

## An Archaeology of the Street: Analysis of Place in Urbino, Italy

Mark Blizard  
Curtis Fish

### ABSTRACT

This article presents the issues, methods, and discoveries of an analytical study of streets, conducted as part of a study abroad program in Urbino, Italy, during the spring of 2013. Utilizing high definition video cameras and digital tools and environments, we focused on uncovering the *genetic code* of the street and examined its spatial and temporal framework. An archaeological method, composed of traditional urban analysis, typological studies, and the cataloging of elements provided the foundation for subsequent video and post-production analysis. Our premise was that as an urban artifact the street was a distinct place in itself, rather than merely a conduit or path between places. Perhaps, we conjectured, the street may be better understood through the study of movement and the effects of time. It seemed to us that only when we have taken into account the presence of time, could the street's organization, identity, and genetic code be grasped.

The street clearly defies being categorized as an object in the sense of an individual building, bridge, or monument. And yet, once approached as an urban artifact and opened to systematic study, the street appeared to us to be the most fundamental of urban artifacts. The street is the framework of the city's identity. Along the traverse of the street, the urban fabric takes shape and the other events and artifacts that belong to the city find their place. To apprehend the street as a place was, in effect, to discern the core of the city's identity.

Through our study, we found that the genetic code of the street—the qualities, elements, and relationships that identify it—was held in a spatio-temporal armature that we describe as a *matrix*. Traditional means of analysis by themselves are limited in that they only isolate fragments of a much more complex whole and represent them abstractly, drawn away from their experience. This article attempts to make an initial entry into the moving frame of experience and consider the importance of the street's temporal structure. The street is a datum that unifies both memory and experience through its continuity and the nature of its elements and spaces. Throughout the inquiry we found that the digital analytical methods that were employed, and the digital tools themselves, provided new insight into the analytical process while expanding our understanding of the street. By extension, we believe that our analysis may contribute to the growing ability to uncover the qualities and structure that constitute the identity of Urbino, or of any city, or of any *place*.



Figure 1: The historic center of Urbino: view of the Duomo and the Palazzo Ducale

### Key Words

street, place, urban structure, urban analysis, genetic code of place, Italian hill town

### 1. INTRODUCTION: THE GENETIC CODE OF THE STREET

In traditional studies of the city, the street has been classified as the principle organizing structure: binding and unifying urban fabric and land. A series of routes that cut across the landscape, widened to form places—markets and piazzas—the street was understood either as a generative form or a means of uniting the elements of the city into a contiguous whole and defining its pattern of growth. And yet, the street as an artifact in its own right has remained elusive. It has been studied in plan or as a datum along which were positioned an a-spatial sequence of perspective frames. This reluctance to regard the street as an urban artifact seems bound to its indefinite figure of vague boundaries and incorporeal extension, and the sense that it is only a void, leftover space between buildings. Other urban artifacts are more or less clear—defined by both their figure and place within the city, they are almost objects that can be grasped and considered in their entirety. Their form and morphology can be measured with certain precision. The street, however, seems to

be the residue of city building—a conduit that conducts commerce and traffic, fixing the city's elements in place: a transition between identifiable places, but not exactly a place itself. It seems to us that the identity of the street is revealed in its genetic code and in the geometry that holds that code. In order to understand the identity of the street we studied it as an identifiable and knowable urban artifact.

This study was initially conducted in spring of 2013 as we directed and taught in the University of Texas in San Antonio's study abroad program in Italy. Our studio consisted of nine third-year architecture and interior design students and included a residency at the Università degli Studi di Urbino "Carlo Bo" in Urbino, as well as local field studies and extended field trips. The program content was woven into a single course of study focused on an *archaeology of the street*. Sketching, measured drawing, and digital photography were used in the initial study and generated the foundation and the storyboard for the subsequent filming and analysis that included post-production editing, and synthesis that concluded with the finished video.

Our approach and site was specific and focused, bound to selected streets in Urbino's historic center; however, the results and intentions of this discourse suggested a more general application beyond the local conditions (Figure 1). We set aside the history of Urbino and the morphology of its individual buildings. Rather than focusing on the historic, economic, social, or political narrative of Urbino, our concern was with the streets as urban artifacts themselves. By naming and classifying the specific elements of the streets, their structure and essential features—their material, form, magnitude, parts, number, and position—we sought to develop a system by which various streets could be measured, compared, and their identity fathomed.<sup>1</sup> What we were proposing was essentially an archaeology of the street—a close reading of elements and structures that lead to a method of measurement, classification, consideration, and comparison. The use of the term archaeology, framed by the work of Michel Foucault, describes both the analytical process of unearthing the characteristics that define each street, as well as the production phase in which students composed their final multimedia works.<sup>2</sup> The analysis and the synthesis formed a discourse into the nature and structure of place.

As with any examination into the nature or definition of *place*, the archaeology of the street rests upon earlier work that attempted to define and codify place—specifically, that of Giancarlo de Carlo and Christian Norberg-Schulz, among others. In considering De Carlo's operational strategy of *reading the territory*, John McKean writes "deciphering the

signs inscribed in the territory makes the place, its buildings or its land, comprehensible to the mind and the senses".<sup>3</sup> What these late twentieth century examinations of place lacked was a method or instrument that enabled time—essentially, movement and perception—to be figured into the analytical process. Over the course of our study, the street became comprehensible and coherent, to the extent that we grasped its significant elements and spaces within a temporal scaffolding.

It is important here to distinguish between place and its genetic code. The substance of place is an elastic amalgamation that includes social, economic, political, and other cultural factors in union with the land and the elements that together compose the constructed environment. We use the word elastic in order to describe its responsive and adaptable nature. There seems to be something fixed or stable within the nature of a place that retains its identity even as it changes over time. De Carlo considered this stable element to be found in its genetic code—a site-specific "dialogue" between the fabricated interventions and the environmental structure and condition. The result of this back-and-forth exchange is a logic or system of principles and tendencies. The image and identity of place—a complex composite of forces, elements, and spaces that exhibit certain tendencies—depend to a large extent on the composition and construction of its built fabric, its elements, and the spaces between. In other words, architectonic structures lend their visceral nature to their location. It is because of this that we tend to remember them. The identity of a place seems to be an uneasy mesh of environmental and cultural factors and architecture—where each is shaped by the other.

Determining the genetic code of place requires a search for the logic that governs the origin, development, and current physical structure. The use of the term logic is compelling. When we conduct a close reading of a place, De Carlo states emphatically, "we discover that there's a genetic code that has governed the birth and development of the place, and that every intervention incompatible with the logic of the code would produce architectural, planning and social alienation".<sup>4</sup> The genetic code includes

*the ways the buildings are arranged on the terrain in relation to its contours, to the sun, to light, to prevailing winds, to waterways, to roads and footpaths, to cultivated fields, to orchards, to areas planted with trees, to woods, and to other buildings; the kinds of relationships that exist between built-up spaces and open spaces, spaces for activities and spaces for quiet [...]; the ways built-up systems, component parts of buildings, techniques used and choice of building materials are reciprocally in harmony and dissonance.*<sup>5</sup>

Of course, the city and its fabric is more than the composition of its elements—its buildings and the spaces between them. Its identity

---

1. Michel Foucault. 1970. *The Order of Things*. New York: Vintage Books, 138.

2. Michel Foucault. 1972. *The Archaeology of Knowledge*. New York: Vintage Books, 138-140.

3. John McKean. 2004. Giancarlo de Carlo: *Layered Spaces*. London: Edition Axel Menges, 49.

---

4. De Carlo as quoted in McKean, 51.

5. McKean, 51.

is inextricable from its inherent culture—its socio-economic-political dimensions. These inform the built fabric and shape the events that take place within the city. The city is many cities over time—each with its own history and body of congruence and contradictions, discontinuities and sense of unity. The city, like Heraclitus' river, is in continual flux, changing remarkably over time, and yet its identity persists: somehow bound to and contained by its physical fabric of artifacts. As we understand the nature of these urban artifacts, analyze or classify them, take them apart and consider their structure, we begin to grasp the larger identity of the city as a distinct place. It seems to us that the street is the fundamental element of this complex fabric and it is through the archaeology of the street that we begin to understand the city.

## 2. PREMISE: THE STREET AS AN URBAN ARTIFACT

We began with a seemingly simple premise: the street is an urban artifact. Embedded within this premise are complex assumptions: that the street has its own identity apart from, but connected to, the buildings and elements that define its physical extent; the notion that as a unique, identifiable material construction it may be analyzed and taken apart, its elements classified—studied as a subject in much the same way as a building or monument; that the street retains certain *a priori* relationships to the place—to other urban structures and to the land. Of course, Aldo Rossi identifies the city itself as a complex urban artifact and then divides it into its constituent parts: buildings, streets and districts. Each of these categories is also understood by Rossi to be artifacts in its own right.<sup>6</sup> As an artifact, the street shares distinct qualities with other, similar urban artifacts, including identity, stability, and persistence. The woven network of streets and open urban “rooms”—piazzas and markets for example—is understood as a primary and propelling factor in shaping and retaining urban form. Over time, we find that the street tends to persist as a relatively stable form within the changing urban fabric. The street's identity is a complex amalgamation of factors including its composition of materials and elements, its place within the city, its response to the topography, and its sequential and spatial structure. These factors, and the public nature of the space, contribute to each street's sense of permanence and identity. Rossi, in describing the city's enduring elements, or *permanences*, states that “certain original values and functions remain, others are totally altered.”<sup>7</sup>

Rossi's study of the street seems to focus on organizational typologies rather than developing a taxonomy of the street's integral parts or searching for the factors that contribute to its identity.<sup>8</sup> In fact, the street

has most often been relegated to being considered a structural framework or series of conduits rather than a distinct place or sequence of places.<sup>9</sup> Certainly, the nature of its streets provides each city with a unique sense of place or image—a particular structure that lends its geometry to the pattern of the city's development and its organization as a whole. We sought to examine the street closer, to approach it as a place that is at once physical and stretched out or folded in time—in other words, the street as a unified set of architectonic conditions as experienced in time and memory. The street, after all, seems to be the primary element that shapes our perception and understanding of the city—it frames our movement and unfolding grasp of the elements, relationships, and events that together constitute the city.

### 2.1 Background Readings and Literary Review

*Places are persistent and exist like characters in one's memory. A Place, remembered, gathers events and experiences into a matrix that is isomorphic but not identical with the landscape itself.*

—Mark Blizard<sup>10</sup>

We drew together readings from the work of Giancarlo de Carlo, Christian Norberg-Schulz, Aldo Rossi, Gordon Cullen, Ivor de Wolfe, and Bruno Zevi, in regular seminar discussions among students and faculty. Together, these readings offered a platform for grasping the fundamental structure of space and identity of place, and provided a point of departure for conjectures regarding the effect or measure of movement and perception over time. Likewise, the use of high-definition video cameras and digital environments became understood as appropriate instruments for our examination. From this foundation, we initially measured and catalogued the elements of the street and their spatial conditions, utilizing traditional analytical methods. In this inquiry, we began to perceive a spatio-temporal armature (matrix) of the street. Our conjectures were then “field tested” behind the camera. It was not uncommon for the camera to direct us. In fact, the digital tools and environments provided a means to take the street apart and examine it in distinct layers of significant and representative elements seen over time.

It was fortuitous that our study abroad program was situated in Urbino, Italy—not only because of its clarity and relatively intact condition, but also because of its connection to the work of De Carlo.<sup>11</sup> We were able to examine many of his built works and perceive them within, or relative to, the context of the historical fabric of the city. De Carlo's approach to *reading the territory* was palpable. For example, in his design for the

6. Aldo Rossi. 1984. *The Architecture of the City*. Cambridge, MA: MIT Press, 21, 33.

7. Rossi, 29.

8. Rossi never pursues the street in his book *The Architecture of the City* although the included text on typology and accompanying photographs suggest to an interest in the strong link between typology and identity. See Rossi, 35–41.

9. Kevin Lynch. 1960. *The Image of the City*. Cambridge, MA: MIT Press, 47.

10. Mark Blizard. 2008. *Architecture: Land Culture Practice*. Dubuque, Iowa: Kendall/Hunt, 66.

11. The hill towns of Italy have long been studied for these reasons. Specifically, Urbino is clearly articulated with its enclosing Renaissance wall and the clear division between the city and the countryside. As with Ambrogio Lorenzetti's painting depicting *The Allegory of Good Government* in Siena, this division enables us to perceive the interconnection between landscape and the city.



University of Urbino and the coincident master planning for the city of Urbino, he took account of both the site and the genetic code of the city's existing historical fabric.<sup>12</sup> His remarkable study of Urbino (1966), coupled with a proposal for its development, set a standard for many subsequent urban planning projects throughout Italy. De Carlo's systematic account of the city was situated in the broader historical and economic context of the region during the 1960s. Today, De Carlo's work remains exemplary, not merely in a historical context, but also for his insight into urban form and its relationship to place as exemplified in his notion of genetic code.<sup>13</sup>

The use of the term *genetic code* to define the individual attributes that constitute the essence or logic of place has been incorporated into European urban architecture following the work and writings of De Carlo. Recently, the term has reentered the architectural discourse, framed by regionalism, and place-based design approaches, and even new urbanism. For De Carlo, attributes of place, together, form a logic (or, loosely, a set of rules) that can be understood as its genetic code. The genetic code is a description the core logic as found in the significant and representative attributes of a place using general categories of material, element, pattern, and relationship that are discovered through a close reading of the territory or study area—particularly, the existing conditions and character of the urban fabric that is a response to the topography. It is De Carlo's understanding that both the form of the environment and that of the city co-exist and are inextricable from each other. The genetic code, then, reveals the fundamental reciprocity and responsiveness of their character.<sup>14</sup> For the domain of our study, these include the physical and geometric envelope of the street—its boundaries with the earth, the sky, and the city—the composition and definition of the street's elements, and its palette of materials (Figure 2).

De Carlo clearly articulates the relationship between the organizing structure and its physical form as an urban artifact in his definition of architecture as the “materialization in three dimensions of a structure, i.e. of an organizing system, through which functions come into being.”<sup>15</sup> His statement serves as a compelling definition for *street*—especially when we introduce the temporal component: a fourth dimension. The street as a material artifact can be understood as commensurate, or even isomorphic, with its organizing structure. De Carlo's notion of *reading the territory* can be approached methodologically as an archaeological process of analysis and classification. We conjectured that each street, once identified as an artifact, could be studied as a composite of elements and special conditions over experiential time.

In *The Architecture of the City* (1966), Aldo Rossi outlines his well-known theory of urban artifacts, collective memory, and typology. Rossi's work has been the focus of a great deal of debate, study, and elaboration, greatly influencing architecture and urban theory since its publication. It remains, however, necessary to elaborate further on its specific importance to our study. Rossi offers insights into the role and nature of urban artifacts within the city. In categorizing the street as an artifact, he seems to suggest that urban space is not merely a void or conduit, but has a definite identity and influence on urban morphology.<sup>16</sup> Going further, he states that, “When we consider the spatial aspect of primary elements and their role independent of their function, we realize how closely they are identified with their presence in the city. They possess a value ‘in themselves,’ but also a value dependent on their place within the city.”<sup>17</sup> The proposition that the street is not merely an armature for growth, but also a generator of the city's form is important to understand. From Rossi's work, we began to put together a coherent image of the street as tied to both urban form and identity.

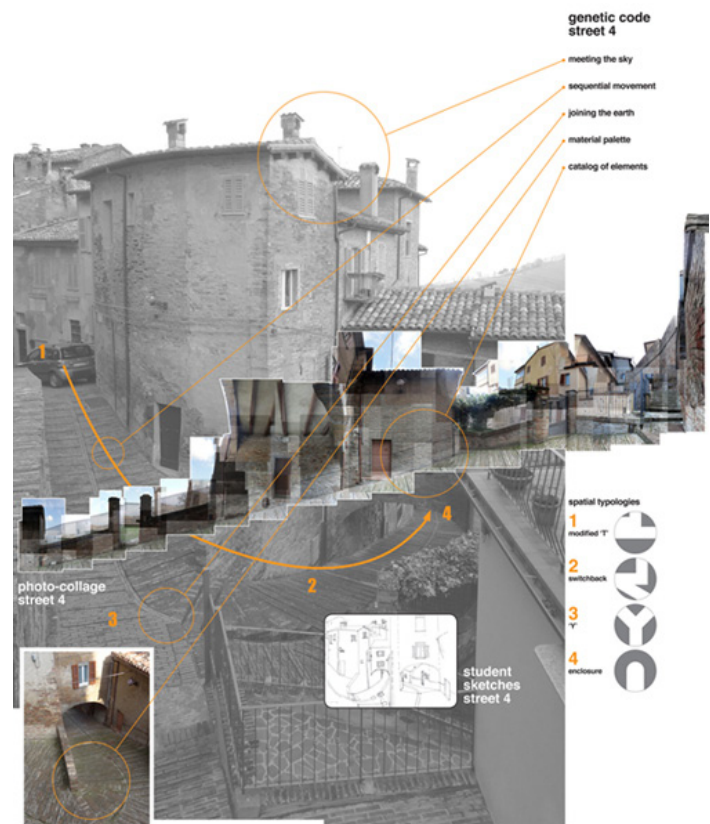


Figure 2: The genetic code of the street, 1 of 2

12. Sabatino, Michelangelo. 2010. *Pride in Modesty: Modernist Architecture and the Vernacular Tradition in Italy*. Toronto: University of Toronto Press, 178-179.

13. McKean, 52. See also: De Carlo, Giancarlo. 1970. *Urbino: The History of a City and Plans for its Development*. Cambridge, MA: MIT Press, 75.

14. McKean, 51.

15. McKean, 54.

16. Rossi, 33.

17. Rossi, 87.

Cullen focused his landmark book, *The Concise Townscape*, on the “spatial aspect” of the city’s primary elements, essentially treating the city as an organizational structure. *The Concise Townscape* explored his notion of *serial vision* through a series of static perspectival frames that were positioned in accord with the plan.<sup>18</sup> Informed by the technology of its time, the still frame of the photograph, serial vision recognized the presence of movement in space but was not, in itself, spatial.<sup>19</sup> Our analysis of the street followed Cullen’s premise but incorporated not merely sequential frames—separated by a series of “revelations”—but the different characteristics and extensions of space, time, and movement. It became obvious to us that we were considering the nature of the tissue *between* Cullen’s static frames.

In *The Italian Townscape*, De Wolfe, basing his work to a large extent on Cullen’s *serial vision*, provided a schematic for the study of spatial patterns that relate the organization of the plan with the profile of both the landscape and the town itself.<sup>20</sup> While his work was not unique, he was among the first writers to acknowledge the spatial character of the street as a contributing factor to the character of the city.<sup>21</sup> He utilized a series of photographs to explain the perspective foreshortening and, building on Cullen’s argument, the sequential frames that mark distinct architectural events.

Zevi’s book, *Architecture as Space*, appealed to us to uncover the effect of movement and the extension of the body out into space. The city was, after all, inherently spatial and not merely composed of separate still frames. Zevi’s work, among the canonical architectural writings of the mid-twentieth century, sought a critical and analytic understanding of mass and void took on a different reading when considered in terms of the space of the city—a topic that he does not breach.<sup>22</sup> Our work rests on the fact that to be in Urbino is, after all, to be in its streets. The street modulates our movement and shapes our perception of the city. The inclusion of Michael Leonard’s diagrams in the annotated bibliography condensed portions of Zevi’s argument.<sup>23</sup> Zevi’s writings, as with the others that became the foundation of our study, were limited by his ability to study the city in experiential time. The movie camera served as an adequate, if not artistic, representational tool that could track the moving eye. Its use as an analytical tool was, however, limited by the cost and the inherent darkroom and production processes.

Cullen, De Wolfe, and Zevi informed our reading of Christian Norberg-Schultz through their suggestion that the character or identity of a city

was largely formed through our perception and that perception was dependent on the space of the street. De Wolfe’s spatial studies—his photography and catalogue of streetscapes—lead us towards the consideration of time as a factor of the spatial sequence and served as the basis for our development of a spatial typology. De Carlo’s consideration of the genetic code of a place and his focus on *reading the territory* is similar in many ways to Christian Norberg-Schulz’s use of the term *genius loci*, or governing spirit, of a place. Norberg-Schulz, writing from a phenomenological position, offered what amounts to a list of qualities of place that served as the core for our study. The structure of our study and, ultimately, our archaeological approach, began with the search for an operative definition of place and its structure.

What was absent in these traditional models of place was a framework that brought together material and spatial attributes as well as accounted for the temporal and mnemonic extensions of the street as experienced in its traverse. As an initial armature for our study, we fabricated, expanded list of the attributes of the genetic code drawing from Norberg-Schulz’s work:<sup>24</sup>

1. inside and outside	4. elements
degree of extension	form
degree of enclosure	substance
connections to the larger city	material palette
connections to the landscape	texture
2. center	dimension
defining elements	number
degree of centralization	proportion
3. boundaries	location
articulation / modulation	position
enclosure / type of pores / openings	orientation
floor, walls, ceiling	
continuity / unity	
fractures / disruptions / breaks	

Our questions became, what holds all of this together? What structures its identity and gives us a sense of place? Because it is experienced

18. Cullen, Gordon. 2009. *The Concise Townscape*. New York: Architectural Press, 9.

19. Cullen, 17.

20. De Wolfe, Ivor. 1963. *The Italian Townscape*. London: The Architectural Press, 26-42.

21. De Wolfe, 43.

22. Zevi, Bruno. 1993. *Architecture as Space*. New York: Da Capo Press, 214.

23. Zevi, 285.

24. In defining the elements of architectural space, Norberg-Schulz initially structures his argument around Lynch’s *landmark, node, path, region, and edge*. See: Norberg-Schulz, 1974. In *Genius Loci*, Norberg-Schulz presents a more detailed discussion that is informed to a greater extent by his readings in phenomenology. While acknowledging Lynch, Norberg-Schulz builds his argument around Heidegger’s notion of concrete space and dwelling. Here, Norberg-Schulz defines the character of place in a body-centric reading that incorporates such terms as: *figure-ground, boundary-center, centralization, direction, rhythm, proximity, floor, wall, ceiling, and openings*. To this vague and partial list, he adds *space* as a system of relationships between things that are denoted by propositions. See: Norberg-Schulz, 1984, 11-17. Norberg-Schulz’s later work, *The Concept of Dwelling*, continues to develop this topological approach to place while incorporating aspects of Rossi’s study of urban morphology and typology. See: Norberg-Schulz, 1985, 56-66.

over time, and because perception, unfolded over time, is dependent on memory for coherence, the street does not provide us with a singular form or a singular figure. Yet each street in Urbino possesses a recognizable identity—distinctive characteristics and representative elements that mark both their individual character and collective unity. The answer would seem to be a matter of the geometry of the street. This armature would have to account for far more than the physical boundaries of the street and the arrangement of its constituent parts. The street is understood through our movement as the position of elements and sequence of spaces continuously changes in time. We propose that it is the matrix of the street as an elastic framework that holds its genetic code:

matrix

1. spatial sequence
  - typology
  - “T”, “Y”, switchback, constriction, release, etc.
2. temporal framework
  - folds / overlaps / references
3. perceptual frame
4. rhythm / cadence
5. figure / ground

### 3. INSTRUMENTS, METHODOLOGY, AND CONTEXT

#### 3.1 The Archaeology of the Street

While our background readings instigated our initial inquiry, we found that Foucault's work, *The Order of Things* and *The Archaeology of Knowledge*, provided an outline for analysis and assessment of the street as a palimpsest, to separate out distinct strata of information and to develop a classification system. The intent was to distinguish the significant or representative elements that compose the street's genetic code. These lent their substance and form to the street's identity while establishing a fundamental logic that was glimpsed through experience and perception. Understood together, this outline of the archaeology of the street describes our approach: definition and identity, measurement and gathering, separation and differentiation, categorization and classification, and lastly, analysis.

We began by naming the *street* having a defined *corpus*, and then determining the extent of the study area.<sup>25</sup> Naming immediately presupposes an identity or architectural unity. In other words, the street has a clearly articulated character and an unambiguous nature of its boundaries. We did not consider each street to be defined by its street



Figure 3: The Renaissance wall and the Duomo: marking the ends of a street



name—a highly problematic and limiting approach that falsely suggests that the particular name identifies a particular place or urban artifact. Rather, we determined that the streets could largely be identified either by the distinct places found at either end or the architectonic unity found between. For example, one street was defined as between Urbino's Renaissance wall at one end and by the cathedral at the other with a somewhat circuitous route between (Figure 3). Clearly, when identifying this or any other street, we were largely informed by the distinctness of places that mark beginning and end: in this case, by a view over the wall to the countryside beyond, and a narrow, focused "slice" of the cathedral.

After we defined the extent of the street, we measured it in both plan and section. Longitudinal and transverse sections were taken using conventional measuring devices. The products of this process were often the sole basis of traditional analytical methods. The drawings served as records of existing conditions and were often used in conjunction with historical records to measure, determine, and establish the qualities that define the artifact.<sup>25</sup> From these drawings and additional photo documentation, we organized a general taxonomy of materials and elements. We also noted the location and extent of spatial and material divisions and transitions, visual limits and extensions, topographic differences, elemental shifts, and ruptures and breaks in the material fabric of the street. By selecting and carefully representing the information gathered, patterns of elements, materials, and spatial conditions emerged.

The results of the measurement and gathering process provided a rather extended catalogue of elements, spaces, and conditions. It became necessary to distinguish between the elements that were significant or representative and other, less critical elements. In addition, clearly defined spatial conditions were identified. A discussion ensued from our comparison of the findings from all of the study areas through which we

weighed the accumulated catalogue, determining the relative importance of each element or condition in defining the identity of each street.

From this epitomic catalogue of significant or representative elements we began to discern categories of spatial, material, and experiential qualities. Each category was defined by the unity or coherence among its elements. The categories suggested both a typology of spatial configurations of the street, and a classification of material conditions. The organization that emerged was similar to, and in part defined by, the outline of attributes of the genetic code of the street (see above). Our final categories were: joining the earth, meeting the sky, the material palette, significant or unique elements, boundaries and representative elements, and spatial sequence. What remained missing from our classification system was a grasp of the geometric armature that contained this code and related it to movement, perception, and experience.

As this point, the high-definition video camera became instrumental in the analysis. It enabled us to track the moving eye within as it traversed the street, as well as select and organize the significant or representative elements and consider their relative position and sequence. The importance of memory in reconstructing and remembering the street became obvious. Recurring elements or spaces gave the street a rhythm and at times, a series of folds, to the experience. Certain elements, such as small shrines to the Virgin Mary for example, suggested a pattern-like relationship between different parts of the street, measuring our movement along the street and connecting different places together. Time and memory merged. These were clearly important factors to the organization and definition of the place of the street and in shaping our experience. The use of the camera in our analysis will be discussed at length below.

### 3.2 The Initial Study

Measured drawings using lasers and other conventional measuring devices were prepared. In addition to the orthographic projections of plans and sections, we focused on the material palette. Sketches explored characteristics of the street and the effect of the street as a frame. The camera (still photography) was first introduced as a means of gathering images of the elements, materials, and spatial conditions along the street. Photographs were then compiled to form a photomontage (Figure 2, center). From these initial forays and products, we began to grasp the complex articulation of the street's envelope. The envelope, in turn both porous and impermeable, suggested that the street was an active field rather than a static and uniform space. This field extended beyond the physical envelope of the space and included framed views of the landscape or other buildings, as well as repetitions, references, and analogies. In other words, what we experienced was not just the immediate and visceral body of the street, but also the street as both frame and mnemonic structure.

---

25. "This brings us to the concept of the *study area*. Since we assume that between any urban element and any urban artifact there exists an interrelationship whose particularity is related to a specific city, it is necessary to elaborate the nature of the immediate urban context. Such a minimum urban context constitutes the study area, by which we mean a portion of the urban area that can be defined or described by comparison to the larger elements of the overall urban area, for example, the street system." Rossi, 63. In our case, the study area was defined in relationship to the street. The study areas included the adjacent and connecting streets—specifically, the intersections themselves were considered. In addition to the area immediately surrounding the street, views of distant urban artifacts or landscapes were also included.

26. This was only a portion of De Carlo's approach with his 1966 study: *Urbino: The History of a City and Plans for its Development*. His study included the following sections: geographic location and population characteristics, the economic structure of the area, and the infrastructure of the area in addition to the structure and form of the city (including an historical outline) as well as detailed plans that outlined the conditions of the city's physical form and structure. Part of this document focused directly on the street, from its visual qualities to its physical condition.

The photomontage, as a technique, illuminated the subsequent video process. It focuses on the compilation of fragments along the street and these different pieces were then combined digitally to form an “elevation” of the street. What emerged was an articulate sense of the street as a whole. Discontinuities in material and elements, such as the bounding walls, were easily detected. In the layered montage, the architectonic unity of the street unfolded. The basic questions of part and whole and the identity of the street were carried forward into the video work. The photomontage, in flattening the street’s corporeal body and recomposing it in a series of fragments—each taken at a different time and from a different position—pointed to what was not present: the temporal structure of the street.

A catalogue of architectural elements was then generated, and from these, we sketched out a simple taxonomy that was repeatedly questioned and reconsidered as we compared each of the study areas. The streets shared in part a common vocabulary of elements and materials as well as spatial patterns. This common architectonic language among Urbino’s streets seemed to be a part of the genetic code that defined Urbino as a place. The space of the street provided a fixed structure or armature. In identifying the street, we were in fact defining the city’s organizational system. Certainly, any discussion of the street’s architectonic language, or our experience along it, needed to include its spatial, visual, and temporal envelope—a sense of *adjacent to*, *alongside*, *beyond*, *in reference to*, or *before and after*.<sup>27</sup> The experience of movement along the street, and memory itself, takes place, or is framed, sequentially and episodically in time. To be in the street was to be within a framework that was isomorphic with both the immediacy of experience and the recollections of memory.

As a language of elements and places evolved, so too did the categorization of spaces. Particular spatial conditions were sorted into general categories: “T”, “Y”, “L”, and others (Figure 4). While De Wolfe’s abbreviated analysis of spatial conditions, focused on the still perspective view—as taken by a conventional camera—as a means of describing the streetscape, we began to realize that the spatial field was more volumetric and that time, memory, analogy, and movement along the street each played an important role.<sup>28</sup> These typical conditions were indispensable for grasping the sequential, unfolding, nature of the matrix, and for moving beyond the particular and understanding the street as a genre of urban artifact.

The city is understood as we move through it very much in keeping with Le Corbusier’s *architectural promenade*.<sup>29</sup> Things are positioned within a spatial and temporal register. Our perception of the city, as well as its constituent parts, was understood relative to the frame of the street. The city’s piazzas, buildings, fountains, monumental stairs, the landscape beyond its walls, and the sky above, are all events placed along the

traverse of the street. After our initial measurement of each of the four streets (Figure 5) commenced, questions emerged: If we considered the street as a field, how far does it extend? What elements are included? What distinguishes its spatial sequences? What governs its identity?

### 3.3 The Storyboard

The results of the initial study were fused together as a working document that became understood as the storyboard for the subsequent video work. As such, it was repeatedly consulted during the production of the final videos. The storyboard remained a work in progress: a composition of measured plans and sections, the photomontage, sequential framed views, and sketches. Spaces were keyed to typological diagrams and framed views were positioned in sequence according to the plan. Written descriptions and photographs represented the catalogue of elements

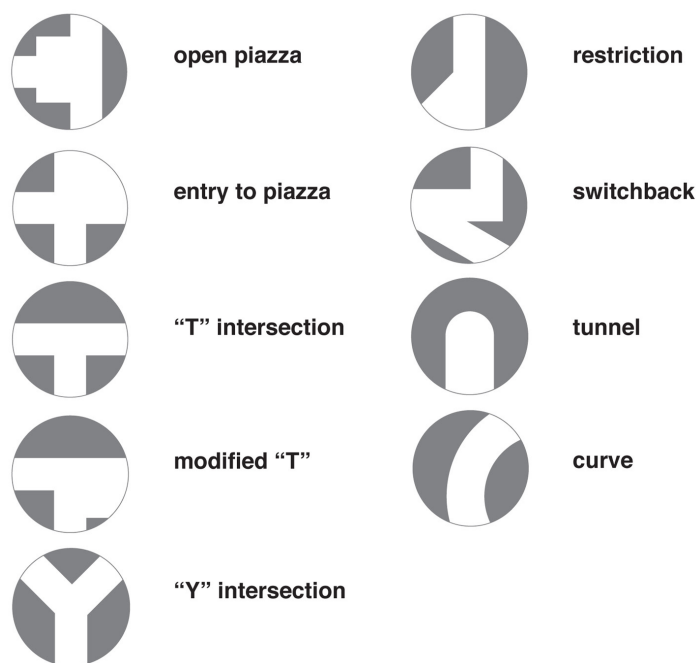


Figure 4: Spatial typologies for one of the streets

28. De Wolfe, 52-71.

29. “Inside: we enter, we walk around, we look at things while walking around and the forms take on meaning, they expand, they combine with one another. Outside: we approach, we see, we discover. We receive a series of sensory shocks, one after the other, varying in emotion [...] We walk, we turn, we never stop moving or turning towards things. Note the tools we use to perceive architecture... the architectural sensation we experience stems from hundreds of different perceptions. It is the ‘promenade’, the movements we make that act as the motor for architectural events.” Le Corbusier, as quoted in Daniél Pauly. 2008. *Le Corbusier: The Chapel at Ronchamp*. Boston, MA: Birkhauser, 29. See also: Flora Samuel. 2010. *Le Corbusier and the Architectural Promenade*. Basel, Switzerland: Birkhauser.

27. Blizard, 66.



and were also used to describe the palette of materials. The extent of the street—above, below, and beyond—became apparent. Views of distant buildings or the surrounding landscape, framed by the envelope of the street, as well as analogical references, were understood as part of the experience along the street and critical to its character. The storyboard became, over time, a composite mesh that mapped our discourse with the street.

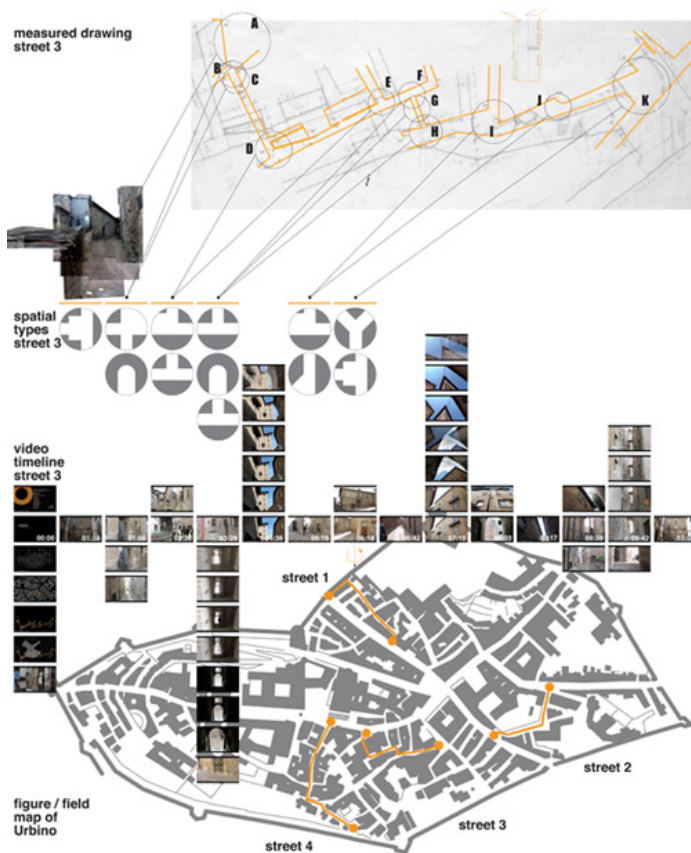


Figure 5: The genetic code of the street, 2 of 2

On the storyboard, the street lent its schema, or underlying organizational pattern, to the video's narrative. In this way, the street's physical structure became a conceptual framework that organized the video process and its product. Camera position and movement was first plotted out in correspondence to the layers of information and imagery. Essentially a working drawing rather than a finished product, the storyboard provided the foundation for video and audio exploration. Once fully involved in the video process, the street, now perceived as a layered and multi-dimensional construct, was no longer conceived as an object, but became the subject of study. It was understood relative to its composition of strata: folds, layers, interconnections, relationships, references, patterns, sequences, and frames.

### 3.4 Use of the Camera and the Video Process

The final products of our study were six ten-minute videos—composed in layers of video-imagery, analytical drawings, typological diagrams, and sound tracks. Throughout the archaeological process, we grappled with the newly introduced technology and evolved new modes and thought processes in order to describe and re-present the domain of the street. The digital frames of both camera and post-production workspace enabled us to define and explore the structural matrix of the street as a function of time.

As an instrument that augmented our perception, the video camera and its digital tools expanded our capacity to perceive and analyze the street. Our perception changed. The digital workspace in Adobe Premier™ provided a fundamentally different system of organization and classification that we adopted as if it were a set of filters (Figure 6). For example, time was the primary structure for composing the video. It appeared as a composite of layers—contiguous frames, simultaneous or paired images, or superimposed fragments. As we sought an equivalency between the video and the actual street, we were able to perceive, assemble, and take apart the movement of the eye or include the simultaneous presence of memories, or join two or more disparate fragments, suggesting conditions that were less literal than figurative. The importance of memory in perception of space, and the identity of place, cannot be underestimated. Through these newly accessible technologies, we were able to study the sequential structure, the spatial extent, and the temporal envelope of the street directly.

The camera as a prosthetic both defined and extended the analytical process. These mediating frames transformed the students' perception and their thinking as much as they allowed the transformation of raw footage to final video. The city that emerged through their analysis was a complex collage: a composite city of layers, enjambments, folds, simultaneities, frames, and transparencies. The final videos were, in effect, rediscoveries and recoveries of the unity inherent in the direct experience of the street. The corporal body of the street, at first unseen, came into view as a vague, multi-faceted space that was indefinite at its boundaries. This corporal body was commensurate with its elastic matrix.

The digital tools and environments of both hardware and software contributed specific questions that propelled discussion: How do we capture and explore this multi-dimensional matrix? How do we ascertain its extent or its structure? How do we represent our experience of movement and perception? To what extent will the introduction of digital technologies shape the study and its discoveries? Our archaeological analysis and the mediating digital apparatus allowed us to conduct our study frame-by-frame within the digital workspace. In so doing, the boundaries of the inquiry were defined differently from those typically found when using only traditional techniques. The digital apparatus introduced the manipulation of sequential and non-sequential movement

over time. Within the static frames of plan, section, and elevation, time could be mapped as a series of definite points along the street that served as a datum. Time—the experience of movement, perception, conjointly with the effects of memory—remained elusive, essentially “unmappable”. The digital environment of post-production work provided an analogic structure of time: its enjambments, simultaneities, folds, recurring images, and a grasp of what lay ahead. Frame by frame,

In the analytical process, where the contested space between viewer and viewed enabled a critical abstraction, it was important for us to develop modes and methods of use that did not trick us into confusing the map with the territory mapped. In Edward Weston’s words, the camera “provides the photographer with a means of looking deeply into the nature of things, and presenting his subjects in terms of their basic reality”.<sup>30</sup>

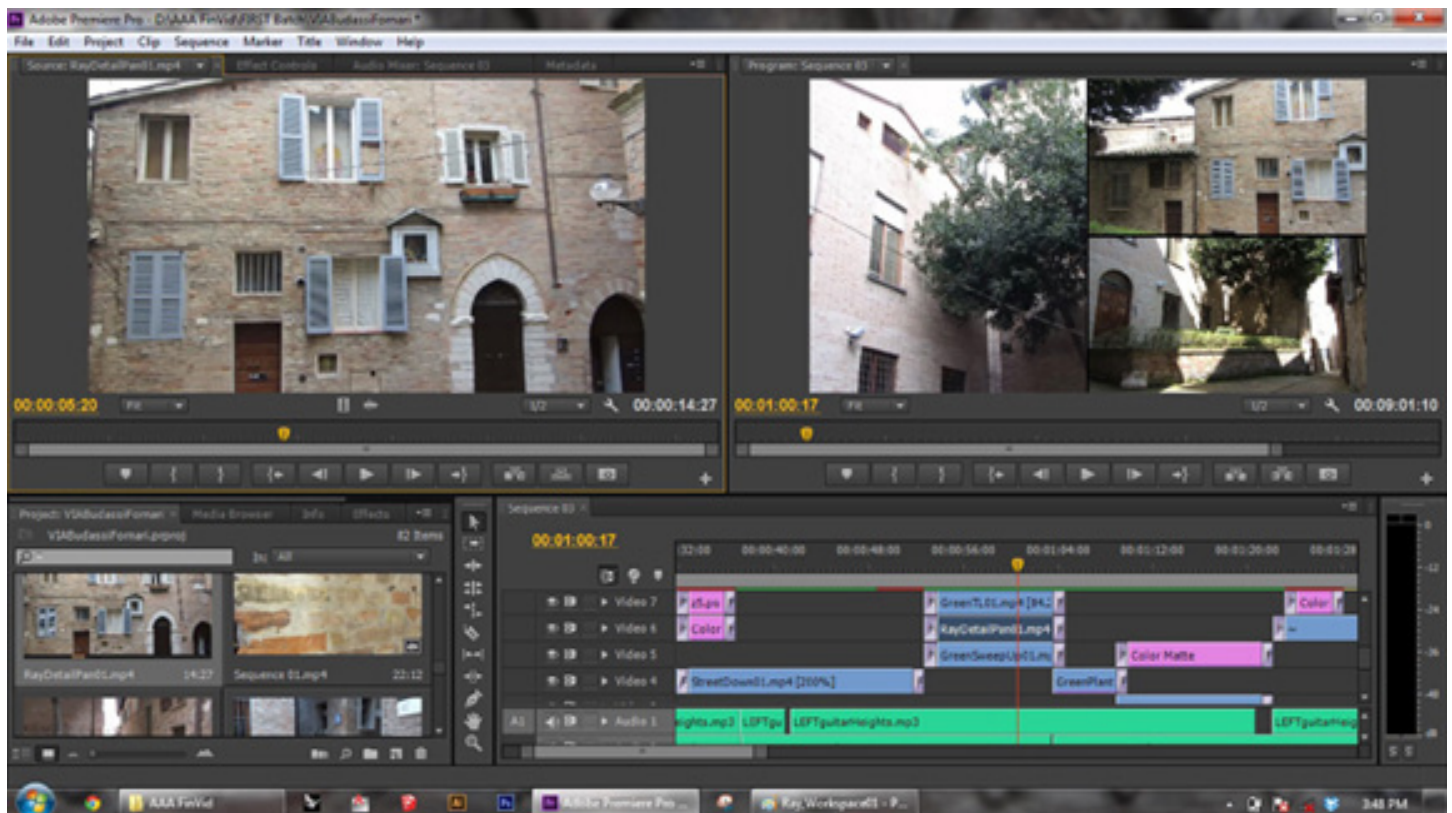


Figure 6: One view of the digital environment: the Adobe Premier™ workspace

perception was down to individual moments, or sped up until objects and spaces became fluid. In this way, the cadence, patterns, elements, materials, and spatial envelope of the street were closely examined while maintaining a connection to the street as a whole. While traditional analytical tools result in representational drawings that map the study area, the video camera provided in an apparatus of inquiry through which the resulting videos retained the network of relationships and connections inherent in the street.

The camera, like all instruments or filters, clarified and distorted the field of study. We found that the camera, to the extent that it screened out the situational “background noise”—that excess of visual information that surrounds us—clarified the world, bringing parts into sharper focus.

Learning to see through the video camera and its digital tools and environments involved experimentation with its possibilities and limitations. The camera’s properties enabled the eye to be extended, tilted, displaced, slowed down, or sped up.<sup>31</sup> Jigs were employed throughout the filming in order to reposition the eye, and certain shots had to be planned. Lighting became a factor as separate sections of the raw footage were linked, only to discover their incompatibility. Here, the software stepped in, which allowed color adjustments—the matching of colors and contrast different source clips.

The camera became, in effect, not only an extension of vision or a means of replicating what the eye sees, but a replacement for the eyes. In so doing, the camera silenced the normal common sense process

of recognition whereby things are recognized rather than actually seen. The camera's frame transformed the object perceived by differentiating it from its field. This allowed greater awareness and clarity. The framed object, replete with its newly perceived qualities of light and shadow, position, juxtapositions, and overlaps stood out. Behind the lens, we became acutely aware of the things before our eyes.

Raw material was brought into the digital environment for the purpose of analysis. The raw footage systematically captured the complete traverse of the street. Each pass of the camera focused on different aspects of the whole experience: the urban ceiling, the urban floor, the boundaries, and the sequence of spaces. Using various parts of this raw footage, a base video was generated. Following the initial editing, and after they had consulted their storyboards, the students gathered additional footage. The "second pass" was an exploration of particular events or elements with greater attention to detail or to the method of filming. Likewise, they had to consider how the secondary, often elliptical, sequences would fit into the base video—departing from its structure and then returning to it. The subtleties and accidents that emerged from this dialogic practice often informed the direction of a particular episode or sequence of images (Figure 7).

Various operations were used: splicing, various digital effects (such as fades and overlaps), and the inclusion of an aural soundscape that was grafted directly onto the video. The digital environment enabled a frame-by-frame comparison and the measurement of incremental time that moved both forward and backward. We noted elements and their frequency and location of occurrence, as well as the periodic patterns and repetitions. We noted the expansion, contraction, and distortion of the perspectival field. General spatial conditions became themes with ranges of different variations. The slowing of the video enabled us to take things apart, to discover the previously unseen.<sup>32</sup> The video capture and manipulation techniques provided a mode of thinking about the street in all of its nuances. It became a language through which the street was approached anew. The experience was no longer undifferentiated and monolithic instead, it was composed of a series of more or less differentiated framed events that were perceived relative to the movement of the body through space. Each video involved a continual reciprocity between analysis and representation, forming a montage that represented the street's matrix and organized the constituent parts of its genetic code, as well as the sensory and temporal boundaries that engender experience.

The digital tools of the camera enabled us to uncover the street in layers. For example, a color-coded stratum of specific, repeated elements could be utilized. In one case, terracotta clay planters were set against a black

and white background on the street—drawing them to the foreground. In another case, a systematic approach to framing doorways in elevation was used—separating them out from the perspectival field and flow of movement along the street. We also noticed that the envelope or extent of the street was never as clear as it seemed at first. In other words, the street's identity was, upon closer examination, somewhat ambiguous. Its structure repeated in a limited range of themes, each with multiple variations. Importantly, we uncovered what amounted to a web. The elements along each street formed constellations in accordance with their similarity or position: resemblance, number, sequence, structure, figure, frame, analogy, type, use, and material. The video production enabled the assessment and re-composition of portions of these constellations. Throughout the process, we were fascinated with the street's disjointed elements. We returned again and again to its fractures, breaks, layers,

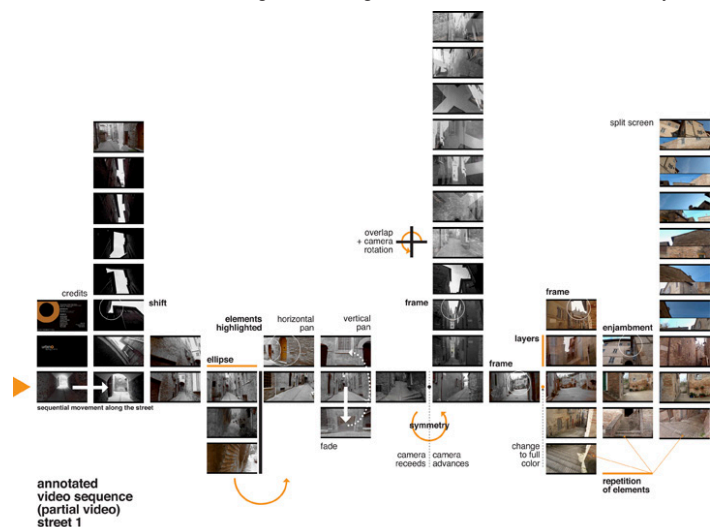


Figure 7: An annotated video sequence

enjambments, subtle shifts in direction, awkward joints in the spatial envelope, and material discontinuities—these defined certain “events” along the street and reminded us of the critical role that memory played in fashioning identity. Too often studies of place focus only on its significant or representative aspects. While these were clearly important in understanding the identity of the street, it seemed to us that the discontinuities reveal history, memory, and occupation. Identity, figure, and image are inextricable. The identity of a street, unlike that of other urban artifacts, is a constantly changing spatial amalgamation that follows the body's movement and memory's braiding. Things are recognized not just by their inherent properties and physical boundaries, but also by the intelligible web that binds them together. Between the foreground and the background, between before and after, between the earth and the sky, and between one side and the other, the street places us in the city.

30. Kracauer, Siegfried. 1997. *Theory of Film: The Redemption of Physical Reality*. Princeton, NJ: Princeton University Press, 16.

31. See also: Kracauer, 29.

32. Kracauer, 22.



Throughout the study, as we uncovered continuities and discontinuities—joints and connections as well as fractures, ruptures, and subtle shifts—it was the underlying spatial matrix that provided connectivity and unified otherwise disparate pieces.<sup>33</sup> The matrix, then, was necessary to the street's character, identity, and image. It came into focus through a constellation of inter-connected materials, elements, and spaces working in collusion.

### 3.4 Findings: The Matrix

The distinction between the one and the other... depends in part on the scale of observation. If we lived a billion times more slowly, and correspondingly longer, if a second... equaled an entire century, we would certainly conclude that the contents of the globe were processes, seeing with our own eyes how changeable they were for they would be moving before us no less than waterfalls do, or ocean currents. And if, on the other hand, we lived a billion times faster, we would conclude that the waterfall was an object — because it would present itself to us as something highly immobile and immutable.

—Stanislaw Lem<sup>34</sup>

The findings were two-fold. First, we uncovered what amounts to a matrix or spatio-temporal structure that holds and frames the genetic code of the street. Secondly, applying this to the more general condition: place itself, has this structural order or matrix that organizes the constituent elements and relationships that together account for its identity. There seems to be a reciprocity here, for the matrix not only structures the genetic code much the same way that a frame provides support and order for the components of a bicycle—ordering its parts and its identity—but the configuration of the matrix is informed by the genetic code.

The matrix of the street holds, structures, and organizes the genetic code. In other words, place is largely characterized by the spatial configuration of its elements and materials, as well as the effects of time and movement. In the words of Anne Friedberg, "Architecture is experienced in a complex matrix of space"<sup>35</sup>. Movement is movement *into, out of, beyond, alongside, under, across, up, down, and through*. The camera traces these movements, becoming a visual analog for the eye. The street serves as a datum that structures both this movement and, consequently, our perception, and memory.

At the microscopic scale, the street exists as an inward and contained space of articulated materials, joined elements, and forms of construction. We walk within the street—enveloped by folds and layers of space and material. We confront a composition of textures, surfaces, fractures, and elements. These offer resistance and give solidity and immediacy to our experience. At the macroscopic scale, the street turns outward

toward the city and the landscape, responding to their structure. The distinctions between the streets crossing topography and those following the topography were remarkable for their effect on movement and urban structure.

The street spans two distinct places within the city's fabric. Between the interiority of the street and its outward extension, we were able to examine the street using a third scale: time—not only linear or progressive time, but time composed in folds, repetitions, and the alternating vagueness and clarity of recollection. In the street, movement follows a definite cadence and rhythm. Each element tends to recall some other—in another street or perhaps in some other city. Each space is a repetition of another, but slightly deformed—perhaps elongated, or enveloped by brick as opposed to stone, or no longer level. It is as if certain pieces were threads that lead somewhere else.

The street ceased to be an objective fact. In fact, it defies being an object at all, for it has no clear, delineated figure nor does it precisely articulate a totality. We grasp its character in pieces over time—assembling them as so many analogies and repetitions that together find a common identity in the street's passage. Far from being a static image or a path, as described by Lynch, the street, different from other urban artifacts, is an active field.<sup>36</sup> A field of relations characterizes the street—extending its envelope and perforating it, forming visual frames and analogies. In other words, the street's identity is essentially a spatial and temporal web. Video was the ideal medium for this exploration.

Each street was at once clear and definite on one hand, and obtuse, hard to wrap the mind around on the other. Its envelope or boundaries were indistinct at times, and at other times, definite and precise. The street's figure framed a changing a-perspectival field of elements, views, thresholds, and analogies<sup>37</sup>. Movement caused distortions within the frame of vision and established an active field of elements that were in continual flux. The street established succession: before and after were given tangible form. The street grouped things into constellations and categories—categorizing and distinguishing stoops, windows, stairs, furnishings... In this way, the matrix identified the street as a temporal ordering system formed by a partial taxonomy of the artifacts that constitute the city.

We found that the street's matrix was not a coincidental or contingent property of the urban artifact, but rather, was a collection or constellation of elements that were bound together. As we moved along the street, and perhaps through any place for that matter, the physical qualities of the place were only grasped in a spatial-temporal order. Like all places, the street was a *form* rather than an object or a collection of objects.

33. Foucault 1972, 157.

34. Lem, Stanislaw. 1999. *His Master's Voice*. Evanston Illinois: Northwestern University Press, 85.

35. Friedberg, Anne. 2006. *The Digital Window: From Alberti to Microsoft*. Cambridge, MA: MIT Press, 150.

36. Lynch, Kevin. 1998. *The Image of the City*. Cambridge, MA: MIT Press, 47.

However, far from being a monolithic whole, streets are experienced sequentially or as a series of more or less distinct moments or events—each with its typical configuration: intersections, hinges, bends, turns, pauses, open spaces, restrictions...

The streets had, of course, a distinctive material presence—one that could be classified and studied through its genetic code. The palette of materials and their uses formed the foundation of an architectural language of elements and spaces. The spatial typology suggested rules, or at least a logic, that related particular urban conditions to the general structure of both city and land. The syntax of this architectural language, the matrix itself, was comprehended only through the experience of movement along the street. The elements and the materials that compose them lent their solidity to the figure and image that we perceive. As we moved through the space of the street, we found that many of its boundaries were frames—isolating views or making references to something that was beyond its physical edges.

#### 4. CONCLUSION

As the tentative spatial typology, material palette, and catalogue of elements was field-tested during the process of collecting raw video, we found that the architectural language of the street was, to a large extent, dependent on the character or nature of its spatial and temporal organization. Essentially, the qualities and elements that provide a place with its particular identity depend on a complex geometry. Such a geometric order is not merely a spatial arrangement but is bound to an elastic temporal structure. Our experience—movement, perception, and the simultaneous effect of memory—is a function of the matrix. The street, after all, is never perceived as an isolated artifact, but is, rather, conceived as extending *to* and *from*, just as it is composed of analogous conditions and references. Traditional analytical techniques could have taken us only so far; the video camera and its digital tools demonstrated their value as a prosthetic for extending our analysis.

The study of the street and the search for its genetic code needs to take account of the structural organization of the street and its intertwined relationship with our bodies and memory. The search for spatial typologies and the components of a genetic code enabled us to generate categorical knowledge of Urbino's streets in general. No single street is particular and wholly unique. Certain sequences of spaces and elements tended to recur, repeating themselves throughout the city. These typological studies permitted us to grasp the importance of space as a defining characteristic of place. Identity is complex, not just a collection of disparate conditions and qualities. The street, and perhaps all places, cannot be defined by a series of categories and range of characteristics. We perceived the identity of this fundamental urban artifact relative to

our grasp of its extent, its connections to the city and the landscape, and as a temporal datum that organized *before* and *after*, *near* and *far*, *here* and *there*, *to* and *from*. The frame-by-frame analysis of movement, space, and matter resulted in perceiving a dynamic field of relationships between parts and wholes. This matrix between things and spaces is the formwork for the street's identity. The matrix is largely an unseen web that organizes the experiences along the street—the *events* and elements that figure into the character of the place.<sup>38</sup>

#### 4.1 Further Development and Study

With the growing need for design that is culturally and environmentally responsive or site-specific, and with the interest in regionalist architecture in general, place has reemerged into the architectural discourse. And yet, this word *place* remains elusive and difficult to define. Giancarlo De Carlo has come closer than most architects and architectural theoreticians to providing a lens for the analysis of place and for the resulting synthesis in design. Along with the writings of Christian Norberg-Schulz, who introduced us to *genus loci*, De Carlo's proposition of a genetic code that informs the logic of place and its continued evolution provides a strong platform for the continued study of place.

New Urbanists have staked out their territory as "place-makers", and yet, their work is strangely unsatisfactory as it tries to replicate patterns, architectural styles, and elements that are out of their original context. In other words, their so-called interest in "place-making" is a contradiction as they ignore the nature of place, bound as it is to a cultural and environmental body of forces and conditions. The growing interest in historic preservation as a means of preserving cultural continuity and place-identity offers a particular, though limited, view of place that is bound to a specific interpretation of material culture and values. Both of these cases seem to grow out of nostalgia or fear that place somehow belongs to the past, and that this past, once discovered and defined, provides the clues for our present identity. The city becomes either a theater or a museum. While both New Urbanism and the field of historic preservation have produced valuable contributions to our thinking about the nature of place, in both instances, they operate from a partial understanding of place. Other approaches extend the definition further.

The study of the site is necessary in order to understand the geologic, topographic, biologic, and climatic conditions in which we build. Architects' fascination with vernacular precedents has also grown in recent years as they offer insight into local and place-responsive design solutions. In these approaches to place-responsive design, the cultural and natural fabric of place becomes increasingly important to understand. Place as an extensive ligature, or tissue, approached at different scales, is both the field of inquiry and the site itself. It is along these and other modes of thought that the study of place continues to

---

37. Foucault 1972, 57.

---

38. Blizard, 53.

develop. What we are suggesting is the utilization of video and post-production analytical processes to extend the discourse. In grasping the importance of the matrix—the geometric spatio-temporal armature that contains the characterizing materials, elements, conditions and spaces of place—the identity of a place can be fathomed. To this end, we will continue the study.

### Student Contributions

The authors would like to thank the following students for participating and contributing greatly to this study: Selina Angel, Teresa Barker, Jennifer Barrar, Ray Castilla, Edward Cuevas, Jennifer Garza, Kelli Onarheim, Jacqueline Pressler, Christine Utech.

### Figures

All photographs and images used in this paper are by the authors.

### Bibliography

Blizard, Mark, 2008. *Architecture: Land Culture Practice*. Dubuque, Iowa: Kendall/Hunt.

Cullen, Gordon. 2010. *The Concise Townscape*. New York: Architectural Press.

De Carlo, Giancarlo. 1970. *Urbino: The History of a City and Plans for its Development*. Cambridge, MA: MIT Press.

De Wolfe, Ivor. 1963. *The Italian Townscape*. London: The Architectural Press.

Foucault, Michel. 1970. *The Order of Things: An Archaeology of the Human Sciences*. New York: Vintage Books.

Friedberg, Anne. 2006. *The Digital Window: From Alberti to Microsoft*. Cambridge, MA: MIT Press.

Kracauer, Siegfried. 1997. *Theory of Film: The Redemption of Physical Reality*. Princeton, NJ: Princeton University Press.

Lem, Stanislaw. 1999. *His Master's Voice*. Evanston Illinois: Northwestern University Press.

Lynch, Kevin. 1960. *The Image of the City*. Cambridge, MA: MIT Press.

McKean, John. 2004. *Giancarlo de Carlo: Layered Spaces*. London: Edition Axel Menges.

Norberg-Schulz, Christian. 1985. *The Concept of Dwelling: On the Way to Figurative Architecture*. New York: Rizzoli.

Norberg-Schulz, Christian. 1974. *Existence, Space and Architecture*. New York: Praeger Publishers.

Norberg-Schulz, Christian. 1984. *Genius Loci: Towards a Phenomenology of Architecture*. New York: Rizzoli.

Pauly, Daniél. 2008. *Le Corbusier: The Chapel at Ronchamp*. Boston, MA: Birkhauser.

Rossi, Aldo. 1984. *The Architecture of the City*. Cambridge, MA: MIT Press.

Sabatino, Michelangelo. 2010. *Pride in Modesty: Modernist Architecture and the Vernacular Tradition in Italy*. Toronto: University of Toronto Press.

Samuel, Flora. 2010. *Le Corbusier and the Architectural Promenade*. Basel, Switzerland: Birkhauser.

Zevi, Bruno. 1993. *Architecture as Space*. New York: Da Capo Press.