

ENRICHED PERCEPTION EXPERIENCE IN THE CASE OF TURKEY: PAINTING OF THE MESOPOTAMIA SYMPHONY

Mehmet ÖZEN¹, Uğur Baran KASIRGA²

¹ Faculty of Fine Arts, & ² Department of Anatomy, Faculty of Medicine,
Maltepe University, İstanbul, TURKEY.

¹ mehmetozen@maltepe.edu.tr, ² ugur.baran@maltepe.edu.tr

ABSTRACT

This study is carried out as applied practice and results are based on accurate and reliable data. The further data that will be obtained with medical imaging devices (fMRI) has not been included into this article yet. Final results of the study initiating with a variety of evidences, hypotheses and comparisons will be deduced in accordance with the data taken from these devices. This will be realized in the further phases of the study. The aim of study is by implementing the narrative forms of music within the expression skills of painting to reach to a pictorial representation of music as different forms and colors. By transforming a musical piece that is perceived by our auditory senses into a painting visually observed and combining both to reach a diversity of perception which we call richness. Fazıl SAY's symphonic musical work Mesopotamia Symphony no.2 ops 38 was chosen the sample for Turkey as enriched perception experience. 20 pieces of pictures that correspond to every part of the symphonic music and a huge painting of 10 meters width which was formed by the compilation of these pieces were produced. Colours and shapes matching the emotions music reflects were adopted in the production. Moreover, some of the aesthetic data composer took special care while performing was noted and tried to give a place to them in the painting. These pieces which are designed to represent each part of the symphony exist as a synthesis (each of them take part formally) in the symphonic painting. This aims to express the symphony as a whole. In this article, the musics are tried to express by their pictorial equivalents and various beliefs and mythological conceptions are arrived by using arrows among pictures; thus it has been maintained that they function as a whole and also trigger one another aesthetically. Consequently, every bit of information, every judgement, is an interpretation of an object and being. Thus, every work of art as an aesthetic object points out to an interpreted existence. So the painting of everything that could be able to come into an existence somehow could possibly be made.

Keywords: Music, Painting, Symphonic Painting, Mesopotamia Symphony, Enriched Perception, Art

INTRODUCTION

Art is the extraversion of human beings' interferences lived by their nature through emotions and thoughts as a result of situations either they're inside or outside. Extraversion comprises writing, music, structure, drawing and forms of expression that were transformed into communication by the use of various concrete and abstract elements (Tansuğ.1991:142). When we consider that art is an unevitable part of the social life we confront with the reality which was always lived and kept throughout human history that every individual somehow produces or consumes art to understand and transfer self by the means of his or her similar. It's well known that the process of perceiving and transmitting what you perceive can only be possible through feelings and corresponding perceptions acquired by the human brain with the help of a variety of senses. It's known that this situation that mental process experiences,

provides some awareness and related habits as well. For instance, while music addresses our auditory organ, many visual and sensual senses can be seen in a mutual reality to serve for these sounds at the same rate. Otherwise, we could be living a world we conceive only by sounds or a visual world that we grasp voicelessly.

AIM

It can be seen that our sense organs' characteristics in terms of their functional structures are compatible and interrelated as if they're the integral part of each other; completing the mental process in our brain together and simultaneously. Sound and image is a good example to this. The aim in this study is to give place to the effects of the music within the narrative skills of painting and present these effects together to obtain a surplus (richness) of senses and introducing new tendencies into the perception of art. Study was being furthered nations wide. Based on some of the works of musicians who became famous for their compositions in the world. Renowned composer Fazıl SAY's Mesopotamia Symphony which is regarded his masterpiece was selected as the Turkey example.

METHOD

It's understood that music and painting derives from similar relationships and reach the same concepts with different perceptions. Humankind as a specy on earth for 200 thousand years has been using meaningful sounds and signs like language for 20 thousand years. His communicating by writing has been going on only for the last 10 thousand years. However, lower brain that directs our emotions is on earth for 500 million years. The figures which were drew on cave walls are known to emerge as reactions to sounds as indicators of the presence of dangers. The mankind who is able to set fire and gather around it has been making sense of life by uttering sounds and pointing out at images since. Trying to understand life by looking at electronic screens is like a contemporary extension of this situation. It's declared by the researchers that thriving to understand the human and his nature will speed up by the investigations on our perceptions and related communications; and especially our senses and perceptions have been evolving into a different direction owing to the developing technologies. When painting which serves to the apprehension of form and colour; and the music acquired by sounds handled as the complement of each other, it becomes evident, according to case studies, that they constitute together a distinguished pattern of perception. In other words, human brain starts to function in an entire new way related with this kind of perception. An interview about this subject is included in the following chapters.

EVIDENCE

Despite music is composed of different elements with the attribute of being pleasant to the ear, it is preassumed to have nothing to do with plastic arts in terms of addressing other sense organs. However, it's made further in this study how especially music and painting influence our two different sense organs aurally and visually, also what could possibly be the matching points of painting and 'music composed about painting' or vice versa. Medical imaging applications can show us how painting and music are filtered in human mental perception processes through colours and sounds (notes). It will be handled with comparative methods that how as the basic elements of painting art, form- colour are linked with notations and harmonic order in music.

ANALYSIS

In this study, similar or differing aspects of arts which establish their way of expression via sound and visually are identified and compared in terms of the basic elements of art which

are form and meaning. Abstract reality of sound and the installation of sound and image together simultaneously are compared in this survey. Arts performed by painting and music will be used as the evaluation means of this comparison. When the basic principles of painting and the variables constituting its composition such as light, colour, texture, rhythm balance, contrast, depth, ratio-proportion, dominance and the components of music such as rhythm melody and harmony are handled together to reach to their pictorial equivalents. We may come up with striking results. We can clearly say that the notes considered to be the letters of music corresponds to colours, the strokes that are made in regular or irregular intervals to our heart beats and music that coincide with our pace has rhythmic features. It's known that balance and harmony in painting and its equivalent in music as harmonic balance are based on same values which transform into seemingly different senses. This research, challenging for the use of two diverse disciplines of art together to live an enriched experience of perception strives to prove its assertion with sample applications. What is "enriched perception experience"? How this title and concept are derived? So to speak, It's at least two sense organs' staying in between stimuli which are regarded as the complement of each other and thus, enabling brain cells' to become more dynamic through these stimuli. This concept is derived because the perceptions gain multiplicity and diversity. "Enriched perception" term is chosen for its being written briefly and characteristic of reminding the research. It's called and quoted with the same name throughout the article. It is considered to contribute to the brain development by implementing (painting and music) together to evoke two different sense organs owing to the increase in the number of stimuli. In consequence, when painting and music are implemented together to evoke two different sense organs it is considered that this situation will contribute to the brain development because of the increase in the number of stimuli and this will introduce new tendencies to art as enriched perception.

HYPOTHESES OF THE RESEARCH

H1: Music; as an auditory narrative form is an influential factor on our senses.

H2: Painting; as a visual narrative form is an influential factor on our senses.

H3: Music; could a painting's music be made taking into consideration of the feedback of the composer about the piece of music (title, form and content) , the feedback of the emotional states that music emphasizes during the course of listening?

H4: Each piece of information, every statement of judgement expresses an interpretation of an object and an interpretation of existence. Thus, every art piece indicates the existence of an aesthetically interpreted object. In consequence, the painting of all possible existence could be made. (Tunalı, 1992:12)

H5: There is evidence that when an artwork carries the burden of another and they get together, there will form a sort of perceptual richness because of the multiplication of the diversity of our senses as auditory and visually.

H6: Music; (Mesopotamia Symphony) as a sample artwork, when transformed into a painting, presented audially and visually altogether will constitute a richness of perception by the diversity of senses it will cherish.

MUSIC AS A NARRATIVE FORM

Music, with its most general description is the state of sound which gained form and meaningful vibrations. Described also as the art of narrating the feelings, thoughts and imagery monophonically and polyphonically, music may as well be said as a mean of expressing emotions. It is an almost proven reality that the most effective facts in the creation

of the emotional dimensions of the music are tempo and the small and big variables of tonality. The loudness of the sound, harmony and rhythm variables are extremely important in making an impact.(Sözen, 2015). For example, while extreme shifts in the level of sound trigger fear, nuances implicate moments of well-being. While giving the music loudly is associated with density, power, suspense, aggression and cheerfulness, giving it low is matched with the feelings of tenderness, sensitivity, sadness and seriousness.

In consequence, the high and low volume can be used by associating them with the intensity of emotions. Tempo represents the speed of music performed. Change of tempo may mean the slow or fast flowing of the music. One of the most significant components of the auditory perception is tempo; tempo is the determining factor of the mood which is intended to emphasize. (Sözen, 2015)

Accordingly, it is a general rule especially in movie soundtracks that in narrating the feelings like cheerfulness, enthusiasm, excitement and anger tunes are played faster and played slower in expressing feelings like melancholy, grief and anger. For instance, the most significant musical factor in sorry/heavy emotional state is minor tonality and slow pace. Whereas, the most important musical element in the reflection of an elegant feeling is its being performed in a slow tempo.(Farrar,2003:3)

While the loudness in high levels evoke happiness, elegance, calmness as well as excitement, surprise, power and fear etc in the listeners, It's seen that when reflected in low levels it expresses dignity, earnestness, discomfort or regret.

While little shifts in an ongoing sound emphasize disgust, rage, fear and hardship, big changings in a part awaken sensational effects like happiness and goodness. (Farrar,2003:5). Another major element of music is rhytm. Stress in a line, a note, defines the sound compliance deriving from the repetition of the properties of the duration or the sound of the music. In contrast, rhytm in a painting may cause by the various rhythmic forms of the stains, different intensity of emotions to reveal the sentimental values in music. (Sözen,2015)

Disordered or rough rhythms can be fun, uneasy and angry; while orderly or smooth rhythmic patterns may indicate happiness, dignity, solemnity and success. Musical instruments with high harmony may be used to emphasize feelings of strength, fear, activity and surprise. Low harmonics however, can be utilised in portraying joy, regret, pleasantness and dullness. Succession of the harmonic or disharmonic intervals which creates various arrangements /groupings constitutes cadences in harmony. While some of these organised groups leave a pleasant effect, some others are disturbing. While symphonious harmonies create pleasant feelings they also reflect the emotions of being happy, imaginative, comfortable, proud, elegant or splendid. Incompatible harmonies may as well express feelings like excitement, tension, liveliness, anger or being sorrowful besides the feelings of restlessness and discontentment. (Sözen,2015)

PAINTING AS A NARRATIVE FORM

Whenever we talk about basic concepts of art first thing that comes to mind is the basic concepts of plastic arts. As is known, painting art is a branch of plastic arts and some of the terms used in painting are as well used in other field of arts. These are formed in the unity and wholeness of composition, light, rhytm and balance. Therefore, this relationship that artist establishes will cause the emerging of an art work like sculpture, painting, film which has a meaning. The counterpart of the formal elements of art is the emotion of beauty in human. This emotion also reflects to the sensibility of human senses and perceptions, also to

the impact of reflexes to this sense on his mind (Yolcu,2004:22) To analyze these components briefly:

Composition in Painting: Composition in art works realizes its narrative through shapes based on visibility and develops with the determining of the artist to place each piece in order of priority to express himself in the most suitable way either with a wish for order or disorder. Famous painter Matisse defines composition saying: “narrative in art for me is not merely in a brush stroke or the expression of an excitement appearing on a surface; rather it’s hidden in the whole order of a painting I made.” (Yolcu,2004:30) Elements that make a work of art fluent are formed by the composition of related elements in a unity and integrity. These basic elements are successively balance, contrast, rhythm, proportion, colour, dominance that constitutes a composition.

Rhythm as an Example: Dance and music are actions generally measured by time. Rhythm is the effect which basically concentrates on the measurement of movements arranged in their length and shortness and emphasize the emotions of frequency and rarity. It’s often used in visual arts as well. Visuals and auditory elements remind of each other, also density increases and decreases.

Heart beating, water dropping, movement of sea waves back and forth reminds us this notion. The voice inside human (heart, veins etc.) , voice in nature (sky motion, rain) or fact of silence are sensations mankind recognise ever since he knows of himself. (Block, 2010,s.197) Following painting illustrates how painters Goya make feel of the motion of wind (rhythm of it) in his painting. (Table.1)

Table 1. Rhythm in the paintings of Francis Goya, bluff of the blind man- 1789 (on the left)

Table 2. Rhythm in the paintings of Francis Goya, Umbrella-1777(on the right)



¹https://en.wikipedia.org/wiki/Francisco_Goya

²<http://www.ressamlar.gen.tr/francisco-goya/>

Texture in Painting: Texture increases the impression of make believe in the viewer. It stresses that emotions are close and familiar. Symmetrical Balance; it creates a boring and monotonous impact, therefore is static and passive. Symmetrical Balance is immediately understood to be unnatural and handmade therefore there is a gentle, splendid, impressive and ruling over nature manner in it. (Yolcu,1996:33). **Colour in Painting;** In plastic arts and cinema, colour is employed in expressing feelings and concepts like joy, liveliness, motion, warmth, stillness, provocativeness, sadness, melancholy, pessimism, infinity, energetic, comfort, inspiration, coldness. (Block,2010:137)

Table 3. Colour- Form relationship in Kandinsky “Composition IV”(1911)

³<https://www.wikiart.org/en/wassily-kandinsky/composition-iv-1911>

Colour-Form Relationship: Colour is seen to be limited to form in nature. So, colour and form by their nature constitute a whole which cannot be separated. Kandinsky says “form can exist by itself, as a symbol of an imaginary object, limiting of emptiness, a space of mere abstraction. Unlikely, colour can never exist isolated from form. (Table.3) (Kandinsky,1981:49) Colour is used as an extremely influential element to add persuasiveness to narrative and to give weight to mood. (Sözen,2003:)

A CASE STUDY FOR AN ENRICHED EXPERIENCE OF PERCEPTION ADAPTATION OF SYMPHONY INTO PAINTING

Sample work: In order to carry out this study of an enriched experience of perception, the Mesopotamia Symphony no2.ops 38 of Fazıl SAY was chosen with his permission as an example from Turkey. The musical piece of the composer is transformed into painting over the basic elements of music and painting. **Theme of the Work:** Fazıl Say tries to tell us about the present day Middle East as well as the Mesopotamia Culture throughout the history in the composition of Mesopotamia Symphony. Assyrian, Babylon and Urartian cultures and beliefs beginning from Summerians as well as today's Middle East, Turkey, Kurdish issue, unending wars, terrorism, in other words of the philosophers, “death culture “ has almost been the destiny of this region and its people. These facts which have been carried to the symphony by the artist who is very impressed by the situation, are narrated in ten parts. These are respectively: Two boys in the Savannah, Tigris, On Death Culture, Melodrama, Sun, Moon, Bullet, Euphrates, On War, Requiem for Mesopotamia. The region named Mesopotamia is also a cradle to culture and humanity. (Say,2014:5) A great deal about human beings began in Mesopotamia thousand years ago. Brought to the overall of the symphony, this situation is narrated with respect to culture, history and archeological findings that define the region. In the following illustration, mythologies which grow in parallel with beliefs and surround the region, statuettes of gods (idols) that bear the deep traces of them and the ceramics applied on the painting can be seen. It is understood that these ceramics were obtained by deriving from the forms of the statuettes on the right. Viewers and listeners witness the heavy and deep traces of the past with the help of the ceramics imposed in every part of the painting together with the tonality of the music. In Mesopotamia, the influence of religions was expressed by gold foiles in icons. The ceramics that represent the moods of each part of the symphony of the artist are made timeless by leaving a empty space between canvas. There is still another reason for ceramics to remain in the air and at blankness that they symbolise the music which also locates in space in blankness. This feature that makes music and painting come closer is crucial as a method in enrichening of perception. (Table.4) (Table.5) (Table.6)

Table 4. Mesopotamia Symphony “Painting of “On the Culture of Death” (on the left)
Table 5. Idol of the Goddess (in the mile). Table 6. Sümer Goddess Inanna M.Ö.18.yy



⁵<http://ahmetustanindefteri.blogspot.com.tr/search/label/terracotta%20figurine>

⁶<http://ahmetustanindefteri.blogspot.com.tr/search/label/Mezopotamya>

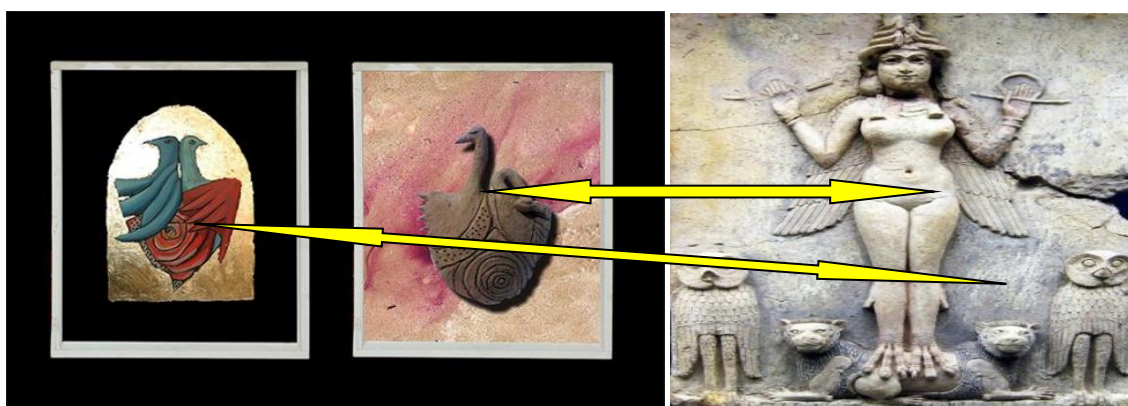


Table 6. Sümer Goddess Inanna M.Ö.18.yy (right)

Table 7. Mesopotamia Symphony no 2 ops.38 Painting of
“Bullet”⁶<http://ahmetustanindefteri.blogspot.com.tr/search/label/Mezopotamya>

Table (1.6) Goddess Inanna (Ishtar): Goddess of abundance, love and war; is the most favourite goddess of Assyria and Babylon. It derives from belief in Sumerian mythology. Among the names of Goddess Ishtar, it is possible to see Astarta, Astoret, Artemis, İsis, Venüs, Kybele beliefs that spreaded throughout the region. As can be seen in the picture there are two protector bird figures next to Goddess Ishtar.

Table 7. Mesopotamia Symphony no 2 ops.38 Painting of “Bullet”
Table 8-9. Icon examples circular forms. (right)



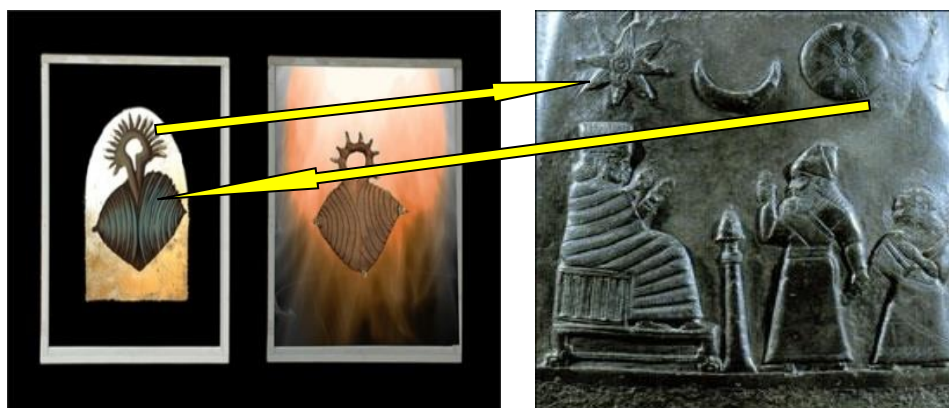
⁸⁻⁹http://www.pravoslaviето.com/life/10.28_sv_Parashkeva_Ikonijka.htm

Pictures above are especially designed for each part of the symphony. While right side is about the historical and cultural reality of Mesopotamia, left side explains the beliefs corresponding to the realities within the same history. Each part of the symphony is attempted to be narrated within the composition of beliefs situating on the left and cultural and historical texture on the right. The composer makes use of a similar design in his symphony while dealing both with present day Middle East and Mesopotamia culture throughout history. He refers to various musical instruments and their characteristic sounds in the narration. These instruments were already mentioned above. This order of the painting serves for the narrative structure on the basis of the symphony. Gold foils are used in the painting designed in an iconographical order. Gold foil explains the value and preciousness of beliefs. Dove Bird which was also mentioned by the composer represents children. One of the children was shot. Sound of the bullet which was also included in the symphony hits one of the children. This situation is also expressed in the painting by one of the birds' head resting on its body which means it is killed. Blood of the child shed on to the hot sands of the Middle East was also shown in the painting. (Table.7) (Table.8) (Table.9)

Bullet: From the section of moon we directly connect to this section. Episode begins with the dove bird's sound which was heard in the darkness of the night. Folk song as the main theme was heard again. Two children in the savannah are engaged in a dialogue while playing games innocently. Suddenly, in the night, by a machine gun sound, one of the children was shot in the savannah. (Bass flute) Other child, all of a sudden staying alone and confused (Bass block flute) can't understand the situation for a while. He is puzzled, asks, calls, hopes for. Then he begins to lament. At this point, the dove bird's sound is heard; Dawn breaks. Trumpets raise the sun which wills this time to a bloody morning. (Say,2014:5) (Table.7)

Sun: Sun is one of the most worshipped elements for thousand years. In Mesopotamia, as the cradle of humanity, sun represents enlightenment and birth. It's belief. It's fondness and attachment for life. It's light and life. Surely, this belief became a source of inspiration for many religions. In later excerpts, sun's dawn progress with the rising sound of the trumpets. (11/8 measure is evident with xylophone notes). This rise culminates when the sun is at its brightest and shiniest and then gradually departs leaving its place to night and moon (Say,2014:6). In the picture on the right side there can be seen a sample of archeological tablet which represents beliefs like moon and sun. The rise in the voice of music is expressed with the intensity of the fire in the painting (Table.10) (Table.11) (Table.13)

Table 10. Mesopotamia Symphony No.2 ops. 38 "Painting of " The Sun" (left)
Table 11. Relief that Sun and Moon belief was shown. (right)

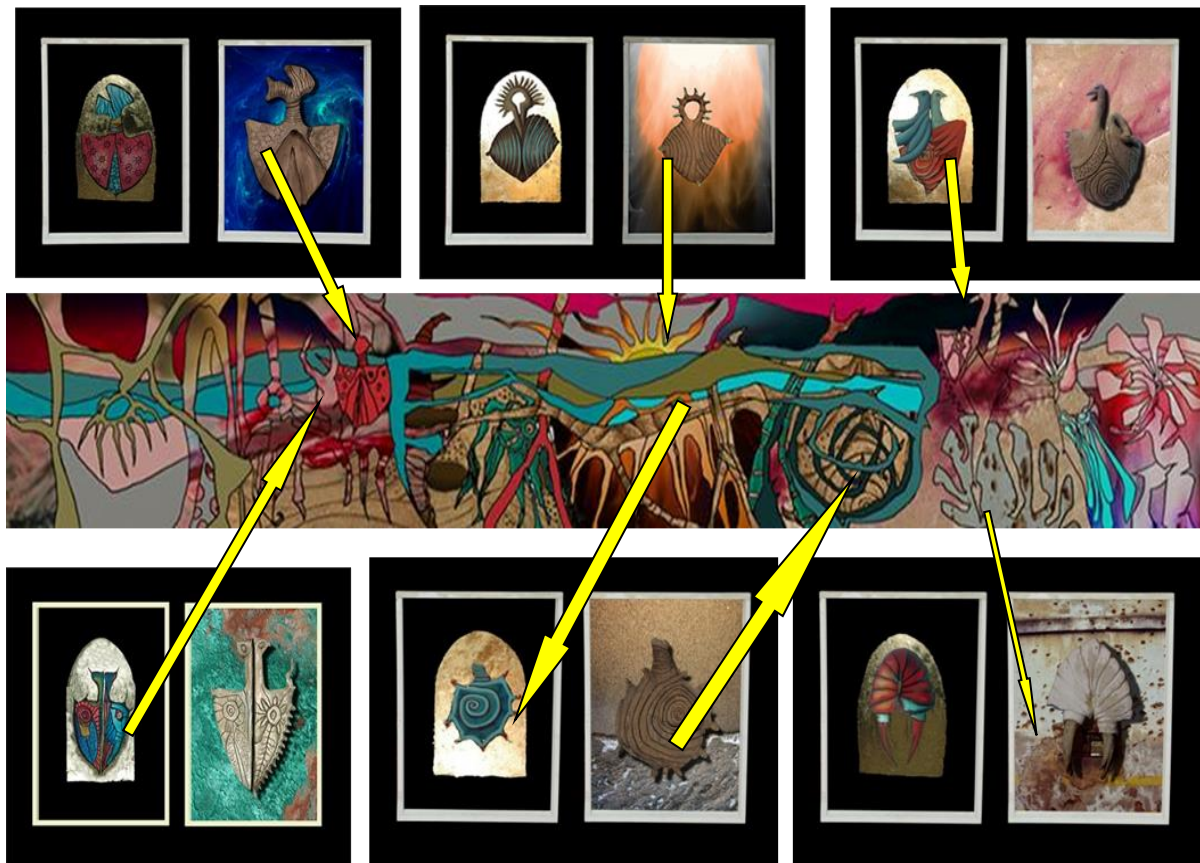


¹¹<http://ekstrembilgi.com/tarih/eski-mezopotamyada-gokbilim-astronomi/>

Sounds of water and river in the symphony: Effect instruments like sounds of water, pebble stones (these instruments are generally used in Africa or Amazon region folklore often) are played by the members of the violin and viola group of the orchestra. All along Tigris and Euphrates parts, river sound is employed. (Say,2014:6) In the symphonic painting however, water and river sounds are emphasized by green and turquoise colours travelling horizontally on the canvas separating it into two parts. Big picture (Table.10) (Table.13)

Dove bird: is a custom made, single noted, brass instrument and is performed within the percussion instruments section. (Say,2014:6) In the painting, these sounds are represented as two birds watching about on the right above hand. These are as the composer said: are narrators and the ones who are aware of what's going on. Afterwards, one of them was killed. This situation reflected by the ceramic figure in the small chart, is expressed by the blood merged into the desert sand. (Table.9) (Table.13)

Table 13. Mesopotamia symphony no.2 ops.38 Painting of “Euphrates” (left above). Painting of “Sun”(above middle). Painting of “Bullet”(above right).Painting of”Two boys in Savannah”(left bottom) Painting of “Tigris”(bottom middle).Painting of “War” (bottom right) Painting of”On the Symphony of Mesopotamia”(big painting in the middle) Symphonic painting containing the pieces of small paintings,



INTERVIEW ABOUT THE SUBJECT

These studies also contain information obtained from some of the interviews made during the preparation period of the article. One of them is the interview with Assistant. Prof. Dr. Uğur Baran KASIRGA who is a lecturer in Main Scientific Branch of Anatomy in Medicine Faculty, Maltepe University. According to Kasirga, auditory and visual stimuli that is transmitted to us through art make our brain function in a different way *“Our body is directed by the brain. However, it requires senses to collect data from the environment. These*

are simply consisted of five senses, namely seeing, hearing, tasting, smelling and touching. Yet, to have senses isn't enough to gather information from the environment and the world that surrounds us. Our brain also demands for the combining functions of cortical areas in it's higher centers. The branch of arts like painting and music which are thought to adress one single sense are particularly efficient as combining factors. For example, the subjects that were shown painting and listen to music in medical imaging devices which we call (fMRI) the brain areas that we were unaware until today were enlightened and started to function. From this perspective, in order that any art form to be repected by their subjects viewing or consuming it, our brain needs enriched perceptions."

CONCLUSION

This study derives from the proposition that music can be seen as well as heard and when the constituted art works are used together perception mentally enriches. Evidents of the study are provided by a sample study of Fazıl SAY's symphonic masterpiece "Mesopotamia Symphony" no.2 ops.38 and a symphonic painting is produced based on the information about the composer and the moods which is created by him audially. The symphony performed by an orchestra of 130 people and the paintings exhibited set a good example for research. During the concert, the painting sized 10 meters width was introduced with the participation of the composer. So, musical piece of Fazıl SAY who approaches music over the culturel codes of his own country was reproduced in a visual medium for the first time and exhibited along with the symphony, thus being a good example for this study in Turkey. Enriched perception is, when we exhibit painting made for music and music made for painting in certain circumstances as the complement of each other we reach to an enriched perception in which visuals match auditory feelings and sounds are compatible with visuals. Our special senses function as transducers which transform a type of energy to another. For example, the light that falls to eyes from a painting is in fact an electromagnetic radiance and retina transforms it into electrical signals. A similar case is valid for our auditory organ. The music or sounds we listen to are turned to electrical signals by our auditory organ. Evaluated from this perspective, we can easily say that either audio or visual perceptions are grasped as electrical signals by our brains. This happens through the projection of visual and auditory stimuli to the primary sensory areas in the cerebral cortex in accordance with the general structuring of central nervous system. This projection in celebral cortex, by communicating with lower brain, causes the formation of sensory dimension of perception. Just at this point, richness of experience revealed by the multiple confocal perceptions is the subject of this study. This kind of richness of perception shouldn't be confused with the coming together, arbitrarily or by itself of whatever music or painting. Because, an artwork may stand as an example of richness of perception only when its theme can be perceived both with its auditory and visual dimensions. The concept of "richness" refers to the diversity of stimuli and maintained by the contribution of not one but multiple sensory organs. This condition readily brings to mind the art of moving pictures; it seems possibly to work in cinema as well as in our case. It is open to discussion after the results of this research that sound and image communicate different themes. When it's handled from the perspective of psycho physiology, pictorial information is obtained by our eyes depending primarily on rational processes; while sensory information obtained by ears are turned into meaningful wholes through emotional and intuitive processes. The thing mentioned here is of course not the argument that imagery by itself is unable to create sufficient emotional impacts (Sözen,2015:37).Results taken from this research indicates that different disciplines of art by coming together may create various forms of rich experiences in perceptions and this can be demonstrated by following the activities of neurons with the help of medical imaging devices like fMRI.

A Turkish composer's work was adopted in this research. However, when a different composer with a different composition in another country becomes a subject to this study it will give rise to richer understanding of international and intercultural varieties and the comparison of enriched perception.

REFERENCE

- [1] Ahamad, M. G., Khondker, R. K., Ahmed, Z. U., & Tanin, F. (2013). Seasonal food insecurity in Bangladesh: Evidences from northern areas. *Mitigation and Adaptation Strategies for Global Change*, 18(7), 1077–1088.
- [2] Arnold, D. (1988). *Famine: Social crisis and historical change*. Oxford: Blackwell.
- [3] Bengal Administration. (1897). *Bengal famine code*. Calcutta: Govt. of West Bengal.
- [4] CEGIS. (2005a). Seasonal crisis study in the northwestern districts of Bangladesh (Component 1.4.3). Dhaka: Sustainable Environment Management Program (SEMP).
- [5] CEGIS. (2005b). Draft baseline situation assessment report. seasonal crisis study in the northwestern districts of Bangladesh. Dhaka: Sustainable Environment Management Program (SEMP).
- [6] Chant, S. (1999). Women-headed households: Global Orthodoxies and grassroots realities. In H. Afsar & S. Barrientos (Eds.), *Women, globalization and fragmentation in the developing world* (pp.91-130). Houndmills: Macmillan Press Ltd.
- [7] DER-UNDP. (2004). *Report from the Special DER Meeting on 'Monga'*. Dhaka: DER Sub-Group Secretariat.
- [8] Elahi, K., & Ara, I. (2008). *Understanding the Monga in northern Bangladesh*. Dhaka: Academic Press and Publishers Library.
- [9] Government of Bangladesh (GOB). (2011). *Bangladesh Country Investment Plan: A road map towards investment in agriculture, food security and nutrition*. Dhaka: Government of Bangladesh (GOB).
- [10] IRIN. (2008). *Bangladesh: Poor braced for "Monga" Season*. Dhaka: Government of Bangladesh (GOB).
- [11] Kabir, M. H. (2009). *Poverty, vulnerability and the coping strategies of Monga affected female-headed households: A study of Gangachara, Rangpur, Bangladesh*. Dhaka: Women, Gender, Development (WGD).
- [12] Karim, K.M.R., & Tasnim, T. (2015). Nutritional status, dietary food and nutrient consumption patterns in Monga affected area of the northern part of Bangladesh. *Asian Journal of Clinical Nutrition*, 7, 55-63.
- [13] Lazzaro, J. (2013). *Bengal Famine of 1943 - A man-made holocaust*. Dhaka: Ibitimes.
- [14] MOFDM. (2006). *National Food Policy*. Dhaka: The Ministry of Food and Disaster Management.
- [15] Rahman, H. Z. (1995). *Mora Kartik: Seasonal deficits and vulnerability of the rural poor*. In H.Z. Rahman & M. Hossain (Eds.), *Rethinking rural poverty: Bangladesh as a case study* (pp.234-253). Dhaka: University Press Ltd.
- [16] Sebastian, Z. (2006). Monga - Seasonal food insecurity in Bangladesh - Bringing the information together. *The Journal of Social Studies*, 111.
- [17] Sen, A. (1981). *Poverty and famines: An essay on entitlement and deprivation*. Oxford: Oxford University Press (OUP).