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# ON EDUCATIONAL TECHNOLOGIES FOR AESTHETIC SYNESTHESIA RESEARCH

# ОБ ОБРАЗОВАТЕЛЬНЫХ ТЕХНОЛОГИЯХ ДЛЯ ИССЛЕДОВАНИЯ ЭСТЕТИЧЕСКИХ СИНЕСТЕЗИИ

**Abstract:**

The present paper outlines that the category of "aesthetic", closely related to the conception of "art", appeared from the philosophical world outlook and maintained an inclination to "the perception in art" as one of its basic invariable characteristics. The aesthetics of the Hellenism epoch was based on the growing influence of sensual-irrational tendencies in art. The main subject of the study of medieval aesthetics became a super-sensual world wherewith the concept of beauty and aesthetic pleasure can be defined more precisely. Having transformed during the Renaissance, the anthropoid aesthetic consciousness universalized a centric concept of "perception" as a psychological state of the person perceiving a work of art. The Recent centuries again brought human attention to the irrational sensory psychological perception in discourses about the art, which was solved by the association. The schools of thought studying such category of "aesthetic" as the aesthetic subjectivism and the aesthetics within the framework of the empirical psychology appeared during that period. The Recent centuries were marked by overstepping the limits of the philosophical

aesthetics, moving towards the natural sciences and emergence of metaphysical aesthetic and artistic worldview and conceptions: aesthetics "in-sensation", spiritual aesthetic synthesis, creativity association, phenomenological and semantic aesthetics.

The paper underlines that the aesthetic facts were interpreted by the language of physical phenomena in their aggregate. The conversion to the cognition and an assessment of aesthetic things was outlined by means of the irrational sub-modal perception with distortion of the previous original shape of artwork's existence, where a determinative harmonious part was assigned for the content or the language fact in the institutionalization of the artistic work.

The present paper emphasizes that many famous contemporary artists with synesthesia technique use their synesthesia to create their artwork; they experience an involuntary joining or crossing of any of her senses – hearing, vision, taste, touch, smell and movement; they paint from life rather than from photographs and by exploring the sensory panorama of each locale attempts to capture, select, and transmit these personal technology experiences.

**Keywords:** Synesthesia Research, Educational Technologies, Association, Perception, Artistic Worldview, Aesthetic Synesthesia, Psychological Aesthetics

**Introduction**

It is well- known that the term 'Synesthesia', from the Greek for «joined perception»[3], has been described as the «Involuntary physical experience of a cross-modal perception» [4, pp. 21] Common examples include perceiving colors associated with letters or shapes associated with music. Synesthesia is generally viewed as an innate and presumably unlearn-able characteristic of a very small percentage of the population. It is suggested here that synesthesia is present to some degree in everyone, and that it is a learnable skill. Anyone who has felt inclined to dance to music, or felt that a particular dance was "right" for a particular piece of music, has experienced a form of synesthesia [4, pp. 41-42] The phrase synesthesia in art has historically referred to a wide variety of artists' experiments that have explored the co-operation of the senses - seeing and hearing] in the genres of applied art. The age-old artistic views on synesthesia have some overlap with the current pragmatic scientific view on aesthetic synesthesia but also some major differences - in the contexts of investigations, types of synesthesia selected, and definitions. While in educational studies synesthesia is defined as the elicitation of perceptual experiences in the absence of the normal sensory stimulation, in the arts the concept of synesthesia is more often defined as the simultaneous perception of some stimuli as one gestalt experience. The usage of the term synesthesia in art should, therefore, be differentiated from creativity in scientific research. Synesthesia is by no means unique to artists or musicians. Only in the last decades have scientific methods become available to assess synesthesia in persons. For synesthesia in artists before that time one has to interpret biographical information. Additionally, Synesthetic art may refer to either art created by synesthetic or art created to elicit synesthetic experience in the general audience.

It is also best-known for us, that the researchers in the field of the philosophical aesthetics

[3] The word synesthesia is from the Ancient Greek "syn"-'together' and "aesthesis"-'sensation'.

Katharine Everett Gilbert[4] and Helmut Kuhn interpret the synesthesia as a natural conscious ability to correlate with different modal objects, the inter-perceptional association, produced in the culture and determined by the society. Besides, the conceptions of universal synesthetic regularities acquired by people in the process of socialization in the way of a specified cultural context, as well as individual synesthetic regularities acquired by means of the personal experience and having the distinctiveness are discriminated. The work of art represents intellectual and material values in the context of the defined culture. And if synesthesia is understood as an isolated case of the synthesis being grown out of the syncretism of a human spiritual world, in this case any text becomes the synesthetic one through olfactory, gustatory, tactile, visual and audio communication. «Any culture develops the technological system for information transmission of intellectual values. It reproduces ideal absolutes of its time through the system of rites and rituals, visual and audio systems. An artist recreates these ideal values of the culture by means of their reproduction and transformation»[9, pp. 524-525].

Our aesthetic worldview is developed from a great number of cooperating components that represent an integral system. It is reproduced in the form of a poly-modal mosaic of sounds, colors, tactile and visual sensations in the perception of the reader. So the synesthetic worldview of the writer is reconstructed and represented as a fragment of his common poetic worldview; a full personal presentation about the world of sound and color, reflected in the idiom-style; as a system of proper aesthetic senses, revealed in the so the synesthetic worldview of the writer is reconstructed and represented as «a fragment of his common poetic worldview; a full personal presentation about the world of sound and color, reflected in the idiom-style; as a system of proper aesthetic senses, revealed in the process of an artistic communication» [7, pp. 121-122].

It is very interesting for us, that a Russian Philologist and Professor of Saratov State Socio-Economic University Natalia Gribova considers[5] the synesthesia as a physiological mechanism of sensation emergence in one modality in response to a signal in another modality. Therefore, the synesthesia is represented as an actual mixed sensation or a secondary sensation of another modality. She understands synesthesia as the psychological mechanism of mutual translation from one

[4] Katharine Everett Gilbert (1886–1952), an American philosopher who studied aesthetics, was one of the first women to be president of the American Philosophical Society. She was also the first female professor at Duke University and, during her lifetime, the only female chairman of a liberal arts department. She was awarded an Honorary Doctor of Letters degree by Brown University in 1942. Gilbert's main interests in philosophy were aesthetics, art, criticism, architecture, dance, and literature. She was primarily interested in what beauty meant to the observer making it the artist's obligation to communicate their experience to the onlooker. Published in 1939 with Helmut Kuhn, 'History of Aesthetics' was made to be a textbook for University students as well as others curious to know more about what aesthetics mean. In her work Gilbert argues that the purpose of poetry should be to leave the reader with a satisfied sense where the world of immediate experience appears more "real". Contemporary poetry, on the other hand, makes the world more foreign, distant, and confusing.

[5] We should note Natalia Gribova's idea that scientifically proves a synthetic nature of the world image construction. He also draws a conclusion about a single method of assessment structuring in accordance with an object, despite the defined modality what is an evidence of existence of single semantic coordinates of the subjective experience, revealing the mechanisms preserving its unity - synesthesia and the metaphorical transfer. Natalia Gribova shares her opinion, having included associativity of a synesthetic type into the classical common patterns of the associative perception types, as a complex world reflection. In her monograph the "synesthesia" phenomenon is described as a beam of different modal associations and as a manner of a mental world organization. Such associative sensations are produced into the sensitive-associative-figurative space of the literary text.

modality into another, or as the mechanism of categorization having a defined extra-modal structure, organizing object images of the surrounding world and forming an individual's subjective space. A tentative assessment of the perceptional objects relying on certain common factors that have an emotive nature can be realized with the help of such mechanism [10, pp. 27].

We must note here that when discussing synesthesia in art, a distinction needs to be made between two possible meanings: Art by synesthetic, in which they draw on their personal synesthetic perceptions to create works of art; Art that is means to evoke synesthetic associations in a general mainly non-synesthetic audience; These distinctions are not mutually exclusive, as, for example, art by a synesthetic might also evoke synesthesia-like experiences in the viewer. However, it should not be assumed that all «synesthetic» art accurately reflects the synesthetic experience. Several contemporary visual artists have discussed their artistic process, and how synesthesia helps them in this, at length.

**Chapter I – Historical Excursus for the Aesthetic Synesthesia Educational Concept**

We may say that little is known about how synesthesia develops. It has been suggested that synesthesia develops during childhood when children are intensively engaged with abstract concepts for the first time. This hypothesis explains why the most common forms of synesthesia are grapheme-color, spatial sequence and number form. These are usually the first abstract concepts that educational systems require children to learn. Difficulties have been recognized in adequately defining synesthesia. Many different phenomena have been included in the term synesthesia, and in many cases the terminology seems to be inaccurate.

It is well known, that the earliest recorded case of synesthesia is attributed to the philosopher John Locke[6], who, in 1690, made a report about a blind man who said he experienced the color scarlet when he heard the sound of a trumpet. However, there is disagreement as to whether John Locke described an actual instance of synesthesia or was using a metaphor [1, pp. 82].

It is generally known that the interest in synesthesia is at least as old as Greek philosophy[7]. An Ancient Greek philosopher and religious teacher Pythagoras taught the belief that numbers are the guides to the interpretation of the universe. Mathematics could explain everything, including music. Legend states that one day Pythagoras was walking past a smithy's workshop, listening to the sound of the blacksmith's hammers on the anvil. He turned his attention to the percussive sound that was

[6] John Locke - an English philosopher and physician, widely regarded as one of the most influential of Enlightenment thinkers and commonly known as the "Father of Liberalism". Considered one of the first of the British empiricists, following the tradition of Sir Francis Bacon, he is equally important to social contract theory. His work greatly affected the development of epistemology and political philosophy. His writings influenced Voltaire and Jean-Jacques Rousseau, many Scottish Enlightenment thinkers, as well as the American revolutionaries. His contributions to classical republicanism and liberal theory are reflected in the United States Declaration of Independence.

[7] The interest in colored hearing dates back to Greek antiquity, when philosophers asked if the color of music was a quantifiable quality. Isaac Newton proposed that musical tones and color tones shared common frequencies, as did Goethe in his book "Theory of Colors". There is a long history of building color organs on which to perform colored music in concert halls. In further support of this notion, in Indian classical music, the musical terms raga and rasa are also synonyms for color and quality of taste, respectively.

produced and noted that some strikes sounded much higher than others. He was certain that there was a mathematical explanation for the different pitches he was hearing. Therefore, he entered the smithy's shop and observed that they were using different sized hammers. Some of the hammers were large and others smaller, but they were ratios of each other: one being twice the size of another one, one being two-thirds the size of the last. Thus, Pythagoras declared some relationships as absolute intervals of music [9, pp. 441-442]

One of the questions that the classic philosophers asked was if color of music was a physical quality that could be quantified [11, pp. 252]. The first known experiment to test correspondences between sound and color was conducted by the Milanese artist Giuseppe Arcimboldo at the end of the sixteenth century. He consulted with a musician at the court of Rudolph II in Prague to create a new experiment that sought to show the colors that accompany music. He decided to place different colored strips of painted paper on the canvas with a keyboard instrument [11, pp. 214-215]. He was also an artist who created strange portraits from unusual objects, such as 'Four Seasons in One Head'. The problem of finding a mathematical system to explain the connection between music and color has both inspired and frustrated artists and scientists throughout the ages. The seventeenth-century physicist Isaac Newton tried to solve the problem by assuming that musical tones and color tones have frequencies in common. He attempted to link sound oscillations to respective light waves. According to Isaac Newton, the distribution of white light in a spectrum of colors is analogous to the musical distribution of tones in an octave [11, pp. 218-219]. So, he identified seven discrete light entities that he then matched to the seven discrete notes of an octave.

Inspired by Newton's theory of music-color correspondences, the French Jesuit Louis-Bertrand Castel designed a color harpsichord with colored strips of paper which rose above the cover of the harpsichord whenever a particular key was hit [11, pp. 257]. The invention of the gas light in the nineteenth century created new technical possibilities for the color organ. In England between 1869 and 1873, the inventor Frederick Kastner developed an organ that he named a Pyrophone. The British inventor Alexander Rimington, a professor in fine arts in London, documented the phrase 'Colour-Organ' for the first time in a patent application in 1893. Inspired by Newton's idea that music and color are both grounded in vibrations, he divided the color spectrum into intervals analogous to musical octaves and attributed colors to notes. The same notes in a higher octave produced the same color tone but then in a lighter value. Around the turn of the century, concerts with light and musical instruments were given quite regularly [8, pp, 34]. As most technical problems had been conquered, the psychological questions concerning the effects of these performances came to the fore. The Russian composer Alexander Scriabin was particularly interested in the psychological effects on the audience when they experienced sound and color simultaneously. His theory was that when the correct color was perceived with the correct sound, 'a powerful psychological resonator for the listener' would be created. His most famous synesthetic work, which is still performed today, is Prometheus – «Poem of Fire». On the score of Prometheus, he wrote next to the instruments separate parts for the color organ.

As we know, Carol Steen[8] experiences multiple forms of synesthesia, including grapheme → color synesthesia, music → color synesthesia, and touch → color synesthesia. She most often uses her music → color synesthesia and touch → color synesthesia in creating her works of art, which often involves attempting to capture, select, and transmit her synesthetic experiences into her paintings. Steen describes[9] how her synesthetic experience during an acupuncture session led to the creation of the painting vision [12, pp. 271-272].

Rather than trying to create depictions of what she experiences, «Reflectionist» Marcia Smilack uses her synesthetic experience in guiding her towards creating images that are aesthetically pleasing and appealing to her. Smilack takes pictures of reflected objects, mostly using the surface of the water, and says of her photography style: «I taught myself to take pictures by shooting whenever I experience a synesthetic reaction to what I see: if I experience a sensation of texture, motion or taste, I take the picture. If the reflection elicits the sound of cello, I shoot the picture. I photograph reflections on moving water. It works like this: I watch the surface of the sea until I experience one of my synesthetic responses. When I do, I trust it to be a reliable signal that tells me it is the right time to take the picture, so I click the shutter. Within the creative process, I think of my synesthetic responses as vital messengers that arrive faster than thought to deliver one urgent message which I always heed: beauty is lurking» [3, pp. 197-198]

Anne Salz, a Dutch musician and visual artist, perceives music in colored patterns. She describes her painting inspired by Vivaldi's «Concerto for Four Violins»: «The painting represents the opening of the concerto for four violins. I listen to the music while I paint. First, the music gives me an optimistic, happy feeling and I perceive red, yellow, and orange colors in a great variety with little contrast. It looks like a field of these colors. I perceive the color field as a musical chord. You can compare it with the colors of a blanket or cover made of autumn leaves»[3, p. 201] She explains that the painting is not a copy of what she hears; rather, when she listens to music, she perceives more colorful textures than she normally perceives and she is able to depict them in the painting. She also expresses the movement of the music, as its energy influences the pictorial composition. She explains how she perceives the painting: «The lively movements in the music become a stream of glowing shades of orange. The black structure provides cadence and reveals its significance and character. It is an indispensable foundation for the moving colors. The painting evokes my feelings again when I listen to the music again»[3, pp. 203-204]

[8] Carol Steen is an artist, writer and curator who lives and works in New York. She has had over 20 solo gallery exhibitions, her first solo exhibition in 1973 was at the Detroit Institute of Arts, and her work has been in over 50 group exhibitions including shows at the Philadelphia Museum of Art, the Brookgreen Gardens Museum in South Carolina, the Cranbrook Museum in Michigan, and the DeCordova Museum in Massachusetts.

[9] "One day, many years ago, I was having an acupuncture treatment and was lying flat on my back, on a futon, stuck full of needles. My eyes were shut and I watched intently, as I always do, hoping to see something magical, which does not always occur. Sometimes what I see is just not interesting or beautiful. Lying there, I watched the soft, undulating, black background I always see when I shut my eyes become pierced by a bright red color that began to form in the middle of the rich velvet blackness. The red began as a small dot of intense color and grew quite large rather quickly, chasing much of the blackness away. I saw green shapes appear in the midst of the red color and move around the red and black fields. This is the first vision that I painted exactly as I saw it..." [12, pp. 271-272]

Brandy Gale - California-based Canadian painter and photographer «experiences an involuntary joining or crossing of any of her senses – hearing, vision, taste, touch, smell and movement. Gale paints from life rather than from photographs and by exploring the sensory panorama of each locale attempts to capture, select, and transmit these personal experiences» [1, pp.164-165] «Growing up with this gift, I thought everyone had it. But it turns out that it is not so common, and it took the school psychologist to figure out why the letter "A" was always yellow to me, or the fresh cut grass on the way to school triggered a melody in my head, or why certain shapes had personalities and smells» [1, pp.168-169]

According to Georgian Philosopher Irma Bagrationi's work «For the Issues of the World-View Online Foreign Language Learning" the online cycle of information use in decision-making, "In particular, a typical example of such traditional encounters was trust board meetings. During these meetings, we did observe the online educational process in action, with the chairperson usually setting up the scene and some member of the executive team presenting the background information and the supporting evidence collected prior to the meeting. This would be customarily followed by a discussion when the online participants would ask probing theoretical questions and test the validity of the worldview argument» [2, pp. 501-502]

In the second half the nineteenth century, a tradition of musical paintings began to appear that influenced symbolist painters. In the first decades of the twentieth century, a German artist group called The Blue Rider executed synesthetic experiments that involved a composite group of painters, composers, dancers and theater producers. The group focused on the unification of the arts by means of "Total Works of Art"[10]. Kandinsky's theory of synesthesia, as formulated in the booklet "Concerning the Spiritual in Art", helped to shape the ground for these experiments. Kandinsky was not the only artist at this time with an interest in synesthetic perception. A study of the art at the turn of the century reveals in the work of almost every progressive or avant-garde artist an interest in the correspondences of music and visual art. Modern artists experimented with multi-sensory perception like the simultaneous perception of movement in music and film.

Starting in the late 1950s, electronic music and electronic visual art have co-existed in the same digital medium. Since that time, the interaction of these fields of art has increased tremendously. Nowadays, students of art and music have digital software at their disposal that uses both musical and visual imagery. Given the capability of the Internet to publish and share digital productions, this has led to an enormous avalanche of synesthesia-inspired art on the Internet [10, pp. 254-255]. David Hockney[11] perceives music as color, shape, and configuration and uses these perceptions when

[10] The author discusses his experiences as an artist and synesthetic one. He describes his synesthetic perceptions - his experiences of touch, sound and other sensory input in the form of often strikingly colorful visions. He explains the development of his awareness of his synesthesia and of methods and preferred Educational techniques for communicating these experiences through painting and sculpture, thus allowing his to express what would otherwise not be fully expressible. He finds that art inspired by synesthesia may convey information of significance to everyone, observing that more general aspects of perception may be illuminated by the Educational study of synesthesia.

[11] David Hockney, is a British painter, draftsman, stage designer, and photographer; As an important contributor to the pop art movement of the 1960s, he is considered one of the most influential British artists of the 20th century. Creation of the "joiners" occurred accidentally. He noticed in the late sixties that photographers were using cameras with wide-angle lenses. He did not like these photographs because they looked somewhat distorted. While working on a painting of

painting opera stage sets though not while creating his other artworks. He combined four senses: color, hearing, touch, and smell and described his grapheme-color synesthesia at length in his autobiography, and portrayed it in some of his characters.

With today's knowledge and testing apparatus, it can be determined with more certainty if contemporary artists are synesthetic. By interviewing these artists, one gets some insights into the process of painting music. The lines of artistic explorations of synesthesia and scientific research into the subject have become closely intertwined in the last decade. Some contemporary artists are active members of synesthesia associations around the world. In and outside these associations that house scientists and artists, the exchange of ideas and collaborations between artists and scientists has grown rapidly in the last decades, and this is only a small selection of synesthetic work in the arts. New artistic projects on synesthesia are appearing every year. These painters, sculptors, designers and musicians have shown to be well informed on the latest scientific insights in synesthesia. They combine this scientific knowledge and personal intuition in a range of artistic expressions. For instance, they capture their synesthetic perceptions in painting, photographs, textile work, and sculptures. Beside these 'classical' materials of making art, an even larger production of synesthesia-inspired works is noticed in the field of digital art.

Since the rise of the Internet in the 1990s, synesthetic began contacting one another and creating web sites devoted to the condition.

**Chapter II – The Educational Techniques for the Applied Aesthetic Synesthesia**

As is generally and well known that an emotionally-compelling fable is the account of a series of events which, for a particular listener or reader, has the following attributes:

Situation - Is based upon a problem, question or situation which is significant in the life of the listener; Exploration - Explores the problem, question or situation through a series of internally-consistent actions; Moral - Suggests a resolution or deeper understanding of the problem, question or situation; Emotional response - Produces an emotional response in the listener. It is a striking fact that certain things, such as key events in childhood and the plots of particular stories or movies, are remembered effortlessly for our entire lives. Other things, such as shopping lists, are hard to remember even briefly. A consideration of what we remember and what we do not and of what evolutionary role memory plays in aiding our survival, leads to the theory that human long-term memory is engineered to support emotionally-compelling fables.

It is interesting, that connecting paths and salient images are powerful mnemonic techniques which can and should be taught in any introductory language class. They are simple to explain, improve retention, and add a pleasant, game-like aspect to memorization. However, while these and similar techniques are definitely an improvement over leaving students to memorize through rote

a living room and terrace in Los Angeles, he took Polaroid shots of the living room and glued them together, not intending for them to be a composition on their own. On looking at the final composition, he realized it created a narrative, as if the viewer moved through the room. He began to work more with photography after this discovery and stopped painting for a while to exclusively pursue this new technique. Frustrated with the limitations of photography and its 'one-eyed' approach, however, he returned to painting.

repetition, these techniques tend to collapse under the weight of rapidly learning the full vocabulary of a new language. Paths or images are forgotten in part or in whole, and there are confusions between words. It is a thesis of this essay that the failure in bulk of connecting paths and salient images is due to the fact that these techniques are insufficiently grounded in the natural operations of human long-term memory. Mnemonics made in these ways are forgotten because our brains were not designed to remember them. It is suggested that the key failings of existing techniques can be removed by basing a mnemonic strategy around the theory that human long-term memory is organized in terms of emotionally-compelling fables. A specific mnemonic technique based upon this theory is introduced, using applied synesthesia [8, p. 39].

If we consider that a situation we find ourselves in can be thought of as the "starting point" of an emotionally compelling fable, then we are led to the following thesis: Human long-term memory is engineered to identify, record, and selectively retrieve emotionally compelling fables. The necessity for a fable to produce an emotional response in order to be remembered appears to reflect two considerations. The first is a sort of quality check: if a fable does not produce an emotional response then it is probably not important enough to be worth cataloging in long-term memory. The second consideration, more operational, is that emotion appears to serve as the index for long-term memory. A particular situation that we are placed in induces an emotional response. Our long-term memory then retrieves emotionally compelling fable's that produced the same or similar emotional response; on the grounds that they are the emotionally-compelling fable's most likely to be relevant. If long-term memory is based upon emotionally-compelling fable's, then rapidly and permanently learning vocabulary lists depends upon efficiently representing the link between words in two languages as emotionally-compelling fable's. The technique of salient images[12], described in our research, touches on some parts of emotionally compelling fables[13]. However, the importance of producing an emotional response, as opposed focusing on creating a humorous or striking image, or visual detail or intensity, is rarely emphasized. Also, the necessity of including a moral is not widely taught [11, pp. 79-80].

It is very interesting that in Georgian scientists and researchers - Ibraim Didmanidze, Zebur

[12] For instance, the salient image given in the introduction, linking "kick" to "patter", could be quickly extended to an emotionally-compelling fable by imagining the following elements: Situation - which the player patting his ear had been attempting to make a great play; Exploration - that in the process of making the play, he made a risky move that resulted in him getting kicked in the ear; Moral - A number are possible, such as: greatness requires sacrifice; sports are dangerous; etc. The person needing to remember the link between "kick" and "patter" should pick the moral that resonates most quickly and deeply with them; Emotional response - Many are possible, such as anger, bitterness, determination, etc. The key point is that one must be sufficiently engaged in the emotionally-compelling fable to feel an emotional response or the emotionally-compelling fable is likely to be forgotten.

[13] Aesop's fables are good examples of the emotionally-compelling fables. Consider, for instance, the fable of the grasshopper and the ant. Briefly summarized, the grasshopper plays during the summer while the ant prepares for the winter. When winter comes, the ant survives and the grasshopper does not [7, pp. 140-141].
The grasshopper fable fits the characteristics of an emotionally-compelling fable:
- it deals with the question of why we need to work;
- it explores this question by comparing someone who works with someone who does not;
- it points out that if you do not work, you are likely to die;
- it tends to produce an emotional reaction, perhaps a combination of pity and horror.

Beridze and Irma Bagrationi's opinion[14] we must distinctly note here that «Psychologists' research is helping to make educational technologies more fun, intriguing and more effective. This study explores the perceptions of practical educational psychologists into ethical issues. Significance of the topic there is increasing interest in professional ethics in many areas of modern social life, both nationally and globally» [5, pp. 115-116].

However, there are two difficulties with the emotionally compelling fable methodology as presented above. The first is that it is initially time-consuming. It takes time and effort to build an emotionally compelling fable for every pair of words to be learned. This difficulty resolves itself with practice, to the point that an emotionally compelling fable forms almost subconsciously as the word and its definition is read. Amortized over the time needed to learn ten thousand words or so in a new language, the emotionally compelling fable methodology pays for itself fairly quickly. A more fundamental problem is that most words are not as convenient as "patter", in terms of breaking down easily into components that can be used to build an emotionally compelling fable[15]. While strained decompositions can be used, the following section presents a deeper solution: a means to systematically decompose any word into units suitable for rapidly constructing emotionally compelling fables. It's noteworthy here that in agreement with Georgian researchers – Ibraim Didmanidze, Zebur Beridze and Irma Bagrationi's scientific discussion[16] «[…] we explain […] our thinking on the specific process of analysis of educational technologies of philosophical issues. Our research has been informed by a view of critical psychologist, Erich Fromm, addresses the notion of authority in a way that reveals it as an ethical issue, one that teachers and other political workers must confront every day» [6, pp. 54-55]. In our opinion, this solution makes use really of the applied aesthetic synesthesia process.

**Conclusion**

From the above-mentioned we may conclude that the phenomenon of synesthesia as an aesthetic category, adopted in practical Philosophy, pragmatic pictorialize theory and applied Psychology, and as an aesthetic component of figurative contexts, semantically connected with a sphere of artistic creativity and artwork. The synesthesia is realized as implementation of the fiction associative thinking, connected with the category of the theoretical artistic aesthetic perception. The term "aesthetic synesthesia" is used as the explanation for intermodal sensations verbalized by the styling language and conception of the creative activity.

[14] In the printed/published scientific article "ON ETHICAL USE OF INFORMATION TECHNOLOGIES IN EDUCATIONAL PSYCHOLOGY"

[15] Aesop's fables are of course very memorable. More generally, literature tends to be memorable to the extent that it tells a story about the consequences of decisions, essentially in the form of an emotionally compelling fable. It is also of interest that while most activities in our own lives are forgotten, the few that are remembered tend to be those that have a lesson to teach us, again in the form of an emotionally compelling fable. Examples might include learning about the importance of not climbing out on the ends of tree branches, when honesty is or is not the best policy, etc. Memory is a product of evolution. It can exist only to the extent that it helps us to survive. The primary survival value that memory can provide is to inform us of how a situation is likely to play out before we have to risk life and limb. Consequently, human memory is not a copying machine, it is a comprehending machine.

[16] In the printed/published scientific article "ON THE ETHICAL VALUES OF BUSINESS AND TECHNOLOGY EDUCATION ACCORDING TO ERICH FROMM'S SOCIAL PEDAGOGY VIEWS"

As it is seen from our research, it is understandable that the results of this scientific work are on synesthesia raises questions about how the brain combines information from different sensory modalities, referred to as cross-modal perception or multisensory integration.

The researchers hope that the study of some techniques of synesthesia will provide better understanding of Aesthetics for educational establishments of different kinds. In particular, synesthesia might be relevant to the philosophical problem of artistic creativity given that synesthetic experience of colored sound. Synesthesia also has a number of practical applications, one of which is the use of 'intentional synesthesia' in an educational technology.

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