



Investigating the Relationship between Responsive Environment and Appearance of Public Art Case Study: The St. Petersburg Palace Square and Moscow Red Square

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Abstract

Public art is a connection between the city and human, and it needs an audience and context for Appearance. If the relationship between citizens and public art become strong, their perception of the city and the sense of belonging to the urban environment will increase. The components of responsive urban spaces bring about appearance of perceptual quality and satisfy citizens, in other words, strengthen the relationship between the city and the citizens. This bilateral relationship is the main point of this article that has been investigated. Through two case studies in Russia, with the method of field studies and qualitative research. In this paper, after perusing the characteristics of urban space in the two square of St. Petersburg and Moscow which is causing the appearance of Public art, in the analytical tables, relative comparisons of Public art in these two sites were discussed. The criteria for creating a high environmental quality lead to the creation of spaces that are shaped in accordance with the needs and requirements of the human being and are responsive to human behavior. Also, the emergence of public art will satisfy human needs in the Russian Palace and Red Square. However, the two domains have conceptually different perceptions. The House of Lords in St. Petersburg, is in contrast to the Moscow Red Square in meaning. This difference in the meaning of these two squares is both physically and functionally and also related to their different historical backgrounds.

Keywords: Public art; responsive environment; human behaviors; Russia; urban square.

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1. Introduction

The city is like a living body in which the physical features coexist with the spiritual ones in order to create the living space in which the inhabitants could have a sociable life. Public art is a connection between the city and the citizens that make this relationship stronger. In fact, public art is a social play, which finds a communal purpose but relied on the society to survive and continue. In addition, it becomes a mean to express the characteristics of its own society. Public art needs a suitable platform for emergence. Public spaces, which are the subset of urban spaces, can be a context for the emergence of social interactions and, consequently, the emergence of public arts. Open urban spaces can provided people with cultural diversity, to engage with natural processes and to conserve memories Successful urban space affords a place for the meeting of strangers and a place where one can transcend the crowd and be anonymous or alone. The public space is a place where individuals and various social groups interact. This space is an excellent place to convey thoughts and information and a platform for the formation of the social networks. Such spaces are an experience rather than just an area. One vital role that public space is providing environment for the expression of diversity, both personal and cultural [1]. These spaces link public art and citizens. Therefore, public art is a connection between the city and different classes of people, including the poor and the rich, and covers wide ranges of thought. Thus, public art is a concept of art that is created by citizens based on their interactions with the work. In this interaction, each of the audiences has its perception. Hence, "public art is not an artistic object defined solely by its physical feature and can be installed anywhere, but a phenomenon that the experiences of the citizens about the city spaces and symbols play an essential role in the creation and interpretation of it. One of the most important spaces in each city is the square or plaza. Plaza is a place where confined by barriers, integrated and has a collective life for the citizens, which has three distinct dimensions. It also has specific inside area, which is distinguishable from the outside, and the floor and its bodies have a defined architecture. This area resulting from the citizens' collective action requirements and because of this collective nature embraces various functions from commercial to historical and dramatic ones. Dynamic urban squares with their historical roots and stories considered as the heart of the cities which injects the identity and sense of belonging into the spaces. Successful places such as these are designed with the strong planning system and by focusing on human, structural and environmental needs. In this regard, a recognition of the value of wild spaces, informal, loose-fit, occasionally messy places, that turn out often to be as valuable as the tidy and the formal [1]. These places let such activities as public arts to emerge.

Squares are probably the first public experience for human. The arrangement of the squares created higher amount of inner control of the space, and gradually this area gain a symbolic model for holy or important places in the city [2]. this kind of arrangement afforded qualified spaces which make it an inevitable form of public space in every city and culture. To discover answers of questions above, main squares of two cities in Russia have been peruse.

The public art is tied up with the cities like Russia, with magnificent landscapes alongside a multi-faceted society and has fascinated many people from the past until now. In the 1990s, Moscow and Saint Petersburg had to adapt to the collapse of the Soviet system, meet public expectations of more democratic processes. Both successful squares in Russia, the Palace Square in St. Petersburg and the Red Square in Moscow, has dynamic

and vital spaces which are visible and indisputable [3,4]. Both spaces have created a unique quality of urban spaces that seem to provide a suitable platform for the emergence of public art due to their designs.

1.1 Literature review

Public art is not a particular form of art that once achieved from the physical attributes. However, it is a concept of art that is created by the citizens and based on their interaction with it. Hence, public art is not an object defined only by physical features that can be installed anywhere, but a phenomenon that the experiences of the citizens about the city spaces and symbols play an important role in the creation and interpretation of it [5]. Public areas are accessible and multi-functional spaces that interact with people and are open to everyone. Public spaces are used by all members of the community. Thus, they can be a suitable platform for the emergence of public art. General livelihoods can be seen as a theater in which symbols are presented and exchanged. The city is considered as a scene for presentation. So, there are many similarities between urban design and stage design. In both of these, neutrality and flexibility, and the audience entrance into the show, are necessary for interconnected communication. The public space is a place to present roles where the reality exist and tolerating different views are practiced, and it is imperative that these spaces can facilitate the directly or non-directly interacts with humans [6].

Public Spaces encompass a wide array of spaces, from old historic centers to suburban developments. Urban squares are one of the most important public areas of the city which formed from the link between three elements of space, surrounding buildings, and the Sky dome. Design of urban space defines certain spatial qualities. The desire and the success of public space is before anything else predetermined by its ability to bring together two main and necessary quality upon which all the rest depends: accessibility and communication. The quality of the square's function is mostly determined by the floor, dimensions, equipment and surface area division. Therefore, in existing square structures, observance of functional aspects equally influences the observance of spatial qualities and over time keeps itself alive by the creation potential for group activities. Physical and functional indicators of the squares are the width, size, map, the type of surface, and topography [7,8]. The most successful urban squares from the perspective of Moughtin are those that have a strong function along with various types of activities. The presence of multiple activities in the square creates visual attractions and vitality [9]. The general public domain is a place where the main public needs, the highest public expenditure, and the most extensive public art placed. It can be claimed that urban square is like a living room for the family, with the best facilities and decorations in it. When a newcomer arrives in the city, the streets lead him to a central and important place of the town which is the main square that has a significant impact on urban life and citizens spend the most hours in their free and open space. An urban square is a place where different thoughts and products are offered and exchanged so; it provides a great potential for the development of public art [9].

2. Structure

2.1 Urban space and responsive environment

Plazas in cities are focal points for social activities, and they have a high potential for providing high-quality spaces for social behaviors. Having responded to human demands, such environments interact with human behaviors which is one of the vital criteria of these sustainable spaces. Some plazas provide such environments for citizens despite of their different perceptions in the citizen's minds. In other word, although some urban spaces possess different meaning and mental perceptions, they offer people with the quality. Applying a variety of approaches for designing and programming the urban spaces is an avenue to provide sustainability in different urban spaces in the relationship with their historical background, their functions, and their form. It is needless to say that every space needs a unique design approach which fits with its diverse facets. One approach to make a space more qualify is to make it potent to be responsive. Responsive environments, as Bentley asserts in 1945, provide democratic environments and appropriate possibilities for citizens to satisfying their needs and express themselves. Bentley declares several aspects of the responsive environments [10]:

- **Permeability:** which is the quality that provides the accessibility of one place. The number of potential paths and axes to reach the place which gives people the right to choose their movement in the space. This quality is not limited to physical access [10]. Transparent and visible paths which provide visible access to the place make it possible for citizens to exist in the space thus it relatively would be more dynamic.
- **Variety:** efficiency of an urban space is not possible merely by permeability. It also must provide citizens with rights to choose their basic use of the space, and it is possible with the second quality: variety. When an environment has different characteristics such as formal, function and meaning perception, variety occurs in the space. Such spaces have different buildings with different shapes and usage which cooperate with each other with harmony and proportion. Therefore, different people in different times with variety of purposes are attracted to the place. This variety of activities, forms, and people leads to reach mental picture and space perception, and a range of meaning is interpreted in the users' minds [10]. The more variety that space has, the more dynamic and living it will be. However, if the variation does not occur with harmony, it would lead to baffling and chaos, which reduces the legibility of the environment. Hence, there must be an efficient amount for the variety of space to provide better quality.
- **Legibility:** initiated by Kevin Lynch, legibility is a concept for explaining spaces, which are not chaotic, and one may conveniently find their path in it. This attribute makes the environment more understandable which citizens can recognize it easily [11].
- **Robustness:** With this quality environment provide more options for its users [10]. Environment with the ability of responding to constant changing situations and demands produce more capacity for different activities. These flexible characteristic occurs in different levels. In the first step, users adapt themselves with the space to fulfill their demands. In the second level, Users change some features of the space, in other word, the space adapt itself with users. Eventually, users leave the space since it has not enough robustness to meet users' needs. Flexibility is what makes a space sustainable in long run, and ensures the presence of people in the environment [12]. People are flexible creatures. Humans are constantly changing and they get their surrounding change to be suitable for their desires.
- **Visual appropriateness and Richness:** The design of exterior appearance of urban plazas which

attract different scenes in the space is called visual appropriateness and richness. The proportion of space to mass and visual appropriateness are even more important in crowded spaces with variation. Details, greenery and lightings have great impact on richness of a space.

2.2 Public art

'Public art' is the term that used to describe art works that are applied to open public spaces. Such forms of practices generally located outside of galleries, museums and concert halls [13]. Public art which appeared in special urban spaces is contingent to its audience (city and citizens) for its survival. With this in mind, the context and audience in public art can be discussed in two category.

- Public space and appropriate context of public art
- Audience of public art

Public space recently consumed as a changeable concept which is related to psychological aspects rather than physical and environmental. In addition, public and private spaces in the cities are not clearly separated, for instance, many plazas, parks and open spaces belongs to some owners and companies yet they permit people to use this areas. This concepts bring about generating the artwork status as an "un-author(is)ed" work, visible in public space [13,14]. Art appears and is presented in interaction with right place and space, and contact with its audience. Otherwise, it may cause chaos. One of the suitable context for appearance of public art is public space. Such space contains of different people and groups, and are the best place to transferring variety of ideas which can leads to create social networks. These places are more like experiments than just a space [11].

Discussion of public art takes place in the context, in which the utopian aspirations of modernism and 'legislated city', a space in which a particular kind of experience is produced through the regulation of space, have been substituted by a post-modern cynicism [7,8]. Therefore, it seems that the quality of art is closely related to its public space context which depends on the existence of audience. Since the public art is created for citizens, the interaction between the audience and the art must occurs in places in which the audience chooses to be on purpose. In other word, so qualified must the place be that the audience intends to be there. Such environments attain their meaning from the intentional existence of people. People may use a street as a communal gardens for residents beside a access for commuters on their way to work. A public park may be occupied by political protesters, and a set of stairs, may become a launch site for skateboarders while it is meant for climbing and access. A public space must consider these possibilities for such behaviors [14]which would lead to better interaction between human and environment.

In addition, public art intensifies the quality of space while it is interpreted by its audience. Art in public spaces produces more possible readings of art, city form, social pattern, which may collide with each other [13]. Thus, despite the traditional explanation of public art which merely focuses on art works, contemporary beliefs accentuates on audience interaction with public art within their environment.

Human in this area has a multiple role, having understand and interpreted the art works, one can participate in the creation of art. Obviously, not also placing some art works in public spaces without considering the

interactions of art and citizens in not public art but also this is just a formal approach, which would reduce the position of artworks limited to ornamentation. As a result, the communication between citizens and artists decreases. Furthermore, the difference between public art and other art works is that public art must be a part of city and obeys its regulations. Not every artwork is capable to be a public art, it must cooperate with the city's language and be in harmony with citizens. Despite other arts, the audience of public art are not unknown or just in the mind of artist, hence the artist should be aware of his audiences and apply techniques which are adaptable to their mindset.

3. Research methodology

Appearance of art and art life in city is explainable in two way. First, the city and the architectural form of city is and must be an art work. Second, the city is a place for presenting art and artistic attitude. The second declaration is the target of this paper. The main hypothesis of this paper is that the responsivity of space have positive impacts on public art, and the bridge between human and environment expresses itself as public art in responsive areas so the perception of space advances while the responsive environment provides better relationship between the city and citizens. This paper with qualitative research methods peruse the responsive elements in two case studies in Russia red square of Moscow and palace square of Saint Petersburg by observations, analysis and comparative comparisons to measure the impact of responsive environment on appearance of public art.

Although the research has reached its goal and the following lines are the results conducted from the qualitative research methods, it is also imperative to address some unavoidable limitations throughout this study. First, because of the specific weather conditions and time limit, the research was conducted on a short duration with observing handful types of arts which were more comfortable to perform in that certain conditions. Second, small number of public spaces were observed due to the time limit. Among more than 100 public spaces in these two cities in Russia only 12 of them carefully observed and two of them compered. Finally, while we tried to minimize the impact of subjectivity to the least possible level, a slight degree of subjectivity might be found since the descriptive assessment of the results from qualitative research and observation is conducted by the authors.

4. Discussion and Analysis

- Comparing Permeability in red square and palace square :

Moscow is in a specific period of history which can be defined as the transition to a new urban model and to a new way of life by a part of the population [15]. The red square have been inaccessible for public for many years since its construction. The space dedicated to soviet army parade. After soviet collapse, red square become available for citizens. Corners provide access to the space, but the main entrance in north eastern sideway provides both physical and visual permeability to the place. The location of entrances in the corners affects the hierarchy and motion in the square in a way that fast movements are pushed to edges and the center of the square become suitable for the pauses and stops. It is possible to stand in the vast middle areas of square without

interpreting people's rapid walking on sides which might be an opportunity for more interactions. Because of the unique planning, the red square also has visual permeability from its surrounding streets despite being pedestrian. Besides, outstanding signs such as res starts of kremlin palace and colorful domes of basil church are noticeable from far distances.



Figure 1: Pause and Resume in Moscow square, summer 2017 Captured by authors

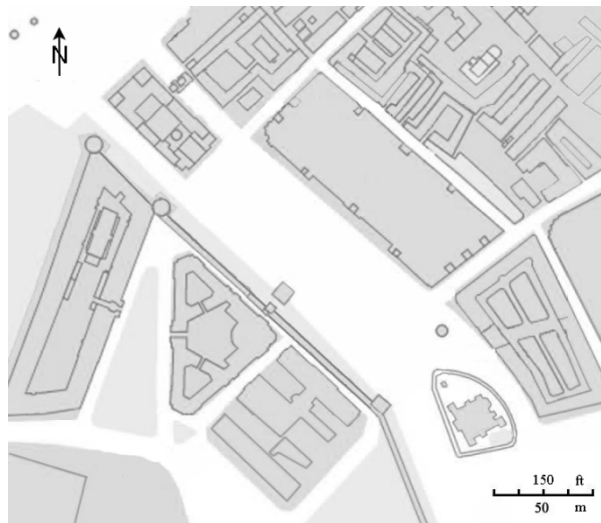


Figure 2: Red square site plan, wikipedia.com

Permeability of palace square in Saint Petersburg has some differentiation in some levels in comparison to red square. Although accessibility of palace square is provided by entrance gate, quite a triumph arch, as well as red square, visual permeability is not as clear as red square because of its location and the especial form of the square.

Thus, the first encounter to the palace square for the audience is relatively shocking similar to exploring an elegant space which bring about more enthusiasm, and is more inspiring.

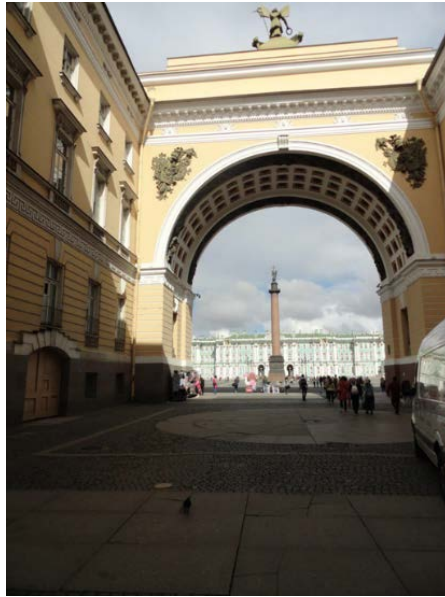


Figure 3: Entrance gate to Palace square, summer 2017 Captured by authors

- Comparing Variety and legibility in red square and palace square :

The building surrounding the red square are not constructed simultaneously. Each building represents the identity and attitude of its current era. The basil church express religious spirit of its own period of time. The traditional religious music and chores still can be heard from it although it is turn to be a museum. On the other side, Eastern and western edges of square contrast each other. While the Gum shopping center with extreme light and transparent walls increase motion and bring



Figure 4: Movements in front of Shopping mall, summer 2017 Captured by authors

more dynamic on eastern side, red high and silent walls of kremlin palace stand without any function push the crowd of people toward shopping mall side. These contrast in in form of makes different movement pattern either. People behavior is a combination of fast and slow motions and standing near to the shopping mall however they tend to walk fast and nonstop on the other edges despite the Lenin grave which is a monumental

building and the environmental scene around it changes abruptly. North of the square is not as holy as the church and grave nor crowded and popular as shopping mall, the museum has its own characteristics. Different character of each side bring about more variety, and each visit of the square is a unique experience which prevent redundancy. Every hour, day and season would be like an adventure for one but this amount of variety reduce eligibility and prevent consistent perception of the square.

Similarly, each building around palace square has been built in different period of time, however they have more harmony with each other in comparison to red square. Most of the buildings had royal functions and other ones imitate winter palace, the oldest building in the square, and the habitat of Russian tsars. Similar forms and shapes around the square leads to more integrated perception, also the alexander column in the middle of the square provides focal point and central concentration which strengthen the legibility, but the variation of activates and behaviors is much less than red square, based on the field studies. Yet, the plaza as alive as red square thanks to its flexibility which provided opportunities for different activates.

Palace square is eligible because of its strong edges and alexander column in the center, while the red square's eligibility is provided by noticeable and outstanding buildings around it.



Figure 5: Alexander column in middle and equal rhyme on the edges, Shutterstock.com

- Comparing flexibility and Robustness in red square and palace square :

Both the plazas provide vast space for citizens, and the neutral flooring which does not distinguish specific districts for users makes more options for people to choose their own activity or their path and movement pattern. One of the techniques for providing flexible spaces is to separate hard and soft structures. Hard structures are adaptable, and can change easily while hard structures have specific function which is more fixed and tend to be unchanged. In the both plazas hard part is assigned to edges, and vast space in the center operates as soft part. However, in palace square the alexander column differentiated the behavior in the middle of the square and the center of the plaza is not as soft as red square. As a result, the activates are not as diverse – containing art works-as red square, yet different art works such as urban music performances are noticeable in the palace square which is a common type of public art in Russia.

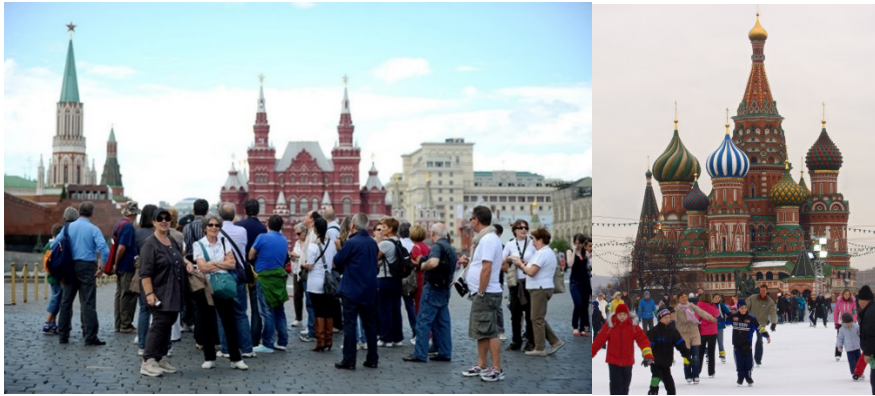


Figure 6: Ice skating in winters and Public activities in summers Red squares, Shutterstock.com

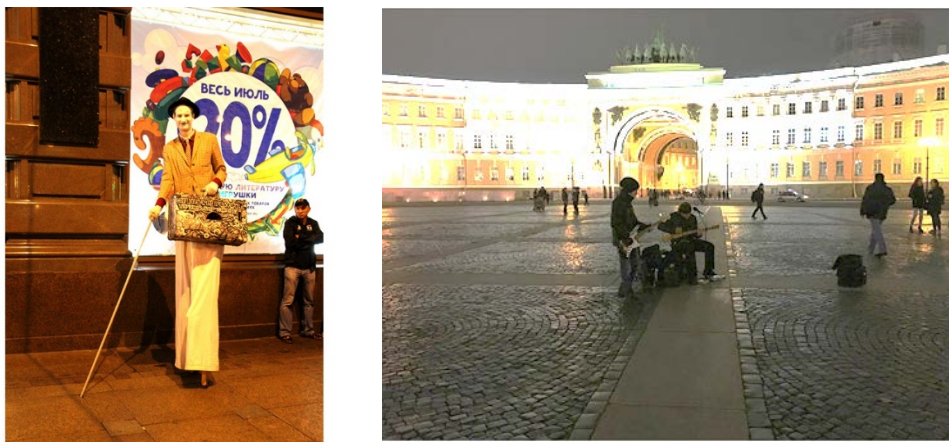


Figure 7: Street theater and small musical performance Palace square, summer 2017 Captured by authors

- Comparing Visual appropriateness and Richness in red square and palace square :

Red square as a huge space (700m8130m) has especial visual proportion. This vast area may interpret with visual perception of the space since it is not possible to notice every part of the space with only one glance. Sky line is different in every side of the square from basil colorful domes to red stars of kremlin palace. Materials are different and contrasting occasionally, for instance, the black granite of Lenin's grave has a contrasting with red bricks of palace.

Most of the colors that can be seen in the square, are sharp with intense pigments which makes the environment more pleasant in its nutmeal context of the gray sky most of the year. On the other hand, palace square has a consistent rhythm and ordinary visual proportion and every item in the palace square accentuated the main element in the middle.

Buildings are colorful but not as flashy as red square hence the more neutral materials provide the alexander column opportunity to highlight itself. Nocturnal lighting in red square also pursues its own characteristics. Each side of the plaza has its own design for lighting, for example, shopping mall is shinny and bright while Kremlin palace is darker and silent. This approach for lighting is more fancy and inspiring which may make more senses

to engage in the process of perception the space.

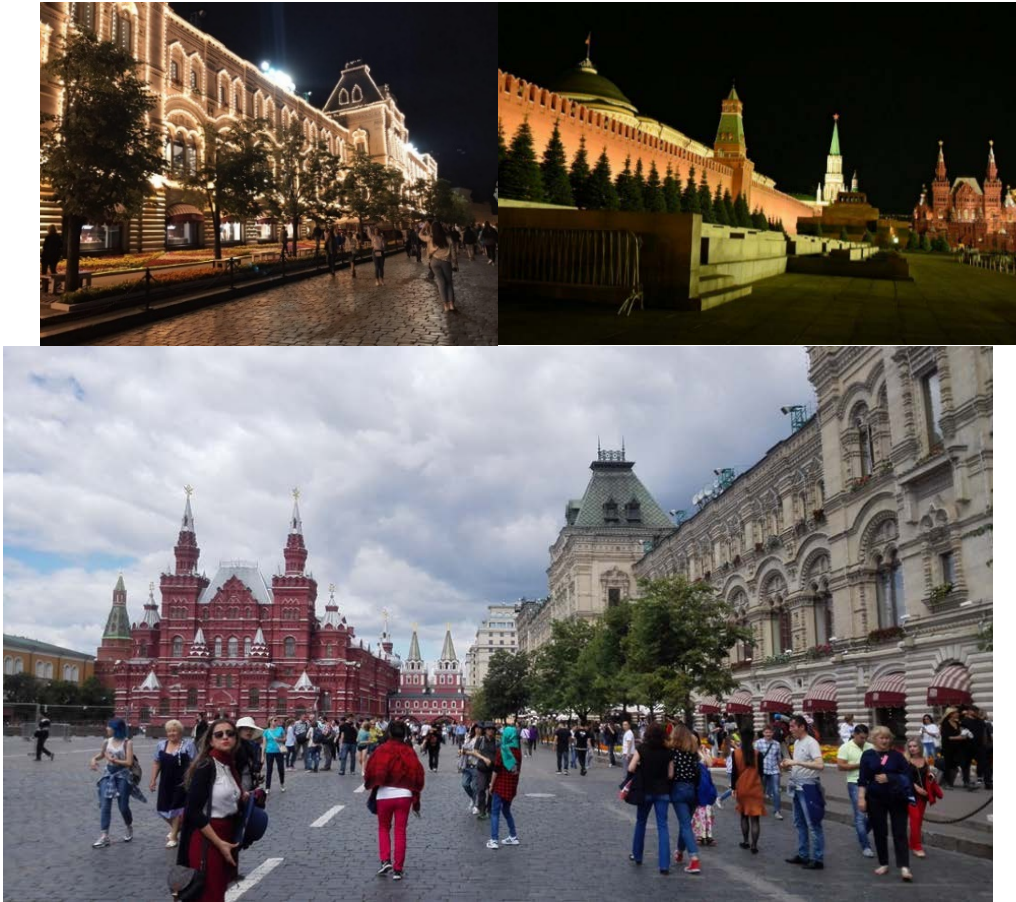


Figure 8: Variety of materials and lighting Design in Red square, summer 2017 Captured by authors

5. Conclusion

The public art acts as a link between the city and the citizens, creating a sense of belonging to the city, affecting its audience. Responsiveness factors, including flexibility and diversity, attracts citizens into communal spaces. In this regard, the role of the audience and artist is played in the place as a part of theater scene. When this artistic role affects humans, we will not only see the physical artworks (body and building, etc.) but also a change in citizen's behavior. The existence of responsiveness features in the communal spaces, which is the context for the emergence of Public art, causes the appearance of different types of arts, also affects the audience engagement with the artwork; Arts such as street music, graffiti, dance, group performances, ice-skating and other dramatic arts. The factors to create a high-quality urban space lead to the creation of areas that are shaped by the needs of humans and respond to their behavior. The examined Responsive qualities and the emergence of Public art provide a platform to meet the human's needs in the Palace and Red Square. However, the two squares have different perceptions. The palace's square in St. Petersburg, in contrast to the Moscow Red Square in the quality of urban space, is also different in meaning. This different meaning results from the difference in physical and functional features and their different histories. In addition, this difference in the meaning among Russian people lead to two different approaches to the emergence of Public art. For example,

the Public art in the Palace Square is more likely to be found as street music but as a street performance or ice-skating in the Red Square. Due to the observations and the aforementioned reasons, it can be considered that although, the Red Square which was not constructed for public use at first and did not have human proportions, due to its permeability and several entering gates, it can be responsive to a variety of human behaviors. The palace square with a vast area can be flexible and adaptable, but the existence of a central element and a lack of diversity in the environment has reduced the various types of human’s behavior. Therefore, the most dominant Public art which is music that has less physical interactions than other arts. The relative comparison is summarized in the table below.

Table 1: responsive element comparisons

	permeability	Variety and eligibility	Flexibility and robustness	Visual proportion and richness
Red square	Entrance gate Visual and physical permeability	Variety of function and form Less legible	Vast and neutral Multifunctional space High flexibility	Diverse material and forms
Palace square	Entrance gate Less visual permeability	Less diversity in forms and use High legibility	High adaptability	Strong proportion an rhythm Similar materials and forms

Table 2: Public art appearance s comparisons

	Urban features	audience	Appearance of public art
Red square	Variety and flexibility High permeability Less regulation	Local people Tourist	ice skating ballerina, Dance, Music performance and street concerts, Graffiti and painting
Palace square	Adaptability Regulation	Mostly Tourist	Small Music performance, Street theater

6. Recommendations

In today’s hectic life, finding a pure moment to get rid of the stress and anxiety that society compelled is of great importance. These peaceful and inspirational places can create easily even in crowded capitals by allowing urban arts to emerge. This emergence of urban arts not only smoothen the harsh mechanic conditions in the cities but also create a viable platform for individuals to interact in the language of art. These vital places help

cities to interact with the city's spaces and other citizens and create memorable moments thus their sense of belonging to the city increase and the possible chance of migration will decrease. This fact also guarantees the hopeful future for the cities due to their unbreakable bond with their culture and society. Therefore, it is crucial that destination planners appreciate the local arts in each city and find a responsive platform to emerge them. Future directions for research might include recognition of possible solutions for the emergence of urban arts different parts of the cities regarding the same issues and challenges. These directions could also include further examination of the residents' perception towards their cultural perspectives in which researchers may need to apply a multi-disciplinary approach to come up with practical solutions in terms of responsiveness of each place.

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