Environmental representation: Bridging the drawings and historiography of Mediterranean vernacular architecture

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Abstract

Architectural drawings, which are projections of spaces on a paper surface, can be categorized according to the projections' directional and temporal relation with the represented space. A projection becomes a documentation when it departs from an existing spatial organization for recording it on paper. The projection serves the design process when it departs from the present to foresee a spatial proposal in the future. While the former records the present within limited interpretive range, the latter is more constructive. While these two types of projections are known widely, there is another highly interpretive type of projection, the potentials of which, are generally underestimated. As the architectural historian's tool, this third projection type represents bygone architecture. The task of this drawing, which is one of the least questioned issues of architectural history, is to restore an incomplete image by referring to material and textual sources. This drawing type contributes to the methodology of architectural historiography while conceiving, explaining and representing space.

For illustrating this situation, this study analyzes the vernacular settlements and their environmental integration because this selected context reveals the interpretive nature of the third type of projection in a successful way. In this framework, the cut-away axonometric is considered as an appropriate drawing method for uncovering the integrity between architecture and its site or culture and nature. The outcome of this theoretical insight into the prolific relations between drawing and architectural history is coined as "environmental representation."

In history architectural products have been integral components of the environment. Then, the architectural representation of historical buildings through drawings becomes critical since the majority of architectural drawings tend to isolate buildings from their environment. This conventional representation of historical architecture has been the dominant tool of typological analysis. Typology, which is intertwined with plan drawings, categorizes historical buildings according to their spatial, structural and material organizations and disengages the buildings from their socio-cultural and environmental context. If this methodological problem of typology is regarded as a problem of drawing, a new mode of "environmental representation" can be proposed.

This study proposes "environmental representation" of architecture through cut-away axonometric. This graphic proposal is based upon the theoretical references of "environmental aesthetics", which is an interdisciplinary field analyzing the participatory human engagement in environment. "Aesthetics," as a term, defines this bodily engagement into environment through

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the use of all human senses. In this theoretical framework this study challenges the assumptions of scientific theory for architectural representation of the "abstracted object" and proposes an alternative method of "environmental representation" on the basis of "aesthetics". Within this scope, the proposed cut-away axonometric drawings produced by the author is analyzed in order to represent exemplary historical contexts of architecture selected through the vernacular settlements of the Anatolian Mediterranean.

Keywords: historiography; architecture; vernacular; Mediterranean; representation; environment; drawing.

1. Introduction

In history architectural products have been integral components of the environment. In order to understand architecture in any given period in history it is necessary to unfold its continuous relations with environment (Hughes, 2005). Graphic documentation of architectural works is an essential tool for architectural historiography (Bourdier, 1989: 40-52). In this framework the architectural representation of historical buildings through drawings becomes critical since the majority of architectural drawings tend to isolate buildings from their environment and, according to scientific theory, present them as abstract sets of dimensions, materials and plan schemes (Kavas, 2016: 34-35). This conventional representation of historical architecture has been the dominant tool of typological analysis, which categorizes historical buildings according to their spatial, structural and material organizations.

Typology is intertwined with plan drawings disengaged from the socio-cultural and environmental context. The abstract language of the orthographic projections (plans, sections and façades) obstructs local characteristics. In this way architectural works are reduced into abstract objects of contemplative appreciation (Kavas, 2016: 34-35). However, architecture is not an abstract object; it is rather a cultural construct which is realized in a bodily engagement into an environmental context. Therefore architecture should be represented in its environmental depth. If the methodological problem of typology is regarded as a problem of drawing, a new mode of "environmental representation" can be proposed.

Cut-away axonometric is a prolific mode of drawing integrating sections with axonometric perspectives. In contrast to regular perspectives, cut-away drawing enables to emphasize selected spatial components or environmental relationships because where to cut and what to show is completely related with the decisions of the interpreter (Bourdier, 1989: 50). Therefore the drawing may have very effective representative qualities. This capacity of representation is more powerful than another mode of representation.

This study proposes "environmental representation" of architecture through cut-away axonometric. This graphic proposal is based upon the theoretical references of "environmental aesthetics", which is an interdisciplinary field analyzing the participatory human engagement in environment. "Aesthetics," as a term, defines this bodily engagement into environment through the use of all human senses. In this theoretical framework this study challenges the assumptions of scientific theory for architectural representation of the "abstracted object" and proposes an alternative method of "environmental representation" on the basis of "aesthetics". Within this scope, the proposed cut-away axonometric drawings produced by the author is analyzed in order to represent exemplary historical contexts of architecture. In order to illustrate the theoretical and practical proposals of this study, exemplary vernacular settlements and dwellings of the Anatolian Mediterranean is selected.

2. The Conceptual Framework and Material of Analysis

2.1. The Conceptual Framework

Architectural history encompasses the study of historical spaces where environment has been culturally weaved through architecture. The relation between architecture and environment has been a central theme in the interdisciplinary field of environmental aesthetics (Carlson, 2011). This field, which is based upon phenomenology (Sharr, 2007), is closely related with architecture, art history and other social sciences. Environmental aesthetics pays special attention to the relations of the traditional non-Western cultures with their environment. For Berleant, an important theoretician of environmental aesthetics, environment, which cannot be considered independently from humanity, defines "a harmonious unity of human contribution and physical location" (Berleant, 1992: 132).

In order to understand the significance of environmental aesthetics for architectural research (Berleant, 1991), it is first necessary to analyze the term "environment." Through its use over a long time "environment" has acquired certain meanings. The most straightforward meaning of the term is "the region that surrounds something" in reference to "the French en, in and viron, circuit" (Berleant, 1997: 29). Berleant claims that this narrow meaning depends on a duality: "an object and its surroundings," or "a self and its setting" (Berleant, 1997: 29). Refusing this understanding of "environment," Berleant introduces a proposal (Berleant, 1991: 84). Accordingly, environment is "no foreign territory surrounding the self," because the human habitation is "a contributing and responding part of a dynamic nexus of interpenetrating forces" (Berleant, 1991: 102-103). Berleant regards environment as "physical – cultural realm in which people engage in all the activities and responses that compose the weave of human life in its many historical and social patterns" (Berleant, 1992: 20).

According to the theory of environmental aesthetics the categories of "object" and "surroundings," which are imposed by the conventional definition of "environment", are erroneous since this opposition itself is a fallacy. Within the continuous web of relations defined by the "environment" there is no independent or isolated being. Paralleling this new definition of environment, an alternative and more comprehensive view of "aesthetics" has flourished. In accordance with this new view, "aesthetic" involves all relations between culture and environment at the basis of sensual, bodily and participatory engagement and actions and responses (Kavas, 2015: 334). Any human activity underlined by perceptual engagement with environment becomes the subject of aesthetics (Carlson, 2011). From this viewpoint, the term "participatory involvement" (Berleant, 1991: 91-92) becomes a key for understanding the dwellers' conception of environment in traditional pre-industrial societies where architecture and environment are integrated.

As a result of these theoretical transformations, environmental aesthetics enhances the inclusive conception of "environment" as an integrated unity of nature and culture. In addition, environmental aesthetics makes it possible to understand "aesthetics" as an integrated realm of perceptual engagement with environment. This new concept of "aesthetics", which becomes important for this study, involves all situations where humans set up "sensual, bodily and participatory involvement" with environmental elements (Berleant, 1991: 91-92). These integral perspectives introduced into human – nature unity by environmental aesthetics reinforces the idea that rural architecture is "the design of the built environment rather than of isolated physical structures" (Berleant, 1997: 33) and furnishes this idea with theoretical depth.

2.2. The Material of Analysis

This study interprets the theoretical framework summarized above within the concept of Mediterranean vernacular architecture. The environmental characteristics of the Mediterranean

geography has shaped the cultural history of the Mediterranean basin by also affecting spatial organizations (Hughes, 2005). Since vernacular architecture, especially its rural variations, produces the most responsive spatial organizations to the environmental factors, this set of historical spaces (Rudofsky 1964 ; Rapoport 1969 ; Özgüner 1970; Aran 2000; Allen 2007) defines an appropriate context for assessing the spatial dimension of environmental aesthetics.

Then the above mentioned architectural concepts is exemplified clearly through an analysis of the vernacular architectural traditions. Especially in the rural contexts, it has been possible to disperse environmental coherence throughout a range of scales such as building, rural settlement and region (Kavas, 2016: 17-24) by "moving beyond the physical boundaries of a structure to embrace its connections to site" (Berleant, 1997: 33). In the Mediterranean-rural highlander settlements situated in the Western Taurus Mountains of Turkey, the timber frame structures covered with vine leaves compose a different micro-climate in their surroundings, and according to necessities, these structures are transformed into timber platforms framing the buildings (Kavas, 2011: 32-37). These platforms, which are raised from the ground level on timber posts, make it possible to produce spaces of refreshment during the summer. These spaces also embrace other facilities of everyday life.

These timber systems decompose the conventional duality of "interior space – exterior space" and constitute a gradual transition between the interior and the exterior. The forms of architectural expression engendered by this transition represent the points of integration between environment and culture on a higher scale level than architectural detail. The architectural sections on this scale level exhibit environmental coherence by illustrating spaces, structures and land forms flowing into each other continuously **(Fig. 1)**. Through this contiguous form, traditional rural architecture becomes "sensitive to the distinctive features of its location" by "reaching toward a unity of building and site" (Berleant, 1991: 80).
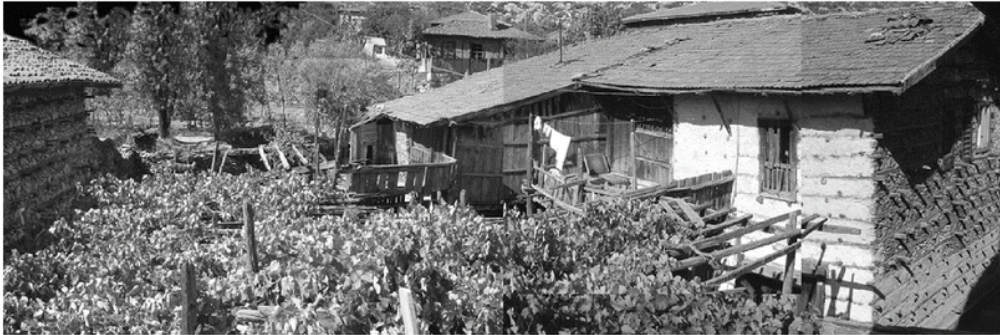

Figure 1: Continuous structures of the rural built environment.
(The village of Ürünlü, İbradı, Antalya, Turkey)

This spatial configuration which renders the architectural boundaries permeable, not only assembles different physical structures but also regulates daily activities associated with these structures. These activities are closely related with agricultural production, which defines the character of traditional life. For instance, semi closed spaces covered with vine leaves maximize surfaces subject to solar energy and constitute surfaces for drying fruits and vegetables for winter use (Kavas, 2016: 48-50).

Since there is a vague segregation between interior and exterior spaces of rural architecture, the boundaries of the traditional rural dwelling should be regarded as an "interface"[3] enhancing the

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[3] Asatekin 1994, 103-105. Asatekin develops an understanding of "interface" in the study of the "traditional Anatolian residential architecture". This understanding of "interface" aims to explain the transitory relations between "public – semi-public – semi-private – private" zones.
Alexander 1977, 195. This definition of "interface" may be related with Christopher Alexander's proposal of spatial "patterns" such as degrees of "publicness" and "intimacy gradient".

permeability between interior and exterior, rather than sharply defined limits. This interface has an "organic" character because the constitutive elements of its physical structure are natural and the spatial configuration of the interface is composed of spaces and sites flowing into each other. This spatial organization resembles a contiguous organism diffused into the environment. Through the "organic interface"[4], which transforms rural architecture into environmental design, solar energy is captured, filtrated, stored, used and reflected. In this way, solar energy is transformed into agricultural product or environmental comfort (Kavas, 2011: 36-38).

Within the environmental unity postulated by environmental aesthetics, it is possible to analyze spatial relations on the scale of architectural section through the concept of organic interface. In this study, concrete examples are used to illustrate this theoretical proposal comprehensively. At this point the most important question to be answered is as follows: How does "organic interface" match up with the "patterns" of everyday life (Alexander, 1977)? Next section is concerned with the ways to analyze the spatial continuity through the graphic language of architectural drawing. In this way the intersection points of organic interface with everyday life can be revealed.

3. Environmental Representation and Architectural History

3.1. Architectural Drawings and Architectural History

Today, in general the social and economic structure of the traditional rural societies around the Mediterranean basin are dissolved, rural settlements are abandoned, representative buildings of traditional rural architecture are demolished or violated either totally or partially due to estrepement or contemporary interventions. In other words, the dissolution of the traditional social structure has concrete effects on settlements. To summarize, it can be argued that rural architectural traditions are components of bygone cultures.

The objective of this study is to develop a representation of the rural architectural tradition during the heyday of their rural social and economic organizations. Since this objective necessitates studying a bygone culture and its architecture, this becomes an inquiry of architectural historiography. The architecture of a bygone social organization can be represented by referring to historical sources. These historical sources may be in oral, written or material forms. Material sources are constituted by architectural remains handed down by previous generations. In order to understand architecture of a historical period through information approved by the historical sources in these different forms, historical buildings are "represented" by the use of architectural drawing methods.

If the totally or partially demolished examples of a rural architectural tradition, which is accessible through oral, textual or material sources, is projected into paper through architectural drawing in order to illustrate its historical performance and original form within the past social structure, this activity can be defined as a form of "architectural representation". This inquiry should be considered as "representation" because it tries to "represent" a spatial configuration which no longer exists today.

Robin Evans argues that "architectural drawings are projections" and "projections- the invisible lines that relate pictures to things- are always directional" (Evans, 1989). Thus Evans categorizes architectural representation as a special mode of architectural projection. For Evans there are two

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Alexander 1979, 613. Alexander builds his concept for "the timeless way of building" upon the idea of "patterns". For Alexander, the traditional built environment is composed of multi-scaled and timeless patterns, which has been used for resolving the spatial problems posed by the characteristic contexts. The above-mentioned patterns relate with the "interface" explain a sequence which departs from the entrance and the most public parts and "leads to the slightly more private areas, and finally to the most private domains."

[4] "Organic interface" addresses the same spatial zone interpreted by Asatekin (1994). However, by using the term "interface", this study focuses on a different dimension of the same issue. Here, "interface" is taken as a conceptual tool for explaining the congruence between architecture, culture and environment.

Kavas 2011, 36-37. "Organic interface" focuses on the continuities between the "public" and "private" zones with respect to their contributions to the broad environmental structure of the settlement.

opposite directions: "to record or to propagate things already made" versus "to project things as yet unmade." It follows that "to record or propagate things already made" signifies "presentation" or documentation. This activity does not require an interpretive effort. On the other hand, "to project things yet unmade" is an interpretation that requires mental effort. This mental effort is the foundation of architectural design. Therefore it might be discerned that this interpretive activity conforms to the idea of "architectural representation." Here to "represent" means substituting a physically non-existing object or product by using an information or phenomenon. This activity is foreseeing a spatial organization that will exist in the future. This is the function of architectural drawings related with designs to be constructed in the future.

Referring to Evans, in this discussion, another dimension of architectural representation should be proposed. Evans gives these definitions in terms of architectural design practice[5]. However, from the viewpoint of the architectural historian, reconstructing spatial configurations of a bygone culture by drawing is also an interpretive and constructive process which should fall under the category of architectural representation. If "representation" means using graphic interpretive language for substituting physically non-existing architecture at the moment of drawing, "representation" should cover graphic reconstructions of the past as well as design projections oriented towards the future. Therefore as regards architectural historiography, a third type of projection, which is also a second dimension of architectural representation may be proposed as the effort "to project bygone things as they existed before". This is an equally interpretive process requiring mental effort based upon historical research **(Tables 1 and 2)**.

Projection Type (no)	Function	Type of inquiry	Direction/character of the projection	Temporal location / direction
1	Presentation of the current situation	Documentation (drawing 1)	From the object to the drawing (passive)	the present
2	Representation of the future	Architectural design (drawing 2)	From drawing to the proposed object (interpretive and constructive)	From the present to the future
3	Representation of the past	Architectural historiography (drawing 3)	From drawing to the reconstructed object (interpretive and constructive)	From the present to the past

Table 1: Types of architectural projection according to their directional and temporal natures

Table (1) summarizes the three basic types of the above-mentioned projections. Projection (1) is a documentation because it departs from a building for recording it on paper. Projection (2) serves design since it departs from the present to foresee the future. While the former records the present within limited interpretive range, the latter is more constructive. Projection (3) is another highly interpretive type of projection[6], the potentials of which, are generally underestimated. As the architectural historian's tool, it represents bygone architecture. The task of this drawing, which is one of the least questioned issues of architectural history, is to restore an incomplete image by referring to material and textual sources. This drawing type, becomes a tool for the methodology of architectural history while conceiving, explaining and representing space.

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[5] Evans 1989, 19. Evans claims that "ideas become architectural only if they are given definition prior to being constructed." This statement focuses on the process of design in architectural practice.

[6] Arnold 2002, 1. Arnold states that "history is about the past. Yet it exists only in the present…The narrative must then relate to the moment of its creation as much as its historical subject. Thus history presents the task of producing a dialogue between the past and the present. In terms of architectural historiography, this task of the historian gives a constructive and interpretive character to drawing.

For illustrating this situation, this study analyzes the vernacular settlements especially in the rural and mountaineer contexts and their environmental integration because this selected context has the capacity to exhibit an intense dialogue between architecture and environment in a universal scale (Tronconi, 2008) and to reveal the interpretive nature of such drawing an a successful manner. **Table (2)** maps the three basic types of projections according to their temporal dimensions, objects of investigations and related drawings. It can be followed that all of the drawings are located at the present. No matter which way in time the objectives of a drawing are oriented, the drawing is produced at the present time. The projection (1) is related only to the present time since it reflects the current form of the building into the paper by producing the drawing (1). Through the projection (2) the design ideas of today can be embodied by a building intended to exist in the future, thus drawing (2) is an architectural representation used during the design process. The projection (3), on which this paper focuses, positions the object of investigation in its historical context in the past. The remains of the bygone building, which can be used today, may be material, textual or oral. These sources also contribute to the shaping of the drawing (3).

Type of Inquiry	Time Scale & Findings	PAST	PRESENT	FUTURE
1 Documentation of an existing building	The object of investigation	Building exists. (Construction date can be discovered according to sources.)	Building 1	Uncertainty
	Related drawing		Projection 1 (presentation) / Drawing 1	
2 Design of a new building	The object of investigation	Building does not exist.	Building does not exist. (there are design ideas)	Building 2
	Related drawing		Drawing 2	Projection 2 (representation)
3 Historical analysis of a bygone building	The object of investigation	Building 3	Building does not exist or exists partially	Uncertainty
	Related drawing	Projection 3 (representation)	Drawing 3	

Table 2: Architectural Projection and Historiography

In Table (2) the arrows between the objects and drawings stand for the projections and the directions of the arrows indicate if they are presentations or representations. The projection (1) is from the object to the drawing because the projection happens in the presence of the object. This shows that projection (1) is a presentation. Whereas the projections (2) and (3) are representations since these projections are realized in the absence of the objects. Drawing (2) represents an object which will exist only in the future while drawing (3) represents an object which existed in its complete form only in the past.

3.2. Problems of Drawings in the Historiography of Rural Architectural Traditions

In terms of architectural representation, the principal products of the prevailing typological method in vernacular architecture research are inventories, plan schemes and related tables[7]. The clearest manifestation of typological reductionism may be seen in this mode of architectural representation. The conventional approach has emphasized abstract proportional relationships mostly concerning the interior plan organization of the traditional dwellings. The standard graphic language underlying the representation of these dwellings reflects a profound disengagement from the socio-cultural context and local particularities. In consequence the dwelling are reduced to abstract compositions of measurements, proportions, materials, construction techniques and plan schemes isolated from environment. The abstract language of the orthographic projections obstructs regional characteristics. In consequence, traditional dwellings of completely different regions, social structures, environmental circumstances and material constraints may be represented in a very similar way. This situation leads to an erroneous understanding of different dwellings as if they were the same.

Whereas, the analysis of the rural settlements so far has demonstrated that rural architecture cannot be conceived independently from environment. In order to comprehend rural architecture in connection to its environment, it is necessary to understand and explain the experience and consciousness of the rural dwellers regarding the construction process (Kavas, 2011: 28-33). This struggle for comprehension and explanation can be successful if only a context specific method of architectural representation **(Table - 2)** can be developed as an alternative to typological standards. In order to achieve this goal, the ways by which architecture is represented in drawings should parallel the ways by which architecture is constructed and experienced.

In order to develop the architectural representation method for rural settlements on a sound basis, at first it is necessary to realize the difference between contemporary urban society and traditional rural society in terms of construction and experience of space. In contrast to the individuals of the contemporary urban society the members of the traditional rural society possess sectional knowledge of the construction process. The observers and users of architecture in contemporary urban societies are detached from the knowledge and process of construction. In contrast, besides the specialized craftsmen, the ordinary members of the traditional rural society had intermediate knowledge concerning the construction process. This was an obligation for assuring sustainability for shelter under difficult natural circumstances. While architectural knowledge and experience of the members in the contemporary urban society is quite facile, architectural knowledge and experience of the rural dweller is quite deep (Berleant, 1992: 17-22).

In order to assess traditional rural architecture in its historical context, it is obligatory to conceive and represent this architecture in terms of the values of its context. For this conception, the "surface" perception of the contemporary society (Berleant, 1992: 21) and standard drawings based on reductive abstractions of typological approach are insufficient and incompatible. The method of architectural representation which is necessary for understanding and explaining rural architecture is supposed to represent architectural sections and environmental continuity of architecture. Consequently this paper proposes "environmental representation" as a method of architectural representation based on the conceptual frameworks of phenomenology (Norberg-Schulz, 1980) and environmental aesthetics (Carlson, 2011).

The process by which architecture is embodied as a cultural construct necessitates experiencing architecture "environmentally" as constructional depth rather than "conventionally" as contemplative surface. The way the work of architecture is constructed and experienced is incompatible with "the customary and detached contemplative appreciation" (Berleant, 1992: 130-

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[7] Fuentes 2010 ; Heath 2009 ; Vellinga 2007. The widely recognized method employing inventories for categorization can be followed in a quite large number of academic and professional studies.

131) underlying the typological analysis. Environmental appreciation underlies traditional rural architecture and becomes possible through participatory engagement and integration rather than contemplation and isolation. The rural dwellers construct and experience space through "the touch of surfaces, textures, and kinesthetic response to pressure and movement" (Berleant, 1992: 130-131). Environmental representation, which is an outcome of this study enables to represent architecture "environmentally" as spatial depth rather than conventionally as "contemplative surface". Environmental representation is compatible with the sensory and participatory appreciation underlying environmental aesthetics.

3.3. Environmental Representation as a Solution through Cut-Away Axonometric Drawings

Drawing is a powerful tool for thinking, representing and transmitting ideas. The way architecture is constructed and experienced cannot be illustrated by two dimensional plans, sections and façades. A more complete spatial representation should convey experience of sections and environmental integration by permeating into the spatial and environmental depth. If vantage points of drawings are adjusted appropriately, a much more successful method than standard plans and photographs may be developed for expressing the continuity between environment and traditional rural dwellings. At this point, sections of the site and the dwellings become important. If sections are used, the continuity between the inner structure of the traditional dwellings and the site can be expressed in a more comprehensive manner. However, on their own, sections are insufficient for representing the three dimensional spatiality of environmental continuity. For this reason, it is necessary to develop another drawing method capable of representing three dimensions while retaining the logic of section.

In this search, Bourdier's proposal for cut-away axonometrics (Bourdier, 1989: 50) is promising. In contrast with perspectives, "The cutaway axonometric has the potential to acknowledge its status as representation and to play with the norms of realist representation in several ways" because "the position of the drawer is imaginary and constructed. His or her intervention is constantly acknowledged" (Bourdier, 1989: 50). This intrinsic acknowledgment of the axonometric is further accentuated by the operation of "cutting away" because "the cutting away of a space is a deliberate decision of the drawer and hence the process of assembling a cutaway axonometric is creatively demanding." The process demands intricate decisions for effectively representing the case: "Where should one cut into a space and why would one open up the wall(s) or roof(s) of a house?" (Bourdier, 1989: 50) The answer changes according to what we intend to emphasize or explain by using the drawing and according to the qualifications of the drawer. **Fig. 2** is a schematic drawing indicating four alternatives.
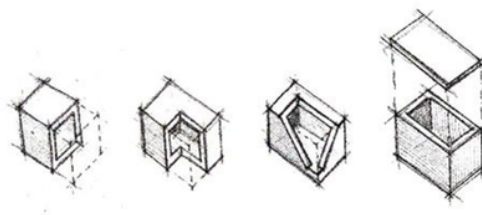

Figure 2: Alternatives of cut-away axonometric drawing.

The first alternative is a simple sectional perspective. In this case, the section is emphasized but the space beneath the section can be visualized very limitedly. The second alternative subtracts the corner portion of the building mass and provides opportunities for seeing the interior space more efficiently **(Fig.2 and 3)**. The third alternative, which is a variation of the second one with angular sectional

planes, uncovers a wider view of the interior space **(Fig. 2 and 4)**. The fourth alternative is a blow-up axonometric dislocating the roof in order to show the interior plan organization **(Fig. 2 and 5)**. Each alternative has advantages and disadvantages however, each is appropriate for certain purposes. Then the drawing provides limitless opportunities for representation and it is the drawer's task to select one of them. Therefore the drawing may have a representative capacity which is more effective than any other type of representation.
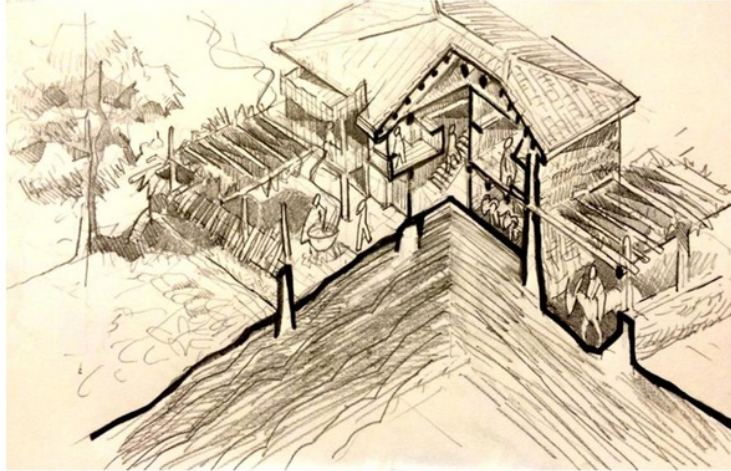

Figure 3: Environmental representation of the continuous structures of the rural built environment. (The village of Ürünlü, İbradı, Antalya, Turkey)

This paper presents three proposal drawings **(Fig. 3, 4 and 5)** based on the last three alternatives given in **Fig. 2**. These drawings illustrate the assessment of the rural architectural tradition as environmental design. The drawings in this vein provide representations of relevant sections of daily life in the traditional society. The culture represented by the proposed drawing has disappeared due to several reasons. Today only some remains of the traditional dwellings are found in the mountaineer villages. Especially the timber structures of the organic interface[8] are the most destroyed sections of the traditional built environment. These timber sections are usually absent. However oral sources state that during the 1950s, the streets were shaded by these structures (Kavas, 2016: 127). Accompanied by textual information derived from oral sources, the proposed drawings **(Fig. 3, 4 and 5)** become documents of historical research in architecture. The drawings, which are produced in this way, aim to develop a more complete view of the receding cultural tradition, its spatial richness and architectural patterns. In so doing it is intended to present a more integrated overview of the traditional patterns of everyday life.

The proposal of "environmental representation" refers to the spatial layout of the "traditional room", which has been established by typological approach.. In typological plans the material and proportional features of the rooms have been studied in detail, and as a result, general principles have been established (Küçükerman, 1973). To propose an alternative approach of representation, the following question should be asked: what is the place of a room for the continuity of architecture

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[8] Kavas 2016, 127. "Asma" and "ayazlık" are the representatives of these traditional patterns in the context of Akseki-İbradı Basin in northeastern Antalya. In Turkish, "asma" stands for vine leaves. The word also refers to the timber post and lintel constructions which are covered by vine leaves. These outdoor constructions produced shaded spaces underneath. Today, the majority of these constructions do not exist but their traces may be followed by observing the surviving timber posts in the garden walls on the two sides of the streets. "Ayazlık", on the other hand, is the semi-closed space where most of daily household facilities were realized. In Turkish "ayazlık" stands for "cool place." It is an elevated timber platform which is physically connected with the "asma" structures.

and environment in a rural settlement? The study of rural architecture in different geographical regions of Turkey (Aran, 2000) illustrates that while the general spatial characteristics of the traditional room is widely common, the environmental relations of the rural dwelling constitute the real site-specific features. Therefore neither the room nor the interior plan organization are sound determining factors of environmental characteristics of rural architecture. In this context, going beyond the limited scale of the plan, the meaning of rural architecture should be questioned in a broader environmental scale.
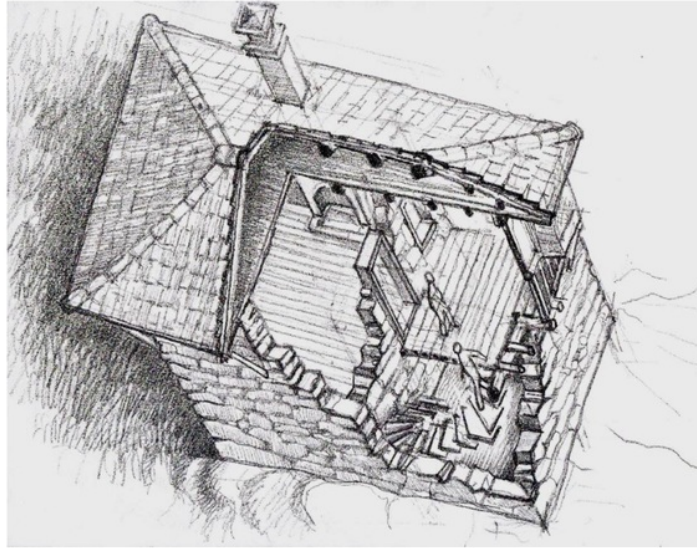

Figure 4: Environmental representation of the continuous structures of the rural built environment. (The village of Hatipkışlası, Çine, Aydın, Turkey)

The cut-away axonometrics produced by the author **(Fig. 3, 4 and 5)** stand for a graphical criticism of the typological method. The cut-away operation is made with the idea of demonstrating the position of a selected room within a dwelling and its neighborhood in the Central District of the mountaineer villages in the Mediterranean regions of Turkey **(Fig. 3 and 4)**. The cut-away line is emphasized by its thickness. The three dimensional section indicates the room in the upper floor, the stable in the ground floor. The drawing demonstrates that with respect to the environmental relations of the dwelling, the room is not as important as typology argues.

In terms of dimensions, spatial configurations and material features, the traditional rooms in the selected rural dwellings resemble the rooms in the traditional dwellings of many other Anatolian regions (Özgüner, 1970; Aran, 2000; Şimşek 2007). The main characteristics of rural architecture in the given examples are the patterns of environmental coherence (Kavas, 2011) demonstrated by the sections, not the interior spatial organization of the dwelling **(Fig. 3 and 4)**. If the same dwelling was represented through the conventional method, it would be impossible to unfold the differences with the dwellings of other regions affected by completely different environmental parameters and material constraints.

As drawings exemplifying environmental representation the proposed drawings express local differences and specificities within historical context **(Fig. 3, 4 and 5)**. The sectional relations and spatial richness informs about the architectural elements of environmental coherence. This spatial richness indicates that the continuity between culture and architecture should not be searched on limited representative plans of a room or a floor, but it should be conceived within relations disseminated into environmental scale (Rapoport, 1990). For this reason, the congruence of culture

and architecture should be studied on the scale of environment. Therefore the abstractions of architectural plans should be left aside and the study should focus on daily activities interrelating the dwellings and spatial configurations derived for realizing these activities.
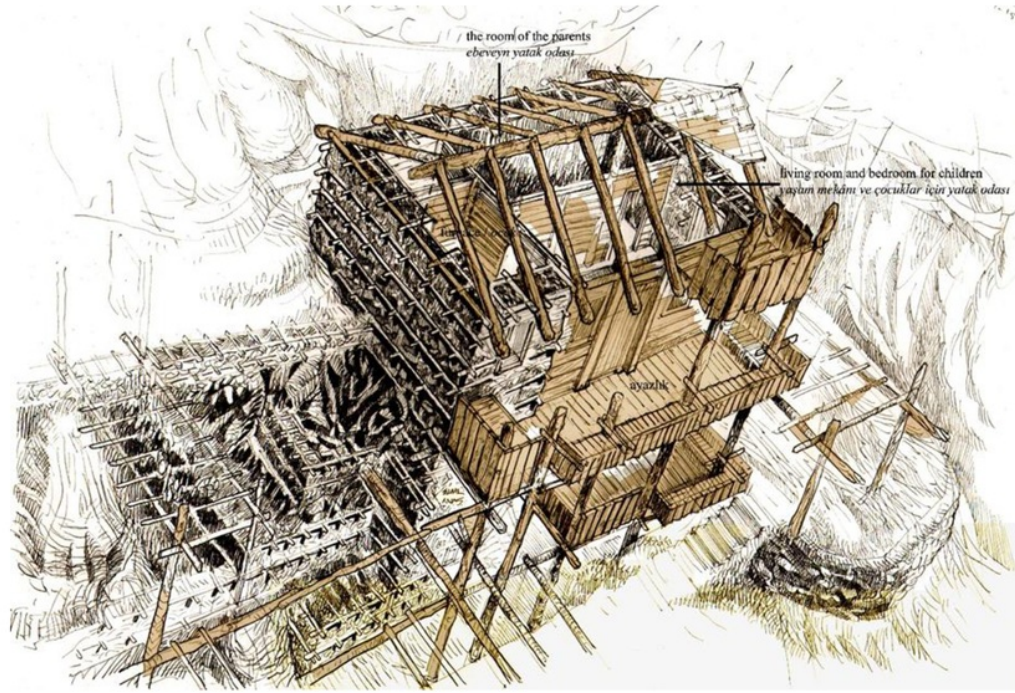

Figure 5: Environmental representation of the continuity in rural built environment.
(A vineyard dwelling in the village of Ürünlü, İbradı, Antalya, Turkey) (Kavas, 2016: 196).

The need for a different scale of representation for the illustration of the congruence between architecture and culture is also emphasized by Rapoport. For Rapoport, while cultural behavior is "contained loosely by architecture," there is "tight fit" or "precise congruence" between culture and systems of activity (Rapoport, 1990: 18). It may be inferred from this argument that the congruence should be searched in the environmental scale where "activity systems" are in action. For instance, the first proposed drawing **(Fig. 3)** illustrate some dimensions of the "activity systems" shaping the rural settlement. For instance, the use of the semi-closed space (*ayazlık*) for daily activities, the use of the timber frame constructions (*asma*) as surfaces for agricultural production, the use of the outdoor space for food processing and production while boiling the grape juice (*pekmez*) are some reflections of the activity systems which underlie the congruence of culture and architecture in environmental scale.

From the above mentioned viewpoint, **Fig. 3** illustrates the interpretation of the architectural section in terms of environmental aesthetics. In this way the drawing reveals how a peculiar constructive mentality embraces whole cultural landscape by providing a characteristic integrity and spatiality in the cultural landscape. This drawing type contributes to the methodology of architectural history while conceiving, explaining and representing space. By the analysis of the architectural section within three dimensional relationships **(Fig. 3, 4 and 5)**, it becomes possible to perceive the incessant continuities of the timber elements departing from the buttoned wall and extending into outside through floors, roofs, garden walls, retaining walls, foundations, fences, terraces and platforms. This continuity explicates how the traditional built environment acquires environmental coherence in entirety.

4. Conclusion

In consequence, environmental representation exemplified by the proposed drawings **(Fig. 3, 4 and 5)** demonstrates the following guidelines for architectural representations in a historical inquiry:

It should never be forgotten that architecture is contiguous with a particular culture. When this culture is bygone, the analysis of its architecture becomes a historical inquiry in architecture. This fact transforms the drawing into a tool of architectural historiography.

All architectural inquiries ranging from historical ones oriented towards the reconstructions of the past, to design processes implying future projections, employ architectural drawings **(Table 2)**. Architectural configurations, which are existed during the heyday of a bygone culture, and which are intended to exist in the future, do not exist at the moment in their entirety. Therefore drawings of these buildings of the past and future are both interpretive and mentally-constructive. These features transforms the drawings into "architectural representations" since they "represent" a work of architecture in its absence **(Table 2)**.

For the analysis of the architectural character of a rural settlement, the section of the wall is more important than the plan of a room. The depth of the wall embraces the irreducible environmental essence which combines local building materials in a practically reproducible manner. This essential architectural detail fabricates the built environment with spatial richness **(Fig. 3, 4 and 5)**.

As an orthographic projection in two dimensions, section is not sufficient to explain the environmental character of the bygone rural culture. Three dimensional relations existing in the scale of the whole settlement should be unfolded through the illustration of three dimensional space. This goal may be achieved by employing axonometric drawings. Therefore the logics of section and axonometric should be combined. The ideal outcome is the cut-away axonometric.

In this framework, the cut-away axonometric is considered as a drawing method for uncovering the integrity between architecture and its site or culture and nature. The outcome of this theoretical insight into the prolific relations between drawing and architectural history is coined as "environmental representation." The cut-away axonometric has the potentials to convey the continuity between the building and its site. Hence architecture can be reviewed as environmental design. This integral approach is compatible with the theoretical implications of environmental aesthetics and makes it possible to understand spatial configurations in their historical contexts.

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