

Artialised Environments of Paris, France: Urban Partitioning

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Abstract: - In behavioral science, investigators are interested in the social values and the perception of space. One form of expressing these values is represented in the artialisation of space, where individuals selectively depict images they wish to convey to others, excluding other settings and nearby environments. We examined this behavior expression in Paris, France. We collected the images of photographs from a small respondent group who had shared their images with others in the springs of 2015 and 2016. The locations of these images were mapped. Large districts within the city were not represented (unrepresented districts). We took pictures of these districts and compared the images from these districts with the images that respondents had shared. The results illustrate that there are two distinct parts of Paris: one is the Paris that people would like to share (full of landmarks and historic landscapes); the other one is not (containing a matrix of Haussmann post-medieval urban fabric). In other words the two groups of photographs are very different. And in many respects, the unrepresented districts are like “lost space,” as if the districts did not matter and were invisible and unsuitable to the visitor who took photographs. This notion was reinforced in social media depicting maps indicating photographic ‘hot spots’ in Paris. We suggest that the “lost space” may require a re-examination concerning the quality and spatial organization of these districts.

Key-Words: - environmental psychology, landscape aesthetics, urban behavior, land-use planning, urban character, historic districts, tourism

1 Introduction and Literature

In *Art, Design and Visual Culture*, Barnard noted that there is a difference between landscape and the representation of landscapes [1]. Landscapes are made meaningful only by applying human or cultural intentions to landscapes; generals, farmers and artists interpret the landscape based on the cultural meaning they gave to the landscape, such as “defensibility, arable crops or melancholy” [1]. Landscapes are also representations of “lived relationships” [2]. Especially from the end of last century, Western cultural geographers have come to realize how “representational practices” could be important in influencing the “production of landscape” as well as “social relations and social structure” [2].

Such a notion of landscape can be traced back to the study of landscape perception in human geography [2]. In the 1920s, Carl Sauer introduced

qualitative methods for studying landscape perception; he argued that it was the collective human transformation of the landscape that produced “cultural landscapes” [2]. Carl Sauer also influenced a generation of cultural geographers who used his empirical method to study how landscape and culture relates with each other [2]. For example, J.B. Jackson studied the impact of American popular culture through “vernacular landscapes” in the formation and transformation of the American landscape [3].

Visual is of great importance in the “cultural construction of social life” in “contemporary Western societies” [4]. In the early 1980s, an interdisciplinary field called “Visual Culture” for “the study of the social and cultural construction of visual experience” (Barnard, 1998, p. 197) started to emerge in the field of art history, literary studies, and cultural studies [1, 5].

Researchers consider seeing as a critical point of analysis in visual studies [6]. Seeing is culturally constructed; as John Berger noted in his seminal *Ways of Seeing*, our individual way of seeing is shaped by the culture we grow up with [7]. The paintings, photography, architecture, sculpture, advertisements and other visual representations of culture and society shape our understanding of the society [7]. It's argued that in postmodern times, the strong connection between seeing and knowing is questionable, because we interact more and more with totally constructed visual experiences, such as a photograph [8]. The power of photography to document and bear witness is also questioned by scholars in the field of visual studies [6].

Critical social theory not only brought a new perspective to visual studies, it also challenged landscape researchers in landscape studies since the 1980s; one enduring theme in landscape studies is to interpret and understand landscape as "symbolic" representations of the relationships among people, as well as "between people and landscape" [2]. With the influence of critical theory, landscapes came to be thought of as an interception of "competing authorities, perceptions, interpretations, discourses, and knowledges" [2].

Not only does landscape reflect or represent culture, it is also argued that visual representations can be effective in "communicating about, understanding, and modifying place and landscape" [9]. For example, "landscape representations by artists" can assist in the management or transformation of the landscape [10].

To study the relationship between human and landscape, a landscape perception model was created that considered landscape perception as a function that affects the interaction between human and landscape [11]. The model includes the human component, the landscape component, how these two components interact and the outcomes it creates [11]. This model is used in this research as a framework in discussing the relationship between human and landscape. The photographs collected from people are used to analyze and examine people's perceptions of landscape.

"Artialisation" is a concept related to the area of research in cultural geography where art and landscape overlaps [12]. The notion of "artialisation" is a philosophical concept defined by the French philosopher Alain Roger. In his concept, the landscape is considered a perceptual interpretation of nature and art is in the process of transforming nature [13].

Artialisation is "the selected presentation of a real environment using a characterization of the environment by selectively choosing what to present" [12]. To illustrate the idea, Joliet and colleagues argued that landscape paintings are iconographic messages created by the artist; the meaning of the landscape is revealed by the "choices" that artists make when they "observe, frame and compose the artwork" [10]. Thus it is to say artialisation is embedded in our image making process when we make "choices", whether consciously or unconsciously.

As part of an image-making process, photography seems to fall into this discussion of Artialisation. This concept of artialisation is in the decision-making process when we take photos. When we are asked to take photos and select photos, we are often faced with a choice, and it is for the photographer to select what information to be included in the frame. Whether the photo is taken in negatives or in the digital format, it is a representation of the reality based on the choices we make. The process of making "choices" goes on to the distribution of photographs as well. Will the photo be printed? Will it be viewed in a slideshow? Or will it be posted on to a social network? Will it be seen with other photos or will it be viewed by itself?

The interest of visual research is growing across a variety of academic disciplines, especially in the recent years [14]. Among these disciplines there are art history, sociology, tourism studies, environmental communication, and computer science [4, 6, 15, 16, 17]. The validity of using visual materials to study people's perception is confirmed by several researchers; it is suggested that people responding to photographs, videos and simulated 3D models have a similar response to the real outdoor experiences [12, 18, 19, 20]. Another interesting finding is that the response between design professionals and non-design professionals is significantly different from each other [12, 21]. Landscape architects and urban designers who have gone through design education may look at a place differently than those who have not. For example, experts tend to interpret and comprehend the landscape as a whole whereas lay people focus on a limited number of landscape features such as the buildings [22]. Such findings of the difference between cultural groups can also be found in research that employs visual materials, such as tourism studies [16].

Although photos can be used qualitatively and quantitatively, using photography as a type of data in the research is complicated; there is not a

well-established methodological framework for using photography in social science research [23]. Gillian Rose stated in *Visual Methodologies* that it's important to notice three sites or aspects while working with visual materials: the site of production or where and how the image is made; the site of the image itself or its visual content; and the site where the image encounters its audiences [23].

With the popularity of social networking services, photos are shared widely. Accessing crowd-sourced photos from social networking websites such as Flickr, Twitter, and Panoramio has been a popular approach for researchers in the recent years for understanding people's perception of the urban environment [24, 25, 26]. However, the quantitative approach used in these studies is effective but has its limitations. Because they usually focus on a broader group of users when they acquire a large amount of data from the internet, they may lack concerns on specific groups of people who have different backgrounds, knowledge and experiences. In this study, however, a qualitative approach is employed to focus on a specific group of people.

The study team was interested in how the urban fabric of Paris, France would be artialised through photographs. The hypothesis was that people will share a certain type of Paris with their photographic representations; the places to be shared will have a certain type of quality that is different than the places where no photos were shared; the photos will not be distributed evenly across the research area.

Burley and Machemer describe how individuals often ignore or become desensitized to the many realities of a setting [12]. Instead, individuals record and capture composed images of their experiences that reflect an artialised environment (Figures 1, 2, 3). Painting and photography have much in common concerning what is depicted and what is often not chosen as a subject for study. In many respects, individuals are unconsciously reflecting the norms and expectations of culture/society concerning what is acceptable in the communication of the composition and contents of the environment.



Figure 1. A painting of the historic Paris urban landscape from Notre Dame looking towards the Tour de Eiffel. The paintings is an example selecting an artialised image of Paris (Used by

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In contrast Claude Monet was an artist who at times selected subjects that challenged artialised notions [12]. For example, Monet decided to paint images of train stations, a topic that many considered not a subject suitable for study and painting [12]. Consistent with the ideas affiliated with Monet, Figure 4, presents a modern image of a power plant as observed from the rail line between Newcastle, United Kingdom and London. This subject would not be a typical choice as a topic for a painting. However, the image is a view that is typical of the type of scenes witnessed along the railway route. Figure 4 contains cultivated fields and a tree row with a rookery in the trees. The painting is an attempt to escape the cultural norms imposed by artialization.



Figure 2. Another artialised painting from the Tulleries looking towards the Place de la Concorde and the Arc de Triomphe taken before a forthcoming walk of the Champs-Élysées (Used by permission of © 2004 Jon Bryan Burley, all rights reserved).



Figure 3. An artialised painting featuring Sacré Coeur, Paris, France (oil on canvas) (copyright © 2002 Jon Bryan Burley, all rights reserved, used by permission).



Figure 4. A painting of the landscape along the old Great North Eastern Rail (GNER) line in the United Kingdom (copyright © 2002 Jon Bryan Burley, used by permission, all rights reserved).

2 Methodology

This investigation employed the case study method. The case study method is employed by researchers from many fields. In the field of landscape architecture, the case study method is valuable in that it often serves to illuminate generalized or anecdotal information about projects or processes as well as developing projects and concepts worthy of further examination [27]. The case study method is particularly useful when a controlled empirical method is difficult in a real world context [27]. According to Mark Francis, the case study method in landscape architecture is defined as “a well-documented and systematic examination of the process, decision-making and outcomes of a project

that is undertaken for the purpose of informing future practice, policy, theory and/or education” [27].

Paris, France was chosen as the study site. Paris is a city with historic and contemporary significance in Europe [12]. It has been one of Europe’s major cultural economic centers and had an important role in the course of modern urban planning. Paris is also one of the destinations in the 2015 and 2016’s Michigan State University study abroad program. For the purpose of this study, the research boundary is set in the historic Paris [12].

The first group of photos were collected from students who took part in Michigan State University’s study abroad program in 2015 and 2016. Study abroad is an integral part of the landscape architecture program at Michigan State University. Each year, the third-year students may participate in the landscape architecture program during the final nine weeks of their spring semester. Study Abroad locations are determined on a year-to-year basis. For the year of 2015 and 2016, Paris, France is part of the destinations in the program.

Several students in the program were asked to share photos that they took in Paris. These students had not been to Paris before, but before departure, they had a class that meets every week where the students investigated and prepared for the study abroad program, so the students had some expectations and knowledge of the destinations. This group of students consists of males and females, Chinese and Americans. By having people from different backgrounds, the sample could represent the research question with a global view. Because they were third year landscape architecture students at the time of the departure, they had relatively the same level of landscape related expertise, thus eliminating the bias introduced by their different knowledge of landscape. The cameras students used were all digital cameras brought by the students themselves, be it a point-and-shoot, a DSLR, or a smartphone camera. The photos will be collected after they’ve finished their visit in Paris.

For the study abroad program, students have a set of destinations to visit each day, while they also have a free day to explore places on their own. When the official program ends each day, students are also free to explore. These destinations on the schedule may influence where photos will be taken (site of photo production), but students may also take photos in their free time at places not shown in the schedule; they may take photos when they are in a car or when they have free time. For the time being, most destinations were accessed by taking the

Paris Metro. Note that on some days, the destination on the schedule is outside the research boundary.

Since the aim was to compare the photos that people shared (hot spots) with what the rest of the city might look like (cold spots). A different method was used to gather photos from other parts of the city. Locations of where the first group of photos were taken was extracted to determine where to gather the second group of photos. If the photos were centered around some areas, the photos were then to be gathered in different areas within the research boundary.

A geography colleague who lives in Paris was asked to gather photos of the ‘cold spots’ for this study. The colleague was to take photos in a “non-compositional” way, meaning that she just held her camera and captured an image without thinking about composition. The photos were to be gathered at eye level in these areas. Although the “non-compositional” photo-taking process may seem hard to execute in a city such as Paris, it is well used in visual quality assessment studies in natural and urban settings [28, 29, 30].

After compiling the two groups of photos, the team would examine the two sets of photographs and note similarities and differences, refuting or confirming the hypothesis in the case study—that there are at least two distinct types of environments within historic Paris.

3 Results

A total of 14 students provided photos for this research; seven of them took part in the study abroad program in 2015, the other seven took part in the 2016 study abroad program. The 2015 photos were collected in February 2016, around 9 months after the program officially ended in May 2015. The 2016 photos were gathered in April 2016, right after the students visited Paris. A total of 95 effective photos were gathered by the respondents.

Figure 5 presents a subset of the images collected and shared by the respondents. Figure 6 illustrates the sorting process to cluster and group the images supplied by the respondents. When a map concerning the locations of the images was created (the ‘hot spots’) it appeared that there were large voids/areas that were ‘cold spots.’ Figure 7 presents a subset of images gathered from these ‘cold spots.’ Several observations can be stated between the two sets of image:

1. There seems to be two sets of photos. One set is of a selectively represented (artialised) Paris, while the other set is the Paris that is lost;

2. Comparing the first group of photos with the second group, it’s seems that most of the photos in the first group have a theme, or people’s intention. On the contrary, the second group of photo doesn’t seem to have a theme; they just look like random uninteresting street photos;

3. When one examines the first group of photos as a whole, we can see that these photos are clustered around certain areas at the city scale (Figure 1), rather than dispersed;

4. The Eiffel Tower has the most photos compared to other places.



Figure 5. A collection of images supplied by a respondent (copyright © 2017 Xiao Hou, used by permission, all rights reserved).



Figure 6. This image illustrates the sorting and grouping of pictures taken by the respondents (copyright © 2017 Xiao Hou, used by permission, all rights reserved).



Figure 7. This collection of images illustrates the characteristics of the portion of Paris from an area not chosen by the respondents (copyright © 2017 Yu Wang, used by permission, all rights reserved).

4 Discussion and Conclusion

The clustered characteristic is related to the “scale of perception”, or how we frame the environment. At an urban scale, the photos are clustered around these famous destinations such as Eiffel Tower and Arc de Triomphe. It appears that different individuals could perceive the environment with similar, even identical views. Because these students went together as a group, they were able to communicate their thoughts and feelings to each other at the same spot. Someone may point at a wonderful view and then several students could start to take photos at once. Although they may have the same intentions when they clicked the shutter, not everyone frames the view exactly the same. The students framed these photos just like each other, even similar to some photos online. But they did not simply let their friend take the photo and share it with them because that will not be “their photo.” This added meaning may have a layer of self identity imbedded within the image image.

If one might ask respondents what they think of Paris directly rather than asking them to share photos, they may well say about these landmarks that have become symbols of Paris. They could also comment about the food, the culture of the city, and

a lot more. But with the photo as a medium, this impression become vague and hidden behind the photos.

The same city can be experienced in different ways. Looking at the second group of photos, it is hard for us to recognize where the places were, even to recognize whether or not these photos were taken in Paris. There may be several reasons. Students going abroad also have limited knowledge of Paris, so the photos they pick will be based on their knowledge of Paris. The other reason is that the street photographs may not be suitable to showcase Paris. Paris is a city with a very rich culture. Even though the streets of a city are considered by Jane Jacobs as “the main public places of a city” and “its most vital organs,” the streets of Paris may only represent a portion of the culture in Paris [31]. Therefore, the photos collected from the streets of Paris could only represent parts of Paris. Research in tourism studies also suggest that photos feature culture, history and art are frequently associated with pleasant feelings of a place [32]. One might also argue that the students did not take and select the second group of photos because these ordinary street scenes were lacking in culture, history or art dimensions and that they were not “pleasant.”

The differences in the photographs collecting method have created two different sets of representations. Although the second group of photos was collected randomly on the streets of Paris in order to get a general idea of what other parts of Paris look like, they do not seem to represent the city other than representing the streets. The first group of photos, however, did not represent the entirety of Paris, either; because the photos were clustered around certain areas, the locations that were not covered were not properly represented.

When one examines the representations of Paris, the unrepresented portions are sometimes ignored. The first group of photos seems to represent the city with a cultural lens while ignoring the physical construction of the city. The second group represents the city with a “scientific” approach, similar to that of a map, but it lacks considerations in the city’s cultural and social aspects. In order to get an accurate representation of a city, one may need to utilize two approaches together to get a better image of what Paris might look like.

The group of students seems to perceive the city with some “common ideas”. The “common ideas” reflect the collective understanding of a group or their culture. By collecting photos from a specific group of people, one is collecting a cultural way of seeing that is unique to this group. But when the

group changes, the way of seeing is changed as well. For example, the 2015 group of students have different understandings of Paris compared to the 2016 group. Comparing the photos between 2015 and 2016, it's safe to conclude that when destinations change, the content of student photographs partially change as well. The student's impression of a city is based on their own experiences and their unique way of seeing.

One might imagine/guess what Paris looks like from the first group of photographs. Landmarks such as Eiffel Tower, long and wide streets like Champ Elysee, the Eiffel Tower, the Arc de Triomphe, and Notre Dame. The photos are documents of what one may see, but they form pieces of one's memory of a place. Drawing from the artialisation theory from Alain Roger, it seems that in photography, people choose selective representations of place. The photos selected from students are artistic representations of the landscape rather than an image that only shows what the real landscape looks like. People see the city in different viewpoints and perspectives.

Even though students may have gone to other places and taken other photos, they all seem to select photos that are more of an iconic place, or a landmark. In other words, students have selected these iconic places as representations of Paris. In the first group of photos, landmarks such as the Eiffel Tower, Arc de Triomphe, and Notre Dame Cathedral. These iconic places seem to be meaningful in a way that is associated with personal experiences and cultural expectations. They are also easily recognizable from the surroundings. The second group of photos, however, does not seem to have distinctive characters like the first group. Maybe it is harder for one to associate the meanings of the second group of photos to one's impression of Paris.

While the sample size of the primary study is small, social media results reinforce the pattern established by the respondents in this study. On the internet, for a time, one could obtain maps of 'hot spots' and corresponding 'cold spots' concerning the locations where photographs were taken.

Across France, this selective photographic representation with hot spots and cold spots can be observed (Figures 8, 9, 10, 11). In Figure 9, Versailles to the west south-west of Paris is a photographic hot spot. Beyond Paris, there is a large photographic 'cold region' matrix. Figure 11 depicts the photographic hot and cold areas for northern and central France. Paris, the coastline, the Loire River, and along the French Alps through

the border with Germany all appear to be 'hot spots.' The very light grey area are the 'hot spots.' The medium grey areas are the 'cold spots.' The near black areas are divisions between the light grey and dark grey. These areas can be assessed with the calculation of the fractal number for the pattern.



Figure 8. A map of photographic hot (very light grey) and cold spots (medium grey) in Paris, France observed in the fall of 2017. The map is similar in representation to the choices of the respondents in this study (copyright © 2017 Zhi Yue, used by permission, all rights reserved).

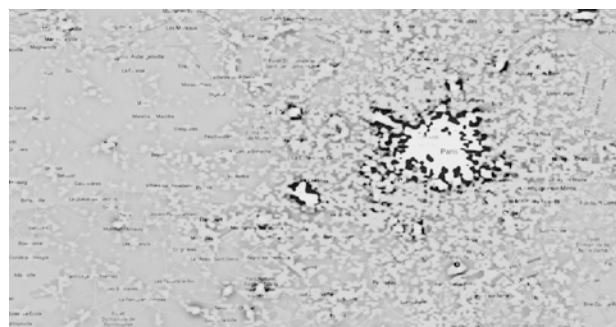


Figure 9. A map of photographic hot and cold spots for the area around Paris, France recorded by the fall of 2017 (copyright © 2017 Zhi Yue, used by permission, all rights reserved).

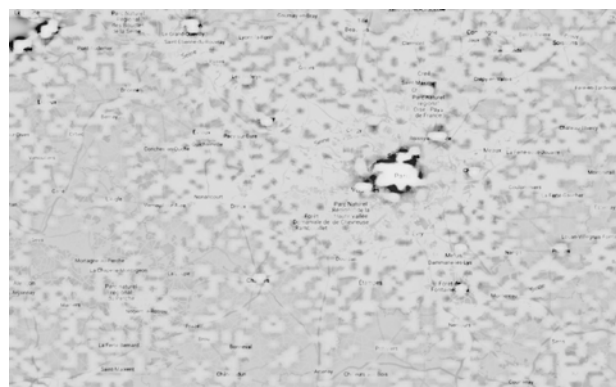


Figure 10. A map of photographic hot and cold spots for the area beyond Paris, France recorded by the fall of 2017 (copyright © 2017 Zhi Yue, used by permission, all rights reserved).



Figure 11. A map of photographic hot and cold spots for northern and central France recorded by the fall of 2017 (copyright © 2017 Zhi Yue, used by permission, all rights reserved).

The study team examined the fractal pattern on the hot and cold spots for Figures 7, 8, 9, 10. The fractal numbers for both black and white and grey scale derived values are somewhat similar across scales within their column (Table 1), slowly migrating to a smaller number as the area being studied enlarges. The actual number is not that important, but the relative consistency of the pattern in either black and white or in a greyscale suggests that the pattern is persistent across scales.

Table 1. The fractal number of Figures 7 through X10.

| Figure | BW Fractal | Greyscale Fractal |
|--------|------------|-------------------|
| 8 | 1.872 | 2.386 |
| 9 | 1.845 | 2.187 |
| 10 | 1.821 | 2.191 |
| 11 | 1.578 | 2.168 |

It may seem that one might be able to get a better understanding of the world by reading more information. A photo collection will give us a better understanding of the whole; the individual groups of photo all look very different, but together they have commonalities. The more perspectives contribute to better understandings. Since different photos are representations of different cultural ways of seeing, they are also contributing to the building of diversity.

Drawing, paintings and photographs are representations that reflect personality and culture. Consider the decisions involved in drawings versus taking photographs. Nowadays the process of taking photos is as simple as taking out a phone and click--which is much easier than taking out a sketchbook and choosing where on the paper a pencil or pen should go. Making sketches takes a lot more time and takes more decisions. However, one is but able to take photos that look much more realistic than drawings. People in the profession have argued that drawing is still a medium that can help one learn and observe the environment [12. 33].

In urban design theories, "Lost Space" is a concept put forward by Roger Trancik to describe "the area within a city that is unused by pedestrians or not occupied by buildings or streets" [34]. Trancik argued that one reason that have contributed to the issue was the use of automobile; automobiles, highways, garages and parking lots have contributed to a type of design that have contributed to places unsuitable to pedestrians who want to walk in the city [34]. Similarly, one may argue that the ubiquitous use of photos may contribute to a visual "lost space" in the urban environment.

In the modern age where visual experience seems to dominate other senses, a photogenic image may get attention easier and be more effective. However, good visualizations and representations do not replace real experiences. A project that looks good on paper may not transfer to the success of it in reality. Although the construction of visual representations may assist people to understand a project better, one must not confuse it with reality.

In planning and design professions, when a project is built and experienced by users, the complicated evaluation process is often times substituted by a visual document that strives to communicate what the space can be by the design team, ranging from the analysis of the space according to context, to the overall plan view of the place, a section view of an important relationship, to a perspective view and drawing. A computer rendered graphic that gives one impressions of the place along with textual descriptions that illustrates a design concept is a useful tool.. The visual materials not only serve as guidelines that help the designer to make decisions in the design process, but also give the places meanings. The intent of the expert is usually not easily received and transferred by the general public, and yet the clients and users very much rely on visual communication before their actual experience in the built place.

By assessing people's photos, design professionals may be able to gather valuable

information that otherwise would not be available through direct participation. Quantitative methods that employ user provided photos may benefit from qualitative assessment. Using computers as tools and utilizing technologies such as data mining and deep learning, one may be able to assess visual materials more efficiently.

There are several limitations in this research. Although the second group of photos were collected in different parts of Paris, it is this technique of photo collection that determines the street-view like quality of the second group. One study that could be done is to collect photos on the street in the areas where the student's photos were clustered around. By comparing this group of photo with the first group of photo collected in this study, one will be able to see how important the streets are in the clustered areas. By comparing this group of photographs with the second group of images, one will be able to discover the distinctive characters of the landmarks, although it is also possible that they do not look very different. One may also collect photographs from more areas of Paris.

The current study is focused on a specific group of students that has gone through some training in landscape architecture, so the result may not represent lay people who do not have expert knowledge of city design. Therefore, in the future studies, different groups of people can be assessed and compared.

There are two parts of Paris. One is the Paris shared, the other one is not. People do not think Paris should be represented as the same place across the entire city; The streets of Paris do not have cultural significance when city is to be assessed; instead, focal points such as landmarks are symbols of cultural and social significance that is significant in people's perception of a city. Paris is a great city, but with a slight twist of representation, it can also become dull and unpleasant. Urban landscape is diverse, and when one designs, what looks good in plan does not necessarily mean it will have a good experience in person. It's important to understand the limitations of a medium (photography) to make better decisions, because in the end, one does not design and live in cities based on illusions and representations.

To design city at the urban scale is complicated. One might perhaps see the Eiffel Tower as the symbol of Paris, but the reason seems to be more than its looks. The history, the cultural values, the relationship between it and the city, and the services and programs provided, combine to account for the tower's success and how people appreciate it.

This research study confirms that there are at least two types of environments in historic Paris. This does not mean that one is better than the other. But it is clear, for visitors, much of Paris is unimportant lost space. Designers, planners, government officials, and concerned citizens will have to assess the meaning, utility, and appropriateness of these two zones. They will have to determine if there needs to be changes and adjustments in future urban design projects.

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