

# Impact of Authoritative Elements on Placemaking in Architecture

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**Abstract** The understanding in the differentiation between spaces and places is vital in architecture. One deals with the physical dimensions that constitute the physical form and boundary while the other is an edifice that contributes to the narrative of the user and is people-centric. Spaces and Places are not mutually exclusive owing to the fact that any place intrinsically stems from a space. However the components that define each of these phenomena differ in intent during their creation. All spaces employ the use of metrics to generate lines, planes, volumes. Well-designed spaces combine these tangible metrics with creativity and a keen focus on aesthetics that bear positively on the physical manifestation and composition of these forms. Places go beyond creating purely aesthetic spaces and engage the user/s in a dynamic dialogue that helps the user forge an emotional and/or spiritual connect to the place. There are several elements which aid in the creation of such place. Of these, authoritative elements may be considered to lend authenticity to design. This paper tests the hypothesis that authoritative elements are key influencers of Placemaking in Architecture.

**Keywords** Architecture, Authoritative Elements, History, Typology, Context, Placemaking

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## 1. Introduction

There have been endless theories regarding what

differentiates places and spaces. A famous conundrum was put forth by Nikolaus Pevsner [1], wherein he stated, "A bicycle shed is a building; Lincoln Cathedral is a work of architecture." That is to say the Lincoln cathedral goes beyond the mere function of housing worshippers and elicits a certain emotional and spiritual response which is in stark comparison to the bicycle shed whose sole purpose is that of utility. As architecture is understood today to be constituted of both the built and the un-built, the above statement may be paraphrased as 'A bicycle shed is a space while the Lincoln cathedral is a place'. At the core of architecture lies its ability to strike a chord with its users to result in places. Therefore places are the essence of architecture and Placemaking is quintessential to its soul. There are several elements that contribute to Placemaking in architecture, adding to the meaning of an edifice that goes beyond its primary function of shelter to connect and engage at different levels with the user, subsequently implying that Architecture is for people - to use physically and to experience holistically. Extensive literature study of the writings of different theorists in Architecture and research on the topic of the components of Architecture has facilitated the consolidation of these elements. To further a clear understanding of the scope of these elements and their impact on architecture, they have been broadly classified as Authoritative Elements and Modifying Elements. Figure 1 illustrates Places as the resultant creation when Spaces work in conjunction with Modifying Elements and Authoritative Elements.

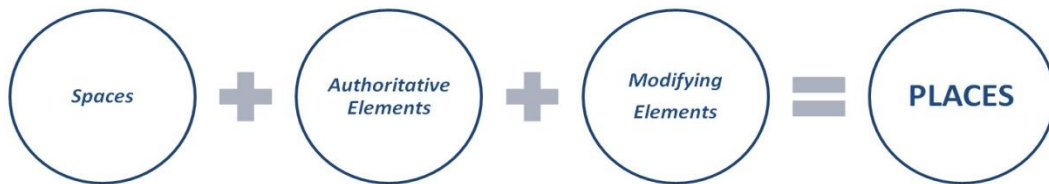
This was demonstrated through an exercise carried out for the students of Architecture in the History of

Architecture classroom where the aim of the exercise was to prove the converse, that is to say that when a place is stripped of its respective Authoritative and Modifying Elements, which are basically the humanistic components of architecture, the consequence is an aesthetic sculpture. Students were asked to analyze historic monuments through models, charts and sketches. Physical attributes in terms of geometry, principles of composition and organization were retained. However, cultural factors were distilled and peeled away so that the monuments were stripped of their meaning and context in time. Now the students were asked to reassemble the monuments as a model whose aesthetic composition was derived from the physical attributes of the monuments sans the cultural components.

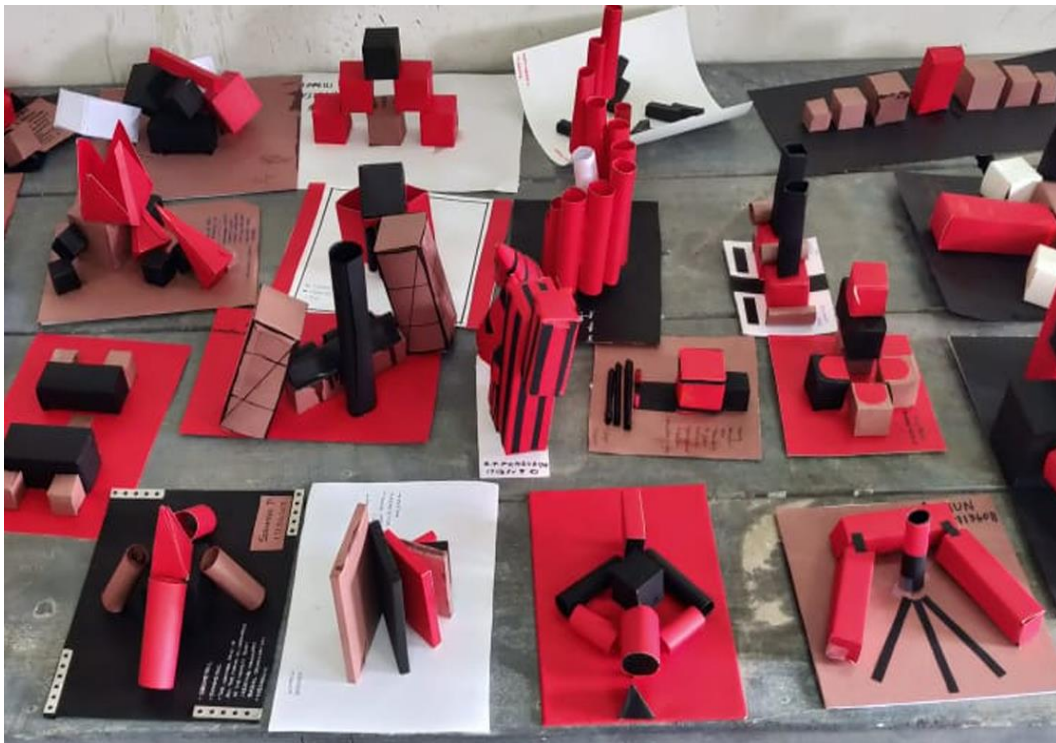
The models which resulted, albeit aesthetic in appearance, were impassive, non-engaging and devoid of meaning, as Figure 2 illustrates. This exercise aided the students in grasping the fundamental truth of Architectural design - it is vital that elements of context, history, sensory associations – to name a few, are of utmost importance to lend meaning to architecture while also

influencing its physical manifestation. It is when all the elements come together that Placemaking is achieved in Architecture.

“Place is to architecture... as meaning is to language... Place is the essential burden of architecture” [2]. A lucid illustration of this statement is the striking similarity between the interior design of the typical Chettinadu house in Tamil Nadu, South India and the interior design of Basilica di San Lorenzo, a Renaissance church in Florence, Italy. The similarities include arcades lining a central space, coffered ceilings, flooring patterns and clerestory lights. Physically, the whole composition is one of geometry and axial organization. These buildings are set miles apart geographically, culturally and in different timelines. Yet to fully comprehend the difference in the interiors would require one to superimpose the framework of the afore-mentioned Modifying Elements and Authoritative Elements. The definition and components of Authoritative and Modifying elements has been established in prior research undertaken by the authors. This research explores their subsequent impact on Placemaking.



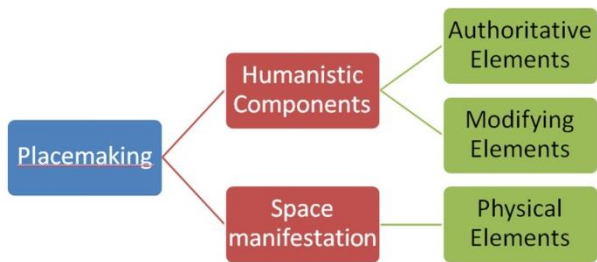
**Figure 1.** Places are Created by Layering Modifying Elements and Authoritative Elements on Spaces (Source: Author)



**Figure 2.** Models Employing Only Physical Principles of Space Composition to Represent Historic Monuments (Source: Author)

## 2. Creating places in Architecture

Places create optimal frames within which life unfolds. Conducive frames aid and engage with the unfolding of life by stimulating our experiences with them, and creating dialogues in time. They create positive memory and sensory associations and cause us to revisit them physically or linger on them mentally. “Those of us who are concerned with buildings tend to forget too easily that all the life and soul of a place, all of our experiences there, depend not simply on the physical environment, but on the patterns of events which we experience there” [3]. The design of any place ideally begins with the intent that it will respond to and engage with its user group in a positive manner. These places are designed with specific people in mind and are not experienced in isolation, unless they are specifically intended to. They are parts of a bigger narrative and draw from it – for example, a residence in urban Chennai is experienced as a part of the street it is located in and the street as a part of its neighborhood. This narrative bears on our cognition and perception of these places as the places we design and experience become an extension of the existing narrative. In this sense architecture and Placemaking is compared to music or poetry where the parts are perceived with respect to the whole. Although sculpture and paintings find their existence in the realm of art and design, they lack this definitive dimension of humanistic engagement making them purely a product of the creator’s intellect. This is the primary consideration as to why it is imperative that Authoritative and Modifying elements are factored into Placemaking. The components of Placemaking are described in Figure 3.



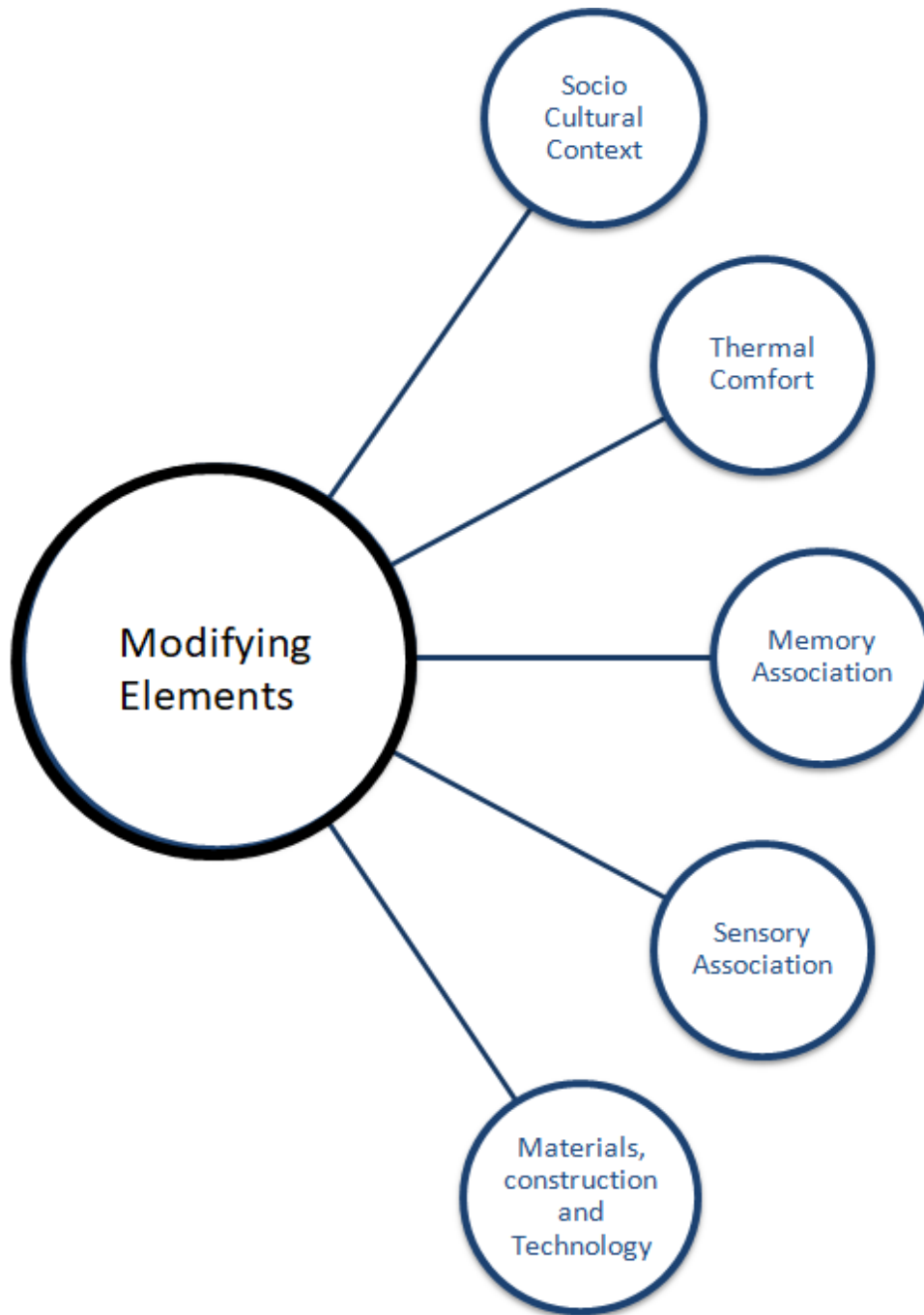
**Figure 3.** Placemaking is the Sum of Humanistic Components and Space Manifestation Elements in Architecture (Source: Author)

### 2.1. Authoritative Elements

Authoritative elements are the first layer of elements which develop and evolve an architectural program. These elements aid in ideation, experimentation with prototype and design / form generation. In his book *Theory of Architecture*, author Paul Alan Johnson (ed. 2018) theorized these elements as those which bring design to life or those that author architecture. The elements that can be broadly classified to lend authority to architecture include History, Typology and Context. Authoritative elements anchor and root the architectural program and design within the scheme of a larger narrative.

### 2.2. Modifying Elements

Modifying elements are the second layer of elements to be superimposed during the design process to achieve Placemaking in architecture. They have a rather ephemeral and intangible quality to them, yet they are indispensable in the conversion of spaces to places. The quality or essence of a place cannot be conveyed in its wholeness through scaled drawings or even models. While actually experiencing the physical manifestation of an edifice, the users draw from their own worldview through which they perceive their environment. “Architecture is to be regarded by us with the most serious thought. We may live without her, and worship without her, but we cannot remember without her” [4]. The elements constituting their worldview largely impacts and modifies their cognition of the environment. Socio-cultural context, thermal comfort, memory associations, sensory associations, materials, construction and technology are the factors that bear upon and modify one’s experience and perception of a place. These elements are listed in Figure 4. They are dynamic and may vary from user to user. An architect would possess a lesser degree of control on Modifying Elements in comparison with Authoritative Elements. However this can be combated by increase in dialogue with end users and adopting a participatory and collaborative approach with the end users. The end is well worth the means as the resultant design is derived from personal insights and preferences of the end users themselves.



**Figure 4.** The Modifying Elements in Architecture. (Source: Author)

### 3. Materials and Methods

The study stemmed from a comprehensive reading of literature and research articles where the several factors / elements that influence design generation and form manifestation were consolidated. These inventories of elements were then reviewed to group similar elements and categorize them as Authoritative Elements and Modifying Elements. Two independent questionnaires were framed for Authoritative Elements and Modifying Elements respectively to establish the impact and

relevance on Placemaking in architecture. The Authoritative Elements questionnaire survey was conducted online. The questionnaire was answered by 90 practicing architects and teachers of architecture from all across India. The respondents were so chosen to draw from their experience and assimilated knowledge over the years. The questions were framed to delve into the scope, influence and impact of the elements on Placemaking and the questions numbered 22 in total. However, only the questions and data pertinent directly to the relationship of these elements on Placemaking are explored in this

research. A similar questionnaire was framed to establish and understand the Modifying elements as influencers of Placemaking in architecture. The respondents were students of architecture, practicing architects and teachers of architecture. The respondents were of more varied spectrum because modifying elements draw from personal worldviews that influence perceptive and cognitive awareness. The questionnaire was designed to be manually filled and was distributed to respondents from across India. The total sample size was 50.

The objectives of the questionnaire were:

- To establish the role of the Authoritative elements in Architecture
- To understand the elements that contribute to Placemaking in Architecture
- To consolidate elements that confer authority on Architecture so that they may be helpful to students engaging in architectural design
- To analyze the degree of impact of the consolidated Authoritative Elements on Placemaking in Architecture
- To explore the various aspects of the individual elements of authority so that they may aid students of Architecture in design generation.
- To identify the attributes of Authoritative elements in existing works of Architecture

## 4. Analysis and Discussions

### 4.1. Authoritative Elements

The survey questionnaire for the authoritative elements explored the relationship between History, Typology and Context with architecture. Chi-square test was run in SPSS to test statistical independence or association between the variables. Chi-square test of independence is

used to analyze the association between the two or more variables of categorical data. In this study, Placemaking was taken as the dependent variable, whereas, the independent variables were History, Typology and Context. Table 1 describes the number of valid cases used in this analysis. There are 84 valid responses for History and 85 for Typology and context respectively.

#### 4.1.1. History and Placemaking

The history of a site has major bearing in the manner of perception of a space constructed within its premises. What is and what will be stem from what has been, irrespective of whether the fact is acknowledged or not. Contrary to an import that is irrelevant to the history / heritage of the neighborhood or site, it is the ethical responsibility of the architect to integrate its essence into the design of the edifice. “There are two duties respecting national architecture whose importance it is impossible to overrate; the first, to render the architecture of the day historical; and, the second, to preserve, as the most precious of inheritances, that of past ages” [4]. Including aspects of the site’s history and heritage, improves on what has been and enriches the visual and spatial aspect of a building. In doing so, due respect is ascribed to the past, which in turn adds value to the design at present. Consequence of this value addition is the fact that inclusion of history in the design of spaces plays a vital role in transforming spaces into places. Table 2 shows that the respondents strongly agree with the influence of History on Placemaking. The relationship between the two as expressed in the analysis is high.

With reference to table 3, the chi-square test also state that the p-value is less than the significance level, i.e.,  $\alpha = 0.05$ . Hence, statistically it is proven that there is an association between the Placemaking and History ( $X^2 (1) = 25.239, p < .001$ ).

**Table 1.** Valid cases used in statistical analysis

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Place_making * History	84	98.8%	1	1.2%	85	100.0%
Place_making * Typology	85	100.0%	0	0.0%	85	100.0%
Place_making * Context	85	100.0%	0	0.0%	85	100.0%

**Table 2.** Placemaking and its dependence on History

<b>Placemaking * History Cross tabulation</b>					
			<b>History</b>		<b>Total</b>
			<b>low</b>	<b>High</b>	
Place_making	Disagree	Count	3	3	6
		% within Place_making	50.0%	50.0%	100.0%
		% within History	60.0%	3.8%	7.1%
		% of Total	3.6%	3.6%	7.1%
	Agree	Count	2	17	19
		% within Place_making	10.5%	89.5%	100.0%
		% within History	40.0%	21.5%	22.6%
		% of Total	2.4%	20.2%	22.6%
	Strongly agree	Count	0	59	59
		% within Place_making	0.0%	100.0%	100.0%
		% within X3	0.0%	74.7%	70.2%
		% of Total	0.0%	70.2%	70.2%
Total		Count	5	79	84
		% within Place_making	6.0%	94.0%	100.0%
		% within X3	100.0%	100.0%	100.0%
		% of Total	6.0%	94.0%	100.0%

**Table 3.** Chi-square test results with P value less than Alpha value

<b>Chi-Square Tests</b>			
	<b>Value</b>	<b>df</b>	<b>Asymptotic Significance (2-sided)</b>
<b>Pearson Chi-Square</b>	25.239 <sup>a</sup>	2	.000
<b>Likelihood Ratio</b>	16.805	2	.000
<b>Linear-by-Linear Association</b>	21.186	1	.000
<b>N of Valid Cases</b>	84		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .36.

#### 4.1.2. Typology and Placemaking

Typology is an immensely valuable tool that helps students and professionals alike to understand spatial layouts as well as functional and habitable aspects of design. Prototypes (which illustrate the primary pattern or model) influence our understanding of different typologies. As an example, typical patterns for a residence can be broken down into the following major patterns. Independent residences have gardens that act as buffers from the street / road, a threshold space that serves as a semi private/public space before entry into the residence that takes the form of a porch or verandah, a space to receive visitors or gather and unwind with the family that goes by various names in various cultures such as living room, hall or drawing room, an area to prepare food called the kitchen, a space where food is served and eaten called the dining room, a space where one sleeps and spends considerable time in solitude or in the company of a partner - a highly private sanctuary called the bedroom

and finally a space that is largely utilitarian in manner, devoted to sanitation and hygiene – the bathroom. This primary pattern has been repeated in various permutations across cultures and across time. It has been scaled up/ scaled down/ embellished/ stripped to stark utilitarianism and everything in-between. However, in most cases, spatial planning stems from these basic functional patterns. “It is therefore clear that patterns play a concrete and objective role in determining the extent to which we come to life in any given place” [3]. Similar patterns for other typologies of buildings direct design generation in Architecture. An understanding of the primary patterns / prototypes / typologies would be especially beneficial to students pursuing Architectural design. Their strength in aiding Architects to maintain focus while designing gives them authority in Architecture. This is further proved in Table 4 where it is seen that the respondents strongly agree with the influence of Typology on Placemaking. The chi-square test states in Table 5 that the p-value is less than the significance level, i.e.,  $\alpha = 0.05$ . Hence,

statistically it is proven that there is an association between the Placemaking and Typology  $X^2 (1) = 58.972$ ,  $p < .001$ .

4.1.3. Context and Placemaking

Any architectural space exists within a context. It is never experienced nor perceived in isolation. One of the questions of the survey saw the majority of the interviewees respond that it was the ethical requirement of an Architect to consider context and factor it in the design process. Context is understood to include the physical context in terms of visual aspects of the surrounding buildings, the geographical location of the site, as well as the social/ cultural context of the neighborhood. “No house should ever be on a hill or on anything. It should be of the hill; belonging to it. Hill and house should lie together, each the happier” [5]. Timeless works of Architecture usually draw the user in, before they

physically enter its premises, either beckoning across the skyline of the neighborhood or serving as a grand focus at the culmination of an axis created through the neighborhood. “Always design a thing by considering it in its next larger context – a chair in a room, a room in a house, a house in an environment, and environment in a city plan” [5]. Context helps to weave the design within the fabric of the neighborhood and renders it with a factor of belonging, even when it is designed to stand out. Therefore, it is certainly an element of significance in the creation of places. Table 6 illustrates that the respondents strongly agree with the influence of Context on Placemaking and the relationship between the two is high. As depicted in Table 7, the chi-square test also state that the p-value is less than the significance level, i.e.,  $\alpha = 0.05$ . Hence, statistically it is proven that there is an association between the Placemaking and Context  $X^2 (1) = 17.932$ ,  $p < .001$ .

**Table 4.** Placemaking and its dependence on Typology

Placemaking * Typology Cross tabulation					
			Typology		Total
			Low	High	
Place_making	Disagree	Count	5	1	6
		% within Place_making	83.3%	16.7%	100.0%
		% within Typology	26.3%	1.5%	7.1%
		% of Total	5.9%	1.2%	7.1%
	Agree	Count	14	5	19
		% within Place_making	73.7%	26.3%	100.0%
		% within Typology	73.7%	7.6%	22.4%
		% of Total	16.5%	5.9%	22.4%
	Strongly agree	Count	0	60	60
		% within Place_making	0.0%	100.0%	100.0%
		% within Typology	0.0%	90.9%	70.6%
		% of Total	0.0%	70.6%	70.6%
Total	Count	19	66	85	
	% within Place_making	22.4%	77.6%	100.0%	
	% within T1	100.0%	100.0%	100.0%	
	% of Total	22.4%	77.6%	100.0%	

**Table 5.** Chi-square test results with P value less than Alpha value

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	58.972 <sup>a</sup>	2	.000
Likelihood Ratio	63.020	2	.000
Linear-by-Linear Association	52.350	1	.000
N of Valid Cases	85		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.34.

**Table 6.** Placemaking and its dependence on Typology

Place_making * Context Cross tabulation						
			Context			Total
			low	Fairly high	high	
Place_making	Disagree	Count	2	1	3	6
		% within Place_making	33.3%	16.7%	50.0%	100.0%
		% within Context	66.7%	4.3%	5.1%	7.1%
		% of Total	2.4%	1.2%	3.5%	7.1%
	Agree	Count	0	7	12	19
		% within Place_making	0.0%	36.8%	63.2%	100.0%
		% within Context	0.0%	30.4%	20.3%	22.4%
		% of Total	0.0%	8.2%	14.1%	22.4%
	Strongly agree	Count	1	15	44	60
		% within Place_making	1.7%	25.0%	73.3%	100.0%
		% within Context	33.3%	65.2%	74.6%	70.6%
		% of Total	1.2%	17.6%	51.8%	70.6%
Total	Count	3	23	59	85	
	% within Place_making	3.5%	27.1%	69.4%	100.0%	
	% within C1	100.0%	100.0%	100.0%	100.0%	
	% of Total	3.5%	27.1%	69.4%	100.0%	

**Table 7.** Chi-square test results with P value less than Alpha value

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.932 <sup>a</sup>	4	.001
Likelihood Ratio	9.061	4	.046
Linear-by-Linear Association	4.356	1	.037
N of Valid Cases	85		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is .21.

## 5. Conclusions

The primary purpose of architecture concerns itself with Placemaking or creating a sense of place. At present, this is an unsaid dictum that needs to translate itself in an express manner within and beyond the walls of the design studio, inside a university or an architect's office, regardless. This research was undertaken to establish the relationship between the variables of Authoritative elements and Placemaking through mathematical statistics. The analysis derived has attested to the fact that the relationship between the elements is strong with respect to Placemaking. Therefore, the hypothesis that Authoritative Elements are key influencers of Placemaking is proved. It is of absolute importance to draw from these elements in the process of designing and during the course of

Architectural pedagogy at universities in order Architecture would rise above its utilitarian scope of placing a shelter overhead to commence a dialogue with its user that at best will stand record of timelessness of architecture and at least will holistically respond to the emotional and spiritual sensitivity of its user.

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