities due to their porous borders.

Temporality: Temporality means the ability to remove the built intervention at the end of its planned usage. Or else, when we focus on the category of ephemeral built interventions it can be called temporal when the functional experience or the program assigned within the building is not fixed: change with time.

Faster to build: Less time consumed to construct/ arrange/ erect the ephemeral-built interventions is signified. Das (2014) states that, ephemeral structures are speedy in terms of their construction: because they do not need foundations, and also since all the fragments can be quickly made, temporarily built structures are exceedingly quicker to erect and dismantle.

Cheaper: Due to the shorter lead times in the planning, designing and building stages, and the lower costs of components used in the construction ephemeral-built interventions as a configuration typically save you a great deal of money in divergence to a conventional building whether you rent it, build it or buy entirely. Thus, it's so far more cost-effective.

Versatility: Das (2014) clarifies that it's very easy to change the configuration of the structure of an ephemeral built intervention, or add to it at a later date in order to expand or change the

arrangement/function/built form or the layout due to many different directions in different aspects.

Urban Spaces and Ephemerality:

Mehrotra (2012) suggests that ephemeral urban solutions would be the next step in determining contemporary cities for future. Even though the built environment of contemporary cities comprises both ephemerality (impermanence) and solidity (permanence), the spread throughout the city is not even. And as a tendency, in most of the contemporary cities including Colombo, ephemeral built interventions in cities operate in a bottom-up approach by its inhabitants and general public according to different situations: not designed by professionals. There are significant city portions vividly occupied with ephemeral built interventions in cities. Most of these significant urban spaces remain “off the grid” in hidden and unadvertised locations in cities but operate as more agile and sustainable nodes. In Colombo, self-organized street markets are a significant typology that efficiently operates with ephemeral built interventions for years.

The function of a street as a link given rise to the movement of the people, connecting together the individual spaces for a town creating a sense of urban street. It is much more demanding the street as a public space, which must be able to personalize by each one in that group.

Herath, 2005

Hanse this notion of encompassing self-generated ephemeral-built interventions can be observed as an attempt to be robust in bearing all the uncertainties and circumstances. Accordingly, properly implemented ephemeral built interventions have the ability to tap into socio-cultural and economic aspects of cities.

Urban Spaces and Robustness:

In cities, “Robustness” is the quality that designates the degree to which the public can use a given place for different purposes. Bentley (1985) declares that public spaces are more successful when they are not specified for a single usage. It’s in context to the quality of the public realm, which is the place for the public to gather. Accordingly, as to consequence an environment where a variety of stakeholders can access and advantage of the range of opportunities offered to the members of the society. Desouza and Xie (2021) define robustness as a property that allows a system to maintain its functions against perturbations in an environment. Moreover, robustness is the quality that some places have to be used for many different purposes, offering people more choices than places that limits them to a single fixed use. Hall (2015) in his book “Robust city” converses that cities expand, upwards and outwards, and their physical structure can last a very long time, not just tens but hundreds of years. But they are rarely designed for expansion. Their layout does not allow for extension or for the retrofitting of infrastructure and can constrain, and often prevent, the growth and change of activities within them - cities are not 'robust' in their design.

The built environment can be identified as the most significant component which safeguard the robustness of a place. Properties and the quality of urban spaces mostly rely on their built mass and the availability of people. Therefore, it’s obvious that the robustness of built mass directly contributes to operating urban spaces. In terms of the construction details of built interventions, the “loose fit” concept enables robustness making built interventions open to change or removal.

Bishops and Williams (2012) state that through seasons, trends, and many other forces, built environments change, but necessarily 'place' may be sustained through these changes for better sustainability of people. To make this happen, better robustness of urban spaces is obligatory in cities.

Research Question:

How and to what extent ephemeral built interventions contribute to enhance the robustness of urban market streets?

Research Design and Methodology:

In order to conduct the study to answer the research question, it is important to come up with a theoretical relationship between ephemeral built interventions and the robustness of urban spaces. Hence, establishing theoretical rapport among ephemerality and robustness acts as the basic design of research and the above theoretical survey act as the base of it. Throughout the literature survey, the properties of ephemeral built structures discussed by several scholars indirectly fall under the determinants of robustness in cities and there are similarities noticeable. Mehrotra (2016) queries in one of his interviews that, we take permanence as a default condition. Why can't we think about permanence and ephemerality simultaneously? Juxtaposing those together could create beautiful and perhaps robust solutions?

The theoretical framework developed to study the selected case, consists of the above-mentioned background theories and applies in the case study analysis. Thotalanga Street market which operates along Ferguson's Road, Colombo 14, in between Kelani River and the adjoining community of underserved settlements is selected as the case study for the analysis. Thotalanga Street market was selected considering its well-established functionality, noticeable availability of ephemeral built interventions, sophisticated consumer attraction and the threat on operating the market in the future due to UDA relocation proposals.

The methodology will first undertake a comprehensive literature review to research study components including ephemerality and robustness. Then utilize the knowledge gathered from the literature review to develop the analytical framework applicable. Quantitative data collection happens through the self-developed questionnaire depending on the theoretical framework because it suits the objectives of this research and seems more successful to comprehend user perception of responsiveness of the spaces. The target population for the questionnaire is 36 people including 12 respondents for each selected node. Qualitative data collection happens through on-site observations, photographic surveys visual documentation, google Maps studies, and petite talks with consumers on-site.

The final analysis and the conclusion are based on the analysis of collected data from the case study and the theories built through the literature review to emphasize the hypothesis. Statistical package for social science (SPSS) version 21 acts as the statistical data analyzing method.

- 1. Multi-functionality** - Robustness of urban space operating with ephemeral built interventions in terms of its utility is studied.
- 2. Loose fit** - Robustness of urban space operating with ephemeral built interventions in terms of its structure and construction is studied.
- 3. Social interaction** - Robustness of urban space operating with ephemeral built interventions in terms of its interactive performance with the user is studied.

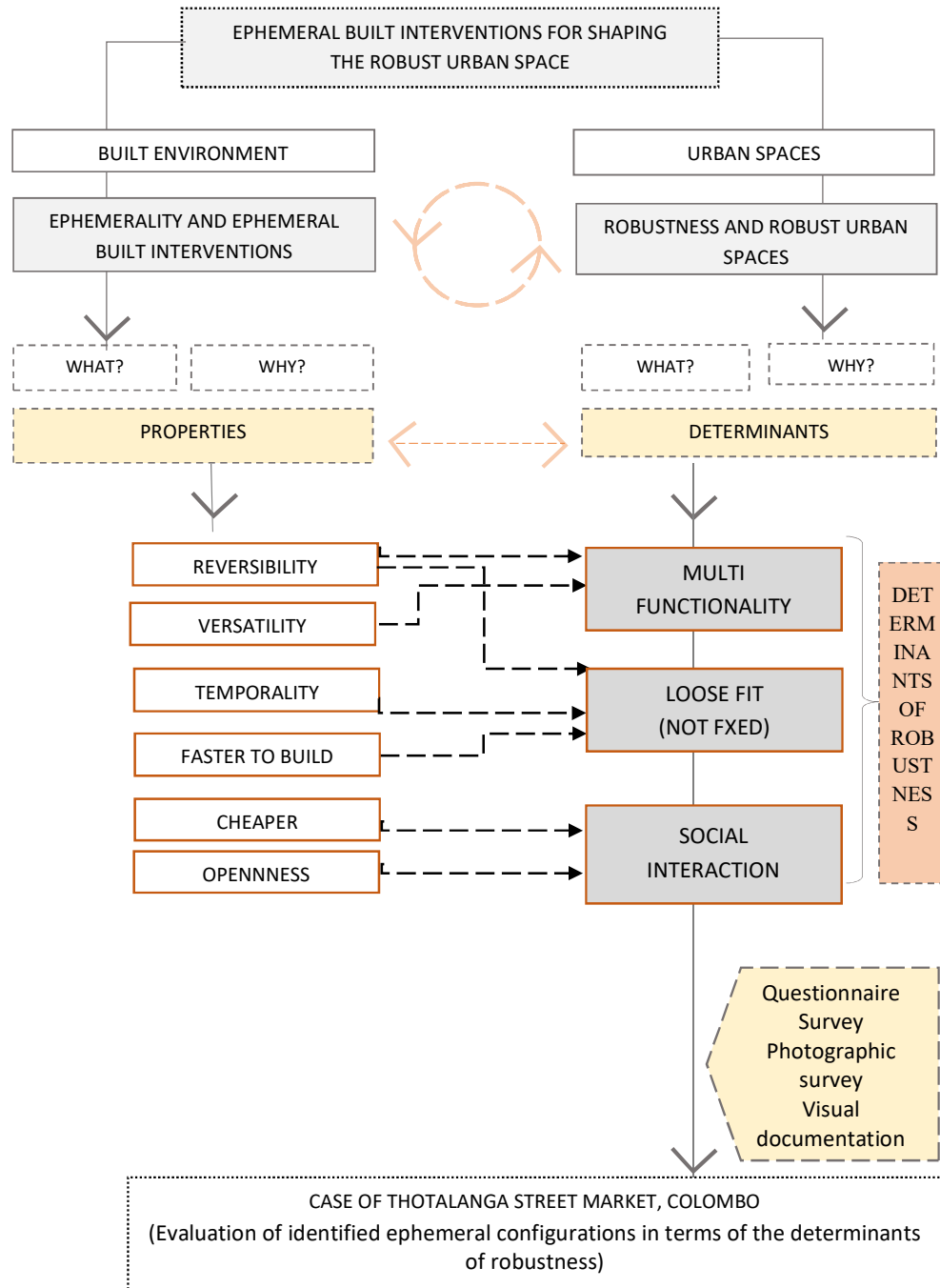


Figure1: Theoretical framework derived from literature review
 Source: author

Findings and Analysis:

Thotalanga Street market is considered as an urban space and three main nodes of the Street market operate with ephemeral built interventions are selected for the study through onsite observations.



Figure 2: Thotalanga Street market
Source: Google street views & Author

■ - Ephemeral built mass of Thotalanga Street



Figure 3: Spread of human density along Thotalanga street market
Source: Author



Figure 4: Nodes of street market operate with ephemeral built interventions
Source: Author

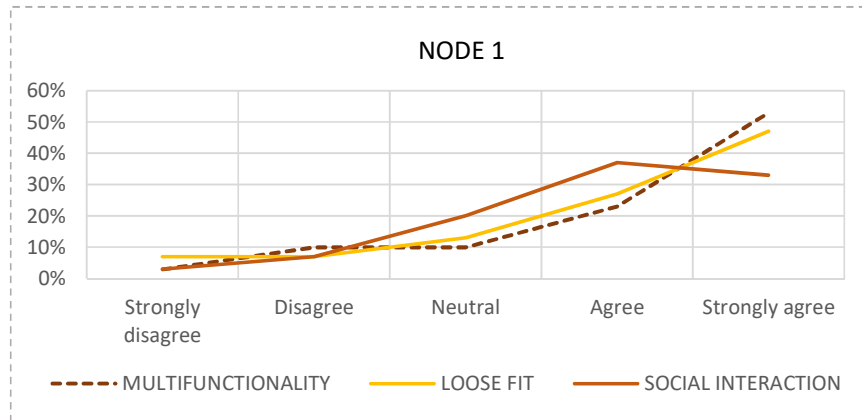


Figure 5: frequency table for robustness of node 1 operating with ephemeral built interventions
 Source: Author

Figure 04 clearly displays frequencies of user responses regarding node 01 in terms of multifunctionality, loose fit & social interaction. The majority (53%) of users strongly agree with multifunctionality resulting from ephemeral built interventions at node 1. Also, 46% of users strongly agree on the loose fit of ephemeral built interventions on its site. Regarding the social interaction allowed through ephemeral built interventions at node 01, a majority of 36% agree. Accordingly, all three determinants positively contribute to operating node 01 with robustness. It's evident that at node 01, the multifunctionality of ephemeral built interventions is the most contributing aspect on robustness.

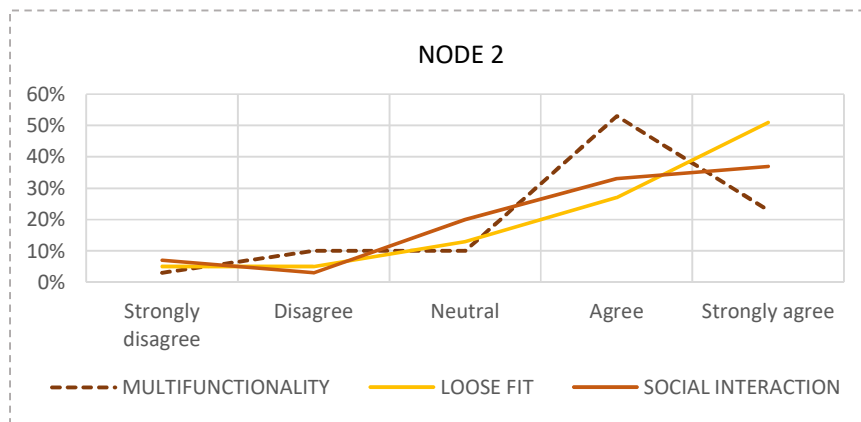


Figure 6: frequency table for robustness of node 2 operating with ephemeral built interventions
 Source: Author

The frequency table for node 02 reveals that the majority (52%) of users agree and also 23% of users strongly agree on multifunctionality. The majority of users strongly agree on loose fit and social interaction as well. It's clear that the most successful operating determinant in terms of robustness at node 02 is loose fit. Likewise, the majority strongly agree on social interaction on behalf of robustness of the street market at node 02. Consequently, ephemeral built interventions at node 02 are more conspicuously committed to multifunctionality and loose fit.

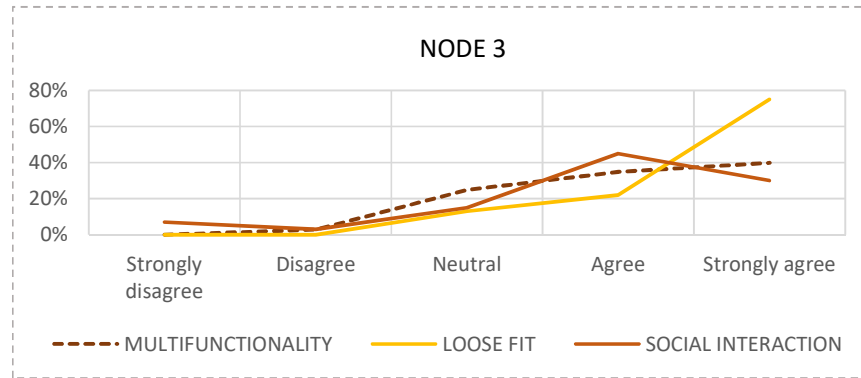


Figure 7: frequency table for robustness of node 1 operating with ephemeral built interventions
 Source: Author

Figure 06 presents the frequency table for node 03 and the highest percentage (75%) of users strongly agreeing on the loose fit of ephemeral built interventions at this node of the street market is more prominent. Also, there is a percentage of 46% of users agree on the social interaction of this node bound with ephemeral structures. Accordingly, all three determinants positively contribute to operating node 03 with robustness.

Conclusion:

In cities, the built environment is one of the main components which generate the urban realm apart from people. But when an urban built environment operates in collaboration with people, it's more efficacious. At the same time nowadays urban spaces are required to be more robust to endure uncertainties due to the rapid evolution of the world and the built environment directly links with the robustness of a space. In contemporary Asian cities, the built environment generated and operated by its inhabitants in a more informal way without any involvement of authorities is robust. Emphatically ephemeral built interventions play a major role within the built environment of cities, even if they are not permanent. According to the outcome of the study it's precisely clear that, ephemeral built interventions strongly contribute to shaping the robustness of urban spaces. And also, the study initiates that due to robustness achieved through the ephemerality of the built environment, these significant city portions stay agile even under snags.

And this study provides an initial step to approach ephemeral urbanism as a planning tool in future cities, being an exploration of the current operating status of robustness generated by ephemeral-built interventions in cities.

References:

- Alexander, C. (1977). *A pattern language*. Oxford: Oxford university press.
- Armada, J. (2012). *Sustainable Ephemeral: Temporary Spaces with Lasting Impact*.
- Bentley, I. (1985). *Responsive Environments*. London: The Architectural press.
- Bhatia, B. (2016). 'Informal Morphologies' - Learning from appropriated spaces, Mexico city. *Linkedin*.
- Das, A. (2014). *Ephemeral structures: An exploration of ephemeral structures in aspects of 'Firmness, Commodity and Delight' (structure, function and aesthetics)*.
- Durant, N. P. (2013). *Ephemeral interventions: Experiencing with th performance, the event & the crowd*.
- Hall, T (2015). *The Robust City*. London: Routledge
- Jackson, M. H. (2010). *The ephemeral effect: Temporary architecture as urban catalyst*.

- Mehrotra, R. (2015). Temporary Flows & Ephemeral Cities. *Room One Thousand*.
- Oswalt, P. (2013). *Urban Catalyst: The Power of Temporary Use*. Berlin: Dom pub.
- Philbrighty. (n.d.). A profile of underserved settlements in Colombo. *Gosrilanka*.
- Silavi, T. (2017). *Design of a spatial database to analyze the forms and responsiveness of an urban environment using an ontological approach*.
- Silva, P. D. (2003). *Impact of canal re-vitalization projects on living environments of informal sector communities: An examination of the canal environments of the Colombo metropolitan region*.
- Sutherland, T. (2018). *Impermanence Materialized: Exploration of Temporary Architecture at the Kumbh Mela in Allahabad, India*.
- Sweeting, A. (2015). *The Value of Temporary Urbanism in Creating Responsive Environment*.
- The place of dreams*. (n.d.). Retrieved from https://anammanzo.wordpress.com/2010/09/03/ephemeral-architecture/?fbclid=IwAROFFcq5N0aTBz-_kAG23W4u1Z-ahYh_Z5KTJqRpnvz5skGMs11SjfnqDg
- Tuncbilek, G. Z. (2013). *Temporary architecture: The Serpentine gallery pavillions*.
- Tyrvanen, K. (2015). *Relevancy and potentials of implementing temporary architecture in Stockholm*.
- Vera, F. M. (2015). Temporary Flows & Ephemeral Cities . *Room One Thousand*.
- Vimeo (n.d.). The Kinetic City [Recorded by R. Mehrotra].
- Xi, J. (2013). *Evaluating the Functional Performance of Small-Scale Public Demountable Building*.