

Islamic Art as Tool to Convergence and Dialogue between Religions- A new Siege Perspective for Cultural and Peace

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ABSTRACT

Based on the principles of the Holy Qur'an and religion of Islam, a religion of moderation and tolerance, it has given by the custodian of the two Holy Mosques King Abdullah bin Abdulaziz Al Saud particularly important in light of the challenges facing world crises, that require cooperation, concerted and complementary steps to make this planet in all its oasis of peace and contentment, an oasis which co-exist where the followers of religions, doctrines and philosophies cooperate and respect each other. If we want this historic co-existence is to succeed it must go to the commonalities that bring people together and renounce the crossfire and focus on the differences and exaggerated.

The research has answered the following fundamental question: What are the patterns that have common blueprint among diversity religions, sects and philosophies? The research invent a mechanism to identify these patterns. It has made it clear the possibility of focusing on such patterns at universal scientific studies in educational institutes, and how they are used in building construction and architectural designs in different parts of the world because of their impact on the convergence between the various people.

The Study has gathered hundreds of patterns and decorations from widely divergent cultures known as Islamic and non-Islamic, in addition to their geometrical symbols, These designs were studied from various aspects such as technical features, structural fittings and their existing that direct to figure out their properties for finding common denominator, these are used to interact with for spreading the spirit of dialogue and peace establishment.

The research methodology focused on symmetry patterns in particular, which has been classified to architectural designs and geometrical religions symbols, then sort the common or similar patterns who have at least two background cultures through symbol religions analysis and constructed indicators based on the shape, interpretation, content and current existing place of the patterns.

Keywords: Patterns, Religions, Doctrines, Philosophies, Artistic properties, Common denominator, Interact, Dialogue, and peace.

1. Introduction

The nature of this study is required to provide very briefly and basic introduction of knowledge on the main elements in the research to establish common understanding among readers. These issues are as fallow; dialogue among religions, Importance of Art and symmetry, art with religions and cultures, and international community with Art and Peace.

The term Religions Dialogue (or interreligious dialogue or interfaith dialogue) refers to positive interaction between people of different faith communities [18], there are eleven major religions (Buddhism , Christianity , Confucianism, Hinduism, Islam, Jainism, Judaism, Shinto, Sikhism, Taoism, Zoroastrianism) that are practiced in the world today [32]. Each of them includes various groups that may practice their religion in different ways, but all have certain basic beliefs traditions, and philosophies. They believe that Allah (God) is all-good and all-powerful, and rules the world with a conscious purpose. They think of him as pure spirit with no body at all. Every religions are rejecting terrorism, criminal aggression, and injustice of behave.

Art has been used in countless contexts, and with diverse shades of meaning. In ancient Greece, the word for art was *techné*, from which technique and technology are derived [37]. Its terms are applied to both scientific and artistic practices. Many consider that works of "art" derive from the Latin word "to fit, to put together" [37]. In the modern definition of art, it refers to but is not restricted to all forms and traditions of dance, drama, music, music theatre, visual arts, crafts, design, written and oral literature all of which serve as means for individual and collective creativity and expression through performance, execution, presentation, exhibition, transmission and study. Where visual arts include painting, sculpture, graphic art, photography, drawing, performance art, fiber art, video, installation works. This research will focus mainly on patterns, paintings and designs.

It is proved that Islamic Art has originality and unique sense of style and beauty. Muslims have invented arts impressed the world, Europe for several centuries has learnt from it to construct their buildings and to clarify scientific and artistic complex concepts in their schools and universities [33]. The Islamic art always has its identity and own characteristics, although in its infancy the art has been influenced by the arts of neighboring nations where Islam was spreading.

Symmetry is obviously associated with the elements of beauty, confidence, security, stability, balance and harmony, human brain has the ability to recognize these associations. It gives human brain the force to guess. When a small part of a symmetric structure is seen then the rest of the symmetry structure can be guessed. The concept of symmetry also offers economy in manufacture. A symmetric object is made up using the same component repeatedly. Financial advantage is preferred economy of construction utilizing the same components over and over again in different combinations.

There are arts associated closely with religions and cultures. All religions and cultures' arts are breath taking in their beauty. It is typical manifestation of harmony and taunt quality which lie at the heart of all arts. In so doing human can express themselves through drawing in addition to different media like talk, writing, music, singing, dancing, ...etc. Therefore, art in general and Islamic art in particular has an effect on various cultures and religions people beyond its beautifulness, it can be used to promote peace among human of the world.

2. Important of The Investigation

Geometrical patterns and designs are well known to the east and west due to its use in teaching, learning and explaining theory concepts at different levels. This study investigates the use of the art as a tool to assist separating peace with dialogue of religions.

Main intentions of the investigation are as follows:

1. Introduce to the world new applications of peace.
2. Define new contributions of Islamic culture on new phenomena (Dialogue Between Religions).
3. Show the world the bright side of the Art among different cultures and nations.
4. Carry out new approaches to unify culture, Art and technology.
5. The study will be the blue print to readers and researchers who wish to explore another scientific phenomena or else using geometric art.
6. These experiences will rise new inspiration, creativity and opportunity to explore and find other means for the Art.
7. Drawing and painting Artists can actively contribute to world peace, like other admitted figures such as, musicians, film makers, journalists, teachers, politicians, ...etc.

This research will help nations and peaceful figures activists to encourage designs and to enhance their vision for promoting peace around the world.

3. Background and The Investigation

The Author's interest is in the possible use of patterns with focus on Islamic Art as a tool for convergence and dialogue between religions for the purpose of peace and better cultural relationships. This idea was in the mind long time ago but it became clearer through the reading of the speech by HRH King Abdoulaye Bin Abdoulaye (Allah protected him) in Madrid conference 2008 [34]. Therefore, a decision has been established to research the topic.

The main objective of the research is to draw the attention of the world in general to take advantage of the possibilities of art in the dialogue of religions to provide a unify experience of different cultures, countries and nations. This experience of new concept to immense value not only to build peace, but also sustainability of the global environment etc.

Although, the literature on the topic are very limited due to the nature of the study. The author previously has investigated various studies;

- Islamic art with symmetry and group theory, it has dealt with the analysis, classification and production of symmetrical patterns through the use of geometric and group-theoretic methods [20, 21, 22, 23];
- Pattern production of Islamic Art is one element and Security is another, it is biometrics and symmetry studies, it uses fingerprint [28];
- Islamic art with Sepsis movement, it applies manual tracing system, it has invented what is call Symmetry Pattern Box [29];
- Islamic Art and Music, Islamic Art with Poetry [25, 26], it shows how unity between color, poem and patterns;
- Islamic Art with spot color [27], it shows how unity between color, and patterns;
- Islamic Art with Atom, it is investigated the structure similarity between symmetry art and Atom [22];
- The use of methods for the seventeen distinct types of two-color Frieze patterns [24], and study done on Makkah [31]. ...etc,
- And now, Islamic Art with Dialogue Between Religions for the purpose of peace.

It is beneficial to the reader introducing work by other researchers and scientists [1, 6, 7, 9, 11, 13, 16, 19, 38] had been carried out to produce images through the use of other methods. Also among them:

- Washburn & Crowe [36] and Kreidler H & S [8] for example shows a similar relationship between symmetrical patterns and culture, for more information see also [16].
- Critchlow [4], Mamedov [14] and Makovicky [12] have noted that the molecular structures of several naturally occurring substances, e.g. $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$, known as Beryl, are identical to that of an Islamic pattern (see for an example. Page 90 Nasr [17]).
- For hundreds of years, Islamic patterns continue to be of great interest to Crystallographers, see for example Makovicky [13], in addition to [2, 19, 35]. In praise of our study please read below what very well known scientist think of geometric patterns.
- "The theory of group is a supreme example of the art of mathematical abstraction ... Group theory has also helped physicists penetrate to the basic structure of the phenomenal world, to catch glimpses of innermost pattern and relationship" Said J.R. Newman [23, page 45].
- "The geometric spirit is not so bound up with geometry that it cannot be disentangled and carried into other field. A work of morals of politics, of criticism, perhaps even eloquence, will be fine, other things being equal, if it is written by hands of a geometer" said Fontenelle (b. Feb. 11, 1657, Rouen, Fr. d. Jan. 9, 1757, Paris), French scientist and man of letters, described by Voltaire as the most universal mind produced by the era of Louis XIV.

The research involved an extensive study of the different kind of patterns exist in verity of religions and cultures, it went beyond the steps of two dimension patterns. The study is analyzing and classify the Rosette and one dimension patterns in addition to two dimensions patterns for the purpose of finding common ground. The attention of this view is not to force specific opinion, it is clearly that art can give much more than is asked for it, and can make a large contribution towards promoting dialogue among religions for peace. moreover based on the finding and at the end of the study, there will be recommendation and advice is giving to the people that look after international community who are arranging conferences, meeting .. etc of dialogue between religions for peace. Therefore, it is believed strongly that our study wealth while.

4. Methodology

The methodology has constructed of four stages for simplification purpose. Each stage has divided into different elements or indicators, as explained below:

1. Basic principle:

This stage gives an idea about type of patterns that have dealt with, in another word it set up the guide line of the type of patterns that looked at in this research, these are as follow:

- a. The investigation includes three types of patterns which are, Rosette, Frieze and crystallography patterns. These correspond to patterns with rosette symmetry, one direction of symmetry (Frieze, strip), and two directions of symmetry (Callystography, wallpaper, tessellation). In addition to religions symbols Figure (1).
- b. The presented pattern has to be exist or relevant to at least two religions or cultures, or mixed of religions and cultures.
- c. Looking for common ground or explore of possible finding common ground.
- d. The art can be found anywhere, (temples, mosques, ...etc) in the world, and created any time.

Above initial elements are needed to establish the study which can be explained in the following stages.

2. Art collection and study:

List of below activities have carried out in this stage:

- a. Collect hundreds of Art work and symbols of different type of Art, with divert regions resources, with various religions and cultures, with focus on Islamic Art prior for analysis.
- b. Study different Art and focus on the symbols of religious.
- c. These data has to be filtered and converted to information.
- d. Database system used to keep record of the information.

3. Identify Common Indicator:

Finding common descriptions among various religions and cultures art are the main issue in the methodology, to achieve that common indicators should be identified. These indicators will be to identify common patterns, this means, apply indicators against the collected art work with focus on the Islamic Art. The common indicator includes the following:

- a. The form of the pattern: This indicator is used to answer the question of Does the pattern have the same shape?
- b. Interpretation of the pattern: It is used to answer the question of Does the pattern has meaning? This is very important with the symbols of religions and cultures.
- c. Manipulation of the pattern: This indicator used to answer the question of Does the pattern represented with miner changing from other pattern from different cultures?
- d. The commonalty of specific tile: Different patterns can be created from one tile or motif. Does this motif exist on a lot of patters belong to various religions? There are a lot of pattern paced on main tile.
- e. A mixture of two or more cultures arts: Does this pattern has more than one identity? There are patterns construct of different skills from more than one culture or nation, for example, a pattern has Islamic art character but it has presented in Chinese technique.

In the above c indicators, technology like computer graphics can be used as tool to validate and checking this indicator.

4. Art peace promotion- Suggestions and guidance:

Kind of art will be suggested in this stage. The main criteria of these patterns that they constructed of various religions or cultures art but together. It can be considered in the promotion of convergence for Peace. These could be similar or different but the final pace should be in harmony and reflect the bratty of their original paces. Computer graphics and play an important roles in produce such patterns.

4.1 Diagram Explanation of The Methodology

Further description of the methodology is using below diagram to show how can be filtering the art works collected from various part of the world which resulted in the grouping religions commonly patterns, The method is summarized in the flowchart below. It is clear that the first thing we should do, is to collect patterns from different culture and religions whether the pattern is two dimensional pattern or not. Then group these patterns

into pots by dividing them according to their religions or culture belonging (Muslim, Christian, Jewish, and others). The reader should refer to many authors for simple explanation to identify the belonging religion of the pattern. At this level, the religions pattern examined individually according to two identifiers which are Religions symbols and Indicators. The below diagram can viewed in two ways, the first view shows how to identify the patterns that have the religion symbols, the second view shows how to identify common religion patterns through indicators. The diagram used twice with minor changes in order to explain how the two identifiers are operate. The parameter and questions are swapped between views as follow:

- "Comint (common indicator)" Instead of "ComRelArt (common related arts)"
- "Can apply the indicator?" Instead of "Does has symbol shape?"
- "Does indicator exam complete?" Instead of "Does symbol exam complete?"

In the first view, there are two examinations do loop in the process, the inner examination (symbols examination) to find out the pattern who has symbol, one pattern will be examined more than once as much as the number of examining symbols. Therefore, the pattern can has more than one religions symbols as shown in next section. The other outer examination (patterns examination) to change into new pattern for symbol check. The process will be repeated until the examination of all patterns against symbols finished, in the diagram, the mechanism of the methodology will identify, separate and group the religions patterns which has one or more symbols in one Common Religions Pattern Pot.

In the second view, it operate similar to the first one but with miner changer. It utilize Indicators instead of symbols. It is also will identify, separate and group the religions patterns which has one or more indicators in one Common Religions Pattern Pot.

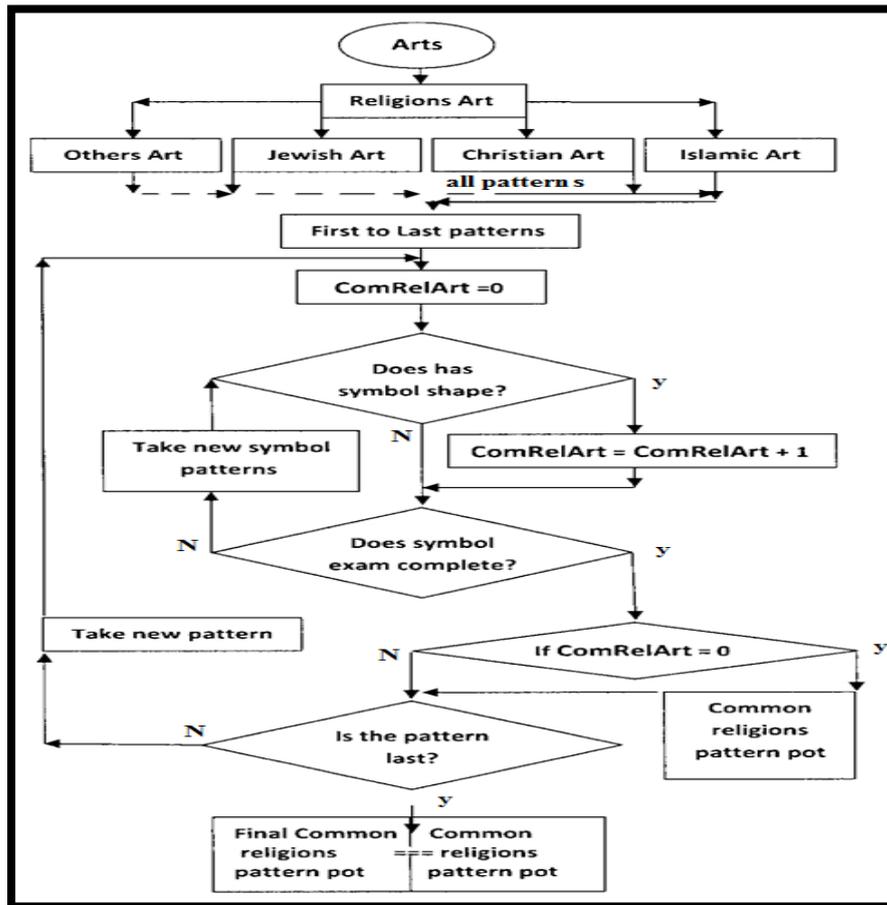


Diagram 1. Identify common patterns by symbols

5. Result Analysis

The author would like to declare and state it very clearly that the intention to write about the below designing listed for pure scientific presentation and not to offend any group or religions or culture, also not to undermine or underlying the work done by the artist who design it or the people involved in construct the real finishing art work. The purpose of the study is to locate religions and cultures common ground through art for aim of peace. This section will show the reader selected images that has been taken by the author for the purpose of proofing without doubt the issues and discovery by the research. The discussion will not evolve the symmetry elements in the patterns because there are many publications on these issues, for detail see [5, 15], and it is not my intention to repeat them here, although, it is believed that all kinds of art use geometry directly or indirectly. Even the most complicated painting composition may have a geometric structure in its basis. Sometimes, this structure is static, stable, based mostly on bilateral symmetry.

It is clear that the basic question that can be asked, what are the first group of patterns should be discuss at this stage? Is it type of patterns with religions symbol orientation? Figure 1 shows some of the religious symbols, Figure 1.d is taken from east side, outdoors of Cathedral Basilica of St. Louis, it is D4 and very common in christen art [3]. Or, is it kind of patterns with symmetry character (Rosette, or frieze or crystallography)? The answer to these questions is to start with the most popular pattern exist in the Islamic art. The pattern is known as Khatem Suleman, meaning the Suleman's seal as in Figure 1.b, it is created from two identical squares (tills or polygons) in top of each other with one of them rotated by 45 degrees as shown in Figure 1.a. It is Rosette pattern kind of D8. Katem Suleman tile is the most frequently pattern occurring in Islamic art as known in the past, see [22] for details, and indeed, it is the most common patterns in the grand Mosque of Al Kabbah. Figure 2 shows only examples of different variations on the theme of Katem Suleman which made of various material. It is collection of pictures taken by the author and put together using Photoshop software, Such tile can be spotted more than 2000 times as standalone pattern in different parts of Makkah. Also, it can be spotted as basic motif for Frieze Figure 3.a, and Crystallography patterns Figure 3.b. These are pictures also taken by the author.

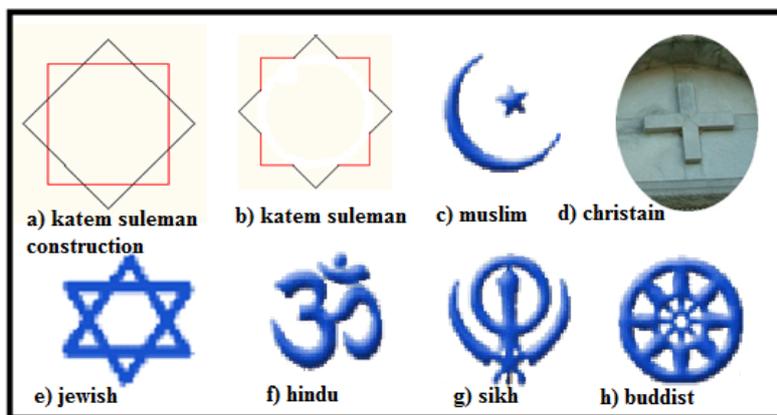


Fig. 1. Some religion symbols with common pattern



Fig. 2. Different variations of Katem Suleman tile in Makkah mosque

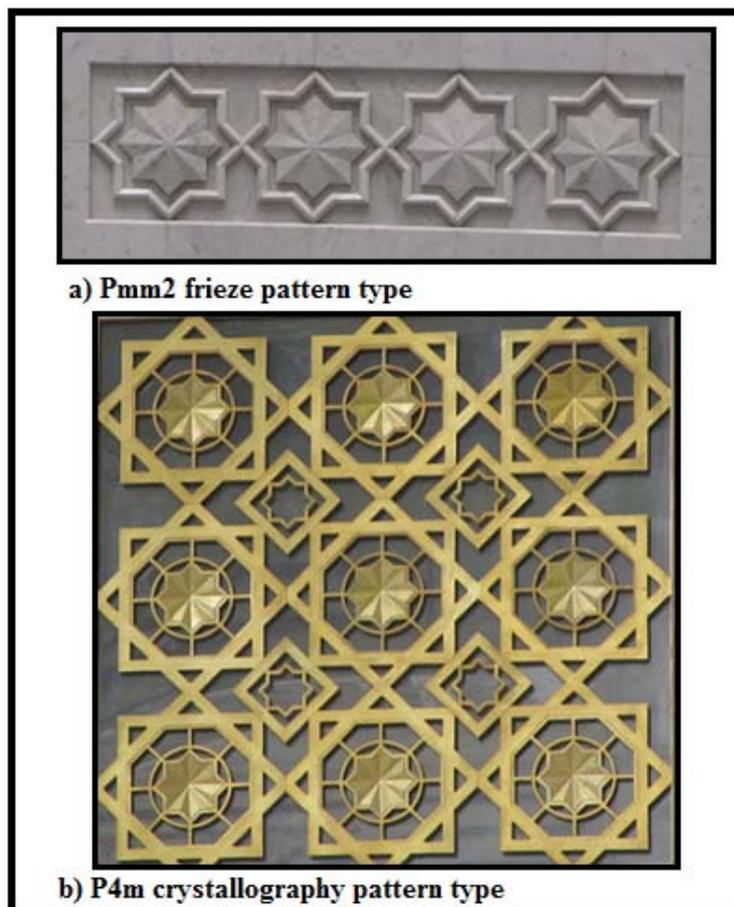


Fig. 3. Frieze and crystallography pattern type in Makkah Mosque

Figure 4 shows example of different variation of Katem Sulamen exist in various location within Cathedral Basilica of St. Louis [3], it show that the motif of Ketam Suleman is common blueprint to so many patterns in Christian

art. If four tile of Katem Sulamen order as shown in Figure 5, the cross (Christian symbol) will be construct automatically in the middle of the created pattern. The cross has been highlighted with dark area in Figure 5.a, what is more astonishing result? What has been shown in Figure 5.b, six pointed star shape in the heart of Katem Sulamen, it is picture taken by the author of selling in designing cloth shop at Abe Baker Street, Taif, Saudi Arabia. Figure 8a is pattern taken from Cathedral Basilica of St. Louis [3], it is p4 pattern type, and exist in Central Dome, altar partition. A pattern with p4 symmetry can be turned 90 degrees, and has no reflection symmetry. This is the only example of p4 found at the Cathedral, it shows a variation of eight pointed star as well as the Christian symbol (cross) as main elements of its construction. Figure 6.b is pattern, its construction based of the eight pointed star as shown in the right part of the pattern, this pattern is typical Celtic pattern. Figure 5.a and 6.b are done by the author using AutoCAD software.



Fig. 4 Different variation of katem sulamen in Cathedral Basilica of St. Louis

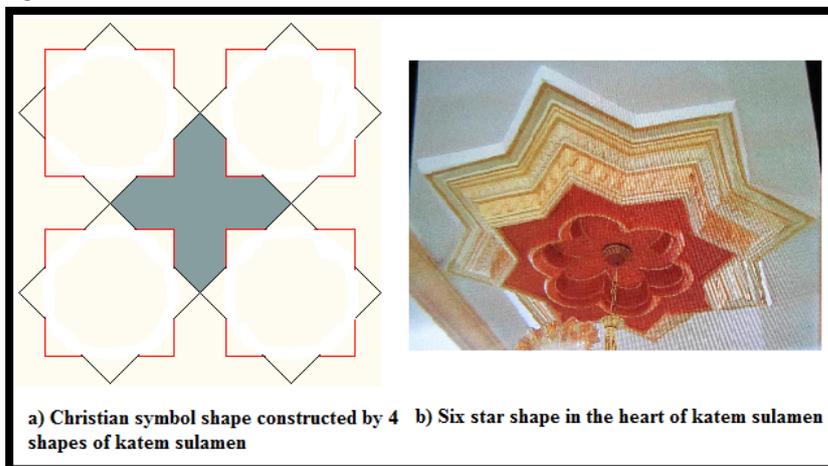


Fig. 5. Generating of reliions symbol with katem sulamen

The above demonstrate how Katem sulamen tile (symbol of Islam); can be used to construct symbol of Christian (Figure 5.a), add moderation to its design to produce mixed religions connection Jewish and Islamic (Figure 5.b), also can be used as base to produce another pattern of different culture Figure 6.b.

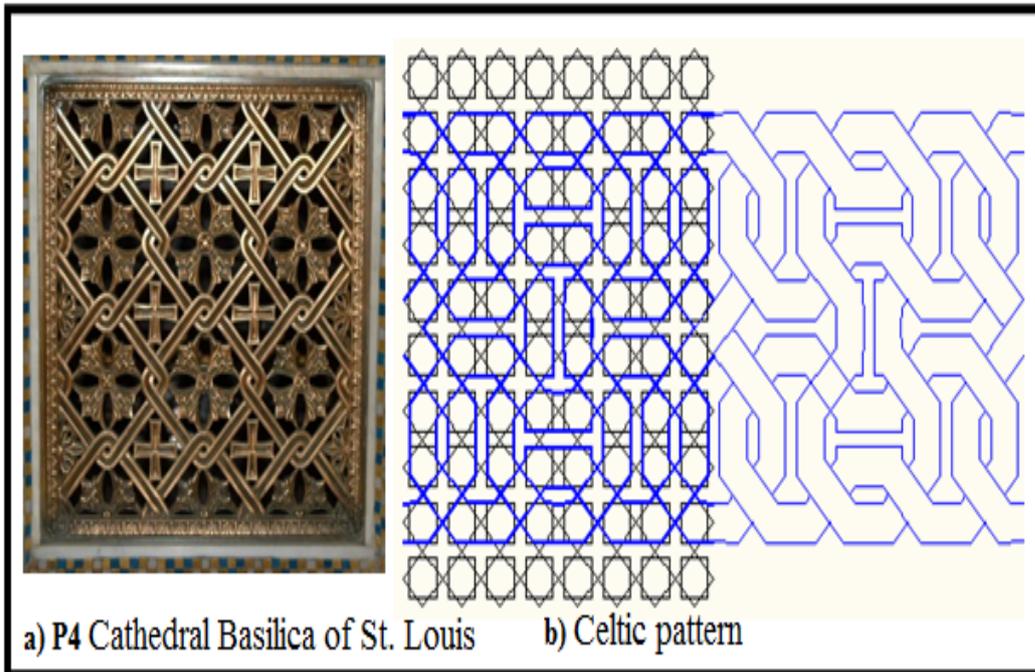


Fig. 6. Christian art examples

Stars are very common characteristic of Islamic art. The six pointed star (David star, hexagon tile) is as shown in figure 1.e, it is well known to Muslims as well as to Jewish. It has been used as symbol, it can be found in Jewish public place as well as in the entrance of Soldier Castle established by Salah Al-Din Al-Youbi. Figure 7 display variation patterns of six point star (David star), it shows Islamic as well as Christian patterns. Figure 7.a to Figure 7.e is different Islamic pattern base of the hexagon tile. These are done by the author using AutoCad and Photoshop software. Figure 7.f has two images based on the tile, they are taken from Cathedral Basilica of St. Louis [3].

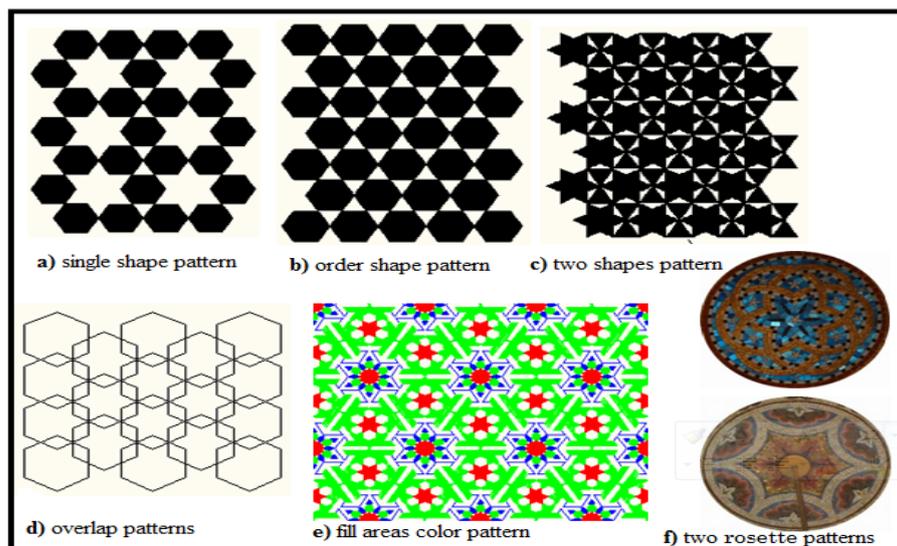


Fig. 7 Variation patterns based on six point star (David star)

Figure 8 is p4m pattern take from the book by the author from page 246, it is a unique Islamic pattern due to the content art of it. The author has examined 318 Islamic pattern and found only one pattern content of Islam, Christian and Jewish symbols. Figure 8.a is the outline of the pattern and Figure 8.b is the same pattern with filling area to highlight the religious symbols, this example gives the reader the opportunity to fly over religious within the pattern. The pattern has done by the author using AutoCAD software.

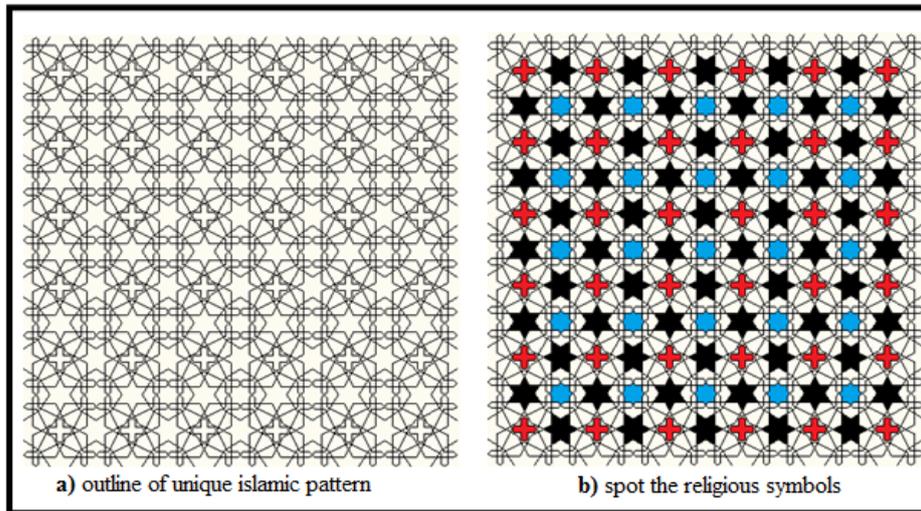


Fig. 8. Unique Islamic Pattern



Fig. 9 Art products by two cultures

Art creativity and innovation can be produce from mixing two experiences or cultures, Figure 9 shows art product as result of influence both Islamic and Chinese. It is combining into one unique culture. Figure 9.a is Arabic calligraphy done in Sini script by tradition Chinese brushes and ink [10]. Figure 9.b can be seen as Chinese

influenced decorations of birds and vegetation, combined with abstract vegetal design and medallions of Islamic calligraphy in various scripts.

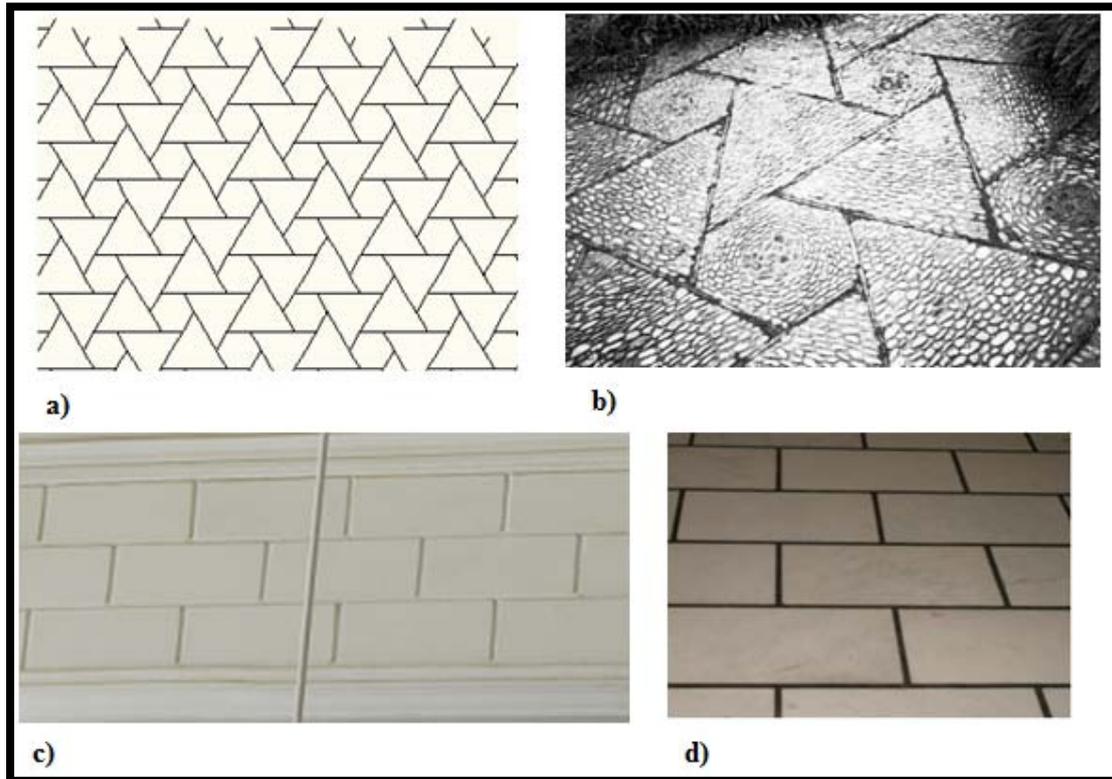


Fig. 10 Same constructed patterns exist in two religions places

Figure 10 shows same two patterns can be found in two religions, the designs in Figure 10.a is done by the author using AutoCAD taken from his book in title 'Symmetries of Islamic Geometrical Patterns' [22], page (248). Figure 10.a and b are p6 pattern type. Figure 10 c. is picture taken by the author for a whole in the first floor of Makkah mosque. Figure 10 c and d are pg type of pattern.

5.1. Further Result of Star Shapes Analysis in Islamic Patterns

In order to present to the reader a complete study of the star shapes based patterns and due to the importance of such patterns and their popularity in religions and culture Art, it has decided to carry out survey of star shapes that are exist currently in Islamic Crystallography patterns, the following question should be answer: what is the types of star pointed shapes pattern that exist in Islamic pattern? And their frequently and popularity?. To answer these questions, 318 Islamic pattern has been collected by the author from different part of the Islamic world. They can be considered as core of Islamic art, then examined them against the existing of star shapes, which are three star, four star, five star, six star (David star, hexagon star), seven star, eight star (Ketam sulamen star), nine star, ten star, twelve star, fourteen star, sixteen star, eighteen star, twenty star and twenty four star, which resulted one library for each star shape. The study show, there is no eleven star, thirteen star, fifteen star, seventeen star, nineteen star, twenty one star, twenty two star or twenty three star shapes. Table 1 shows the distribution of the star shapes discovery Islamic patterns. The roles of recoding the counting of the star shapes analysis is as follow:

- One pattern could has more than one star pointed shapes, for example, Figure 8 has four, six and eight star shapes.
- One pattern could have more than one star shape of the same in different location within one pattern.
- One pattern can only exam once.
- Patten could have none of star shapes, therefore, the total of below patterns does not reflect the actual number of examining patterns.

Star Name	Three	Four	Five	Six	Seven	Eight	Nine	Ten	Twelve	fourteen	Sixteen	Eighteen	Twenty	Twenty Four
Frequency	22	55	30	91	6	80	8	20	67	7	17	4	1	3

Table 1: The analysis Result of Stars Types Tile in Islamic Patterns

Diagram 2 shows graphically presentation of table 1.

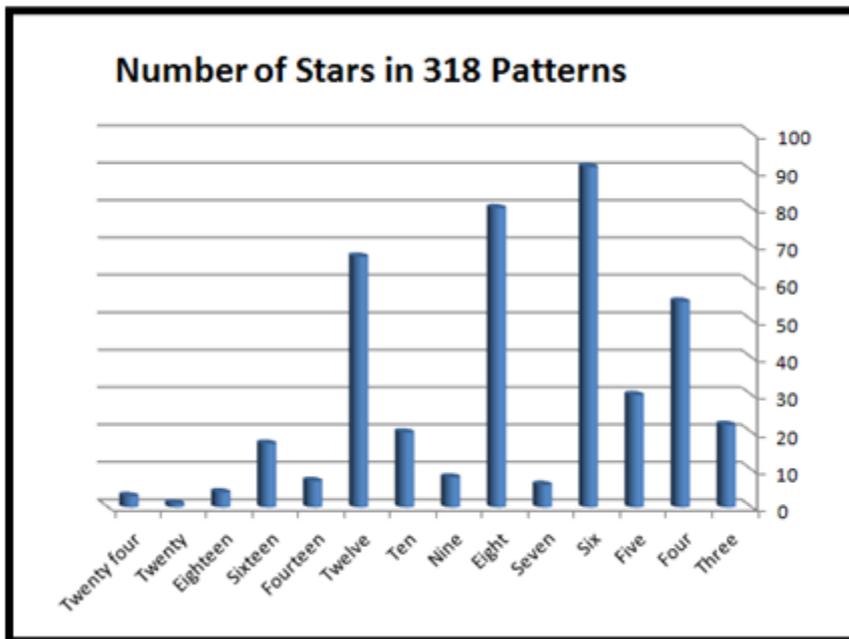


Diagram 2. Histogram view of the distribution of Stars Types Tile in Islamic Patterns

Preliminary conclusion of the star shapes analysis is as follow:

- Six star shape is the most frequently pattern occurring in Islamic art, followed by eight star shape.
- The maximum star shape exist in Islamic patterns is twenty four.
- There are pattern has no star shape at all.
- These pattern made of various material.
- The designer utilized considerable number of star shapes in their work.
- With reference to Crystallography, the study shows there are a lot of rooms to investigate this part of art work.
- Star shapes can be spotted as standalone pattern or as basic motif for Frieze and Crystallography patterns.
- Islamic art can over wide range of art possibilities to do different sort of things using modern technology like computer graphics or science like mathematics.

6. Conclusion, Recommendation and Summary

This research has set out to present new vision in innovative way of using religions Art in general and Islamic designs in particularly. It show and reveal a collection of patterns can be used in promoting dialogue of religions for peace, hoping that have made some contribution but that is privilege of the reader to decide. The greatest satisfaction would come if the work managed to encourage innovation to regeneration of art and symmetry through the use of different cultural and religion interpretation for spread of peaceful means.

It is found that Art can be applied as tool to promote dialogue among religions for peaceful instrument. Art, religion, peace, culture and dialogue are a means of investigation, they are involved ideas, theories, and hypotheses that are tested in places where all come together. Peace Activist like Artists, study (materials, people, culture, history, religion), and learn to transform information into something else. The result of this research could be considered as evidence that different religions and cultures create the same patterns and design or similar or same ornaments by using their own experience, feeling expression and modularity.

The full potential of arts have realized, in promoting peace, dialogue of religions, and diversity of the people of the earth through education and construction building and patterns, in addition to economic development, and nurture creativity. The result therefore shows:

- Arts are important approach they offer potential ground for dialogue of religions and peace creation opportunities. Investment in arts and culture provides a stimulus for activity in the broader peace.
- Religions art can be view as an important component of the peace.

The electronic and paper medias are amongst the most powerful means for promoting and developing art for peace. To enable them to contribute in this field proper, policy should be set up and supports should be encourage.

The recommendation is that each country should has roles in place to sponsor arts for peace, according to core of UNESCO's mission "build peace in the minds of men". Arts may play a healing role among different nation and religions to enhance all of our freedoms which is fundamental to freedom of expression. Art should not be used as a mechanism of exclusion, a barrier between people, nor should cultural practices be reduced to ethnic or religious chauvinism. In order to achieve that, people should be educate by provide coordinating networks, mechanisms and set priorities for this major development and changing.

Humans are living through the global world, and must not only remain abreast of the impacts electronic media, satellite, airplane, robotic, and mobile imposes on us, but must actively shape these to our own circumstances. Old distinctions between art and peace are breaking down, and previously distinct areas are merging. People should speak of new activity like "artpeace" where art and peace have blended then to give different means.

7. Acknowledgement

May I take this opportunity to express my respectful appreciation of the contributions made by several persons towards the completion of this research.

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