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AN INTERPRETIVE PATTERN LANGUAGE TOOL FOR UNDERSTANDING ARCHITECTURE AND PLACE: SYNTHESIZING GENIUS LOCI AND PATTERN LANGUAGE THEORIES

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Abstract. This paper is a conceptual paper that engages in theoretical discourse on the shaping of architecture and its impact on place. It undertakes a theoretical investigation on the theories that link between place and its architecture. Within this, the works of Christopher Alexander's Pattern Language and Norberg Schulz's Genius Loci of Places, emerged as the representative theories that comprehensively address the relationship between architecture and place. However, the research challenges Norberg-Schulz's notions of perceiving the genius loci as a fixed and immutable quality and questions the presumed universality of Alexander's Pattern Language, arguing instead for a more dynamic and nuanced understanding of the built environment. This is achieved through a theoretical synthesis of the two theories, resulting in forming an *interpretive pattern language tool*. While Pattern Language provides the idea of patterns, the phenomenological experience of Genius Loci provides the experience of existing places by their users. This unique synthesis is the intrinsic role of the tool that allows for the advancement of places' interpretations. Thus, the study aims to contribute to both theories and to enhance their relevance in contemporary architectural theory. It will provide further interpretations of more dynamic issues that ultimately deal with the relationship between architecture and place. Finally, it will have implications for the practice of architecture and urban design in both new and existing contexts.

Keywords: Genius Loci, Pattern Language, theoretical synthesis, interpretive tool, architecture and place.

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1. Introduction

This paper commences with an interest in exploring the shaping of architecture in a certain place and how it consequently impacts this place. It investigates possible theoretical tools that could facilitate the interpretation of this relationship between the two. Firstly, the paper starts with defining *place*. Gieryn (2000) highlights that place is a location that has been invested with meaning. Hence it is meaningful to people, individually or collectively. They are doubly constructed: most are built or in some way physically carved out. They are also interpreted, narrated, perceived, felt, understood, and imagined (Soja, 1996). Berque (1999) acknowledges the coexistence of two aspects in place, one quantitative and the other qualitative, which complement each other. Sepe (2013) agrees with this and asserts that every place possesses a part which is both physical and measurable and the other is immaterial, phenomenal and semantic – non-measurable and therefore cannot be associated with other places. Healey (2010) emphasises that place is also related to the meaning that people give to their surroundings and their capacity to influence them. Hence, places are not just a set of objects positioned on a site, yet they assume a specific meaning in the moment in which we infuse them with a value. Within this line of thought, Healey (2010, pp. 33–34) asserts that: *"things may be co-located, and relations may overlay each other in physical spaces when we feel that we have arrived somewhere, when we sense an ambience"*. Norberg-Schulz has named this unique ambience of place the *genius loci* of a place, which he defines as the sort of guardian spirit that accompanies people – here places – to their death and determines their character (Norberg-Schulz, 1980). Interestingly, these physical objects include both natural and man-made objects. The latter, indeed, includes architecture.

Thereafter, the paper attempts to define the link between architecture and place and within this, Pallasmaa (2012, p. 20) argues that the role of architecture is always to enhance the surrounding landscape and urban setting and provide it with new meanings and aesthetic qualities. He labelled this *"responsible architecture" that "always*

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enters a dialogue with existent conditions; …are not self-centred monologues. Buildings mediate deep narratives of culture, place and time". Yet to be able to interpret this unique relationship, Cullen (1961) emphasises that a comprehensive interpretation of architecture and place should involve going beyond the aesthetic aspects and physical geometry. He suggests that functional and symbolic interpretations are fundamental for grasping the true meaning and essence of a place (Figure 1).

Hence, a theoretical investigation on the theories that link between place and its architecture is undertaken. It reviewed those theories chronologically, analysing their core idea of place, the role of architecture within its place and finally the limitations of each theory. From this theoretical analysis, two theories were found to be relevant to the context of this research; the first is Norberg-Schulz's Genius Loci of places and the second is Alexander's Pattern Language. On the one hand, Genius Loci, or spirit of place, represents the description of the symbolic, cultural and social interpretations of the place, i.e., the qualitative interpretation of the city. It can also describe the identity and place's character. Thus, Genius Loci act as an overarching quality of all these aspects. However, it relies mainly on the subjective preferences of the perceivers of the place.

On the other hand, the second theory – Alexander's Pattern Language – which can be utilised to measure the physical characteristics and quantify them, was introduced to provide a more nuanced interpretation of place, and to help the perceivers of the place appreciate and recognise the surrounding architectural and urban patterns. Henceforth, this paper critically analyses and compares the work of Norberg-Schulz and Alexander's Pattern Language with authors who praised or argued against their theories and identified gaps within them. These two theories are then synthesised and abstracted to form an *interpretive pattern language tool*. Moreover, it proposes that places can be studied hermeneutically based on peoples' experiences, where the *genius loci* of places and the architectural character of their buildings are experienced and interpreted by place users; hence, guiding their future shaping. Inevitably, when these two interpretations are combined, a more precise understanding of place is gained.

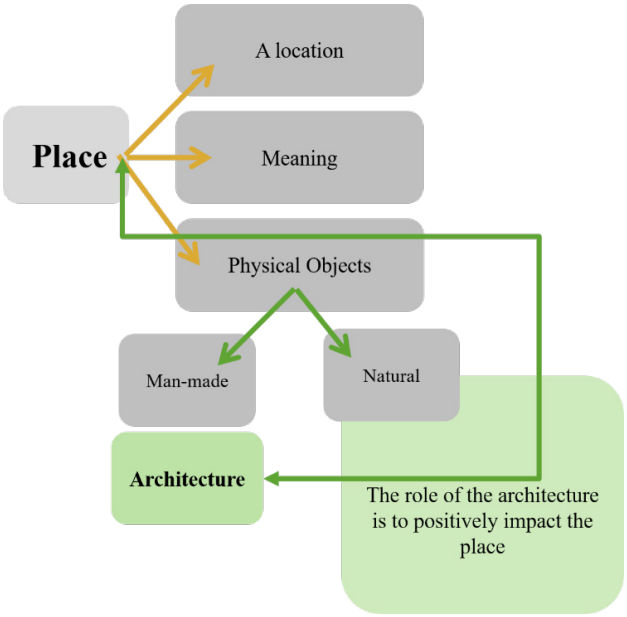


Figure 1. The link between architecture and place (source: the authors)

In summary, this is a theoretical and conceptual research paper that engages in theoretical discourse as the main research method. It explores a possible way to study the Genius Loci of places and their representative patterns through a synthesised theoretical interpretive tool. The broader aims of the tool are to fill in the gap within the two theories, influence architects, urban designers and policymakers in their decision-making process and finally, contribute to the broader understanding of architecture and place and the profound link between the two.

2. Methods

This research is a conceptual paper that aims to explore the theoretical question of *how the link between place and its architecture can be studied and interpreted?* It engages in theoretical discourse in architecture and place as the main research method. Hence, the targeted theoretical analysis has undergone three stages:

1. Theories -that link between architecture and place- identification and their chronological mapping: This stage is about conducting a literature review and critical analysis on influential frameworks and theories that address this relationship such as (Heidegger, 1951; Lynch, 1960; Tuan, 1977; Relph, 1976; Norberg-Schulz, 1980, Alexander et al., 1977; Canter, 1977; Hillier & Hanson, 1984; Lefebvre, 1991).
2. Comparative analysis: Inevitably these theories differ in their conceptualisation of place and the role of its architecture. Hence, to structure these various theories, they have been analysed into four analytical lenses/dimensions These categories included the following:
   - Definition of place,
   - The role of architecture in its place,
   - Its analytical orientation/ methodology,
   - Its applicability to be synthesized into a combined theoretical synthesis.
3. Selection of the two most representative theories to be synthesized: After comparatively analysing the theories, the work of Norberg-Schulz's Genius Loci of place (Norberg-Schulz, 1980) and Christopher Alexander's Pattern Language (Alexander et al., 1977) were selected as the two most representative theories to be synthesised into one comprehensive theoretical understanding or a tool. The research thus firstly, provides a critique of those theories, situates them within their relative literature and identifies gaps within them. It thereafter suggests the theoretical synthesis as a way to challenge and then refine

and extend the two theories through identifying links between them as well as points of differences. These latter synthesis's approaches were inspired from comparatively comparing the concepts that act as the essence of the two theories. This analysis has thus resulted in a *novel theoretical tool*. The aim of this tool is not only to fill the gap within each theory but also to contribute to the broader understanding of the link between architecture and place. Furthermore, the research provides practical guidelines for the future application of the tool to extract and evaluate local pattern languages of places.

3. Theoretical framework

To establish a strong foundation for this study, a theoretical review was carried to identify the theories that link between architecture and place. This link was instigated based on the interest to study this fundamental relation that has a strong impact on many issues such as architectural character, architectural identity, place identity and the wider image of the city. The selection process focused on theories from mid – to – late 20th century that have recognized this link between architecture and place. Within this, a chronological sequence was adopted to order these theories along with a comparative analysis to analyse them based on certain analytical lenses/dimensions. Those dimensions have paved the way for the selection of the two most representative theories to be synthesised. That are "Pattern Language" and "Genius Loci of place" (Table 1).

While Table 1 has focused on mid – to late – twentieth theories that explicitly addressed the relationship between architecture and place, more recent theories have broadened how place is conceptualised. These include non-representational approaches which focus on affect and practice (Thrift, 2008), assemblage perspectives that frame place as a socio-material constellation (DeLanda, 2006), relational accounts of space (Massey, 2005) or post-phenomenological accounts emphasising

Table 1. Selecting among theories that link architecture with its surrounding place for a theoretical synthesis

Theory	Author	Year	Definition of place	The role of architecture in its place	The analytical orientation/ methodology	Its applicability to be synthesised
The image of the city	Lynch	(1960)	Place as mental image formed through legibility	Architecture contributes to paths, edges, nodes, landmarks	Cognitive mapping; urban image analysis	Moderate – Visual bias
Building dwelling thinking	Heideggar	(1971)	Place as existential dwelling; being-in-the-world	Architecture reveals the world; grounds human existence	Philosophical phenomenology	Low – too abstract.
Place and placelessness	Relph	(1976)	Place as authentic experience; insideness vs outsideness	Architecture can erode or reinforce authenticity	Phenomenological description	Moderate –Nostalgic, limited agency
Space and place	Tuan	(1977)	Place as experiential meaning; emotional attachment	Architecture shapes experiential qualities	Humanistic geography; experiential analysis	Moderate – rich conceptually but not architectural enough
A Pattern Language	Alexander et al.	(1977)	Place as a system of recurring spatial patterns	Architecture constructed through multi-scalar patterns	Pattern-based, generative methodology	High – the only theory providing systematic structure for a objective analysis
Psychology of place	Canter	(1977)	Place = physical setting + activities + meanings	Architecture as one component of place system	Environmental psychology; behavioural analysis	Moderate – limited architectural depth
Genius Loci and the Phenomen-ology of place	Norberg-Schulz	(1980)	Place as existential meaning; spirit of place	Architecture concretizes identity and atmosphere	Phenomenological interpretation	High – provides conceptual experiential foundation for synthesis
The Social Logic of Space	Hillier and Hanson	(1984)	Place as spatial configuration and movement potential	Architecture organizes social co-presence and flows	Configurational, quantitative graph-based spatial analysis (Space Syntax).	Low – strong analytically but it treats space as a geometric configuration rather than a place filled with personal or cultural meaning.
The Production of Space	Lefebvre	(1991)	Place as socially produced through power relations	Architecture participates in perceived–conceived–lived triad	Marxist socio-spatial theory	Low – too abstract and political for integrative architectural synthesis
The Eyes of the Skin: Architecture and the Senses	Pallasmaa	(1996)	Place as embodied, multisensory experience	Architecture engages hapticity, atmosphere, memory	Phenomenological–embodied methodology	Moderate – enriches experience but not a formal place theory

technologically mediated experience (Verbeek, 2005, Ihde, 2012). Although these contemporary theories fall outside the historical and disciplinary scope of *how architecture shapes place*, they reinforce the need for a dynamic and experiential understanding of place, which the proposed synthesis of Pattern Language and Genius Loci seeks to support.

3.1. Links between the two theories

Interestingly, a number of studies in the literature have drawn links between the two theories through several conceptual angles. Consequently, this study traces their origins and run a focused comparison between them. Firstly, they were published in the late 1970s. On one hand, Norberg-Schulz practised architecture in the 1950s and 1960s when he became dissatisfied with the practice and as a result, started his architectural theorising (Curl, 2006). Consequently, he became among the first to attempt to translate Heidegger's phenomenological approach into architecture (Haddad, 2010). He became well-recognised as a central figure in the architectural phenomenology movement in Europe and the Americas. Moreover, he is *"the key theorist in elucidating the concept of genius loci, which he explores in several works"* (Jive´n & Larkham, 2003).

Alexander, on the other hand, designed and built over 200 buildings in five continents, many of which laid the groundwork for a new form of architecture that aspires for the future and has roots in ancient traditions (Project for Public Spaces, 2008). Hence, his role as a practitioner significantly influenced his books. Therefore, it could be argued that the authors' slightly different backgrounds have influenced the approaches of their theories; The Pattern Language is more scientific while the Genius Loci is less scientific and depends on the consciousness as experienced in places based on Norberg Schulz's own experience.

Secondly, links between the two theories included; Sime (1986), who argues that they could be considered as the early stages of academic maturity in the concept of place. On one hand, Norberg-Schulz mentioned 'place' explicitly and argued that the existential purpose of building (architecture) is to make a site become a place and to uncover the meanings potentially present in the environment (Norberg-Schulz, 1980). On the other hand, Alexander did not use the expression 'patterns of place' but he used the term 'place' frequently in several patterns. Moreover, Sime established an association which he considered as a potential strong link between the two theories; *"'The quality without a name' is undoubtedly akin to the 'spirit of place'"* (Sime, 1986, p. 52). In other words, the quality that Alexander could not find a name to describe, is the spirit of that place manifested in the architecture that concretises the place's natural characteristics and consequently its genius. These qualities aim to create a meaningful link between people and their places.

Seamon (1987) also found a link between the two theories as studies that focus on the notion of place and the designed built environment. He argues that Pattern Language is a work that can be fairly called an implicit phenomenology of design elements contributing to Genius Loci. They could be considered – together with other theories – as ways in which place can be explored phenomenologically. While the works of Norberg-Schulz (1980) and Relph (1976) indicate an explicit phenomenological exploration of places, the works of Alexander et al. (1977), Alexander (1979, 2002), on the notion of "Pattern Language" could be considered as an implicit phenomenology of design elements which contribute to a sense of place (Seamon, 1987).

Later, Relph also found a link between the two theories in considering them as romantic visions. He argues: *"This may be an impossibly romantic vision both of the past and for the future, but it persists, nonetheless. It can be recognised in Gordon Cullen's writing on townscape (Cullen, 1961) in Christian Norberg-Schulz's account of genius loci (Norberg-Schulz, 1980), in Christopher Alexander's "Pattern Language" (Alexander et al. 1977; Alexander, 1979) and in Kevin Lynch's place utopia (Lynch, 1960)"* (Relph, 1993, p. 25).

These romantic visions develop from people's familiarity with their places and that they feel a responsibility for maintaining the nameless qualities of these places with their intricate townscape and distinctive architectural styles (Relph, 1993). Relph (1993, p. 25) then stresses that: *"these ideals and images are valuable for a modern world rapidly being overwhelmed by the renitent landscapes of rationalism"*. Accordingly, he emphasises that the importance of these theories stems from their ability to achieve not only a sense of place – which the current multinational corporation and universal planning practices consider as somewhat nostalgic and obsolete – but also a reasonable quality of communal life and psychological well-being (Relph, 1993).

To conclude this section, this research agrees with Dovey (1990) and Seamon (2007) that there is a link between Pattern Language and Phenomenology, and with Relph (1976, 2007), Sime (1986), (Seamon, 1987) and (Relph, 1993) who linked the Pattern Language with Norberg-Schulz's phenomenology of place. These links between the two theories justified their utilisation in interpreting existing places as well as planning for the creation of their future architecture with successful links to their surrounding places. Moreover, these links support the theoretical review conducted earlier in this paper and resulted on the selection of those two theories as representative theories to be synthesised to study place and its architecture more comprehensively. Their convergence in the literature therefore justifies their synthesis in this research.

3.2. Genius Loci and the phenomenology of place

Norberg-Schulz's theory of the Genius Loci defines the architectural and urban character of a place, through the experience of that place (Norberg-Schulz, 1980). Norberg-Schulz illustrates his theory through descriptive

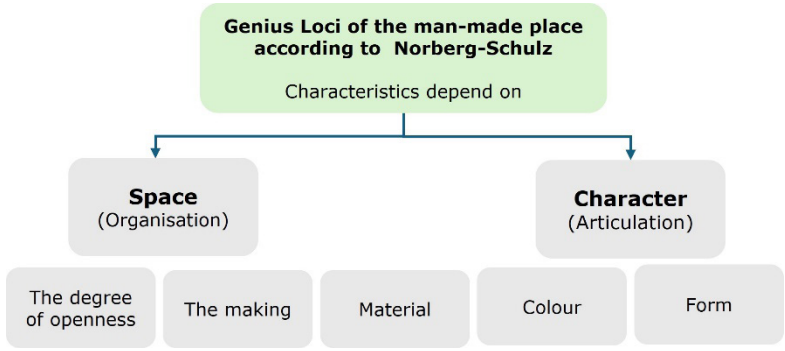


Figure 2. Characteristics of the genius loci of a man-made place according to Norberg-Schulz (1980)

and photographic narratives of cities, which he believes have reflected the unique qualities of places through his experience in those places[1]. He argues that architecture should direct itself to the "meanings" as well as the physical properties of the environment. He classifies his theory into two distinct types: *"Natural place"* and *"Man-made place"* (Norberg-Schulz, 1980). While the natural place is the natural landscape, the man-made place, on the other hand, is the architecture and urban places that visualise, complement and symbolise man's understanding of his environment, have structure and embody meanings.

Within this, Norberg-Schulz introduces the concept of genius loci which he defines as the *"guardian spirit"* of a physical location that is *"determined by what is visualised, complemented, symbolised or gathered"* (Norberg-Schulz, 1980, p. 58). Haddad (2010) emphasised that Genius Loci was perhaps the most influential of Norberg-Schulz's writings. This is because *"it came out at a time when questions of meaning, history, and mythology assumed greater importance in architectural discourse, in a post-modernist climate that gave back credibility to these themes"* (Haddad, 2010, p. 92). By this term, Norberg-Schulz aims to stress that it is the role of architecture to concretise the genius loci which is achieved by means of buildings that gather the properties of the place and bring them close to the man (Norberg-Schulz, 1980).

Moreover, Jive'n and Larkham (2003, p. 7) commented on the Genius Loci as a term that represents "the sense people have of a place, understood as the sum of all physical as well as symbolic values in nature and the human environment". They emphasise that Norberg-Schulz's analyses range from visual impressions of the built environment to the lived or experienced realm by users of that place. Hence, they captured four thematic levels that are recognised in Norberg-Schulz's description of the genius loci and his use of the concept as: "the topography of the earth's surface; the cosmological light conditions and the sky as natural conditions, buildings and the symbolic and existential meanings in the cultural landscape" (Jive'n & Larkham, 2003, p. 7).

Moreover, Norberg-Schulz compares the genius loci of both the vernacular man-made place and the urban architecture place. He argues that, while the man-made genius loci of traditional vernacular architecture usually corresponds closely to that of the natural place, the genius loci of urban architecture should be more comprehensive (Norberg-Schulz, 1980). Unfortunately, nowadays, the direct relationship between the natural environment and urban settlements and towns is weakened or almost lost and many urban forms are brought together with roots in other localities. To be comprehensive, it has to comprise the spirit of the locality to get roots, but at the same time, it should gather contents of general interest which have their roots elsewhere and have been moved by means of symbolisation (Norberg-Schulz, 1980).

Norberg-Schulz then summarises the genius of a man-made place arguing that: it *"depends on how these places are in terms of space and character, that is, in terms of organisation and articulation"* (Norberg-Schulz, 1980, p. 69), Consequently, he identified what could define space and character with the following:

- Material and colour
- The degree of "openness"; the inside-outside relationship that manifests in examples such as zones of transition between the inside world and the outside place of either natural or man-made environment as well as openings.
- The making as an aspect of articulation that relates to the kind of construction used.
- Form of the building (Norberg-Schulz, 1980,p. 66) as summarised in (Figure 2).

Nonetheless, Norberg-Schulz stresses that the distinct character of a man-made place is realised when it allows for human identification. However, he highlights that the natural environment, alone, does not always satisfy the basic needs of identification. The man should add features that might, for example, reflect certain messages – that could stem from the social, cultural or psychological way of living– to ultimately identify his architecture and craft it as an artificial world of his own (Norberg-Schulz, 1980).

[1] Norberg-Schulz could be considered within the first to attempt to translate this phenomenological approach in architecture (Haddad, 2010). He achieved this based on the philosophical writings of Heidegger and consequently *"espoused a theory of place which emphasizes the quality of a person's existential existence or 'being in the world'"* (Sime, 1986, p. 51).

Other theorists such as (Relph, 1976) identified the idea of Genius Loci, just before Norberg-Schulz, and he called it the spirit of place. He described it as the singular qualities of a particular landscape or environment that infuse it with a unique ambience and character. Relph, furthermore, elaborates that: *"the spirit of a place involves topography and appearance, economic functions and social activities, and particular significance deriving from past events and present situations—but it differs from the simple summation of these. Spirit of place can persist in spite of profound changes in the basic components of identity"* (Relph, 1976, p.48-49) . Relph therefore, considers it as an attribute or a component of the identity of places that serves to link and embrace all other more tangible components (Relph, 2007). Hence, sense of place i.e., genius loci is a lived quality that radiates from the physical environment toward the experiencer (Seamon, 2012). From these latter specific points came the interest of including this theory here.

3.3. Scholars' perspectives on the Genius Loci and the gap within the theory

Sime (1986, p. 52) critiqued the very subjective phenomenological narration of Norberg-Schulz and his description of the genius loci of three cities: Khartoum, Roma and Prague. He attributed this criticism to three reasons. Firstly: *"features of the physical environment are cited as aspects of the environment which give 'meaning' to the places and are viewed favourably by the author"*. They were shown as examples of "Romantic Architecture" which he defines as architecture that is *"fantastic and mysterious but also intimate and idyllic"* (Norberg-Schulz, 1980, p.69).

Secondly, there was no clear reference to the behaviour and experiences of the people who inhabit and visit these places or evidence that they would necessarily view them in the same way as Norberg-Schulz did. And thirdly, because *"architecture and the "creation of places" is conceived of as an artistic endeavour and not one which by definition can or should be studied scientifically"* (Norberg-Schulz, 1890). It could be argued that this artistic way relates to the first reason in that these romantic man-made places instigated the astonishment in Norberg-Schulz – probably relating to him being an outsider- in experiencing something different from his Nordic architecture in his hometown. Hence resulted the subjectivity in narrating features favourably and away from any scientific reference, including, such as the use of architectural drawings. Haddad (2010, p. 93) agrees with this latter point and explains that this might be because Norberg-Schulz's religious sympathies played an influential role in the formation of his ideas and *"thus, it is not only landscape in general that stimulates a phenomenological understanding of the world, but specific sanctuaries within the landscape that create a favourable condition for "intimate dwelling"*. or *"sub-places"*.

Popovic (2016, p. 7) also critiqued the theory, emphasising that it is *"largely based in romanticism with an integral sympathy towards pre-industrial life"*. Hence, one could argue that in a contemporary setting that searches for maturation in the technological globalised era, these theories may appear invalid. Yet, *"it acts as a reminder of the importance of sensitivity and soulful contemplation throughout the act of city making"* (Popovic, 2016, p. 7).

This paper agrees with Sime (1986) and Seamon (2012) in rejecting the subjectivist interpretation of the genius loci and the emotional, artistic and romantic interpretation of Norberg-Schulz. It rather, suggests that in order to describe this quality of the built environment it needs to be integrated with another theory to gain an experiential narration that is not only subjective but also objective and more inclusive.

3.4. The Pattern Language

The Pattern Language theory investigates and supports the link between architecture and its surrounding (Alexander et al., 1977). It is a theory that provides a language of regional, urban and architectural patterns that is proposed to be used as a design tool or a reaffirmation of a tradition of architectural design (Sime, 1986). This tradition is a quality that endows places with unique characters. Alexander named this quality "the timeless way" or a "quality without a name". He argues that *"it is not possible to create great buildings or great towns, beautiful places, places where you feel yourself … except by following this way"* (Alexander, 1979, p. 7). He thus uses the analogy of language to define the patterns that are not only physical but also experiential which ultimately lead to the creation of places (Sime, 1986).

The essence of the Pattern Language Theory lies in the sequence and order of the patterns as each pattern is connected to other patterns larger and smaller than it. The patterns are ordered from regions and towns, then neighbourhoods, clusters of buildings, buildings, rooms and alcoves to the details of construction. Moreover, this language is written as a design tool that calls for using patterns in this sequence. It argues that in order to build a pattern or group it cannot be built in isolation, but it should ultimately repair the world around it and enhance the place it is being introduced or built in. The authors highlighted their patterns as continuously evolving, tentative and consequently, they should be considered as free as possible and more of design hypotheses.

Unfortunately, the contemporary architectural languages of today seem to pay less attention to nature, local climate and people of the place. This is why Alexander et al. (1977, p. 16) described them as *"so brutal, and so fragmented"* languages. Therefore, they emphasise that the essence of their patterns is: *"archetypal – so deep, so deeply rooted in the nature of things that it seems likely that they will be a part of human nature, and human action, as much in five hundred years, as they are today"* (Alexander et al., 1977, p. 17) . Pattern Language is thus, the archetypal core of all possible pattern languages because it can make people feel alive and human. Alexander (1979, p. 19) defines it as: *"There is a central quality which is the root criterion of life and spirit in a man, a town, a building, or a wilderness. This quality is objective and precise, but it cannot be*

named". Additionally, Salingaros (2000) explained it as the quality that links to human beings either visually, emotionally, or functionally and facilitates their interactions and activities. Thereafter, Alexander et al. (1977) stresses that patterns give a certain building, or a certain town, its character. They are the features that one remembers about a place as they are the recurrent characteristic features or qualities. Alexander, thus, labels these qualities as patterns: *"The qualities in any environment which give it the character you like it for –are its patterns"* (Alexander et al., 1977, p. 96). That is, *"of course, the patterns vary from place to place, from culture to culture, from age to age; they are all manmade, they all depend on culture"* (Alexander et al., 1977, p. 100). Hence the relevance of the Pattern Language to this research comes at this point where it is suggested to act as a theoretical framework to investigate patterns of places and their architecture and to suggest improvements to their existing pattern languages.

3.5. Scholars' perspectives on the Pattern Language and the gap within the theory

The Pattern Language theory is a theory that was faced with wide criticism and opposition. For example, Protzon (1978, p. 192) argues that: *"By staying within the pattern language you will never be able to produce a design that is radically different from the design of any other pattern language user, no matter what the personal desires or what the local conditions are"*. Another criticism was explained by Bhatt (2010) who argues that it is a theory that is being rejected in the academy because of considering it as deterministic and authoritarian in reducing the design process into more of a diagrammatic language that focuses on pleasure, comfort and ease. However, Salingaros (2000) argues that patterns are too radical and not easily incorporated into contemporary design and planning and that the theory ignores almost all of what is considered important architecture in the twentieth century. Nevertheless, Salingaros highlights that these problems are trivial compared to the important message it offers; that is linking human beings with their built environments.

Other scholars have found a link between Pattern Language and Phenomenology, which re-emphasises the choice of the two theories in this paper (Figure 3). Dovey (1990, p. 4) argues: *"The epistemological base of the pattern language is implicitly phenomenological. The patterns are derived from the lived-world of everyday experience and they gain their power… not by being proven empirically correct, but by showing us a direct connection between the pattern and our experience of the built environment"* . Moreover, Dovey highlighted what he called the *'enemies of the Pattern Language'* and defined them as the current rising aspects of contemporary places that are witnessing the contemporary paradigm shift. Some of the examples of these enemies that are worth mentioning here are Capitalism and Individualism. Dovey (1990, p. 4) argues that: *"Alexander's work runs directly in contrary to many aspects of the capitalist, consumerist and individualistic societies in which we live. Many of the patterns imply a kind of democratic, participatory socialism which is far removed from current prospects in the east or the west"*.

In addition to the above criticisms, this paper adds another criticism that the Pattern Language focuses mainly on spatial patterns and somewhat excludes form articulation patterns. Apparently, for the authors, the form is considered a by-product that will result from following the sequence of the patterns, the site and the designer's instincts (Alexander et al., 1977). Thereafter, they call for working with the people from the site who will be using the place, and by following all that, the form will grow gradually beginning as something very loose and amorphous till becoming more complicated and more refined. But an important question to be raised here is that: *Is this level of complication and refinement enough to endow the place with a certain unique form or character?*

The answer to this question, according to the theory, is certainly positive as Alexander and his colleagues suggest patterns in the scale of construction. They propose that those construction patterns present a physical attitude to construction that is intended *"to provide an alternative to the technocratic and rigid ways of building that have become the legacy of the machine age and modern architecture"* (Alexander et al., 1977, p. 936). This rigid way of building stems from the standardisation and globalisation of architecture from the overall scale of the building to the scale of construction details. Therefore, the authors claim that construction patterns will lead to unique buildings that are tailored to their place and endow them with a unique character. However, it could be argued that this argument is mostly valid in vernacular and regionalist architecture, as the way of construction always stems from the place and reflects the available natural resources and means. However, it is different from globalised and standardised architecture, where everything is ready-made, prefabricated and applied everywhere. Consequently, it is important to highlight here that the details of construction, alone, are unlikely to fill the gap in the Pattern Language theory – about the exclusion of form patterns and focusing merely on spatial patterns.

On the other hand, other scholars have praised the theory. For example, Bhatt (2010, p. 712) stressed that patterns will help in creating *"a system of knowledge that would help to blur the distance between professional designers and every-day users"*. This is especially important in the current time as *"according to Alexander, the rise of modern aesthetic and a specialised architectural profession had contributed to the failure of modern architecture to relate to the deep psychological needs of users"* (Bhatt, 2010)[2]. Moreover, Bhatt argues that the importance of the Pattern Language lies in its recognition that the patterns allow for *"unconscious*

[2] Even later theories coincide with Alexander in criticising Modernism such as Kenneth Frampton's theory of Critical Regionalism, which highlights the importance of appreciating the local context with its traditional knowledge, cultural meanings, topography, climate and tactile qualities (Frampton, 1983).

cognitive relationships with space" which "aims to bring conscious awareness to the patterns that human beings unconsciously relate to space, providing a practical language for everyday users" (Bhatt, 2010, pp. 711–712). This agrees with Park (2015, p. 593) who emphasises that Pattern Language: *"had focused on unconscious, intuitive, and user-friendly design processes to create 'good places'"*. Or what Bhatt (2010) explained as a long-term benefit for builders and contractors who use it mainly as a self-help practice.

Additionally, Bhat (2014) has appreciated what Alexander, and his colleagues have achieved in the Pattern Language theory in that they realized the complexity in the built environment. This was also emphasised by Salingaros and Mehaffy (2006), who emphasised that, their combined architectural and physical sciences backgrounds have allowed for the ability to see beyond what individual disciplinary methodologies can afford. They were able to unearth mathematical principles of unique and successful designs that repeatedly appear in buildings that have stood the test of time, weather and, taste (Alexander, 2002; Salingaros & Mehaffy 2006). However, the essence of these principles is that buildings are not just *"mechanical entities with a height, area, volume, windows, and doors"*, they are very complex structures with many spatial scales which has *"a communicative effect on human perception"* (Bhat, 2014, p. 9).

4. Synthesising the two theories

With the identified link between the two theories both through the theoretical review and from notable academic sources, the present paper strengthens this link. The paper proposes a theoretical synthesis of these two theories arguing for creating an *interpretive pattern language tool* as a tool that utilises patterns for interpreting existing places and their architecture, through the experience of users of those places (Figure 3). Consequently, a focused, theory-to-theory comparison is conducted. This involved examining each theory's primary texts and extracting the conceptual, methodological, and ontological assumptions that underpin them. Through this direct comparison, four unique and deep points of differences emerged that are not only specific to these two theories but have also paved the way for their synthesis in one theoretical tool. These points are as follows:

1. The points of departure

The two theories differ in their points of departure towards the way the spirit of place and its architectural formation are achieved. Norberg-Schulz argues that architectural formation stems from the natural characteristics of the place and its climate. Whereas Pattern Language calls for a design approach that does not pay attention to the external form as it considers it to be a by-product that results from selecting suitable spatial patterns. However, it highlights that those patterns are being invented by culture and transmitted by culture and that they reflect people's patterns of living and events which are all anchored in space. Hence, the place's genius loci is based on mainly spatial patterns and the events that happen there.

2. The sequence of narrating the patterns/features

By comparing the two theories, Pattern Language demonstrates very clearly that its essence lies in following

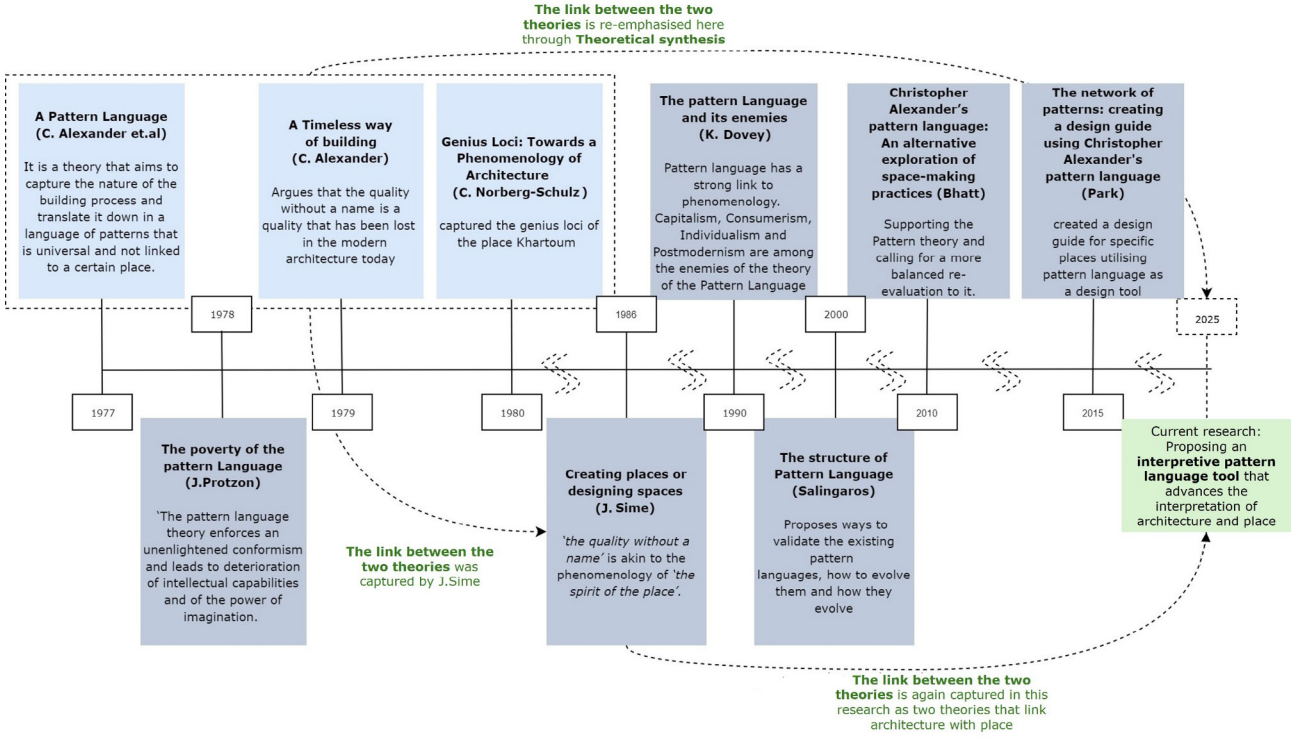


Figure 3. A Chronological timeline reviewing the various writings about The Pattern Language theory and the Genius Loci, then highlighting the link between the two theories and highlights their synthesis in the current research (source: adapted from (Hamid, 2020))

the sequence of the patterns and the importance of understanding the links and relationships within the network of patterns (Park, 2015), The theory argues that in order to build a project, it cannot be built in isolation but should also repair the world around it through following the sequence of patterns (Alexander et al., 1977). On the other hand, the features/patterns that endow certain places with unique qualities in Norberg-Schulz's phenomenology of the Genius Loci of a place did not follow a certain sequence. Rather, those features were captured freely depending on the patterns that the eyes of the perceiver capture while walking in the streets of a certain part of the city. The Genius Loci of that part of the city sometimes incorporated an implicit categorisation of patterns that were narrated gradually from the natural characteristics of the place to the urban spatial patterns to the transitional patterns and finally to the architectural form patterns (Hamid, et al., 2022). Ultimately, those captured patterns are the place's unique qualities.

3. The essence of the architecture

In considering the essence of the architecture, the way that Norberg-Schulz described it was more focused on the visual form articulation, i.e., form patterns. Internal spatial patterns were not documented and were rarely addressed in his experience reflected in the absence of the use of plans and two-dimensional diagrams. Yet, he emphasised both form (articulation) and space (organisation) that are exposed and visualised as the two main determinants of the place's genius (Figure 2).

As for the Pattern Language theory, and because it was put as a design tool, it described the essence of architecture more systematically, including patterns starting from the group of buildings together to the scale of construction. However, it is noticeable that form patterns were marginalised and considered as a by-product that results from the realisation of other urban and architectural spatial patterns.

4. Scientific vs romantic

While Pattern language seems to provide a clear and more tangible structure to design in any place, Norberg-Schulz's experience of the genius loci provides a more hermeneutic experiential interpretation of the built environment. Therefore, Pattern Language could be regarded as more scientific and more objective compared to Norberg-Schulz's experience, which is more romantic and artistic.

4.1. The synthesis and the formation of the interpretive pattern Language tool

Those previous points have paved the way to synthesise the two theories in an attempt to fill the gap within each. Hence, by theoretically abstracting this synthesis, it was possible to form the interpretive pattern language tool which aims to facilitate interpreting the architecture and place of existing built environments.

In comparing the pattern language tool with the interpretive pattern language tool, it could be argued that Alexander's theory focuses on spatial patterns where the community life flourishes and prevails. On the other hand, the interpretive tool suggests paying attention not only to spatial patterns but also to the physical form patterns. This is because physical patterns endow the place with its visual characteristics and are part and parcel of people's learning and cognition. They link people emotionally and physiologically to their places and result in either negative or positive place attachments depending on the quality of those characteristics. Moreover, the Pattern Language was originally proposed as a design tool for designing new places and not for an assessment of existing or even problematic places. However, those existing places need to be re-assessed and improved before designing new ones. This is because the act of assessing problematic places is as equally important as any new designs. Hence, this assessment could be regarded as a stage that precedes the design of new patterns. Thus, the utilisation of the interpretive tool -is proposed here- to provide this assessment (Table 2).

At this specific point, comes the role of Norberg-Schulz's phenomenological experience of the place and the identification of its genius loci as the experienced patterns are then identified and listed, then assessed, analysed, discussed, and categorised according to the phenomenological experience of users of the place. In this way, the essence of the tool is the result of the synthesis; while the Pattern Language gives the idea of patterns, the phenomenological experience of Genius Loci provides the experience of existing places. The latter, however, highlights rich interpretations and meanings that result from people's experiences such as cultural, historical, economic, social or political references that users of the place will continuously relate to or reflect an attachment to. Thus, in interpreting certain built environments, the reader/ interpreter/ perceiver will not follow any sequence, his/her interpretation will unconsciously follow his/her experience, background, culture and if s/he has a place attachment to the place being interpreted.

This paper, thus, builds on an earlier empirical study (Hamid et al., 2022) which extracted the local pattern language of Khartoum's city centre /Sudan through the lived experiences of users of the place whose narratives revealed detailed experiential interpretations of the city centre's patterns, memories, and social–cultural realities demonstrating how participants experiential narratives within the city could reveal the place's patterns.

Within this, a thematic analysis on the collected data from users of a place were coded then categorised into themes. Thereafter, physical patterns of each theme were listed, and their interrelationships mapped out and discussed. The outcome of this interpretation has been summarised in lists of the following:

- Negative patterns that instigate feelings of shame, hate, sadness… etc.
- Positive patterns that instigate feelings of pride, interest, welcome, place attachment, uniqueness… etc.
- Representative patterns that represent the image of a place, and its unique identity.

Table 2. A comparison between the application of Pattern Language theory as a design tool and the resultant interpretive tool based on the theoretical synthesis (source: the authors based on (Hamid, 2020))

Criteria for comparison	Alexander's Pattern Language	+	Norberg- Schulz's phenomenological experience of the Genius Loci of places	→	The result of the synthesis: Application of the interpretive pattern language tool in a specific place
Universality/ locality of the language	Universal pattern language		The interpretation of place through the experience of that place, from the point of view of the perceiver.		Local (place-specific) pattern language
Type of theory	A design theory that provides suggestive diagrams as elements for a practical open-ended language that allows one to actively engage in the design process (Bhatt, 2010).				An interpretive tool that interprets architecture and place of existing built environments through the experience of its users.
Type of diagrams utilised in the theory	Suggestive design diagrams in three possible layers: that of a problem, solution, and construction, to provide a common vocabulary to express key concepts and optimum solutions				Diagrams of a real interpretation of an existing built environment.
Applicability	Practical open-ended language				A practical tool that interprets and then guides the shaping of architecture and place.
Focus	Focuses on spatial patterns		Form (articulation) and space (organisation) as the two main determinants of the place's genius.		Patterns of the whole place including both physical and spatial patterns.
Aim	Aim: *"to bring conscious awareness of the patterns through which human beings unconsciously relate to space"* (Bhatt, 2010, p.712).				Aim: provide conscious awareness of the existing repeated patterns through which people, architects or planners consciously or unconsciously apply in the built environment
Impact on users of the place	Protzon (1978) argues that by staying within the pattern language designers will never be able to produce a design that is profoundly different from the design of any other pattern language user, no matter what the personal desires or what the local conditions are.				Relates to the deep psychological needs of users of the place by highlighting cultural, historical, economic, social, or political references that they will either reflect an attachment to or detachment from + Extracting the places' local pattern language. Hence, is likely to produce unique designs tailored to their site conditions and users' visions.
Final format	Formats the patterns in three possible layers: that of a problem, solution, and construction, in an attempt to provide a common vocabulary to express key concepts and optimum solutions				Formats the actions for the patterns into: ▪ *Absent patterns* ▪ *Patterns that require emphasis* ▪ *Patterns that need to be re-evaluated* ▪ *New positive patterns that need to be added.*

Within this, it is worth stressing that the evaluation of patterns as positive and negative patterns should not be based on the individual impressions of users of the place, but on the recurring themes that are to be identified across the modes of study (such as focus groups/ or interviews). Additionally, triangulation between different users of the place including planners, architects, general public...etc. will ensure that only patterns that were associated with particular experiences are classified as such. Decisions about whether a pattern requires emphasis or re-evaluation are to be similarly based on cross-group identification. Through this, rigorous intersubjective validation

is achieved. The recommendations derived from this empirical study suggested that the identified lists of patterns shall pave the way for the design stage and consequently, certain actions are proposed as follows:

- Define absent patterns that need to be established.
- Define patterns that require emphasis.
- Defining patterns that need to be re-evaluated according to the systematic triangulation from users' experiences and according to changes in socio-cultural traditions and/or technological advances.
- Define new positive patterns that need to be added to improve the place.

However, it is worth stressing that this empirical work did not articulate the role of Genius Loci or the experiential theoretical foundations of place within its methodological framework. This paper, therefore, complements it by developing the theoretical framework that was previously implicit. Hence, the theoretical synthesis between the two theories is proposed and the resulting interpretive pattern language tool emphasises that the experiential, pattern extraction, and the identification of positive and negative patterns can first be understood conceptually, thereby providing a more grounded basis for guiding future design decisions of patterns. The following table thus, shows the stronger potentials of combining the Pattern Language, previously, as a design tool, with Norberg-Schulz's phenomenological experience of the Genius Loci of as follows:

4.2. Contribution to both theories

Evidently, this synthesis contributes to both theories and helps to fill gaps within each of them. As for Norberg-Schulz's theory, the interpretive tool provides a new way to interpret places more scientifically and objectively in patterns, compared to Norberg-Schulz's mere artistic and emotional approach.

On the other hand, the proposed interpretive tool addresses a gap within the Pattern Language theory, which assumes that all designed places and buildings should follow standard universal patterns in order to achieve the *"timeless quality"*. The tool argues that endowing all places with the same universal patterns will erode the sense of each place's unique identity. This is because the way that a pattern will be designed to suit a certain place doesn't mean they will be designed in the same way in another place as many factors will influence those patterns, such as: climate, nature, topography and culture. Hence, the tool introduces a new factor, that is the experience of place, through which existing patterns are to be extracted by the place's users. These extracted patterns are place-specific and are full of rich interpretations including meanings, memories, political, social, and cultural associations.

Moreover, the Pattern Language theory avoids mentioning any kind of assessment of existing patterns for existing built environments and focuses only on the design of new patterns. Hence, it needs to be updated and developed in a flexible way that considers the particularities

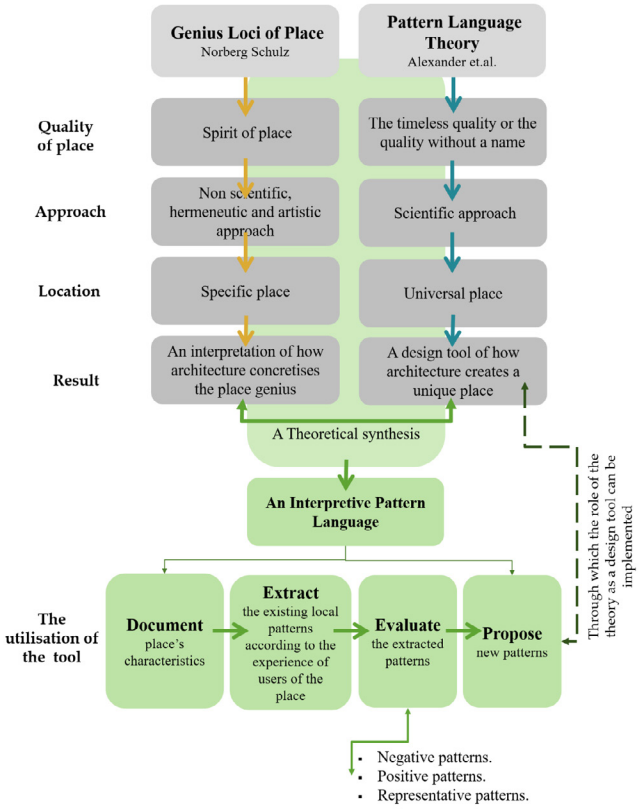


Figure 4. The synthesis between the two theories and the development of the research's abstract theory: the interpretive pattern language tool (Source: the authors, adapted from (Hamid, 2020))

of each place as well as the importance of assessing existing patterns before adding new ones. Thus, the suggested use of the tool considers the properties that are specific to the place being studied. Thereafter, applying this tool could start by evaluating the existing patterns according to users' experiences and examining the extent to which patterns reflect the spirit of the place and whether they have succeeded in reflecting its invariant features (Hamid et al., 2022). Finally, introducing new patterns that can enrich the place with a *timeless* quality from the original theory can be achieved (Figure 4).

4.3. Advantages of the interpretive pattern language tool

- The first advantage of the interpretive pattern language tool is that it facilitates a comparison between patterns through different stages of city development. This provides the possibility of tracking the development of patterns and their transformation and the change of their priorities through time.
- Secondly, it facilitates researching and interpreting the existing patterns and emphasises that the design of newly added patterns should be based on or influenced by the findings from that interpretation.
- Thirdly, utilising the tool results in an 'experiential interpretation' of the place that is influenced

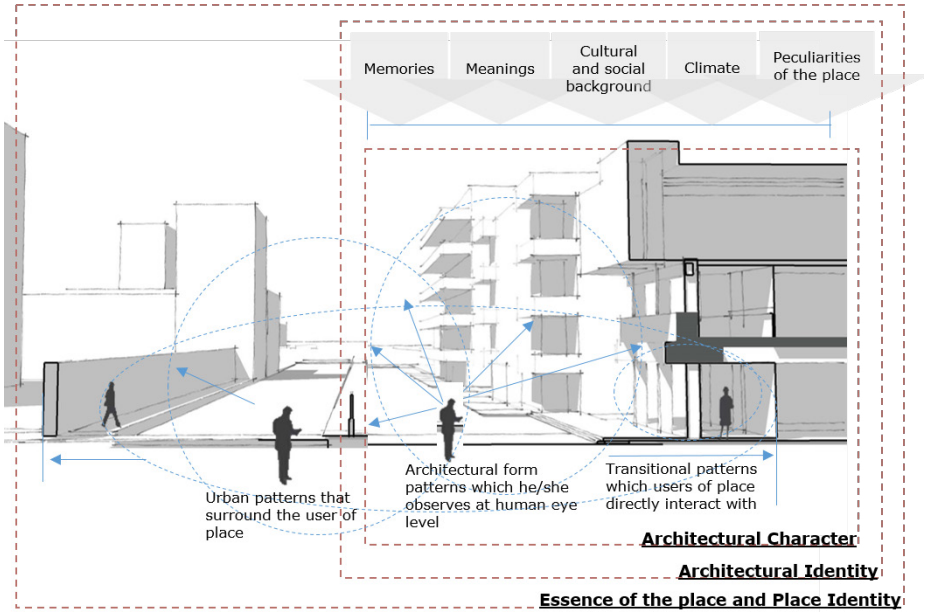


Figure 5. A diagram including the definitions of architectural character, architectural identity, and the essence of the place (genius loci) (source: (Hamid, 2020))

by participants' social, and cultural backgrounds, memories, personal meanings, previous knowledge about the place's history, personal experiences and any common pervasive perception about the place. In this regard, subjectivity inherent in the experiential interpretation is acknowledged as a methodological limitation, but also as an inevitable feature that is conceptually grounded within phenomenological understandings of place.

- Fourthly and theoretically, the tool contributes to the existing knowledge of theories that link place with architecture. Through this utilisation, a richer analysis that provides both an objective interpretation (patterns) and a subjective 'experiential interpretation' of the place is gained. Collectively, these interpretations will provide definitions for many aspects of the place as follows:
  - Architectural character: The specific physical qualities that are experienced externally, expressed through patterns that describe form, materiality, boundaries and transitions (i.e., architectural and transitional patterns).
  - Architectural identity: The experiential meaning that results when architectural character intersects with people's social and cultural backgrounds, climate and peculiarities of the place. It becomes evident through patterns that capture how people interpret these physical features to their own backgrounds and lived context.
  - The Place identity: The overall integrated experiential understanding of the built environment, expressed through natural, urban, transitional and architectural patterns, coupled with the subjective 'experiential interpretation of the place (Figure 5). The essence of the place (genius loci), however, will be the overall perceived ambience as a result of the interplay between all these patterns categories.
- Fifthly, it is possible to advance the interpretation of a place by stretching the realms of utilising the tool through exploring the patterns in a more positive approach by discovering the distinctive patterns of a place. Then, identifying the main domains of distinctiveness that maintain creating an architecture that is unique and concretises the place.

4.4. Practical future application of the interpretive pattern language tool:

In order to practically apply the tool in a certain place, it is suggested that the following steps have to be followed in a systematic approach as follows:

- Documentation: The first step is to collect relevant data on the peculiarities of the place such as its natural features and climate, as well as its experiential aspects such as culture, social aspects, tangible and intangible heritage and historical values, in addition to all sensory qualities of the built environment.
- Extracting local existing patterns in the target area including their forms, materials and spatial arrangements. This stage is to be conducted through surveys and focus groups of users of the place, as well as from historical records, photographs and available documentation (Hamid, et al., 2022).
- Evaluation: This process shall include several steps:
- Pattern classification: classify the extracted patterns into different categories such as scale ranging from

urban patterns to transitional patterns to architectural patterns (Hamid, et al., 2022). They could also be categorised based on their impact on the built environment to positive patterns, negative patterns, patterns that require emphasis and patterns that need to be re-evaluated (Table 2).

- Pattern interpretation: The interpretive aspect of the tool becomes beneficial at this stage as the improvement of the existing patterns, or the subsequent design of newly added patterns are to be based on and ideally influenced by the findings from interpreting the existing patterns in that place.
- Patterns' relationships: After classification, it is important to identify relationships between the extracted patterns in the studied place. This may include categorising them into strong/weak relations or positive/negative impact relations and consequently mapping out how they are impacting each other. This can further be expanded in as a web of networks that explain how patterns cluster and connect (Park, 2015).
- Design guidelines: Based on the application of the interpretive pattern language tool, findings are to be proposed into a set of guidelines or design principles. These guidelines shall provide a framework for future designs and planning interventions to propose new patterns that are sensitive to the existing patterns and the contextual architectural and urban identity. They offer insights into preserving, adapting, or creating new patterns that align with the environmental, cultural and social aspirations of the place and its people.

5. Conclusions

This research has critically examined the interpretation of architecture and place in existing places. It achieved this through employing a theoretical synthesis of Norberg-Schulz's theory of the Genius Loci of places and Christopher Alexander's Pattern Language. The result of this synthesis, as the research's main theoretical contribution, is an *interpretive pattern language tool that* has been developed to analyse and understand the existing architectural and urban patterns in a place. This analysis is to include documenting, extracting then evaluating and interpreting the recurring patterns within the built environment. The result of this interpretation is consequently expected to offer insights and recommendations for more improved patterns to be introduced. Additionally, the interpretative role of the tool will provide definitions for many aspects of the place such as its architectural character, architectural and place identity and *genius loci*. By following this proposed systematic approach, the tool will enable researchers, architects, and urban planners to understand the existing architectural and urban fabric and inform their future design decisions for improved patterns that are contextually responsive and will enhance the place's experiential quality.

Finally, the research contributes not only to the theories of Genius Loci and Pattern Language but also to their relevance in contemporary architectural theory and practice.

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