

Understanding Form beyond Form-alization: Problematizing the Culture of Teaching [Urban] Form in the Design Studio

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Abstract

If we are to understand 'urban form', then it is paramount to first understand what is 'form'. The word 'form' is invariably employed in a limited sense while making sense of a city or an urban environment, especially in the disciplines of architecture and urban design. There exists an overwhelming proclivity towards the act of 'formalization' – primarily the case of formalising an urban settlement or phenomenon into geometric shapes, for the purpose of analysis. The primal argument of this paper is that 'form' does not mean 'formalization'. Our hunch here is not to suggest an alternate urban-form of study, but instead to deconstruct and problematise this dominant practice of 'formalization'. The practice of formalization is a classic case where an urban phenomenon is uncritically and insufficiently studied; and instead of studying different kinds of urban 'forms', a particular type of 'form' is focussed upon and advanced. Apart from architecture and urbanism, form occupies a key importance in the history of philosophy, aesthetic theory, literary theory, as well as socio-cultural anthropology. The reality of the discipline of (architecture and) urban design superficially appropriating it, is indeed tragic and the problematization of this superficial culture is the purpose of this paper. How does the problem of form arise in the design studio? How is it intensified by the key referential texts used in architecture and urban design studios? What are the ways in which philosophy and reconceptualization of form can be figured out? These constitute the key concerns of this paper.

Keyword: form, urban form, formalization, design studio, philosophy.

Introduction

Can we ever be sure about 'Urban Form' if we haven't understood [decoded/deconstructed] the thing/concept of 'form' beforehand? This paper tries to ask this question more than once and through different theoretical as well as pedagogic concerns.

This purpose of this paper is not an attempt to solve our current urban/city problems, certainly not in a direct manner. Our cities and urban realms are rife with myriad concerns and problems, but to directly articulate them and propose solutions – is not the object of this paper. Even though this paper's primal objective is centred around the question of 'Urban Form', it by no means tries to find a good or ideal urban form, nor does it attempt to follow the popular path of decoding or reading urban forms with regards to their impacts on urban functions, activities and the overall quality of life of its inhabitants. What then does this paper try to achieve? What are the primal questions or concerns that this paper try to address or pose? What are the possible sites of application where the research outcome from this paper can be put to use?

The principal argument as well as objective of this paper is to problematize what it means to write or use the word 'form', especially in the context of the word/term 'urban form'. This problematisation can also be understood as a critical unfolding of ideas and constructs; a kind of [knowledge] deconstruction, if you wish. The sites of the study as well as application are the design studios in the architecture and urban design studios in architecture and urban design programs dealing with the urban realm/phenomenon – both at the undergraduate as well as postgraduate levels. But the scope of research and inquiry is not limited to surveying and analysing the studio-cum-classroom. The task of this paper is to trace the genealogy of the body of knowledge producing the construct of urban form the way it exists, is being taught and is getting furthered. There exists a common knowledge problem/ gap thanks to some of the key [iconic] texts through which the concept of form, urban form is disseminated in architecture/urban design studios. On an essential level, the nature of the problem is similar at both the building level (architecture) as well as settlement (urban) level – which is the lack of a proper engagement with the philosophy of the concept of 'form' – what 'form' means, how 'form' exists, how must it be differentiated from other realms – say matter and content. The commonality notwithstanding, the focus of this paper though is limited to the problem of urban form. To arrive at a set of coherent conclusions, this paper tries to triangulate three strands of data/problematisations:

- Knowledge gaps in the understanding of form,
- Problematic understanding of urban form in the iconic texts being taught, or being taught from,
- The carry-forward of erroneous form-constructs in the urban design studios – and its reflection in terms of how the students understand and apply it in their exercises and projects.

The remainder of this paper elaborates on each of these three strands, and attempts to problematise the culture of teaching urban form in the design studio. These articulated 'problems' become the final arguments and hence the propositions of this paper.

Background

The first problem/gap we intend to address is the propensity of works on urban form which fail to dwell upon the word form, or consider it unimportant to trace its philosophical underpinnings. Although an informed philosophising of the 'form' concept is warranted, but such a task is beyond the scope and reach of this paper. However, some keys philosophical arguments can be put in perspective here, and they will do the necessary epistemic contextualisation of 'form' which respect to 'urban form', which will be sufficient for our purposes.

Form – the word, has been used in a number of ways throughout the landscape of philosophy, to explain the nature of things and objects. With each usage, the way it has been understood and explained has changed. As per the *Dictionary of the History of Ideas: Studies of Selected Pivotal Ideas Volume 2* – "Few terms have lasted as long as "form"; it has been in existence since the Romans. And few terms are as international: the

Latin *forma* has been accepted in many modern languages, in Italian, Spanish, Polish, and Russian without change, in others with slight alteration (in French *forme*, in English "form," and in German *Form*)". The historical-philosophical problem however has been concerned with the interpretation of the two Greek root words of form – *eidos* (conceptual forms) and *morphe* (visible forms) – “This double heritage has contributed to the diversity, complexity, and confusion with regards to the understanding of form (Wiener, 1973, p. 216). In other words, the problem of form. Does it not therefore become incumbent upon architecture/urban design studios to dwell on the various ways form has been understood and explained, before they proceed to explain architectural and urban phenomenon by means of form?

Brief History

The traceable origins of form lie with the Greeks, Pythagoreans specifically. The concept of form emerged through the Greek aesthetic theory where beauty was understood as well-defined arrangement and simple proportion of parts, in form or form-ing, or form-ation. Ratios and proportioning systems of visual as well as audible kinds – were the benchmark of to understand beauty in art and design. (Wiener, 1973, pp. 216-17). From the Pythagoreans, Plato developed his ‘theory of forms’, where the permanent reality that makes a thing what it is – was due to the ‘eternal form’. This eternal form has an immutable essence that though intangible, was of a higher reality than material objects (Britannica, 2020). But it was Aristotle who differentiated between matter (*hyle*) and form (*eidos* or *morphe*). He negated Plato and argued that every sensible object consists of matter and form which are inseparable. For Aristotle, Individualized forms are either substantial (account for individual existence of substances) or accidental (individualized properties of substances) (HOROWITZ, 2005, pp. 835-36). Plato’s and Aristotle’s theory of forms were further taken up and given Judeo-Christian treatment by St. Augustine and St. Thomas Aquinas respectively.

In the history of aesthetics, five different meanings of form are established:

Form A: The first meaning of form can be understood in terms of disposition, arrangement, or order of parts. In this case, elements, components, or parts combine to become ‘Form A’. The emphasis is on arrangement, order, commensurability. the opposites to form are elements, components, or parts which form A unites or welds into a whole. The form of a portico is the arrangement of its columns; the form of a melody is the order of sounds.

Form B: When the word form is used directly applied/given to the sense, then it is Form B. The premise is on appearance, visible, audible, or given to any other senses. This creates a duality between content and form, where appearance becomes the form and meaning becomes the content. It differs from Form A because it is not an arrangement or order, but a sensual attribute.

Form C: Here the interpretation of form means the boundary, shape, contour of an object. Its opposite and correlate is matter or substance. This differs from Form B because it is not given to the sense (like color or sound) but is perceived as a kind of drawing.

Form D: This is different than Form A, B, and C which are primarily aesthetic in nature. Form D tends to be more philosophical and was explained by Aristotle as the conceptual essence of an object (entelechy). It is the substantial form which is meant here though it may also have some accidental features (accidental forms).

Form E: This was used by Immanuel Kant to explain the contribution of the mind to the perceived object (*a priori* form) – that it is imposed by the individual on the material object.

Each of these forms have their own discursive traditions, and each have their place in the history of philosophy, aesthetics and literary thought. Each of the above form has various sub-forms within. Therefore, the question arises of why these critical markers of discussion not a part of the 'urban form' discussion in the studio?

Methodology

As explained previously, the concern for the paper arose in the urban design studio. This research was undertaken because of experiential reasons – our experiences and reflections upon how urban form was being understood and taught in the design studios, and how it was reductive, surficial, and misleading. It was therefore becoming an important factor in the students' problem-solving approaches/skillsets to urban issues and realities.

The Provocation and Beginnings

Since architecture education and design studios also share many specific problems with the urban design studio in terms of how form is understood (one can even arguably state that the problem originates in architecture), both architecture and urban design studio have been used interchangeably/synonymously. Our methodology was to decode it backwards; a kind of reverse-engineering – record the experiential and the evident, and trace the evident problems and knowledge gaps to the body of knowledge driving it, furthering it.

First, we talked to the students – undergraduates, recent graduates, post-graduates, who have had a recent, fresh memory and understanding of the urban; and whose views reflect the accurate picture of how this realm/phenomenon is being taught in the studios, and therefore being understood by students. Following this, we identified the commonalities and similitudes in their understandings and approaches towards urban form.

The Follow-Through

Then we corresponded this with their works and processes in the design studios – their analyses as well as solutions and traced their understanding to the theoretical framework in which form had been taught to them vis-a-vis the urban realm/phenomenon. After this, we analysed the key texts [which form the theoretical framework because of the iconic status they enjoy in the architecture/urban classroom] to meticulously understand the nature of the form problem existing in the studio. This helped us in identify the dominant ways in which ‘form’ was being explained, taught and applied [to decode the urban phenomenon]. This is where we found incoherencies, unresolved and often contradicting explanations of [urban] form in the key [iconic] texts from where the studios were getting their theoretical nutrition. It became evidently clear to us at that point that we must turn to the philosophical history of the word/concept form so as to make sense of the problem. In other words, to *problematize* the problem. Some important questions for us were – how form has been understood and explained as a concept? What does it mean? What are the different ways in which it has been understood and interpreted? The answers to these questions fed back on the problems identified in the teaching and the behind-the-scenes texts.

Along with the problematizations which is the key inference of this paper, we also put forward some concluding thoughts in terms of answers and resolutions – how [urban] form can be taught otherwise? What will be the contours of such a discourse? In summation, what are the plausible/potential epistemic shifts in the teaching of form which can save us from formalizing form in architecture and urban design studios.

Results and Discussions

The students interviewed were mostly graduates (49 per cent) and postgraduates (46 per cent). Most of them had an undergraduate degree in architecture (86 per cent). The result figures, pie charts and graphs are in the appendix 1.

Findings from the survey

The interesting thing to note was that almost half (49 per cent) of the students’ first step to study urban form was studying images from Google Earth, followed by vectorizing those images (17 per cent), and making Nolli Plans (9 per cent). Aspects like demography, ethnography matter much less for students while studying/understanding form. One related finding which testifies to this issue (or is actually a reason for it) is the fact that the maximum effort and mindspace of the students (47 per cent) was occupied in converting the urban phenomenon into drawing forms (geometries and patterns of settlements).

The form of an urban space is a recurring discussion in the design studio. How the form of an urban space (square, street, plaza, etc) is being studied and understood is a decisive marker in how the concept of urban form will be understood. In this regard, the disposition and tendency that cut across students – was a focus on symbolic forms, drawings, geometric patterns and visual appearances.

The study clearly showed that for the students, the focus of forms – lie squarely in formalising the notion of it. It was not surprising that for the sweeping majority – form meant ways of formalising – settlement pattern and geometry, physicality of the environment, Nolli Plan, Plan form; the only difference was in the way they preferred of formalising.

More than half of the students were clear that the word form was never sufficiently explained to them. When the students were asked to define and describe what they meant by urban form, the overwhelming majority explained it in terms of the physical form, attributes, spatial structure, architectural form, physical pattern layouts and structures, visual configuration and satellite images.

The Concept of Urban Form in the Key Texts

This section will attempt to discuss the problems intrinsic to the understanding and interpreting of what is meant by urban form in the canonical texts, most commonly referred and widely followed like – *Image of the City*, *A Theory of Good City Form* by Kevin Lynch; *The Architecture of the City* by Aldo Rossi; *Form, Space and Order* by Francis DK Ching, among others.

Urban form is often defined as the *spatial configuration of fixed elements* (Anderson, 1996), or as the *'morphological attributes of an urban area at all scales'* (K. Williams, 2000). Francis DK Ching in his celebrated and immensely popular work *Form, Space and Order* adopts Form D to describe the word form – “the form and geometry of a structure is established by the manner in which it spans across space to bear on its supports and slopes to shed rain and melting snow”. At another instance, he argues that form is established by the shapes and interrelationships of the planes that describe the boundaries of the volume quoting Edmund Bacon’s *The Design of Cities* – “Architectural form is the point of contact between mass and space ... Architectural forms, textures, materials, modulation of light and shade, color, all combine to inject a quality or spirit that articulates space. The quality of the architecture will be determined by the skill of the designer in using and relating these elements, both in the interior spaces and in the spaces around buildings” (CHING, 2004).”

In *The Image of the City*, Kevin Lynch uses the word form in the meaning of order, composition and arrangement; a kind configuration essentially. For example his definition of ‘Form Simplicity’ (simplicity of form) states – “a clarity and simplicity of visible form in the geometrical sense, limitation of parts as the clarity of a grid system, a rectangle, a dome. Forms of this nature are much more easily incorporated in the image, and there is evidence that observers will distort complex facts to simple forms, even at some perceptual and practical cost. When an element is not simultaneously visible as a whole, its shape may be a topological distortion of a simple form and yet be quite understandable”. At another instance, while trying to present a finer definition of form, he argues that – “the form of a city or of a metropolis will not exhibit some gigantic,

stratified order. It will be a complicated pattern, continuous and whole, yet intricate and mobile". Both the above arguments belong to the same genre of form description belonging to Form A (LYNCH, 1979). The issue here is that [ordered] form is put across as the precursor to the image of the city (form-based image), where the form qualifies to be the form only when it conforms to the culture/discipline of arrangement and disposition. As a description of form – It presents a vulgar import of Aristotelian concept of hylomorphism – where the concept of potentiality and actuality have been completely omitted from the discussion.

In *The Architecture of the City*, Aldo Rossi prioritises Form B as the definition of form. He writes – “The form of the city is always the form of a particular time of the city; but there are many times in the formation of the city, and a city may change its face even in the course of one man's life, its original references ceasing to exist” (ROSSI, 2007). Note that form here is explained as the appearance [given to the sense].

Form-Function Dialectics

In *A Theory of Good City Form*, Kevin Lynch sets out on a detailed discussion on form, as is self-evident in the title of the book. The form-function dialectic and tension is an important piece of the puzzle called ‘urban form’. Below are some of the arguments or articulations offered by Kevin Lynch:

The author makes an attempt to distinguish between city form and city function, arguing that form and function when combined with ideas and values make up the city phenomenon. He goes on to make another interesting point that the city form is willed, and it is people who create their city form (LYNCH, 1981, p. 36). Two interconnected problems emanate here. Firstly, it must be understood in the light of the philosophical and linguistic discussion on form, that form cannot be created [by people]. It contradicts the Aristotelian philosophy (including the works of later philosophers who agreed with him) which argues that form always exists with matter. Considering the hylomorphic nature of objects and things, it is evident that form is always in-translation, hence it can never be understood as being created, or willed.

This approach towards form as something which is created, draws a clear line between form and function. The city phenomenon which is the meta-concept is explained to comprise of distinct entities called form and function. But paradoxically, they are meant to be understood together as a single phenomenon. The implied binary between form and function is inducted to actually merge them into ‘a single phenomenon’, or vice-versa. It becomes a case of separation-in-the-name-of-amalgamation. The philosophical discourse around matter, content, form, potentiality, actuality is never touched. This conceptual gap-cum-problem of form-function binary extends everywhere, especially in the way three branches of theory to explain a city are put forward (LYNCH, 1981, p. 37). The functional theory once again puts form as something which is a consequence of functional attributes and values. We see the form-function binary here, as well as the understanding that function and form impact each other in chronological time, one after another; it rejects the simultaneity of their interaction. The entire discussion is carried out without any reference to the

philosophical and aesthetic discourses on form theory – either Plato, or Aristotle, or the scholastics, or any school of philosophy for that matter.

The normative theory of city form proposed by Lynch is based upon generalisable connections between human values and settlement form. It works upon the concept of distinction and differentiation between value and form. The oversimplification of form as tangible, and value as intangible [say formless] creates another set of binary between form and value, where form is explained the same way as in *The Image of the City*. In the decision theory likewise, public decisions, policy-making is considered a form-less entity. All political, social, economic parameters and drivers impact the decision-making are conceptualised as formless, and only once they have resulted in some tangible outcome, the object of form enters the discussion (LYNCH, 1981, p. 38).

In an attempt to evade the complexity of difference between form and function, Lynch while trying to draw an analogy between a city and an organism, simply claims that a city's form and function are 'indissolubly linked' (LYNCH, 1981, p. 89) In what manner are they linked, and for what reasons are they indissoluble – is not considered important! How then are we supposed to understand the context in which form and function are being employed in the discourse, and how are we to understand the nature of the link and its indissoluble nature in a way which can help us understand form and function better? They are neither explained as epistemic concepts (central to the theme of the book) nor through actual, specific examples. The author continues to engage in truism like "The form and function of each internal part should be fused together, while each part is itself clearly differentiated from other internal parts with other functions" (LYNCH, 1981, p. 91). These suggestions too are extremely vague to be understood and applied.

Conclusions

This brings us to the conclusion of this paper, which is by means a reasonably deep probe into the epistemic frameworks around [urban] form, but are nevertheless sufficient enough to initiate a culture of reconceptualizing the word form in architecture and urban design programs. The key point is the acknowledgement of the lack of orientation to philosophy and the history of the word/concept 'form', and therefore incorporating newer lines of research inquiries on these lines. Secondly, the vulgar and senseless import of the word form from aesthetic theory so as to directly use it in the landscape of architecture – is rife with problems. The myriad historical concepts and their genealogies need detailed deliberation before they can be applied to understand the urban phenomenon.

Finally, it must be understood that form needs to be explained in types, and kinds. As an epistemic entity it needs multiple points of location before we can employ it to understand urban form, phenomenon and the realities around.

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APPENDIX 1: FINDINGS OF THE STUDENT SURVEY

Qualification
35 responses

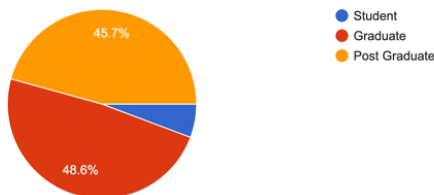


Figure 1 Student Qualification

Discipline / Educational Background
35 responses

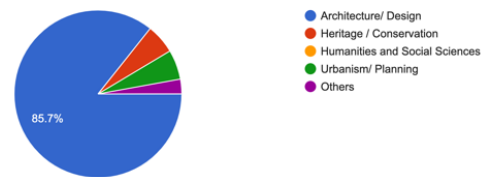


Figure 2 Background/Qualification

In the UD (Urban Design) Studio, what did you do FIRST to study the 'Urban Form' of a city?
35 responses

From the UD Studio, select TWO MOST IMPORTANT means which were used to study the 'form' of urban spaces (squares, streets, plazas, etc)?
35 responses

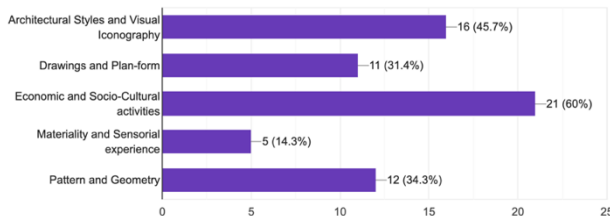


Figure 5

During the first stage of UD Studio, what amongst the following occupied the MAXIMUM mind space and effort in the studio?
35 responses

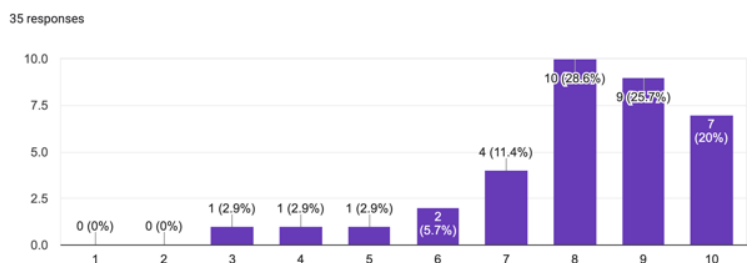


Figure 5 In order to study 'Urban Forms', how much are the following parameters important (1- least important, 10 most important)? SETTLEMENT PATTERN & GEOMETRY

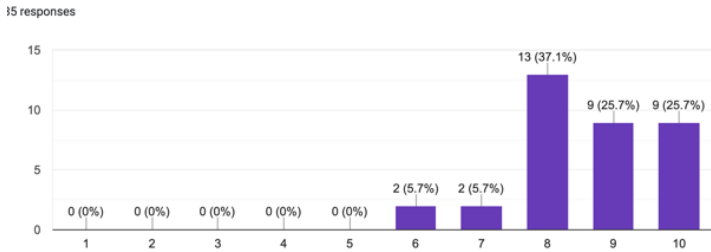


Figure 7 In order to study 'Urban Forms', how much are the following parameters important (1- least important, 10 most important)? PHYSICAL ENVIRONMENT

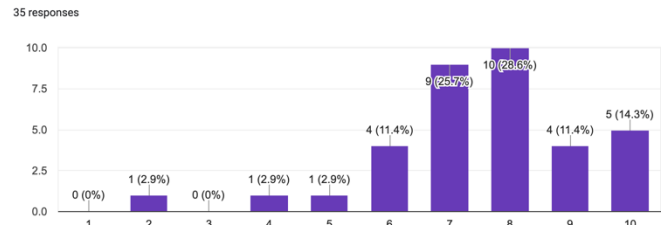


Figure 8 In order to study 'Urban Forms', how much are the following parameters important (1- least important, 10 most important)? FIGURE GROUND

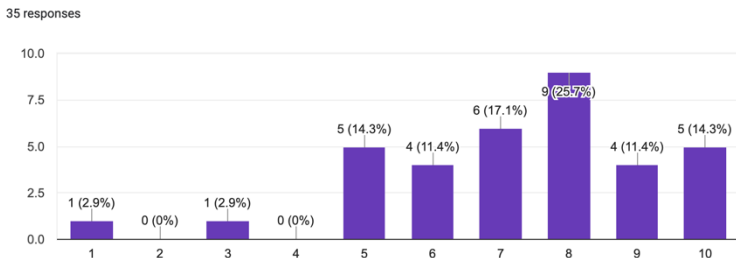


Figure 9 In order to study 'Urban Forms', how much are the following parameters important (1- least important, 10 most important)? PLAN FORM

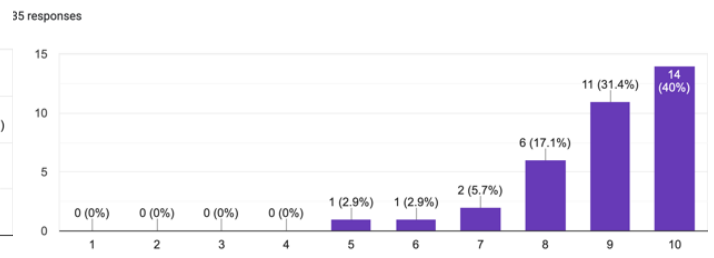


Figure 10 In order to study 'Urban Forms', how much are the following parameters important (1- least important, 10 most important)? ACTIVITY MAPPING

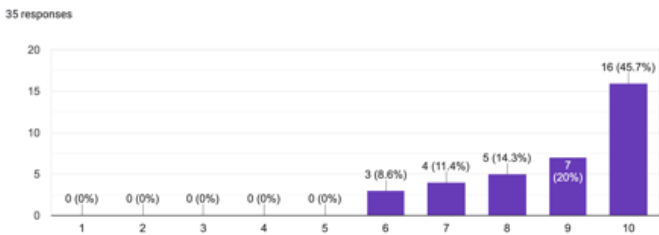


Figure 11 In order to study 'Urban Forms', how much are the following parameters important (1- least important, 10 most important)? SOCIETY, ECONOMY & CULTURE