

ORIGINAL RESEARCH PAPER

How traditional symbols can be used as inspiration source in shaping the urban architecture?

M. Khakzand^{1,}, S. Babaei²*

¹*School of Architecture and Environmental Design, Iran University of Science and Technology, Tehran, Iran*

²*School of Architecture and Urbanism, Islamic Azad University, Qazvin Branch, Qazvin, Iran*

Received 5 December 2015; revised 17 January 2016; accepted 1 March 2016; available online 1 April 2016

ABSTRACT: This paper explores the developing of how designers can search for inspiration source which provided in the form of traditional elements and archetypes and also their role on idea generation in design from building to urban measure. In order to clarify of this, current study focuses on the Far-East region as an ancient part of the world in which there is a huge number of symbols like well known, Yin-Yang. To understanding of how designers inspired by the symbols and forming the character of place via those, the case study method is used to an in-depth evaluation. The result is presented in a table involving cases which selected in divers rang of Far-East countries. Based on result, historical symbols, as a rich source of ideas and stimulation can play a significant in meaning-making and also forming the identity of city. In addition, these symbols help highly to revival the exiting values which ignored in contemporary urbanization particularly in developing countries like Iran. Accordingly, evaluation of cases observed that the symbol-inspired design can prove the durability of the urban character. Finally, inspiration source divided in two main types including: visual and verbal. Based on results of exist study, most of designers inspired visually (i.e. visual analogy, external) and a low percent of them inspired verbally (i.e. abstract, internal). Moreover, minority of designer inspired mediocre by combination of these (i.e. visual/verbal).

KEYWORDS: *Idea; Inspiration; Symbol; Urban architecture; Yin-yang.*

INTRODUCTION

For many designers, particularly students, it is a main question: How can deal with inspiration sources and generate the ideas? So, the role of inspiration source in design is significant and cannot be ignored. The discovery process of inspiration among sources is a key task in generation of ideas. In brief, the ability to find and identify a suitable and useful source at the fundamental stages is so important to achieve the solution. This study was motivated by the need to extend the effective ways to support designers in development of inspiration sources to idea generation. A profit source can assisted the designers to explore divers design alternatives. Creative

people draw inspiration from both evident and surprising sources, for example, magazines, music, literature and the urban environment. The work of other artists/designers in the context, past and also contemporary, gives creative stimulation and so on. Designers can cross-reference components of contemporary life with those of former days, and delve back into the rich tradition of art and design history to visual incitement.

Numerous architects/designers and design studios formalize the inspiration process to a certain develop though the using of ideas books. Each ideas book is an accumulation of cuttings, photos, sketches, color swatches, typographic cases, wrote thoughts, words and discovered objects that are accumulated to inspire.

✉ *Corresponding Author Email: mkhakzand@iust.ac.ir

Tel.: +9821 7724 0467 ; Fax: +9821 7724 0468

An ideas book may be a general gathering that is constantly enhanced to or it might be made as part of the preparation for a specific project.

Designers frequently make characters that are mental pictures of the typical target addressed for a design, exemplifying their characteristics, lifestyle, aspirations and consumption habits (Ambrose and Harris, 2010). Newspaper reporters, it is said, never relax. A large portion of their soul is constantly aware of the possibility that a news story might be about to break just round the corner. Recreate and they will miss it, more terrible, another correspondent may get it first. Conversations with designers reveal a similar syndrome; whom are always alert to the possibilities offered by a shape, a texture, a material, a surface, an image that may be adjusted in a creative design. That is a characteristic not confined to product designers: fashion designers and architects also use what they have observed and their ability to manipulate it as a creative tool (Ashby and Johnson, 2014). Inspirational sources play an excellent role in creative design works. Proficient work, additional legitimate fringe participation in such work, is stimulated by resources that provide an element of surprise and discovery and may help the designer to see things in a new way (Friedman and Stolterman, 2011). Critics and philosophers since ancient Greece have looked to natural organisms as offering perfect models of that harmonious balance and proportion between the parts of a design which is synonymous with the classical ideal of beauty (Steadman, 2008).

The purpose of this study is to identify and introduce the opportunities which provided by local phenomenon as an inspiration source. To understand of how these phenomena can assist the designers, initially, it was necessary to expand the meaning of idea generation process, deal with the strategies used to generate ideas and formulate the research framework for future research in this area. This study discussed in domain of the inspiration sources and its role on design particularly in Far-East regions. In order to develop the advantages of designer in creative process, the main focus was on idea generation and inspiration source. The concept of inspiration has changed considerably over the time, reflected in the original Latin meaning of the word 'inspire'. It means 'to breathe into', and it reveals the past belief that one could only be creative if and when a divine presence descended or 'breathed into' the person. For instance, inspiration

may be elicited by design examples of products or buildings, art pieces, pictures, written documents, but also from diverse forms of life from nature or other phenomena. In design, inspiration during a creative problem-solving activity might prompt the generation of new ideas, ultimately eliciting a motivation to strive for new possibilities (Gonçalves, 2016). In an overall view, the designers tend to inspire in wide-range sources. Consequently, this study seeks to answer the question as following:

How does the Yin-Yang (as a symbol, phenomena or pattern (which consists of local identity and value) operates as an inspiration source in the primitive stages of idea generation?

Far-eastern countries

The Far-East is an intermittent geographical term in English that ordinarily alludes to East Asia such as Japan, China, South Korea, Mongolia and etc. (Collins English Dictionary, 2012). Since the 1960s, East Asia has become the most common term for the region in international mass media outlets (Reischauer and Fairbank, 1960).

Origin of Yin-Yang

Yin-Yang describes how opposite or contrary forces are really correlative and associated in the natural world, and how they give rise to each other as they interrelate to one another. This duality lies at the origins of many branches of classical Chinese science and philosophy, and in addition being an essential rule of traditional Chinese medicine (Porkert, 1974). Yin and yang can be considered as corresponding (as opposed to contradicting) forces that interact to form a dynamic system in which the whole is greater than the assembled parts (Ohsawa, 1930).

Symbolism and importance of Yin-Yang

Yin is characterized as moderate, delicate, yield, diffuse, cool, wet, and passive; and is associated with water, earth, the moon, femininity, and night. Yang, by differentiation, is quick, hard, strong, focused, hot, dry, and active; and is associated with fire, sky, the sun, masculinity and daytime (Osgood, 1973).

Yin-Yang applies to the human body. In traditional Chinese medicine great well-being is specifically identified with the equalization between yin and yang qualities within oneself (Li, 1974). Everything has dual aspects, Yin-Yang, (for example shadow cannot exist without light). Either of the two major viewpoints may

show all the more firmly in a specific object depend on the criterion of the perception. The Yin-Yang demonstrates a harmony between two contrary energies with a portion of the opposite element in each section. [Needham, \(1991\)](#) deliberates about Yin-Yang together with five components as part of the School of Naturalists. In adding, he believes that it is appropriate to start with Yin-Yang before five elements because the former: “lay, as it were, at a more profound level in nature, and were the most extreme standards of which the ancient Chinese could conceive. But it so happens that it known significantly more about the historical axiom of the Five-Element theory than about that of the Yin-Yang, and what’s more, it will therefore be more helpful to deal with it first.”

REVIEW OF LITERATURE

[Dijk, \(2014\)](#) argued that inspiration is what comes from being curious and when being inspired, imagining can start. After becoming fascinated, the drive to do something with it grows, leading to creative thoughts. If creativity can be translated into an actual ‘new’ product (or service), the process led to innovation. [Vahedi, \(2009\)](#) pointed out that in rest of the history nature has been essential source of inspiration for the human begin in different aspects of their life. Architecture as one of the considerable highlights in each society cannot be separated from nature. The best solution for the architects and designers to build up the streamlining in their design works is looking at the nature in every perspective more profound and attempt to apply them as possible as they can in their conceptual design of their project which is the core of the design process, the point at which the rightful form, character, and design details of the project are the best established and finalized. [Ambrose and Harris, \(2010\)](#) believed that inspiration is beneficial in every innovative activity and design is as the same. Also they carried out inspiration as a process could entail both more dynamic (intentionally looking for specific information, via the internet or books, for instance) as well as more latent (arbitrarily experiencing pertinent information) systems. Knowing more about the inspirational sources designers apply in their work is a key step towards investigating the influence of inspiration during idea generation. Moreover, understanding of the distinctive approaches of students and designers on this matter can potentially help to support them in an extra proficient search, improvement and utilization of

available inspirational sources. Designers/architects depend on gathering different materials to get inspiration for the design process. To inspire designers and reduce design fixation, studies demonstrated that designers’ creative thinking process is highly related to the form of inspiration source, the gap between the source and the targeted problems, and the abstraction level of the information involving the inspiration source ([Cheng et al., 2014](#)).

Majority of designers apply the inspirational idea generation techniques, for examples: passive searching, encompassing themselves in the material and socializing. Passive looking alludes to searching without a particular concept in mind. Others reported searching through printed sources, and checking E-sources on a daily basis. Even some of designers immerse themselves in information relevant to the current projects. Another method designer’s use is to socialize. Socializing alludes to conversing with somebody about anything irrelevant to the project at hand such as the weather, sports or politics. This permits them to light their soul for new thoughts to immerge ([Herring et al., 2009](#)). [Cai and Do, \(2007\)](#) pointed out the designers/architects utilize different media as inspiration sources in design. [Casakin and Timmeren, \(2014\)](#) investigated the contribution of various sorts of analogy on the ingenuity of the ultimate design outcome. Their findings showed that the help provided by visual analogy was mainly successful in defining the problem, specification of ideas, and assessment of solutions. Verbal analogy, on the other hand, was particular prosperous in creating design notions. The pair sorts of analogies contributed to the originality and aesthetic value of the conclusive layout. Freely of the sort of analogy used, working in team was found to be principal to enrich various dimension of the design exercise. Sources of inspiration play an imperative role in design activity, both in characterizing the context for new designs and in informing the creation of individual designs ([Eckert and Stacey, 2000](#)).

Regard to the vast and divers range of idea sources from human-surrounded environment to galaxy, designers inspired in the variety forms. As previously mentioned, inspiration process happens in two main forms, visual and verbal (usually separately, sometimes both of them). Additionally, it should be noted that an idea can extract from one source without the same form. By this way, existing study focuses on the role of locational/traditional patterns and symbols on idea

generation particularly in Far-East architecture. Also an understanding of how designers inspired in rest of generating the idea, is considered.

MATERIALS AND METHODS

The case study method has selected to analyze in this research. As research strategy, the case study is used in many situations to contribute to our knowledge solo, team, hierarchical, social, cultural, and related phenomena (yin, 2003). Robert Stake, (1998) reminds that pivotal to case-study-research are not the methods of investigation, but that the object of study is a case: As a type of research, case-study is characterized by concern in individual cases, not by the methods of inquiry used. Ultimate output of research using a case study path is sometime the case itself, but often case study is used in an instrumental approach to explore a more extensive phenomenon (Stake, 1995). Marriam, (1998) defined a case as “an examination of a particular phenomenon, for instance a plan, an occasion, a process, an institution, or a social group”. One major feature of this method is that variety methods are combined with the purpose of illuminating a case from different aspects (Johansson, 2003). Cases were selected on account of their common point. The context of these cases studies was the same which are assistive to present conclusions obviously. Also, in order to obtain the information for future studies in this area, cases were analysed from two aspects; what source (origin) is applied and which type of inspiration is used to idea generation. Totally, it should be noted that the major reason for selection of the cases is:

Place of traditional symbol in the Far-east architecture (in this study meaning Yin-Yang, as an inspiration source) in prior stages during the process of idea generation and also its role on the final output in each project. To achieve this, understanding of how historical symbol can used as an idea source in architecture design and also to identify the types of inspiration, the cases selected among the contemporary projects.

Idea generation

A design is said to be as successful as the advancing idea that drives it is. Sophisticated designers make frequent use of -stock ideas- aggregate over the time and stored in memory and personal archives. Beginners do not yet have created accumulations of sources that can be tapped (Goldschmidt and Sever, 2011). Routine idea generation refers to ideas that are Appropriate, and sometimes Original, but obvious to an expert in

the domain. This type of idea generation can be forced, requires no incubation phase and depends on concentration levels and previous knowledge. SIAM proposes that idea generation is split into two stages; first the knowledge activation stage where a search cue is placed in the short term memory to retrieve relevant knowledge from the long term memory; second the idea production phase where the information is associated to form ideas and concepts (Howard, 2008). An idea can arrive at any time, but it can also be encouraged. It is often thought that the development of an idea is initiated with a brainstorming discussion: a procedure where a trigger term is chosen and then associations or related analogous themes are communicated. The extension of an idea usually begins much earlier, although it may carry on torpid until there is an appropriate verbal or visual catalyst. A brainstorming discussion is surely, therefore, a medium for liberating experiences and motivating the imagination for future directions or ideas. Brainstorming is considered as verbal process, which comprise the recognition of key terms associated to an initial idea and the subsequent releasing of innovative directions. In additional, likewise, it can be a visual process, which involves the generation of small, thumbnail schemes that are connected to, or are unrelated to, an idea (Bramston, 2009). From the point of view of information processing, there are two forms of representation: a verbal-conceptual and visual one. Verbalization of an idea by means of text plays an important role at the early conceptual stages of designs. Graphics, however, are used for spatial description of objects (Asanowicz, 2001).

The idea stage generates a variety of potential solutions to the design brief. Before selecting, it might be required to further work up the most promising of solutions. This will allows specific dimensions to be examined and will give a superior premise to comparison at the selection stage. Once a design brief has been described and inquired about, the generation of idea or thought stage sees concepts created that may solve the design problem. Ideation seeks to generate the concepts that will be worked up and observed in following design steps, and therefore concerns ideas rather than the vocabulary of the design (Ambrose and Harris, 2010).

Visual inspiration

The process of Idea generation can be operated by various kinds of sources, but in architectural design there is a marked predilection for the use of visual

sources (Hannington, 2003). Visual inspiration is relatively well understood and widely used. In this case, pictures of various living organisms, or their system, are used to create similarly looking engineering systems. Visual inspiration can produce useful result especially in architectural design from the aesthetic points of architecture (Vahedi, 2009). Inspiration stimulates both visual and linear thinking to deeper understanding of concepts, increase memory preservation, advance organizational proficiencies and tap originality. Expanding an idea, whether an idea for a written document or for mapping out a plan, can assistive to organizing the thoughts and saving the time (Inspiration Getting Started Guide, 2012).

Most artists are stimulated by the visual world around them and learn of possibilities for expression by examining other kinds of art. Study on art in different eras, regions, and cultures, introduces a wealth of visual creations, better equipping artist/designer to discover his/her own solutions. For better or worse, it is not necessary to create a design solution in an information vacuum.

Therefore, there are benefits of an abundance of visual information coming at designers through a variety of media, from book to television (Lauer and Pentak, 2005). Designers in all disciplines live in an extremely visual world. They are delicate to the outward of artifacts and environments, as a matter of course. Obviously the visual characteristics of their design outputs are, with practically no exception, of great importance to them. In this regard, it is not surprising that visual information is prominent in the design process (Goldschmidt and Smolkov, 2006).

The foregoing phases of visual perception occur during the interaction between mind of the designer or architect, and images. Thus, visual cognition processes are essential in the exploration of design ideas and proposed forms (Abdelhameed, 2004). In addition, there is another type of inspiration which called verbal. It means each designer inspired visually and/or verbally. In the other hand, sometimes an idea arises in the form of verbal inspiration and usually it relays on long-term memory which its core of shaping is inner. One more, on the contrary of visual inspiration which has much visual-similarity to inspiration source, a verbal inspiration may happen very abstract and conceptual and also it may seem complex for others. Therefore, naturally, in order to identify and discover the verbal inspiration it is necessary to high level of knowledge.

Cases description

The cases were selected for this study considering the role of Yin-Yang on conceptual stages in architecture design regardless to the situation of the projects. In the other hand, to select the cases, just the place of local phenomena and values were considered as an inspiration source in the process of idea generation. Briefly, the selected cases are combination of below:

- Constructed project
- In constructin
- Competition participants

Cases

Palace museum

This is an international museum that exhibits Asian's art and culture; considered the southern branch of the Palace Museum (Fig. 1 and 2) show cases classic national heirlooms alongside the time, culture and space in which they are represented. The immense continent of Asia is home to three outstanding civilizations, that is to say Chinese, Iranian and Indian, exhibited allegorically by the dragon, the elephant and the horse. These three different visions, which each one has its own unique vivacity and longevity, are transformed into streamline components and coordinated into the design, in which one sees the ongoing communication (Icmimarlikdergisi, 2014).



Fig. 1: Palace museum, Taiwan. (Icmimarlikdergisi, 2014)

In the center of Chengdu, one of the hometowns of Daoism, the new City-Park is built with the form of Yin-Yang symbol (Fig. 3), with modern attachments and flare, and what looks like an underground shopping mall and subway station beneath the yin half (Noellert, 2016).

Yin-Yang opera house (a)

The concept of design (Fig. 6) is according to the philosophy of Korea. The basic idea is to create an iconic

building that illustrates the locational culture, to remind the existing identity where they come from in order to promote this philosophy to the abroad. Emerging this traditional philosophy in a cutting edge building connects the past with the present, awarding the continued life to a society and culture that must be anticipated into the future. The vision of building (Fig. 4 and 5) is the assimilation with its urban viewpoints, besides being spectacular, created the public space (Sanzpont arquitectura, 2016).



Fig. 2: Palace museum, Taiwan. (Icmimarlikdergisi, 2014)

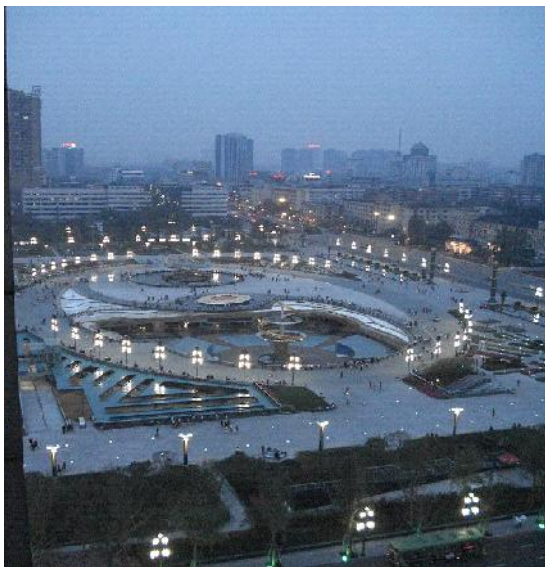


Fig. 3: Yin-Yang square, Sichuan, China. (Noellert, 2016)



Fig. 4: Opera house (competition). (Sanzpont arquitectura, 2016)

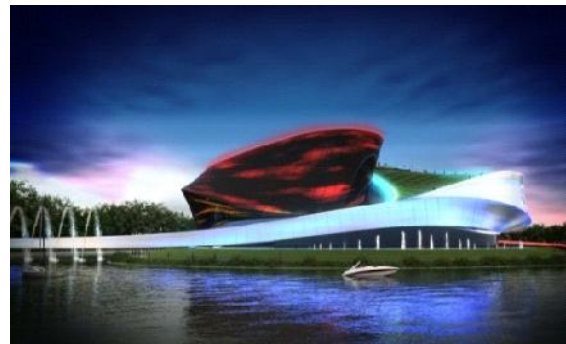


Fig. 5: Opera house (competition). (Sanzpont arquitectura, 2016)



Fig. 6: Conceptual form. (Sanzpont arquitectura, 2016)

Yin-Yang opera house (b)

This project concerns an Opera House located in the marine-cultural region in the re-development area in the northern seaport (Fig. 7 and 8), Junggu, Busan, South Korea. The design process, through some architectural gestures and various symbolisms, aimed to shape a landmark that would be an indisputable representative of city. The importance of such a landmark arises from the unique characteristics of the city. The building consists of two prismatic volumes (black and white) that surround a sphere of light. The Yang (white) is light and transparent and according to our concept represents the eastern culture. By contrast, Yin (black) stands for the western culture (Greek architects, 2012).

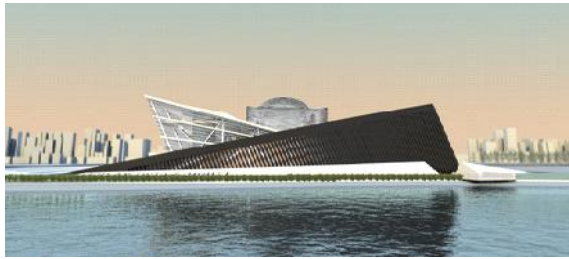


Fig. 7: Opera house (competition). (Greek architects, 2012)

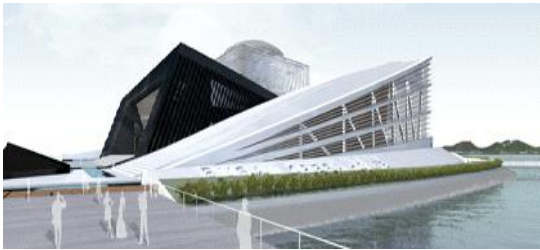


Fig. 8: Opera house (competition). (Greek architects, 2012)



Fig. 9: Ying-Yang museum (3D). (Phaidon, 2016)

Ying-Yang museum

This museum (Fig. 9 and 10) will exhibit on the evolution of galaxy, earth's science (biology) and the advancement of the human race. Visitors lead through the three ecologies in a downward procession of ramps: Earth to Cosmos, Earth to Man, and Earth to Earth. Steven Holl, the project's architect, has tried to make these contrasting subjects, by introducing a Yin-Yang subject (Phaidon, 2016). In this regard, once Holl has described the main idea of mentioned project (Fig. 11) as following:

“The Planning Museum is a ‘subtractive’ space, while the Ecology Museum is an ‘additive’ complement.”



Fig. 10: Ying-Yang museum (3D). (Phaidon, 2016)



Fig. 11: Ying-Yang museum (Sketch). (Phaidon, 2016)

Ying-Yang public library

The public library (Fig. 12) implements the using of philosophical Yin-Yang sign as form shaper opitomize couple of the different origins through interaction. The concept (Fig. 13) obtains not only the shape of the motif, but spatially divides the space into two inverse utilitarian hubs that supplement each other (i.e. communication and education). Due to the dynamic form the edifice is visually in steady development, designing the other locations to be harmoniously distributed in the internal areas of the building (Designboom, 2016).

International Plaza, Shanghai Wuzhou

“Urban Canyon” is awarded entry for colossal, mixed-use complex in Shanghai, China (Fig. 14). The very form of the complex was inspired by traditional Chinese concept of Yin and Yang—massive development is broken in two pieces (Fig. 15), allowing circulation flow between. Both volumes are organized as a collection of two 30 story towers and series of detached retail units. This urban sculpture is new landmark for the city and iconic celebration of luxury, wealth and good life. Vibrant nature of this unique entity reflects vivid urban metropolis of Shanghai(BOJOVIC, 2013).



Fig. 12: Ying-Yang public library (competition). (Designboom, 2016)



Fig. 14: International Plaza, Shanghai Wuzhou. (BOJOVIC, 2013)

RESULTS AND DISCUSSION

According to the previous parts, in general, there are two types of inspiration, visual (external) and verbal (internal, regard to long-term memory). As mentioned, the cases are selected diversely and consist of variety types from the inspirational view. Therefore, comparative approach is used to assess and/or evaluate the cases (Table 1). The key components of the table focused on the role of Yin-Yang in the projects. The process of analyzing the cases started by creating a table in which the cases are compared based on the type of inspiration and also showing of how each inspiration source is used.

This study has looked for the effectiveness of the local phenomena like symbols; i.e. Yin-Yang in Far-East architecture design and its role on prior-phases in conceptual design. AS can be seen in the below, combination of inspiration sources is considered to observe the range of them. Table 1 displays how designers inspired by the sources. Most of the projects designed/constructed based on the visual source which means that majority of designers prefer to use of inspiration sources (5 in 7 projects). Obviously, most of projects designed in this type

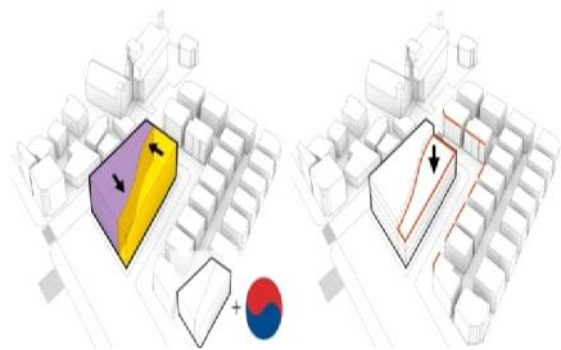


Fig. 13: Conceptual form. (Designboom, 2016)

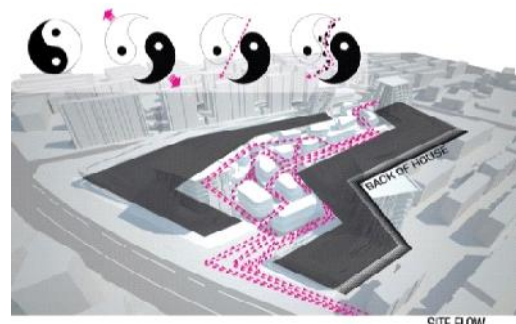


Fig.15: Conceptual form. (BOJOVIC, 2013)

Table 1: Types of inspiration sources.

Project name	Location	Function	Type of inspiration (Visual/Verbal/Visual-Verbal)
Palace Museum-Southern Branch	Taiwan	National museum	Visual
Yin Yang Square	China	Square	Visual
Busan Opera House. a	South Korea (competition)	Opera House	Visual
Busan Opera House. b	South Korea (competition)	Opera House	Visual
Ying yang museum	China	Museum	Verbal
Ying yang public library	South Korea	Library	Visual
Shanghai Wuzhou International Plaza	China	Plaza	Visual-Verbal

(i.e. based on visual analogy and external world). On the other hand, two of these projects are differ to others due to their inspiration sources.

In brief, the first one is verbal, which is used less than others but involved an in-depth concept if designed logically (because it can be meaningful and valuable in high level and also rooted in internal world of designer). The other one is a little different. This type is combination of last two types, visual and verbal (i.e. visual/verbal). It can be considered the mediocre of two mentioned types. However, this type has the features of earlier two Types of inspiration sources. In this regard, it cannot place in the certain category of inspiration, neither visual nor verbal. In short, this type of project designed based on the inner world and long-term memory plus visual analogy (i.e. internal/inner world of designer regard to the external/outer world, designer surrounded).

CONCLUSION

This study provides an understanding and developing of how designers could choose the idea sources in urban architecture. The objective of urban architecture is the entirely sense of place which there is in components of city. Regard to the existing condition, lack of urban identity, the importance of need to this operation (i.e. considering the traditional symbols and values) has becomes more tangible. To achieve this, establishing the framework for evaluation, the type of idea sources is considered. Due to the capacities of valuable historical symbols, they are the most powerful option in designing the urban elements including: public space, garden, landscape, building and so on. The resulted gained from this study leads the designers to an essential method of idea generation through inspiration sources. An inspiration source can usable in any situation from

simple to high-complexity, because inspiration sources can provide the wide range of ideas in different levels of abstraction and conceptualization in idea generation.

Of course, it should be noted that this process - generating the idea based on the inspiration source- is high-dependent to the rate of designers' experiences and level of their skill. In the other hand, whatever the level of conceptualizing goes up, consequently the complexity goes up. Findings of this study indicated that the visual inspiration is much typical in searching the ideas regard to visual analogy. This means, because of the simplicity of this type of inspiration, it is more common among the designer community particularly elementary designers and students.

By contrast, other designers use of sources in different form which called verbal inspiration. Additionally, current study aimed to persuade the designer to using both forms of inspiration sources. However, designers should learn how to use range of inspiration sources. Briefly, a professional designer should now which types of inspiration is suitable (visual, verbal or combination of these: visual-verbal) for a specific location and select the best alternative. To achieve this, actually, it is suggested that the designer should improve the level of his/her knowledge in relative disciplines. An essential action is to analyze the successful projects which designed by remarkable designers. At last, this operation can prevent the construction of the repetitive and similar projects around the city which designed in low-level of visual analogy.

ACKNOWLEDGEMENT

The authors are thankful to the School of Architecture and Urbanism- Iran University Science and technology for its respect and kind cooperation in doing this study.

We are also very grateful of some faculty members of IUST for their valuable contributions and suggestions.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interests regarding the publication of this manuscript.

REFERENCES

- Abdelhameed, W.A., (2004). A java program model for design-idea exploration in three dimensions, 1st ASCAAD International Conference (E-Design in Architecture), College of Environmental Design KFUPM, Dhahran Saudi Arabia.
- Ambrose, G.; Harris, P., (2009). Basic design 08: Design thinking. Bloomsbury Publishing PLC, Lausanne, Switzerland.
- Asanowicz, A., (2005). Information at Early Design Stages, *Archit. Inform. Manage.* 5: 105-110 (6 pages) (Design Process 3).
- Ashby, M.; Johnson, K., (2014). Materials and design. The art and science of material selection in product design. 3rd edn, Butterworth-Heinemann, oxford.
- BOJOVIC, (2013). Evolo, Available from: <http://www.evolo.us/architecture/celebrating-luxury-shanghai-wuzhou-international-plaza-by-sda-shenzhen-architectural-design-institute>
- Cai, H.; Do, E.Y., (2007). The dual effects of inspiration sources designers' use of analogy in creative design. In the IASDR Conference on emerging trends in design research, 12-15 November 2007, Hong Kong Polytechnic University.
- Casakin, H.; Timmeren, A.V., (2014). Analogies as Creative Inspiration Sources in the Design Studio: the Teamwork, In the 4th Annual International Conference on Architecture, 6-9 July 2014, Athens, Greece.
- Cheng, P.; Mugge, R.; Schoormans, J.P.L.; (2014). A new strategy to reduce design fixation: Presenting partial photographs to designers, *Des. Stud.*, 35(4): 374-391 (18 pages).
- Collins English Dictionary-Complete & Unabridged, (2012). Digital Edition, Far East, Available from: <http://www.dictionary.com/browse/far-east>
- Designboom, (2016). Available from: <http://www.designboom.com/architecture/public-library-in-south-korea>
- Dijk, J., (2014). Creating creativity 'a study into architectural means to stimulate the creative mind and enhance innovation'. M.Sc. Dissertation, Delft University of Technology. Faculty of Architecture and the Built Environment.
- Dodsworth, S., (2009). The Fundamentals of Interior Design, Bloomsbury Academic, Lausanne, Switzerland.
- Eckert, C.; Stacey, M., (2000). Sources of inspiration: a language of design, *Des. Stud.*, 21(5): 523-538 (16 pages).
- Goldschmidt, G.; Sever, A.L., (2011). Inspiring design ideas with texts. *Des. Stud.*, 32(2): 139-155 (17 pages).
- Goldschmidt, G.; Smolkov, M., (2006). Variances in the impact of visual stimuli on design problem solving performance, *Des. Stud.*, 27(5): 549-569 (21 pages).
- Gonçalves, M., (2016). Decoding designers' inspiration process Master in Design of Production, Faculty of Architecture, Universidade Tecnica de Lisboa geboren te Faro, Portugal.
- Goncalves, M.; Cardoso, C.; Badke-Schaub, P.; (2014). What inspires designers? Preferences on inspirational approaches during idea generation, *Des. Stud.*, 35(1): 29-53 (25 pages).
- Greek architects, (2012). Competition, Available from: <http://www.greekarchitects.gr/en/μ//the-yin---yang-opera-house-id5732>
- Hannington, B., (2003). Methods in the making: a perspective on the state of human research in design. *Des. Issues*, 19(4): 9-18 (10 pages).
- Herring, S.R., Jones, B.R.; Bailey, B.P., (2009). Idea generation techniques among creative professionals. In System Sciences, 2009. HICSS'09. 42nd Hawaii International Conference on, IEEE, Big Island, HI, 1-10 (11 pages).
- Howard, T. J., (2008). Information management for creative stimuli in engineering design. Thesis (PhD). University of Bath.
- Icmimarlikdergisi, (2014). Design news, Available from: <http://www.icmimarlikdergisi.com/en/2014/10/22/in-progress-palace-museum-southern-branch-kris-yao-artech>
- Inspiration Getting Started Guide, (1988-2012). Inspiration Software, US.
- Johansson, R., (2003). Case study methodology. In the International Conference on Methodologies in Housing Research, Stockholm.
- Li, C., (1974). A brief outline of Chinese medical history with particular reference to acupuncture. *Perspect. Biol. Med.*, 18(1):132-143 (12 pages).
- Marriam, S.B., (1998). Qualitative research and case study applications in education. Jossey-Bass Publishers, Sanfrancisco.
- Needham, J., (1991). Science and Civilisation in China, Volume 2, History of Scientific Thought, Cambridge University Press, UK.
- Noellert, M., (2016). CCS photo gallery, Available from: http://www.umich.edu/~iinet/media/ccs/photocontest_07/slides/Noellert-the%20yinyang%20square.html
- Ohsawa, G., (1931). The Unique Principle, The philosophy of Macrobiotics, George Ohsawa Macrobiotic Foundation, California.
- Osgood, C.E., (1973). From Yang and Yin to and or but. *Linguist. Soc. Am.*, 49(2): 380-412 (33 pages). DOI: 10.2307/412460.
- Phaidon, (2016). Available from: <http://www.phaidon.com/agenda/architecture/articles/2013/january/24/steven-hollis-yin-yang-museums>
- Porkert, M., (1974). The Theoretical Foundations of Chinese Medicine. MIT Press.
- Reischauer, E.O.; Fairbank, J.K., (1960). East Asia: The Great Tradition, Houghton Mifflin, Boston.
- Sanzpont arquitectura, (2016). Busan Opera House, Available from: http://www.sanzpont.com/ficha.php?sec=proyectos&lang=en&path=web/proyectos/5_infraestructura&p=2011-07-26-Busan_Opera_House
- Stake, R.E., (1998). Case Studies', in Denzin, Norman K., and Lincoln, Yvonna S. (Eds). Strategies of Qualitative Inquiry. Sage Publications, CA.
- Stake, R.E., (1995). The art of case study research. Sage Publications, CA.
- Steadman, P., (2008). The Evolution of Designs: Biological analogy in architecture and the applied arts. Routledge.
- Telier, A., (2011). Design things. Friedman, K.; Stolterman, E., (Eds.). The MIT Press, Cambridge, MA.
- Vahedi, A., (2009). Nature as a Source of Inspiration of Architectural Conceptual Design. Ph.D. Dissertation. Eastern Mediterranean University (EMU).
- Yin, R. K., (1994). Case study research: Design and methods 3th Newbury Park, Sage Publications, CA.