# GESTALT THEORY AND CITY PLANNING EDUCATION

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## INTRODUCTION

The author had his education mainly from architect-planners in the 1960s sharing the first year basic design studio with the students of architecture in the Department of City and Regional Planning of the Middle East Technical University. The studio introduced a new and abstract world of lines, surfaces, volumes, colours, textures that were alien to the students who had their high school education in a world of written texts and formulae. This is a universal problem as underlined by Arnheim too, who claiming 'Western education has been concerned foremost with words and numbers', complains how such processes 'detach the child from sensory experience' (Arnheim, 1965, 3).

Later, in the professional life the effects of basic design education revealed themselves where it was easier to communicate mainly with architects to give the environment its final shape. After 1980, the author returned to the school and participated in the first year studio to revitalize basic design education and develop design skills of the students that had declined in the seventies (**1**).

## HOW TO PRODUCE AND SUSTAIN FORM

Producing the form of the city is a problem of composition in two and three dimensions. When we consider the form of the city, if city planners are to produce and give shape to the urban environment, they should be equipped with skills to form groups of structures and the 'sense of belonging together' of those groups of structures that build the environment. This certainly requires the development of visual skills of planners in designing the composition of urban form and Gestalt theory provides the necessary framework.

**Gestalt and Learning Theory**

In the 1920s, Wertheimer laid down the foundations of the Gestalt theory: 'There are wholes, the behaviour of which is not determined by that of their individual elements, but where the part-processes are themselves determined by the intrinsic nature of the whole' (Wertheimer, 1997, 2). As far as the design field is concerned, Gestalt theory has had two main contributions. The first is that it tried to formulate the rules of visual perception through an analysis of object patterns and groupings, and secondly it has formulated principles of problem solving and creativity.

Gestalt means shape, form, pattern or configuration in German, and Koffka claimed that 'in addition to the sensory elements of a perceived object, there is an extra element which, though in some sense derived from the organization of the standard sensory elements, is an element unto itself' (Koffka, 2000, 1). In what Koffka called Gestalt-*qualität* or 'form-quality', 'when one hears a melody, one hears the notes *plus* something in addition to them which binds them together into a tune' (Koffka, 2000, 1); therefore, you perceive the melody as a whole.

Wertheimer's study on Gestalt Theory in 1924, however, claimed that the reverse of this postulate is true; what is experienced in each partition of the melody 'is itself determined by the character of the whole' (Wertheimer, 1997, 4). What is expressed 'by the melody does not arise ... as a secondary process from the sum of the pieces as such' (Wertheimer, 1997, 4). What takes place in each single part already depends upon what the whole is.

Kurt Koffka (2000, 2) accentuated 'structural organization, rather than individual sensory elements' to which the organism responded. Following this claim, Koffka endeavoured to reconcile gestalt with scientific thinking and introduced two categories of design into the gestalt discourse. The first category is **order**. 'When you come to life you find order and that means a new agency that directs the workings of inorganic nature, giving aim and direction and thereby order to its blind impulses' (Koffka, 1935, 9).

The second category is *Sinn* that meant **meaning or significance**. 'Every gestalt has order and meaning, of however low or high a degree, and that for a Gestalt quantity and quality are the same' (Koffka, 1935, 13). Advancing this argument in relation to the *gestalten* of the human mind, Koffka argued that 'it is most difficult, and in most cases still impossible, to express its quality in quantitative terms, but at the same time the aspect of meaning becomes more manifest here than in any other part of the universe' (Koffka, 1935, 4).

Since Gestalt theory's key contribution was based on an analysis of whole - part relationship, it also had significant impact on theories of human learning. Relating the theory with the educational world, Hufnus (1999) has argued that gestalt approach in teaching is based on whole part whole. In the method, "the instructor presents an overview of the subject to be learned. He then proceeds to break down the subject into its various component parts. Finally, he presents the entire subject again, emphasizing the way that the relationship between the parts contributes to the whole" (Hufnus 1999, 1).

As a part of learning theory, Gestalt psychologists have described several kinds of problem solving methods to enhance creativity, and Wertheimer for instance, 'believed that children should be educated to have insights and to organize their experience in new ways' (Harriman, 1978, 705). The consequent emphasis on the perception and integration of relationships
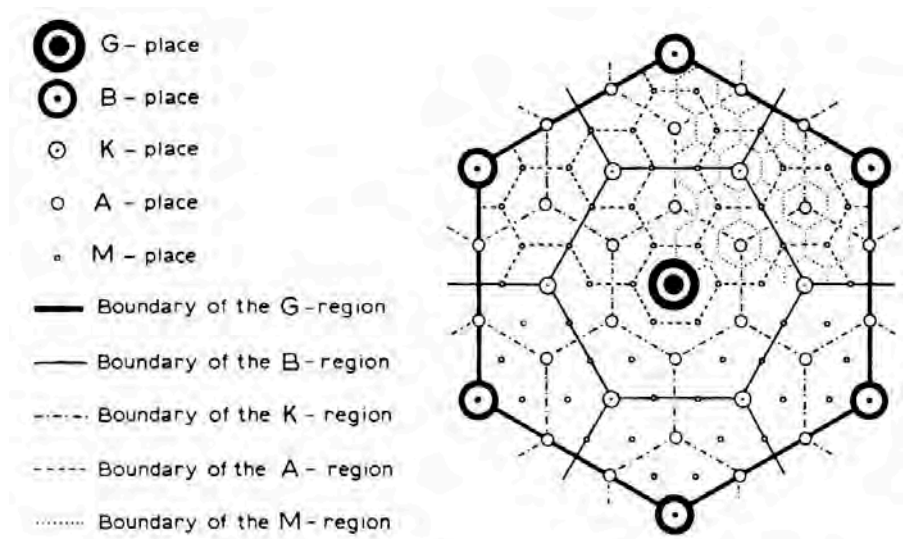
**Figure 1**. The Central Place System as represented in hexagonal graphics by Walther Christaller (Carter, 1985, 65).

of any organized whole is a key contribution of Gestalt psychology to learning theory and Denel (1979, 3) suggests that the aim of any design education should show "to conceive, perceive, organize and communicate as wholes as opposed to fragmented and unrelated information". It is for this reason that the author has been insistently carrying out the first year planning studio to teach the essentials of design and Gestalt rules to the students of city planning.

## CITY PLANNING EDUCATION

The first year studio teaches high school students the concept of abstraction. It is a tiresome and 'brainwashing' process using Gestalt rules to educate students with audile culture. Exercises based on visual representation of the environment where seeing and perceiving abilities are provoked, create the most suitable conditions to display abstract-concrete relationship.

Balance, solid-void, frame of reference, scale, proportion, order (structure, network, model), are not only the concepts of our visual world. Other fields use them too. A good example in this framework is Walther Christaller's abstraction of laws (**Figure 1**) that determine the number, distribution and the size of towns in a region; presented as a model based on hexagonal relations (Carter, 1985, 59).

First year basic design studio interrogates the concepts of balance, solid-void, frame of reference, scale, proportion, order (structure, network, model), in terms of one-dimensional lines, two-dimensional areas and three-dimensional volumes. Later, the students apply the concepts of basic design to the production of the environment. It is likely that a few of city planning students will specialize in design processes, but they should all learn to be critical as to the form of the environment and perception of space. Otherwise, they might turn into pure social or administrative technocrats, as complained by Arnheim (1965, 3).

## WHAT ARE THE GESTALT RULES

Gestalt theory and design principles support problem-solving methods to guide the students to discover the essence of the problem they are dealing with. The relations between the elements of any whole and their

restructuring owe much to the Gestalt theory. Eventually design education becomes more than a journey and turns into an adventure to brainwash students that design is making composition and producing forms that have shapes. Moreover, since we are dealing with the whole - part relationship, gestalt teaching surpasses theory of form and becomes a method of education by itself. It is also much easier to demonstrate to the students the integrity or disintegrity of wholes and parts in a world of visual medium.

Koberg and Bagnall (1974, 86) have simplified principles of design or composition as harmony (recognizable similarity for all parts of the whole), contrast (recognizable difference for all parts of the whole), balance (recognizable stability for all parts of the whole), order (recognizable pattern of organization to the whole) and unity (recognizable collectiveness for all parts of the whole).

Since gestalt means shape, form, pattern or configuration, to distinguish among recognizable and belonging together elements in any medium build up the gestalt quality of any whole and its parts. When Wertheimer first formulated gestalts, he concluded that to achieve belonging togetherness of elements, three rules are essential - **similarity** (elements that look alike), **proximity** (elements that are close together) and **continuity** (elements that show good continuance though interrupted) (Behrens, 1998, 4).

When gestalt theory became more popular in the design field, further rules were added like **closure** (parts enclosing a void) and **closed forms** (a complete whole even if there are missing elements) that were deliberately used by designers of the environment. The well-known design principles of **symmetry** (providing for coherence of composition), **alignment** (lining up elements to form groups or wholes) and **simplicity** (legible parts and wholes) are also parts of the gestalt rules. **Common fate** (parts displaying the same compositional patterns) and **connectedness** (a connecting element of two dissimilar objects or patterns) became attributes of design too.

Gestalt laws (rules, principles) depict regularities of human perception in evaluating the environment but cannot always explain them. Hence **experience** (what we personally see or what we are conditioned to see) also became to be counted as effecting our gestalt values, and for Arnheim 'the rules of grouping serve not only the purely formal organization of compositions but also support their symbolic meaning' (Arnheim, 1969, 73). The proceeding discussion aims to describe the studio process where the students practice gestalt rules.

## HOW TO APPLY THE GESTALT RULES: ABSTRACTION

### Figure and Ground

One of the first principles of Gestalt theory is that all objects stand with reference to a background, which is as significant as the objects. This is the fundamental goal of any search for form. The other rules or principles of gestalt aim to establish this attribute of the environment. Two-dimensional exercises develop the students' abilities in comprehending the power of figure - ground relationship. Harmony and contrast are all there to search for a unity of figure and ground, which constitutes two-dimensional layout of urban form. To consolidate the power of figure - ground relationship, the students are encouraged to observe and pick out the patterns of the environment. This, they have to represent in such a way that the ground should again have as meaningful patterns as the figures (**Figure 2**).
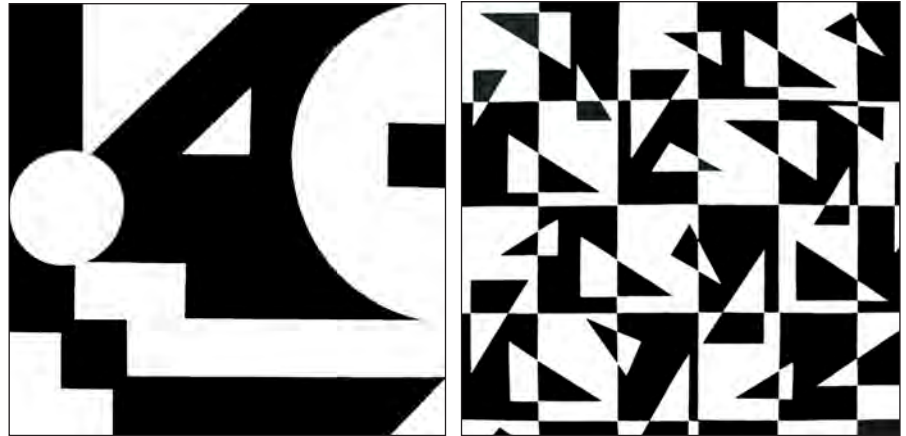
**Figure 2.** Figure - Ground relations with basic forms.

As argued by Johannes Itten, in communicating the process of figure - ground relationship, "the clear geometric form is the one most easily comprehended and its basic elements are the circle, the square and the triangle" (Whitford, 1985, 106). Consequently every possible form might be produced from those formal elements and students are encouraged to work "on the problems of elementary geometric form-characteristics", studying "circles, squares, triangles and their derivatives, as well as lines, planes, objects and stress points, directions in space, and proportions" as advocated by Itten (1965, 111).

While in the previous exercise they are encouraged to use the basic forms – square, triangle and circle, now they may start to discover different forms of the environment, so that they oscillate between regular and irregular shapes to dominate both approaches. In every instance, the students are reminded of the gestalt rules from similarity to connectedness, to enhance their capacity in reading and producing forms and shapes, that is, experience - what we are conditioned to see (**Figure 3**).



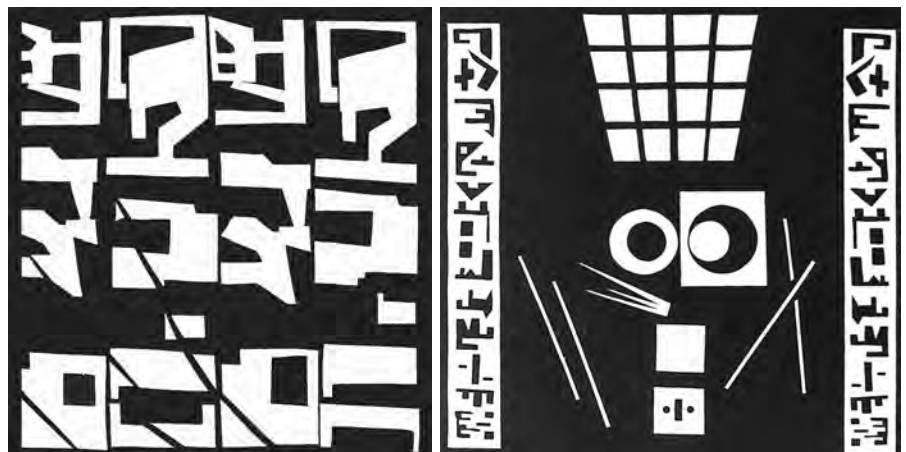**Figure 3.** Figure - Ground representation of the environment.

**Frame of Reference, Order and Balance**

Any composition takes place in a frame of reference. This applies for any problem formulation as well. You have to define the context of the topic to study and the principles of your composition. Figure and ground relationship, further generates another relation with the frame of reference

in which the composition dominates, still respecting those abstract lines limiting the frame. To make it even more abstract, a spaghetti plate may constitute the frame of reference (**Figure 4**). The problem is to eat the meal through the eyes. Hence, the problem turns into a travel for high school students to perceive concepts like order - disorder or balance. An order is sometimes Cartesian, but the condition is that it is abstract; it does not exist in the final composition. Its form giving power, however, is there, controlling figure and ground balance, and the composition with reference to the frame. The order may not always dwell on pure geometry; as long gestalt rules are satisfied and visual experience tolerates, then the composition becomes acceptable.

This method of teaching of composition with the aid of gestalt rules would later be named as basic design, which, as defined by Rand (1965, 157) "is an effective vehicle for teaching the possibilities of relationships: harmony, order, proportion, number, measure, rhythm, symmetry, contrast, colour, texture, space" and through the method the students would "learn to conceptualize, to associate, to make analogies".

Very often, a balanced composition is a value judgment requiring the experienced eye. Some students have talent and may not lean so much on Cartesian orders. For the others, geometric orders are tools of composition. Balance is a problem of distribution of figures on a ground. In this respect for instance, the distribution of light analogy may be a critical tool to analyze over or undertones in balancing a composition (**Figure 5**), where there are no sharp lines defining figures or the ground, but allocation of



**Figure 4**. Spaghetti Plates for creatures eating through their eyes.
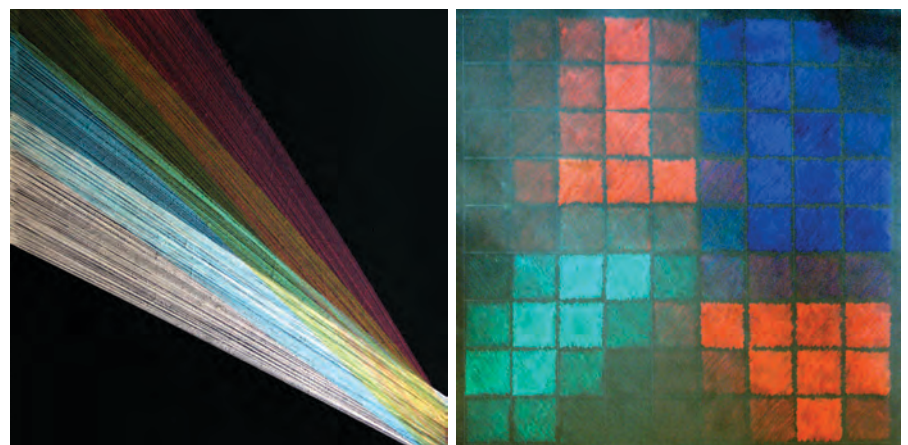


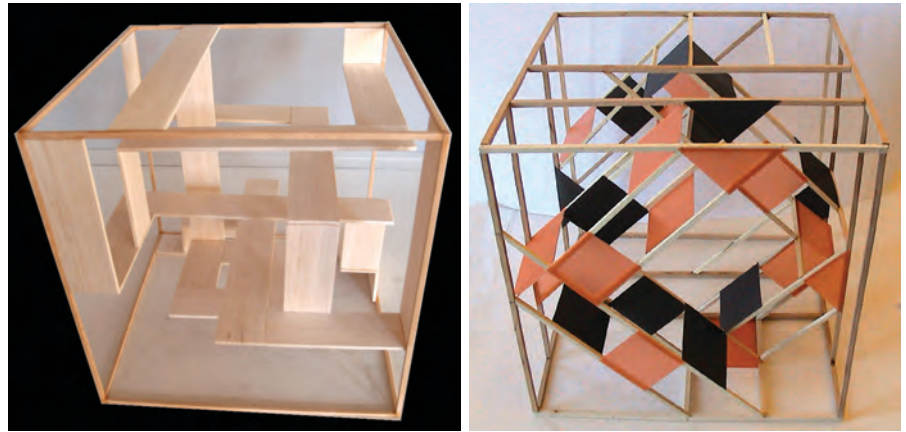**Figure 5**. Distribution of light in a medium.

**Figure 6**. Three-dimensional representation.

values within the frame of reference. This is a different search for the unity of any composition, and the student searches for value configuration.

## Three-dimensional World

One objection raised to the city planners is that their capacity in perceiving and shaping the third dimension is low. Hence, they should transfer the principles and skills gained in the two-dimensional world to the three-dimensional medium. This time instead of figure and ground, solid and void relationship begins to govern the composition. The gestalt principles are still valid, we have a frame of reference and we require a balanced distribution of objects. We do not use the notion of space yet and we are observing the composition from the outside (**Figure 6**). Three-dimensional perception, representation and production are the most difficult parts of any composition. Only the talented have produced eternal pieces of art and architecture. In any case, city planners control the third dimension of urban form and they have to be aware of and control the solid - void patterns of the city with reference to gestalt rules, parallel to other concerns conditioned mainly by land economics.

## Abstract Representation of the Environment

Now that the students are familiar with the gestalt rules, we may move to the concept of abstraction through which we establish and re-establish the environment. What is behind the real has always intrigued the human mind. Abstraction came out of this attribute of the mind to separate certain aspects of the matter to better comprehend the essence of the thing under scrutiny. If it were not for the abstractive ability of the human mind, then

**Figure 7**. Abstract representation of the environment.
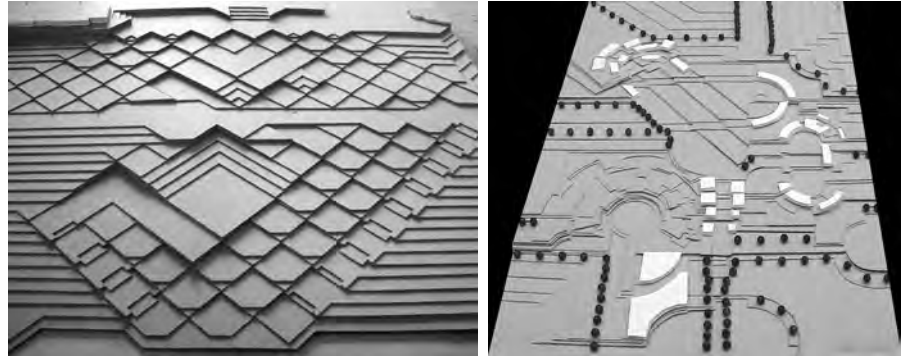
**Figure 8**. Design of the environment using Gestalt principles and the notions of hierarchy, private - common, structure, spine, edge, etc.

there would not be a world of concepts. Hence, when you are making an abstraction of objects or a setting or a phenomenon, you have to find and display its essence, probably excluding some features. Abstraction conveys ideas and finds correlations to establish again concrete products for the world (**Figure 7**).

**Organizing the Environment**

Skills in abstraction, principles of composition and balance in figure and ground, and solid - void distribution in the third dimension are tools of arts and architecture too. How to convey those skills to those dealing with the form of the man-made environment, that is the city planners, is a critical task and now geomorphologic elements and topography are introduced to the students to show them what slopes, ridges, valleys, terraces, hilltops, etc. are.

The essential elements of the man-made environment; two-dimensional subdivision of land, circulation network and the three-dimensional structures, all have to be in harmony and unity with the geomorphologic elements. Planning and design are interventions to the natural environment to reproduce it. Until now, the students were making abstract compositions where the human being was an external observer. Now, what is being represented is a medium, in which, when put into reality, the human beings will accomplish their basic activities – walk, stand, run, come together, be alone, meditate, watch, enjoy, etc. They are supposed to apply the Gestalt rules to the process of shaping the environment (**Figure 8**).

We are not talking about functions yet, but basic human activities and the concept of space. In the philosophical discourse, space has many meanings. For the first year students, space is simply a place that accommodates an object or an event. Since space is a medium lodging particular objects and events, closure and closed forms attributes of Gestalt psychology may easily be associated with space. Moreover, since we have started to deal with space, notions of hierarchy, private - common, structure, spine, edge, etc should dominate it (**Figure 8**). The concept of public is yet refrained, because it has a political basis. At this level, the concept of common is preferred.

Now we can more evidently display the design principles of the Gestalt rules of harmony, contrast, balance, unity and order with reference to similarity, proximity, continuity, symmetry, alignment, simplicity-complexity, common fate and connectedness in shaping the environment (**Figure 8**).
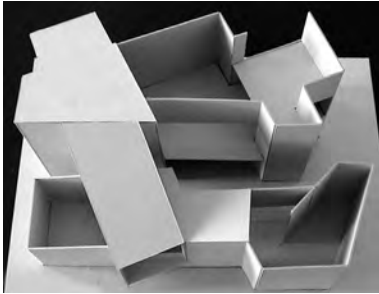
**Figure 9**. The Living Unit.

## HOW TO APPLY GESTALT RULES: CONCRETIZATION

Recently, first year studio deliberately adopts a new practice to visit an ancient or an antique city. The pedagogy of the visits has the purpose of making an introduction to history and, as studio work, design the visited site or city upon a scenario that they will propose. The significance of such sites is that they have died away, leaving back their precious ruins of high civilizations. The remains are there without life. This abstract setting provokes the students to imagine, to create and make abstractions. Pedagogically, when we present real situations to the first year students, creativity suddenly withers away. In the antique sites, however, they can use all their imagination. Knowledge given is limited with how the designers of the antiquity represented their environment and developed design principles of their cities using the gestalt rules. For this end, students should first learn to deal with the main components of the city–the living unit, the cluster, the neighbourhood unit.

### Living Unit, Cluster and Neighbourhood Unit

Inductive and deductive reasoning are the two well-known approaches in epistemology. While in inductive reasoning, we base 'our case on the application of some a-priori logical rules', in deductive reasoning, 'we determine via examination of the facts which are now developing' (Koberg and Bagnall, 1974, 122). Pedagogically, the studio starts with a theoretical analysis of the parts that build up the whole. The living unit is the first element to design. It is not like the usual house, it is a study of volumes. The living unit should imply that there is an entrance and there is a hierarchy of interior spaces, but they do not have to put in wet spaces, kitchens or stairs. The unit should also be suitable to be attached to others horizontally or vertically (**Figure 9**).

Then they arrange the units to form clusters (**Figure 10**). The importance of the common space is now evident. The cluster is supposed to have groups with their own common spaces, all opening to the larger common space of the whole organization; this is introduction to hierarchy of spaces. Again, design should consider entrances and privacy of the cluster. They should also know that their cluster will have the ability to grow or attached together to form a neighbourhood unit.

From the living unit to the neighbourhood, the programme applies the inductive approach in an order. In this framework, the students should

**Figure 10**. The Cluster.

**Figure 11**. The Neighbourhood Unit.

deal with patterns of growth and hierarchy of spaces, and they have to remember and apply the principles of design and gestalt rules in making their composition. Besides the notion of common in the living unit and cluster, now they incorporate public spaces into their neighbourhood unit (**Figure 11**). They further grasp the difference between the common as belonging to the community and the public as a part of the administrative or political system.

**The City**

Design is an ability that can be developed or provoked through education for creativity. Such education for creation "is not something beginning and ending in an individual" (Maldonado, 1965, 122); it is a social fact and should contain in itself responsibility 'against stereotyped ideas'. Moreover, basic design talked to the simple man and as argued by Maldonado (1965, 122); "design is creation, or if you prefer, the means of creation par excellence. At least it is evident that design is neither imitation, nor the means of imitation par excellence" and it "is always an attempt to break with banality, a manifestation of originality" showing "itself frequently associated with the efforts to contribute something new to the world". It should be associated "with the will for creation - or invention, or discovery" (Maldonado, 1965, 122).

The antique sites have the potential to provoke the students for creative design. Hence, we move to the whole, that is the city, and the students are supposed to attribute a new function to the city. To do this, they first develop a scenario as to the new life that would govern the region and specific cities. They may go back to history and revive the community, come to the present time and develop a tourist town, a town with small production as the basic economy, a university town attached to the historical settlement or high-tech environment for research, etc.

All such scenarios entail the development of strategies for both the existing historical towns and their extensions. They should keep all existing structures as reference elements. In this framework, they develop clusters, their central facilities and combinations of clusters are integrated with the general public spaces of both the old and the new towns. They are supposed to make use of the design principles and gestalt rules they have learned and experimented. In designing their city, now the method turns its focus on the deductive approach (**Figure 12**).

The whole should be considered and they have to design the macro-form of the city considering it within its geomorphologic setting (slopes, ridges, valleys, terraces, hilltops, etc), to decide patterns of growth, and, the structure and the heart of the city. Heart of the city is an analogy used instead of the spiritless concept of the centre. The use of conceptual diagrams is encouraged in finding an appropriate form for their city. They are aware of the public spaces (roads, agora, stoa and gate), public structures (temple, theatre, bath, fountain, aqueduct, walls) and public highlights (acropolis, necropolis) of the antique city. The final form takes shape by reinterpreting clusters and neighbourhoods, the heart and the private – public spaces of the city, needless to say, in conformity with design principles and gestalt rules.

Miletus stands at the western edge of the Meander River in Caria. In the antiquity, it was a port city. In time, the alluvial soils carried by the river filled the sea and the city declined and died away. Design historians have assumed the role of designing Miletus to Hippodamus, the inventor of the gridiron city design (**Figure 13**). The city has become the symbol of
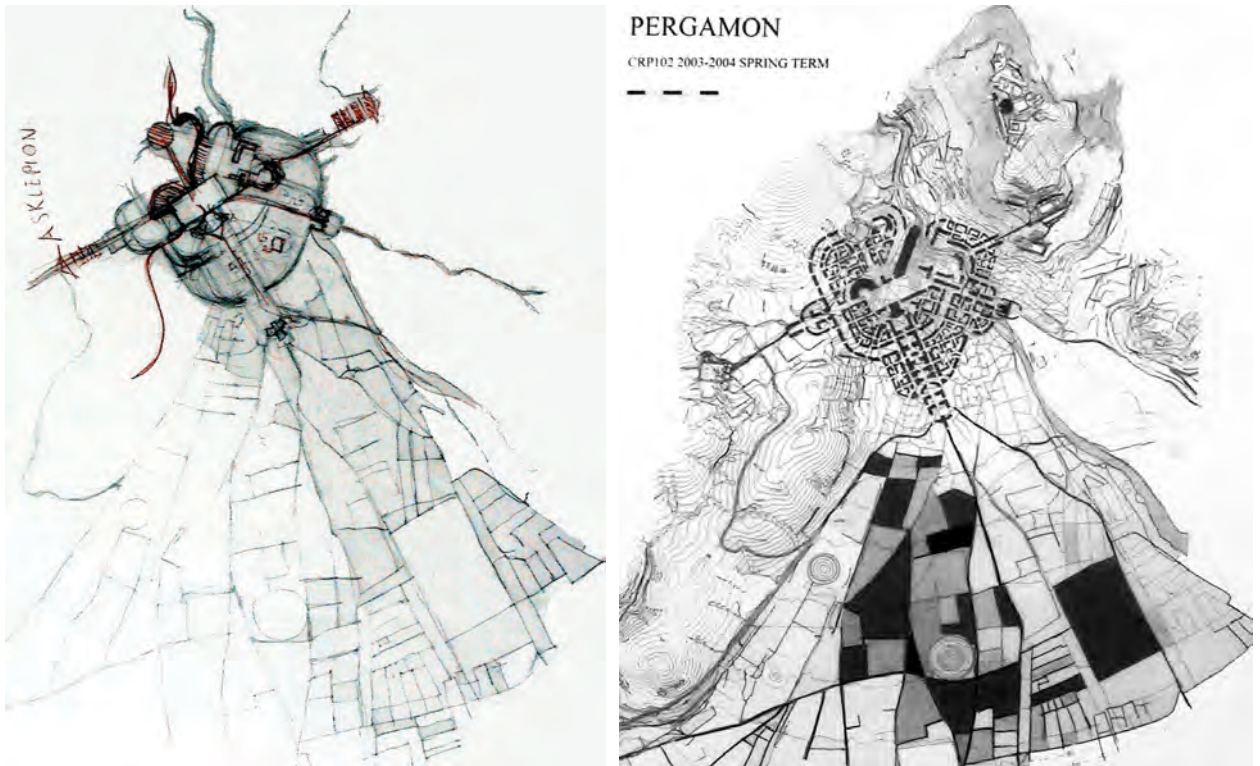
**Figure 12**. Conceptual diagrams and macro-form studies.

order and Friedmann (1987, 23) has claimed that orthogonal planning is characterized by physical arrangement of activities, intended for a static hierarchical world, an outcome of divine reason and pragmatic knowledge passing from the master to the apprentice.

In Miletus, the designer applied the grid plan on a relatively flat terrain. The unity of the city depended on the grid plan within which the public spaces and structures found a location and a form. In spite of the 'rigid discipline of the grid-iron plan' claims Bacon, Miletus displayed 'tremendously dynamic quality' where 'the repetitive module of the
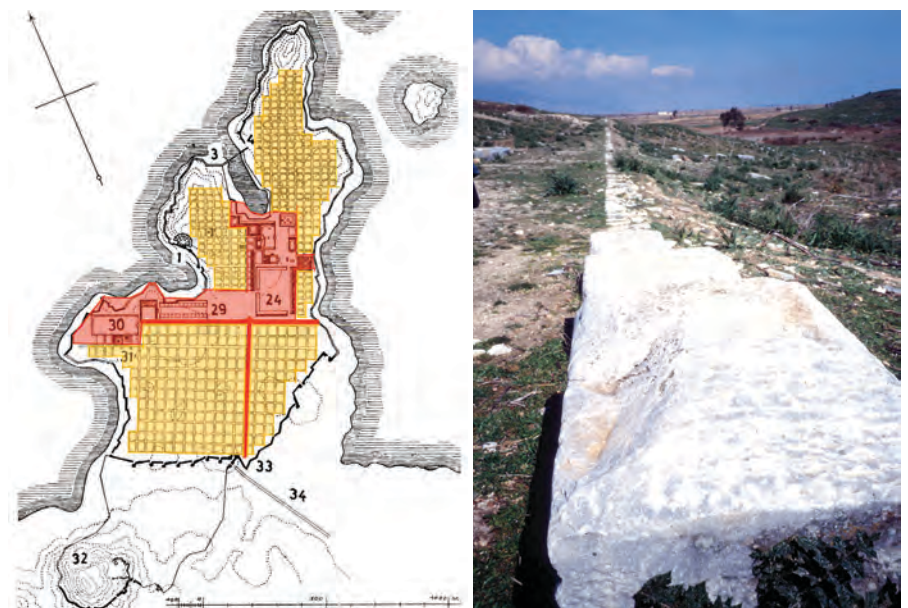


**Figure 13**. Miletus (7th Century BC to 2nd Century AD): Clear order, edges and the heart of the city.
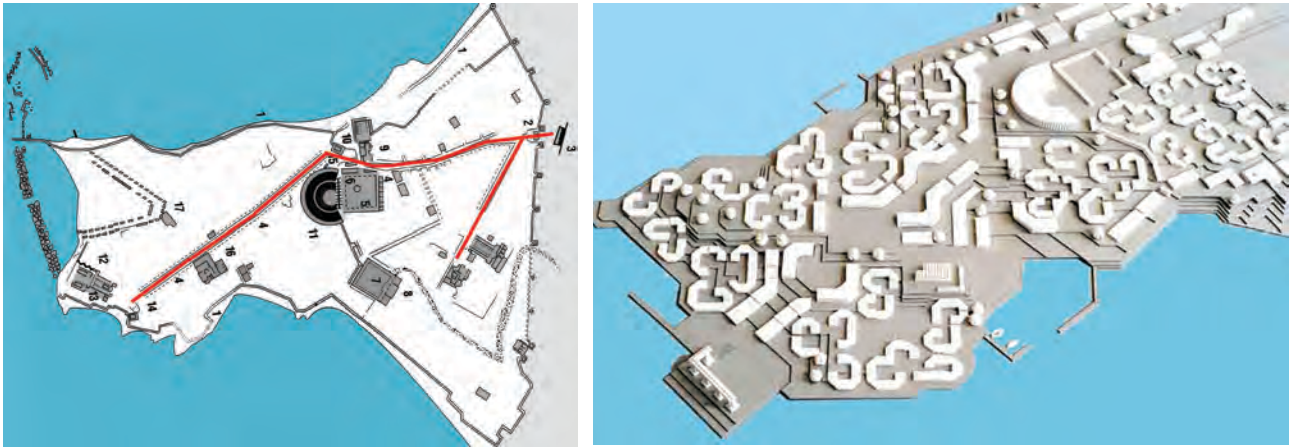
**Figure 14.** Student's reinterpretation of Miletus promontories and the heart of the city.

**Figure 15.** Priene (4th Century BC) and its interpretation.

regular rectangular blocks' gave way for the 'composition of the public parts of the city, the temples, the gymnasia, and the stoas facing inward onto the agoras and out toward the harbours' (Bacon, 1982, 75). Hence, the city has taught many lessons to the students, the most significant being the gestalt effect obtained by the use of the grid plan reinterpreted on the promontories of the geomorphologic structure of the city (**Figure 14**).

In Miletus, the location and the form of the heart of the city display balance with the whole. The gestalt rules of similarity, proximity, alignment and closure immediately attracted attention of the students. The meeting of the main entrance with the agora(s) became an imitated pattern of the city (**Figure 14**). In Priene, on the other hand, the single design provided for a much more interesting setting as far as the whole and part relationship is concerned. The clash between the geomorphology and the grid pattern in Priene has produced a city with scale that is unmatchable.

Figure 16. Side (7th Century BC) plan; clear spine, edges and the heart of the city and student's interpretation of spinal organization

The Aegean Sea surrounds the site of Miletus. As a result, the students remain within those limits. Priene, however, provides opportunities for development and the students begin searching for patterns of growth. The gestalt rules of similarity, proximity, alignment and closure immediately attracted attention of the students. They imposed orders and accordingly designed new neighbourhood units, considering hierarchy of spaces through clusters (**Figure 15**).

Both cities have taught many lessons to the students, the most significant being the gestalt effect obtained by the use of the grid plan and the location and form of the heart of the city. Within the grid, there was no differentiation of main roads as far as their size and location are concerned. Hence, the grid pattern provided unity of the settlements. Hippodamus, with the grid order, has also rationalized the division of urban areas into three parts: "one sacred, one public, the third private" (Mumford, 1966, 202); eventually, giving the students insight as to the organization and hierarchy of space.

The second set of cities covered Side and Perge in Pamphylia. The most significant aspect of these cities is their city structure founded on spines, which meant the existence of more powerful political systems. Side, Pamphylia's largest port, stands on a small peninsula extending north south into the sea where the main road from the gate found the theatre and the agora at the entrance to the peninsula, and then traversed it diagonally ending at the temples of Athena and Apollo. A continuous system of columns shaded the main shopping streets (**Figure 16**).

In Miletus and Priene there was only one grid pattern dominating the whole city. Now the spine dominated the city, and whenever its direction changed, the direction of grid patterns also changed, which was another lesson learned from the Side case. In addition, in every turn of the spine, public structures and spaces were located, enhancing those places; a pattern imitated straight away by the students (**Figure 16**).

In Perge, the winding spine built up the whole. It started with the city gate accompanied by the agora and the bath, to end at the north with the nymphaeum that stood at the foot of the acropolis, and at the centre of the road, there was a water channel dividing the road into two lanes (**Figure 17**). The water brought from the spring emptied into a pool beneath the fountain, and from there flowed to the streets via channels. Hence, the main spine reminded us of the boulevards of the 19th century cities, with water flowing along its median line provoking the students for gestalt

**Figure 17**. Perge (4th Century BC): The winding spine supported by clusters.

patterns of continuity and alignment. The main spine was rich in shops, supported by a colonnaded portico resembling the streets of Side, which provided shelter against rains in winter, and protection against hot summer sun (**Figure 17**).

Hattusas is much earlier than the antiquity. The capital city of the Hittites stood in the centre of the Kızılırmak (Halyse River) River's crescent. Overlooking a fertile plain, the site of the city is a hillside that already had natural defence potential. The Hittites survived for almost a millennium in the Anatolian Peninsula (17th to 7th Century BC). Their cities were woven into the geomorphology of the region and "[t]he strength of their architecture was to accept the raw design of the land as the better part of building. This entailed not only using natural configurations for purposes of defence or advantageous siting, but wresting a kind of manly dignity from the rugged terrain" (Kostof, 1995, 91).

The area in which Hattusas dispersed is comparatively larger than the cities of the antiquity (**Figure 18**). Their living units were also larger and did not display the orderly arrangement antique cities. Neither was there any visible circulation system, however, as pointed out by Kostof (1995) too, it is a very impressive site, giving opportunities for a variety

**Figure 18**. Hattusas (17th to 7th Century BC).

**Figure 19**. Phaselis (7th Century BC): City of three harbours and the spine with stairs as a problem of interconnectedness.

of neighbourhood configurations. The acropolis within the city walls and the great temple are very striking structures of the city. The site and its structures have very much affected the students, but it was also very difficult for them to take control of a city, because we did not know the circulation patterns and the city dispersed within the walls.

Later, this problem became an advantage in terms of searching for a variety of forms. All the scattered ruins, temples and castles urged the students to use common fate (parts displaying the same compositional patterns) and connectedness (a **c**onnecting element of two dissimilar objects or patterns) in developing their design. As a result, Hattusas turned into an exciting and creative experiment for the studio in reinterpreting the gestalt rules (**Figure 18**).

Lycia is the name of the southwestern coast of Turkey in the antiquity and the city of Phaselis survived in the region with three harbours. Although it did not have a rich agricultural hinterland, it made use of its strategic location and protected harbours. The city lies on an isthmus between two main harbours and one secondary harbour (**Figure 18**). Along the isthmus, the main avenue of Phaselis connects the two harbours. On either side of the avenue are sidewalks and shops. The significance of the avenue is that, thanks to the steps on both sides, it turns into a square, a public space where many events take place (**Figure 19**).

Midway between the two harbours, the avenue makes a joint where the theatre, the agora and the baths are located. This is a very clever design approach using the universal gestalt principles of continuity and connectedness. Moreover, the scale of the city provokes the students, just like the human environment of Priene. The design of the avenue connecting the two harbours is a simple and effective manipulation, which enriched life in Phaselis (**Figure 19**).

One of the most popular towns of the antiquity is Pergamon in Mysia - western Turkey. The city's antique existence has continued more than a millennium; it has survived the Ottoman era and continuing to exist as the city of Bergama in modern Turkey. This multi-layered city was founded on the Acropolis that housed the well-known Zeus Altar being kept in the Pergamon museum in Berlin and a 200,000-book capacity library. Containing the steepest theatre of the Antiquity with its own stoa, the acropolis is one of the most impressive in Anatolia, looking onto the broad plain that had given life to the city.

There is a very strong visual relationship between the Aesklepion, a healing centre built in the name of the God of Health, containing a theatre, rooms where the patients were cured by the sound of water and music, a temple and a library, and the Acropolis. The main spine of the Aesklepion looks directly to the Acropolis making both the parts of total unity. The middle city was on the slope between the acropolis and the lower city and gymnasia, auditorium and temples highlighted it.

In spite of the harsh geomorphologic setting, a grid pattern dominated the lower city. The composition of the Red Hall, stadium, theatre and odeon at the lower city has orthogonal relations with each other. Today the Ottoman city has covered the lower city; however, the remains displayed a rich collection for the students. The variety of settlement patterns, public structure and spaces were all interconnected, sometimes visually, sometimes practically sharing the same setting (**Figure 20**). This has given the students the opportunity to view all the forces of design and gestalt
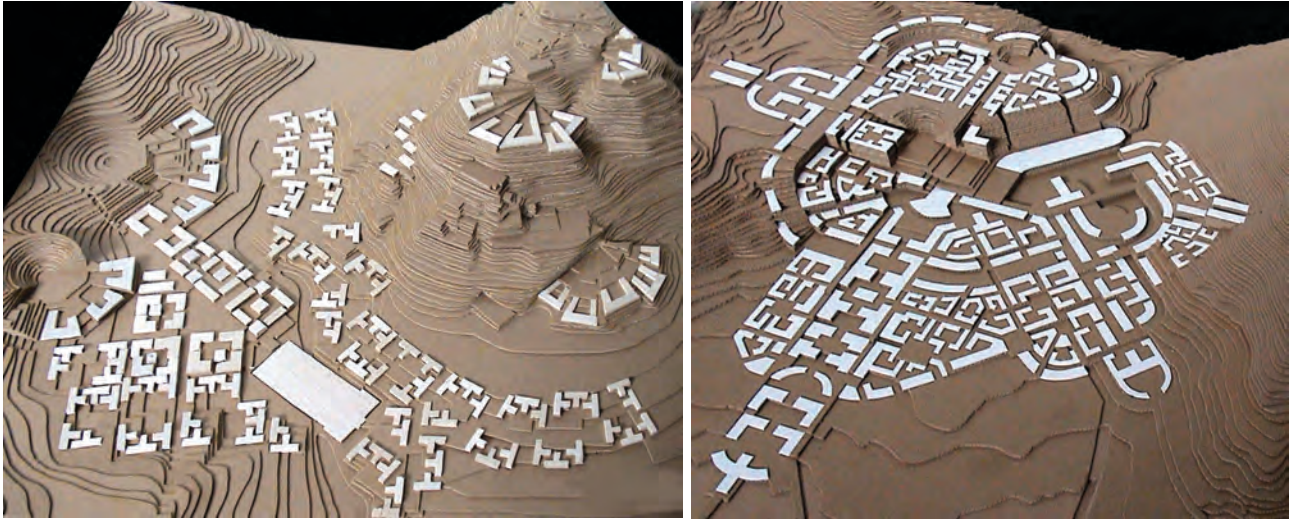
**Figure 20**. Pergamon (4th Century BC to 7th Century AD): Students' interpretation of layers from the Acropolis to the lower city.

rules, a good chance to observe the whole and its parts and the dialectical links among them, rather than the historical details of Pergamon.

The results of the visits to the antique cities have all been fruitful in the previous years. In the studio, we do not interrogate style and it is even encouraged. Whether the student applies classic, modern, traditional, or deconstructive do not count. What is important is unity and harmony of design, which we discovered in our visits to the antique and ancient sites. To achieve similar results asks for skilful and clever employment of gestalt rules and whole - part dialectics. The author believes that city planning education in a still urbanizing society should equip planners with a good sense of composition. Moreover, gestalt rules are never static, depending on the talent and experience of the student; they can be adapted to changing topographic or other conditions that the city enforces (**Figure 21**).

Even in urbanized England, Ravetz has attracted attention to the main concern of planners in 'establishing legal and administrative framework', however, continues Ravetz (1986, 51), since 'any influence or borrowings

**Figure 21**. Gestalt rules are open to variety too; application in Priene and Perge.
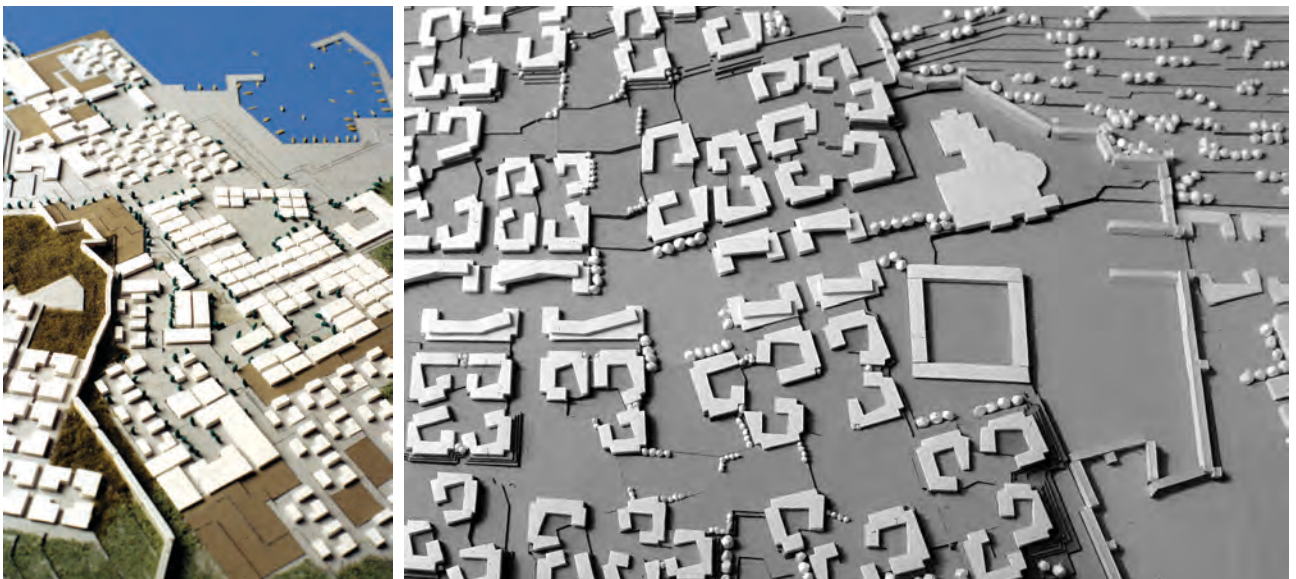
from architecture … went unacknowledged', a wide and aggressive break evolved between the two professions. Ravetz furthers the argument on the combat being lived between the professions regarding the formation of the built environment, and concludes that in practice "under the conditions of planning control, architects had to submit their designs to the planners and so were ultimately subordinated to them" (Ravetz, 1986, 51).

Turkey is experiencing a similar attitude at present. There is a huge attack from the architects to the planners, claiming that the city planners should be involved in only at the master planning level leaving the design to the architects. The author, however, is cautious concerning Ravetz's claim - 'town planning had no background of professional practice and experience from which to derive a body of theory' (Ravetz, 1986, 51). There is a theory; the theories of design and gestalt rules provide the necessary framework to the students of city planning. After all, dealing with wholes and parts is one major issue of any planning act and the basic design education demonstrates this relationship very concretely to the students. It is true that only some of the planners enter processes of designing the built form. Nevertheless, even a subdivision plan requires gestalt qualities and when you add to it the building rights then you are designing the third dimension of the city. Today what is called the urban fabric(s) (two-dimensional subdivision + three-dimensional building rights) is a product of the planning profession. The first year basic design studio is an attempt to educate planners with a design outlook to enhance the gestalt quality of the environment.

**CONCLUSION**

City planning or more generally spatial planning and its education in different societies are a part of their specific epistemological and political perspectives. Hence, we cannot talk of universality of city planning education as a whole. In any case, however, any planning school will fundamentally teach procedure (decision and choice theories), substance (location and urban form theories) and gaming (conflicts, realization). It is probable that there shall be many more topics to study, depending on the political conjuncture.

Responsible creation on the other hand, is "to form the life of others" and "education for design can be indifferent neither socially nor culturally" (Maldonado, 1965, 122). It is for this reason that the author has been insistently carrying out the first year planning studio in his Department for twenty-five years with some intervals. The studio's main emphasis has always been on basic design education. As a result, the above discussion elaborated on the relations between science, art and design putting the emphasis on the role played by Gestalt theory.

In the production of urban form, we are talking about three phases. The first phase covers two-dimensional subdivision of land. In the second phase the bulks of the structures on the subdivided pieces of land are determined which build up the third dimension of form, and in the third phase, the architecture of those structures evolve depending on the prevailing or contrasting architectural styles. Today it is true that planners, besides dealing with many aspects of cities – economic base, infrastructure, transportation, social problems, etc., - are influential in the first two phases of production of urban form. If style is put aside, they also produce and control the architecture of the city through bulks of the structures with their sizes and setback distances.

Producing the form of the city is a problem of composition in two and three-dimensional terms. When we consider the form of the city, if city planners are to produce and give shape to the urban environment, they should be equipped with skills to form groups of structures and the sense of belonging together of those groups of structures that build the totality of the environment. This certainly requires the development of visual skills of planners in designing the composition of urban form. As accentuated by Kepes (1965, i), "vision, our creative response to the world, is basic, regardless of the area of our involvement with the world. It is central in shaping our physical, spatial environment, in grasping the new aspects of nature revealed by modern science, and, above all, in the experience of artists, who heighten our perception of the qualities of life and its joys and sorrows".

The author has concentrated more on the design aspects of the urban environment in professional and academic life. In the final analysis, what count most are still the spatial qualities of any man-made environment. City planning students, besides the rational aspects of their profession, may as well be educated to be more sensible and creative to the urban environment, so that they can better communicate with the architects.

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**GESTALT KURAMI VE KENT PLANLAMASI EĞİTİMİ**

Planlama düşüncesinin akıla dayalı aydınlanma çağının ürünü olduğu söylenir. Plancıların arazi kullanımları, ulaşım sistemleri, iktisadi ve toplumsal sorunlar ve altyapı ile uğraşacakları bir gerçektir. Bu büyük uğraşın sonunda, eğer ürettiğimiz kentsel çevreler bizi mutlu etmiyorsa, çabalarımız boşa gitmektedir.

Yazar,1960'lı yıllarda başladığı kent planlaması eğitiminin birinci sınıf işliğinde temel tasarımın soyut dünyası içinde ilk kez çizgiler, yüzeyler, hacimler ve dokulardan oluşan yeni bir çerçeve ile tanışmıştır. Sözcükler ve sayılardan oluşan orta eğitim sürecinden sonra tanışılan bu dünyanın etkileri tüm meslek yaşamı boyunca sürmüş ve çevreye son biçimin verilmesinde çevreye biçim veren uzmanlarla daha etkin bir iletişim kurmasını sağlamıştır. Bu nedenle, kentin biçiminin üretilmesinde etkin olan kent plancılarına eğitimleri sırasında görsel becerilerin kazandırılması açısından geştalt kurallarının öğretilmesi ve uygulatılmasının önemli olduğuna inanmaktadır.

Alman dilinde *gestalt* şekil, biçim, örüntü, yapı, düzen gibi çok sayıda kavramı içeren bir anlam taşımaktadır. *Gestalt* kurallarının temelini oluşturan parça ile bütün arasındaki ilişki ise eğitim bilimlerinin de üzerinde durduğu bir olgudur. 1920'li yıllarda temelleri kurulan geştalt

kuramında bütünün mü parçaları etkilediği, yoksa parçaların mı bütünü belirlediği tartışılmış ve bu eytişimsel ilişki içinde bütünün parçaların toplamından farklı bir şey olduğu vurgulanmıştır. Bu çerçevede görsel dünya için birey, tek tek nesneleri değil, nesnelerin oluşturduğu bileşimi (*composition*) algılamaktadır. Bileşimi oluşturan tasarlama eylemi ise iki temel kavram (*category*) üzerinde kurgulanmaktadır; cansız doğaya bir amaç ve yön veren **düzen** (*order*) ile her bütünün sahip olduğu **anlam** (*meaning or significance*), bileşimin niteliğini oluşturmaktadır.

Anılan çerçeve içinde tanımlanan *gestalt* kuramının bir diğer temel özelliği de problem çözümü ve yaratıcılık üzerine geliştirdiği söylem olmuştur. Tasarım eğitimi açısından parçalanmış, ilintilendirilmemiş bilgi yerine bütünün kavratılması ve bu bütünün yeniden nasıl örgütleneceğinin öğretilmesi, bütün parça ilişkisinin çok daha karmaşık olduğu kentin planlaması açısından daha da önemlidir ve eğitimin temel niteliği olarak algılanmaktadır.

Benzerlik, yakınlık ve süreklilik *gestalt* kuramcılarının belirlediği ilk kurallardır. Bunlara daha sonra çerçeveleme, birbirini tamamlayan biçimler, simetri, aynı doğrultuda olma, okunurluk, ortak yazgı ve birleşebilirlik gibi nitelikler eklenmiştir. *Gestalt* kuralları kimi ilişkileri ve düzenleri tanımlayabilmekte, buna karşın har zaman da açıklayıcı olamamaktadır. Bu durumu gözleyen kuramcılar deneyim olgusunu da geştalt kuralları arasına sokmuşlardır.

ODTÜ Şehir ve Bölge Planlama Bölümü birinci sınıf işliği *gestalt* kurallarının öğretildiği, deneyimlendiği ve uygulandığı bir çerçeveye oturmaktadır. Arka planın (*ground*) ön plan (*figure*) kadar değerli olduğu, düzen ve gönderme çerçevesinin (*frame of reference*) yalnızca görsel dünyanın değil her alanın tanımlanmasındaki önemi, görsel dünyanın soyutluğu içinde önce iki ve üç boyutlu temrinlerle geliştirilmekte, daha sonra bunlar gerçek dünyada uygulamaya konulmaktadır. Birinci yarıyılın sonunda, edinilen beceriler mekânın düzenlenmesinde kullanılmakta, kademelenme, özel ve ortak alanlar, yapı, omurga ve kenar gibi ögeler *gestalt* kuralları çerçevesinde biçimlendirilmektedir.

İkinci yarıyılda ise bu beceriler bir antik kentte sınanmakta ve uygulanmaktadır. Tasarım ve planlama tümdengelim ile tümevarım yöntemlerini içinde barındırmalıdır. Öğrencilere önce yerden bağımsız olarak tümevarım yöntemi içinde yaşam birimi, küme ve mahalle temrinleri verilmekte, daha sonra işliğin o yılki konusunu oluşturan antik kent ziyaret edilmektedir. Antik kentler soyuttur, izleri vardır, kendileri yoktur. Bunun eğitim açısından önemli olduğuna inanılmaktadır. Bir diğer özellikleri ile hepsi **temel tasarım** ilkelerine göre düzenlenmişlerdir.

Bu çerçevede ziyaret edilen kentlerden Priene ve Milet ızgaranın, Side ve Perge omurganın *gestalt* etkilerini öğrencilere öğretmiştir. Hattuşaş ise surlar içinde bir dağınık eski zaman metropolisinin karmaşık yapısını öğrenciye sunmuş, Phaselis omurganın nasıl mekânsallaştırıldığının resmini göstermiştir. Çok katmanlı kent Bergama ise soyut bir ızgaranın yükseklerdeki Akropolü, orta kenti ve aşağı kenti nasıl denetlediğini, Asklepeion ile Akropol arasındaki çok uzaklardan kurulan görsel ilişkiyi öğretmiştir. Anılan soyutluklar öğrencileri de yüreklendirmiş, öğrendikleri *gestalt* kuralları çerçevesinde bir yandan mevcut kentlere müdahale ederken, bir yandan da bu kentlerin nasıl geliştirilebileceğinin yollarını aramışlardır.

Kentin biçiminin üretilmesi iki ve üç boyutlu olarak bir bileşime (*composition*) oturmaktadır. İki boyutlu olarak mülkiyet, üç boyutlu

olarak da imar hakları kentin biçimini belirlemektedir. Eğer bu biçimi kent plancıları belirliyorlarsa, kent planlaması eğitimi öğrencilere geştalt kurallarını öğretmekle yükümlüdür. Salt işlevsel ilişkiler ve nicel teknikler iyi bir kent yaratmamıştır. Kent planlaması eğitimi yapılaşmış çevrenin mekânsal niteliklerinden vazgeçemez. Bu çalışma, kent planlaması öğrencilerine gerekli beceri ve duyarlılığı sağlayabileceğine inanılan *gestalt* kuralları üzerinde durmuş ve birinci sınıf işliğinde bu kuralların nasıl uygulandığına ilişkin bilgi ve tartışmaları kapsamıştır.