This main purpose of this study was to investigate the aesthetic components of environmental graphics of Iran Birds Garden using a method of descriptive analytics. Library resources were used to collect data. Two bird gardens in Asia were selected as the research statistical population and were analyzed qualitatively. The major objectives of this study were designing new and efficient ideas to increase the Iranian and foreign tourists, investigating Asian birds garden in terms of pictograms, designing guide signs in this garden and finding a solution to improve this branch of graphics in Iran. The results indicated the use of simple and understandable pictographic symbols and signs, animal motifs inspired by birds original form and color can attract domestic and foreign tourists to these gardens. Since the environmental graphics as a powerful instrument and science to attract international and Iranian visitors has not received proper attention in Iran, this paper tried to investigate this branch of visual communication collecting comprehensive information about aesthetics and environmental graphics.

**Keywords:** Environmental graphics; aesthetics; pictograms; birds garden

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**Introduction**

Today, with the increasing number of cities and urban residents, the need for orderly visual guidance systems which have been organized using scientific rules of environmental graphics is felt more than the past. The environmental graphics as part of urban community image which is concerned with the visual aspects of way finding, communicating identity and information, can affect human’s interaction with his living environment to meet his needs. This aspect of graphics with a symbolic nature encompasses a wide range of visual components and tries to represent the concepts, information and functions of each place and situation using the most efficient and dynamic expressive methods. In this method, the visual components facilitate human’s understanding of his surrounding environment to achieve his objectives aesthetically having access to the intended situation within the least time and with a common understanding of signs and their visual structure (Rashvand, 2013).

The birds garden is a public and recreation place which can have the highest number of tourists annually from all across the globe as well as from within the country. The environmental designer uses all his visual tricks to design and create an attractive visual environment but accessible for everyone and help the visitors to achieve their purpose, that is visual pleasure of the environment with his creativity. In these places, the warning signs need to be installed in the best spot so that they can be easily and quickly seen by the public. In fact, if the birds pictograms are well-designed, the visitors in any language, race, ethnicity, and literacy can find their ways using road signs and pictograms.

**Aesthetics definition and background**

The term ‘aesthetics’ is essentially derived from the Greek word aesthetikos. This term is composed of two words, “beautiful” and “appreciation”, meaning “of sense perception”. That is why in the past aesthetics was considered as a branch of philosophy. The definitions concerning the relationship between human aesthetics with natural objects and phenomena in this century have regarded it as the knowledge of “beautiful” or aesthetic phenomena (Karimian Seyghalani, 2013). In the mid eighteenth century, Alexander Gottlieb Baumgarten termed the aesthetics as some special kind of knowledge. In his book AESTHETICA which wrote after long reflections on poetry, he defined aesthetics as "the science of sensible knowledge", taking the object of beauty beyond the limitation of art (Gout and Lopez, 2010:10). In Kant's aesthetics, the duality between objectivity and subjectivity was clearly dominant. Kant argues a beautiful object satisfies our subjective purpose of cognition without being judged to have any actual objective purpose. Kant begins by claiming that there are "two kinds of beauty; free beauty", or merely dependent beauty (Pulchritudo adhaerens), and he differentiates the two as follows: The first presupposes no concept of what the object ought to be; the second does presuppose such a concept and perfection of the object in accordance
Aesthetics in graphics

Meaning. The work of art involves an artistic idea which entails its meaning (Ebadian, 2011). Along with its aesthetic fundamentals, Hegel is concerned not only with the formal features of art, but with its content or our perceptions of those qualities (ibid: 32-37). History and reacted to the aesthetic properties of his period. Hegel was inspired by the views presented by Kant's philosophy (Frascar, 2007:18). The influence created by aesthetics is essential for graphic art not for the admiration it provokes but rather "affective" stage. The perceptual stage is a stage in which we perceive qualities in objects and the affective stage is a stage in which in which we feel the pleasurable sentiments of beauty, or the displeasurable sentiments of 'deformity,' that arise from our perceptions of those qualities (ibid: 32-37).

Georg Wilhelm Friedrich Hegel was the first intellectual who devoted his philosophy of art to developing art forms over history and reacted to the aesthetic properties of his period. Hegel was inspired by the views presented by Kant's philosophy along with its aesthetic fundamentals. Hegel is concerned not only with the formal features of art, but with its content or meaning. The work of art involves an artistic idea which entails its meaning (Ebadian, 2011).

Aesthetics in graphics

Various attempts have been initially made to find out an appropriate definition for art. Doing so, the biggest challenge was to provide a comprehensive definition for beauty. Most of the people judge a work of art beautiful if it is easy to understand and similar to the original one. However, artists have different perceptions of art than ordinary every people. In fact, they consider beauty as the result of using all the appropriate elements to create a desirable work of art. Thus, since it is difficult if not sometimes impossible to satisfy different tastes of all audience and authorities of art world, the aesthetics has changed into a relative concept in the analysis process (Abedi, 2012). Aesthetics may be defined as an inquiry into the nature of sensory perception and in fact, involves the affective and perceptual aspects of aesthetics. Also, the aesthetic terms are used for identifying the qualities of a particular work of art or texture which is expressed using elements such as form, color, material, texture, etc. and analyzes the surrounding environment and its existing works of art. The aesthetic interpretation is performed through reconstruction, understanding and perception. The critical responsibility of graphics and its contribution to struggle for freedom is in its aesthetic form. Today's new graphic arts have been formed using the other countries experiences and need to be adapted to our own culture and social origins. The graphic art is used to envision the general and technical concepts of various subjects in different environments observing aesthetic principles in order to transfer these concepts quickly, directly and correctly to the audience.

The aesthetic quality and proportion of works of art are both significant factors affecting an art work performance and as a designer's commitment to his own society. However, the concept of quality has to do with a designer's wider objectives (Frascar, 2007:18). The influence created by aesthetics is essential for graphic art not for the admiration it provokes but rather because it is part of semantics of art and a method in which the cultural system is merged into as a whole. The aesthetics in graphic art is related to the qualitative influence of stimuli on the senses. These stimuli can derive from the attributes of this world which can be seen, touched or heard or from perception of a thought. Therefore, aesthetics in graphic art rests on two areas: (1) how something is felt and (2) how something is perceived which, in turn, can be classified into sensory and perception categories. Finally, different tastes in aesthetics does not imply a lack of aesthetic principles or rules but rather these principles and rules need to be used with caution.

Environmental graphics

"Environmental Graphic Design" (EGD) is one of the branches of graphics design. This concept denotes a visual look at the environment or a graphic attitude towards environment which is a definition for "environmental graphics and graphic environment" (Iloukhani, 2013).

The environmental graphic design is neither an art nor a science by itself but encompasses both dimensions. The graphic design needs to be a combination of influential and creative effects in a form of logical analysis and technique as well as how
something should be done. The result of such a combination are the signs which can efficiently communicate with people. In environmental graphics, there is an attempt to provide suitable conditions for contemporary life through creative art experiences. In environmental graphics, the human's communication with the environment is corrected, the redundant points are eliminated and the necessary points are highlighted. In environmental graphics, simplification and human's communications as well as new and appropriate aesthetics have given a special attention. The environmental graphics plays a significant role in creating spaces and conveying message for communication with the audiences. Walter Herdeg in his book "Archigraphia" classified environmental graphics into six categories as follows: Pictograms and Symbol Signs, Traffic and Highway Signage, Visual Guidance Systems, Graphics and Lettering on Buildings and Shops Fronts, Super graphics and Animated Walls (Wallpapers), Transportation and Vehicle Graphics (Noroni, 2003).

Research method
This study is of an applied descriptive and analytic type. The instruments used to collect data for this study were direct observation and library studies.

Research question
Can the use of proper graphics and signage to guide and attract visitors attention improve the birds garden space?

Research hypothesis
The use of a graphic structure designed orderly and precisely in relationship with its components can help the success of a work of art using creative and attractive ideas, that is, the ideas are used logically with a proper thought, information, simplification and aesthetic aspects are take into consideration and can have a remarkable effect on visitors.

Findings
Environmental graphics of birds garden
while designing the graphical environment of birds garden, a recognition of the environment, audience and visitors characteristics can be influential in designing the content and signs of pictograms visual guidance. For example, the elderly typically prefer more lighting and larger guide signs and pictograms due to their poor eyesight. Thus, it is necessary to notice the visitors characteristics characterized by their age distinctly. The graphic designer should design the environment, way finding and methods for providing information to respond all the visitors needs. Since a bird garden is a public place, it should be designed in a way so that the literate or illiterate, the elderly or children can understand it in the best way and cause vitality and liveliness of the audience and their efficient communication with pictograms. Further, it should be designed in a way that is not dedicated to a particular race or culture but rather it should be universal and understandable for everyone throughout the globe with any language or literacy. A suitable graphic design requires the use of appropriate writing symbols (fonts) as well as contrasting colors and shapes. 

"In environmental graphics, there is an effort to reduce the amount of writing and instead to express notions through a brief, concise and direct language using images and pictograms. However, we cannot say that there is no need writing and it has still numerous applications" (Falahdar, 2007).

The environmental graphics of birds garden can be described as follows:
It should be compatible with its surrounding environment,
It should express its geographical environment identity,
It can communicate its message effectively,
The guide signs font should be clearly visible and legible.

Guide signs
As it was mentioned above, the guiding system of birds garden should be a practical system in communication with the surrounding environment and visual forms (Figure 1). Also, the font style of guiding signs should be clearly legible and visible so that it can be detected, perceived, and read at appropriate distances. The signs and pictograms should be designed and implemented in a way that they represent a coordinated standard design. A quick communication is the first objective of guiding signs and pictograms of birds garden. The instant, purposive and clear communications are among the other purposes of these guiding signs and pictograms. Way-finding is a process of determining your way, following the signage information and finding your way to an intended destination. A good birds garden guiding system is a system which can be understood and followed by visitors easily and make them feel relaxed and connected to the new environment. For this purpose, it should be avoided to place too much information in these guiding signs (Figure 2).
Materials
The materials used on guide signs of birds garden should be selected in terms of their application and climatic conditions. Since most of these places are located in open spaces, materials that are used must have the necessary resistance against bad weather conditions, corrosion, rusting, humidity, etc. with respect to climatic conditions and geographical location. The quick and easy installation, using screw and clamps than welding for fastening guide signs that are strong in bad weather conditions, observing harmony and considering an optimal view angle for visitors are among other factors that need to be taken into consideration.

Pictograms
Pictograms often play a guiding role and the viewers after seeing a pictogram immediately understand what they mean. As it was mentioned earlier, pictograms are often described as simple pictures without complete writing. In other words, pictograms are typically depicted in single color. However, the application and performance of color in pictograms needs to be taken into account. Although it is necessary to observe simplification in pictograms more than other commercial and cultural signs, pictograms follow the same executive principles as the other sings (Figure 3). While designing a set of pictograms for birds garden, the visual factors, font style, colors, boxes, etc. need to possess the same spirit as well as to be used preferably with an equal proportion together in the pictograms (Jaberi Ansari, 2013).

Light and color
Light and color are one of the most important elements of graphic design of birds garden. The natural and artificial lights have different impacts on the environment. The graphic designer can increase graphic expression in pictograms and guide board using color qualities and draw visitors and viewers attention (Figure 4).
Color in environmental graphic of guide boards plays a significant role with the primary responsibility for attracting audience attention. Then, it plays a complementary function for other visual elements to convey a message successfully.
Investigating aesthetic components of environmental graphics of Iran birds garden

Visual factors analysis of examples of Asian birds garden environmental graphics

Singapore bird park

The logo of Singapore's Jurong bird park has been designed by a combination of three colorful parrots (Figure 5). This logo is a type of mixed logo including both picture and writing. The box of this logo is in a shape of vertical rectangle associating statics, strength and balance. The body of these three parrots have been mixed into each other gently inside the box in the middle. The simple design of parrots figure as well as two dimensional and volumetric implementation can be seen continually in the park space. The figure of these three parrots has been designed in a way that it distills feelings of flying, liveliness and movement depicted by yellow, blue and red colors. The red color of large parrot has dedicated more space of this logo to itself. Since this color has a longer wave length, so it can be seen faster and better beside the green color of grass. The yellow color of the second parrot has provided a satisfactory contrast and the blue color of the small parrot which is lighter than the background blue color has given a calming and soothing sensation to the logo. Thus, the dominant visual element in this logo are the three parrots placed in the middle of box which are associated with gentleness, movement and dynamism. At the entrance of park, the guide board including information such as way-finding, birds location at the park and show time has been installed so that the visitors can easily find their own intended destination (Figure 6).

Figure 4. Singapore’s Jurong Bird Park Logo (Source: birdpark.com.sg).

Figure 5. Singapore’s Jurong Bird Park Guide Map and Show Time (Source: Streetdirectory.com).

Figure 7 illustrates the park guide board on which a simplified 3-dimensional figure of a parrot with open wings has been designed clearly using sharp colors. This guide board has been designed in a way that the direction to the birds aviaries has been shown using parrot's wings. The dominant colors in the guide board are red and blue inspired by the color of parrot's wing. The guide board has a red-green color contrast which distinguishes the figure from green trees background.

Phuket Bird Park, Thailand

The logo of Phuket's bird park in Thailand is a combination of a hornbill bird image and the expression "Phuket Bird Park" printed in Latin. This logo has been installed at the entrance of park using a single white color.

Figure 6. Jurong Bird Park Direction Guide.
The dominant line of orientation is a branch of tree which has been designed vertically and the word "Bird" on the branch indicates peace and tranquility. The designer has used the bird's figure and organized his drawing reiterating the animal. Further, the hornbill's body parts have been simplified. The view angle of logo is lined up with the viewer's visual horizon with no depth of view. The configuration of logo is of an axial-centralized, asymmetrical and dynamic type. The figure has been designed in a way that draws the viewer's attention to the bird. The body of hornbill is black and its beak is yellow. Warm and happy colors have been used in this logo which associates the colors of birds in the garden.

Figure 8. Phuket Bird Park Guide board (Source: phuketmagazine.com).

Figure 9. An Example of Entry Road Sign at Phuket Bird Park.

Figure 9. indicates the guide board which has been installed at the park entrance informing visitors about directions and birds performance at three different times. The visitors can look for the image of their favorite bird on the guide map and find their aviary easily.

Figure 10. is the signage which has been designed and installed at the border of birds park entry road. Also, the designer has used the figure of a parrot and a camel using simplification method along with the park's logo in a form of two-dimensional stands. The illustration of these two animals is very simple and closer to the children's view. The red color of parrot with the green color of trees in the logo draw attention to itself due to a high contrast. The font used is visibly clear and simple and can be seen and read at a long range.

There are also boards installed besides the birds cages on which specifications and information of each bird has been written (Figure 11). On the left side of the board, the bird's image and on the right side, specifications and habitat of each bird has
been written. The designer has used the color of the same bird. Figure 12. illustrates an example of Phuket bird park staff's uniform which has been designed from the original logo printed on a beige background.

**Figure 10.** Birds Profile Board at Phuket Bird Park (Source: forum.mahsafar.com).

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**Analysis of visual factors of Isfahan birds garden environmental graphics**

**Signs and pictograms**

As we can see in Figure 13, there is a pictogram of a flying bird which has been designed at the guide board of birds garden entry 1. At the left side of this board, a human's pictogram has been designed indicating the garden's entry. Figure 14 depicts the pictogram of office building of Garden designed using metal sheets. The bird's pictogram at the bottom of the box which is in a form of arrow points to the building entrance. The logo of Isfahan Birds Garden is of a mixed signs type (Figure 15). The image of the bird (Parrot) and the expression "Birds Garden" has been printed both in Persian and English on the logo. The figure of parrot's head has been simplified and the dominating colors are orange and blue.

**Figure 11.** Pucket Bird Park Staffs Uniform (Source: phuket.com).

**Figure 12.** Entry Board and Bird's Pictogram of Isfahan Birds Garden.

**Figure 13.** Office Building Pictogram of Isfahan Birds Garden.
Figure 14. Isfahan Birds Garden Logo.

Figure 15. Isfahan Birds Garden Entrance.

Entrance
We can see the entrance and entrance board of Isfahan Birds Garden in Figure 16. The schematic image of birds figures has been simplified and used for designing and manufacturing the entrance of garden. The designer has used the figures of birds such as flamingo, swan, pelican, stork, etc. reiterating the bird's body. Also, The designer has used colors such as green, yellow, red, blue and purple which draw the visitors’ attention especially children’s. The text on the entrance board has been written using a simple and visible font.

Guide Boards
Guide boards have been installed all through the park giving information about birds specification, habitat and eating. These guide boards can be classified into several categories: (A) guide boards installed on the birds of prey cage (Figure 17), (B) guide boards which have been installed next to the glass cages. We can see birds such as hornbill, toucan, myna, parrots, etc. in these cages which have a different color depending on the bird (Figure 18). (C) guide boards which have been designed for wading birds. The designer has just used the birds names along with their images in this stand (Figure 19) and (D) guide boards on which the birds specifications has been installed on a wooden stand (Figure 20). Most of these stands have been designed for the birds that can fly freely in the garden's space. Although the design of these guide boards is simple and understandable, there have not been creatively designed from the aesthetic view.

Figure 16. Birds of Prey Profile Board, Isfahan Birds Garden.
Investigating aesthetic components of environmental graphics of Iran Birds Garden

Figure 17. Birds inside Glass ages Profile Board, Isfahan Birds Garden.

Figure 18. Wading Birds Profile Board, Isfahan Birds Garden.

Figure 19. Birds Profile Boards, Isfahan Birds Garden.

Figure 20. The Green Color Used in the Entrance Board of Isfahan Birds Garden.

Color
Color can enhance the significant characteristics of pictograms such as messaging and attention getting. Color is one of the most important visual elements in nature which plays a significant role in humans life. The dominant color which has been used for pictograms and birds profile boards of Isfahan Garden is of blue and green tonalite (Figure 20 and 21). The color blue is a very gentle and soothing color. The green color which is the nature’s color signifies hope and growth as well as a new life and spring. This is a balanced color with a high harmony. This is why the designer has used a mixture of blue and green colors to provide a very peaceful and focused atmosphere for visitors.

Discussion and Conclusion
The environmental graphic of Isfahan Birds Garden dates back to the strong traditions and history of this land depending on Persian art and visual factors such as color, form and configuration. Although environmental graphic is based on international and western criteria, a mixture of indigenized art and modernism can provide a city with a desirable identity and atmosphere. Therefore, it is suggested that the environmental graphic elements of Birds Garden be designed in a way that not only provide the visitors with appropriate services but also bring about calmness, comfort and liveliness for visitors taking psychological and aesthetic aspects into consideration. Doing so, the simplification method in which a bird’s body is designed into a simple and original form can be used in pictograms and signs. However, the form of birds should not undergo nonstandard changes and modifications. While designing pictograms, we take the whole picture into account and remove the details as much as possible.

Isfahan is one of the cities in Iran with a beautiful nature and brilliant cultural heritage which is as old as Iran’s culture and civilization. Thus, it is better that the Iranian designers try to convey messages using our own rich culture and traditions.
Further, while designing pictograms, color plays an important role to draw the viewers attention and communicate messages successfully. Therefore, since there is a significant relationship between color and visual qualities of signs and space, it has been tried to take color as an integral part the natural environment of Isfahan Birds Garden.

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