UDC 159.937:347.782
DOI: 10.52534/msu-pp2.2024.29

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Psychological features of perception of artworks by people with different types of functional brain asymmetry

Article's History:
Received: 09.02.2024
Revised: 13.05.2024
Accepted: 28.06.2024

Suggested Citation:
Kresan, O. (2024). Psychological features of perception of artworks by people with different types of functional brain asymmetry. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology"*, 10(2), 29-38. doi: 10.52534/msu-pp2.2024.29.

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Abstract. The relevance of the study is conditioned by the increased attention of modern psychology to individual personality traits and its decreased focus on the normativity of an individual. In the process of individual development, the contemplation of art allows a person not only to broaden their own worldview, but also contributes to cultural enrichment. The purpose of the study was an empirical investigation of the features of perception of works of art by persons with different types of functional brain asymmetry. The study was conducted using the method of standardised interviews with the subjects of two groups: the main group – people who do not have professional knowledge of art (N = 43), and the control group – students studying art history and fine arts as professional disciplines, and familiar with the rules for constructing composition in a picture (N = 30). The results were analysed using statistical criteria: the Kolmogorov-Smirnov test and the Fisher angular transformation criterion φ^*. As a result of the empirical study, there were no statistically reliable patterns in the perception of works of art in the general group, but significant differences were found in the features of perception of movement and its speed in works of art by persons with different types of functional/interhemispheric brain asymmetry, which indicates a nonlinear nature of perception, and the influence of cognitive phenotypes on the perception of works of art. The perception of artworks is an individual cognitive process that may differ between the author and the recipient of artistic creativity, and the author's intention may be misunderstood by the audience if the features of individual perception of a work of art, and the laterality of the personality, are not considered. The practical significance of the study lies in the possibility of applying its results in the process of professional training of students of art specialities, considering the specific features of the laterality of art recipients

Keywords: perception of artworks; functional/interhemispheric brain asymmetry; right-handedness; left-handedness; laterality; cognitive phenotype

INTRODUCTION

The problem of individual features of world perception and specific personality characteristics is generally relevant in the modern multicultural world. First of all, this relevance is conditioned by the fact that interpersonal and individual differences can give rise to difficulties of interaction, conflicts and disagreements, for the solution of which it is important to understand the difference in views and behaviour of a person and their worldview. Art helps to understand the diversity of the world and the range of views on it, as it expresses the individual characteristics of the author on the one hand, and helps to broaden the worldview of the recipients and the audience that perceives works of art on the other.

The individual psychological characteristics of a person involved in these processes are of paramount importance in the perception and at all stages of creating art objects (works of art, including fine art). Thus, the vision of the artist, the author, may not resonate with the audience or cause opposite emotions. Consideration of these psychological aspects will help bring the work closer to the viewer, and the recipients will better understand the individual aspects of the author's intention. This is especially true for the perception of movement, time, and space in works of fine art. In particular, in art history, it is accepted that the conventional depiction of natural movement is from left to right, but to convey difficult movement that is obstructed or difficult to experience, its reverse, mirror image is used (Bantinaki, 2021). However, in the process of individual perception of a work of art by a particular recipient, various errors and illusions of perception can occur, which makes it difficult for the viewer to understand the work of art. Such an individual psychological feature that can affect the process of perception is the functional asymmetry of the hemispheres of the human brain. This individual difference has been actively studied and has not lost its relevance for the last 50 or more years, and there are various terms for its definition, such as functional asymmetry, or interhemispheric asymmetry of the brain.

Functional/interhemispheric brain asymmetry refers to the neuropsychological and psychophysiological patterns of human and animal brain organisation, which are manifested in the dominance of one of the cerebral hemispheres – the right or left – in mental activity (Lugova *et al.*, 2020; Dehtiarenko & Kovylina, 2023). This complex individual psychological property of the individual is a factor of many mental and psychophysiological reactions, which can affect various features and forms of human behaviour. In particular, in psychology, there are known studies of functional asymmetry in the field of sports activities and its impact on the performance of athletes in various sports (Korobeinikov *et al.*, 2018; Ulan & Shinkaruk, 2019). In addition, psychologists have actively investigated the influence of interhemispheric asymmetry on the learning process and its success (Vozniuk & Horobets, 2019; Borysenko, 2023). Special attention should be paid to the problem of the influence of interhemispheric asymmetry on a person's creative abilities, in particular, the ability to create and understand works of art (Kovaleva *et al.*, 2022). However, the relationship between the characteristics of perception of works of art with the features of functional or interhemispheric asymmetry of the brain in psychology has not yet been studied. Therefore, the purpose of the study was to investigate the psychological features of the perception of movement and time in works of art by people with different types of functional asymmetry of the brain.

MATERIALS AND METHODS

To determine the specific features of perception of movement and time in works of art by subjects with different types of functional brain asymmetry, an empirical study was conducted, in which 43 volunteer respondents not related to art and 30 students of artistic specialities (fine arts, sculpture, design, restoration, etc.) of the state educational institution National Academy of Fine Arts and Architecture (NAOMA, Kyiv) took part, who formed the control sample. The age of the subjects ranged from 16 to 65 years, including 26 female respondents (60.4%) and 17 male respondents (39.5%). Among the main sample, according to the criterion of interhemispheric asymmetry, two groups of subjects were identified – right-handed (34 people) and left-handed (9 people). All survey participants were informed of where the information they provided would be used, and the survey was conducted in compliance with all ethical standards set out in the Declaration of Helsinki (Declaration of Helsinki, 2013).

The methods used in the study consisted of a standardised interview conducted individually in a mixed format by two experts during 2022-2023. The interview included questions based on famous paintings that depict movement, its speed and intensity. To test the hypothesis about the features of the individual's perception of movement and time, the proposed pictures were demonstrated to the subject in both normal and mirror images with a change in the direction of movement (from left to right and from right to left and vice versa). For demonstration to the participants, the works of famous authors were chosen, paintings depicting movement in a certain direction at a certain speed. These were the works of the following artists: (1) Ukrainian artist Ivan Repin's "Barge Haulers on the Volga" (Repin, 1873); (2) Pieter Bruegel the Elder's "The Parable of the Blind" (Bruegel the Elder, 1568); (3) "Attack (On the Line of Fire)" (Petrov-Vodkin, 1916). After viewing the paintings, respondents were asked to answer the following questions, expressing their subjective vision of the work:

1) Where is it harder for haulers to pull a barge? (Image A or B).

A

B

Figure 1. I. Repin "Barge Haulers on the Volga". (1873)
Notes: A – original; B – mirror image
Source: Ukrinform (n.d.)

2) Where do blind people fall faster? (Image A or B).

A

B

Figure 2. P. Bruegel the Elder. "The Parable of the Blind". (1568)
Notes: A – original; B – mirror image
Source: Jyvopys (n.d.)

3) Where do soldiers run faster? (Image A or B).
4) Where does the wounded commissar fall back more convincingly? (Image A or B).

A

B

Figure 3. K. Petrov-Vodkin. "Attack (In the Line of Fire)". 1916
Notes: A – original; B – mirror image
Source: Pinterest (n.d.)

The results were processed in several stages. The *first* stage involved the primary processing of numerical data and the division of the subjects into groups. At the *second* stage, a mathematical and statistical analysis of the frequency of respondents' choices of each image was conducted. The *third* stage involved a statistical analysis of the respondents' choices by group. For further processing of the findings, mathematical statistics methods were used: single-sample criterion λ – Kolmogorov-Smirnov test and the Fisher angular transformation criterion φ^*. The Kolmogorov-Smirnov test was used to test the statistical hypothesis of randomness/non-randomness of the subjects' choices of certain images, and the Fisher angular transformation criterion was used to compare the numerical results of the two groups.

RESULTS AND DISCUSSION

A survey of the subjects about their perception of the direction of movement, its intensity and speed in the paintings showed that there were no obvious patterns in the subjects' choice of certain images. Based on their own subjective ideas, respondents chose images of movement from right to left or vice versa – respectively, from left to right. The total calculation of the percentage ratio between the subjects' choice of direct image, its mirror image and the inability to answer the questions asked showed that the incentive material of the study (presentation of works of art) affects the respondents' responses. Thus, for the first picture, the respondents of the main sample made almost the same number of choices of the original and mirror image (with the opposite direction of movement) 39.5% and 44.1%, respectively (Table 1).

Table 1. The number of responses of the main sample to the paintings presented (original, mirror image, and uncertain choice)

Presented paintings	Number of responses		
	Original image	Mirror image	Uncertain choice
Painting 1	17 (39.5%)	19 (44.1%)	7 (16.27%)
Painting 2	14 (32.5%)	21 (48%)	8 (18.6%)
Painting 3	20 (46.5%)	12 (27.9%)	11 (25.5%)
Painting 3.1	19 (44.1%)	16 (37.2%)	8 (18.6%)

Source: compiled by the author

As can be seen from Table 1, the number of choices of the original and mirror image is almost the same, the greatest difference in the direction of the original image can be stated in Painting 3, where the original image was chosen by almost half of the subjects – 20 people, which is 46.5% (Table 1). At the same time, regarding the same picture ("Death of the commissar"), the largest number of undecided people is observed – 11, which is 25.5%. The second question follows the same pattern and is labelled in Table 1 as Painting 3.1. A visual representation of the choices for each painting is made in the diagram of the distribution of the respondents' choices of original, mirror images, and undecided answers (Fig. 4). As can be seen from the diagram, there are a different number of definite (original and mirror image) and uncertain choices for each painting, which indicates that there was no general pattern regarding the perception of movement and time in the above works of art. As a percentage, it can be observed that the first two pictures are dominated by the choice of a mirror image by the subjects, and the other two – on the contrary – are dominated by the choice of a direct one. However, the third image revealed the highest percentage of respondents who chose a direct image, and the largest percentage of those who did not decide on the choice. Such an unevenness in choices can be either natural or accidental. To explain this fact and determine a reliable conclusion about whether there are patterns in the choice of certain images by the subjects, a statistical analysis of the study data was carried out using the single-sample Kolmogorov-Smirnov criterion.

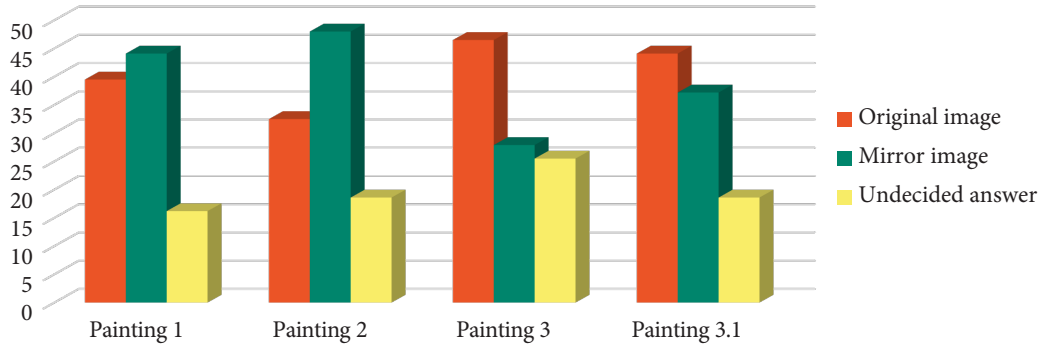

Figure 4. Diagram of the distribution of the choice of original, mirror images, and undecided response in the perception of works of art

Source: compiled by the author

To check whether there is a statistically reliable pattern in the respondents' choice of a certain direction of movement, a statistical analysis of the results of the frequency of selection of the proposed pictures was carried out, including a comparison of the results in the selected groups. To process the results of the study, the λ criterion was used – a single-sample Kolmogorov-Smirnov test to compare the theoretical distribution with the empirical one. As a result of applying this statistical procedure, the result of $d_{emp} = 0.03$ was obtained, which is not statistically significant (d_{cr} at n = 123 at the level of statistical significance $p \leq 0.05 = 0.123$). This indicates the absence of a statistically proven pattern in the choice of response numbers by the subjects, indicating the direction and the speed of movement in the paintings under study. This fact can be explained by the subjectivity of respondents' perception of artworks, in particular, individual understanding of movement, space, time, and other aspects in the process of visual perception. To determine the features of perception of movement and time in works of art by respondents with different types of functional or interhemispheric asymmetry of the brain, the results of two groups – right-handed and left-handed subjects – were compared. Mathematical and statistical analysis of the results was performed using the Fisher angular transformation criterion φ^*, numerical data and percentages in both samples are shown in Table 2.

Table 2. Results of the study of the choice of direction of movement in works of art in groups of right-handed and left-handed respondents according to the Fisher angular transformation criterion φ^*

Groups	Selected a direct image Number of selections	Selected a mirror image Number of selections	Total
Right-handed subjects	46 (56.8%)	35 (43.2%)	81 (100%)
Left-handed subjects	2 (16.7%)	10 (83.3%)	12 (100%)

Source: compiled by the author

Analysis of the data using the Fisher angular transformation criterion φ* showed that the result is in the zone of significance. Thus, $\varphi^*_{emp} = 2.796$, ($\varphi^*_{cr} = 2.31$ at $p \leq 0.01$) which means that the choice of left-handed subjects has significant differences from the sample of right-handers, i.e., the proportion of odd-digit selections (which in this study are original, not mirror images) is significantly higher in the sample of right-handers than left-handers. This indicates that the number of people with the studied trait in the first group, i.e., the group of right-handed people, prevails among the two groups surveyed. Thus, the null hypothesis can be rejected and the differences noted. This gives grounds to assert that among the right-handed subjects, a statistically significant number of people who choose pictures with movement from left to right were determined than among the left-handed ones. Therefore, it can be concluded that the perception of movement in paintings from left to right is more characteristic of right-handed subjects, while the perception of movement from right to left is more characteristic of left-handed people. The next stage of processing the results of the study was to determine the differences in the fate of the subjects in the two groups by parameter *defined and undefined choices*. According to the parameter of certain and undefined choice, the subjects who could not determine the direction of movement and the passage of time were selected, so their choice was designated as undefined. The number of defined and undefined choices in both groups of subjects is shown in Table 3.

Table 3. Results of the study of the choice of direction of movement in paintings (defined and undefined choice) in groups of right-handed and left-handed respondents according to the Fisher angular transformation criterion φ^*

Groups	Defined choice Number of selections	Undefined choice Number of selections	Total
Right-handed subjects	107 (86.3%)	17 (13.7%)	124 (100%)
Left-handed subjects	12 (50%)	12 (50%)	24 (100%)

Source: compiled by the author

Result of $\varphi^*_{emp} = 3.641$, which is statistically significant at $p \leq 0.01$ ($\varphi^*_{cr} = 2.31$). This indicates that the number of undecided respondents is more significant in the left-handed Group, and the number of undecided respondents is significantly higher in the right-handed group. These results can be explained by the long-known psychological fact that among the characteristics of left-handed people, researchers note, among other things, that they are characterised by increased mobility and imperfect spatial orientation (Yair Pinto *et al.*, 2017). Thus, uncertainty with the choice of direction of movement can be attributed to the reaction of confusion in the situation of the need to determine the direction of movement and perform orientation in space. The features of visual perception of left-handed people also often include distortion of the shapes and proportions of figures, mirror movements, which can also manifest itself in the mirror writing of left-handed children (Shkarban, 2018). This can explain the fact that among left-handed subjects, it is the mirror perception of the direction of movement in works of art that prevails.

Empirical studies by other researchers also indicate that lack of development or violation of spatial representations in left-handed children can cause difficulties in studying mathematics, geometry, and in their perception of other objects of the external environment (Shkarban, 2018). However, in the course of training, these points can be corrected, since special education can create a stereotype of the perception of works of art or any other objects. Thus, in the theory of art, it is traditionally customary to perceive the paintings from left to right, clockwise, so movement from left to right is considered more natural, respectively, movement in the opposite direction is perceived as more difficult (Pysanko, 1995). Foreign researchers (Bearden *et al.*, 2016; Henrich *et al.*, 2022) call this phenomenon *cognitive phenotype*, which indicates the acquired and stereotyped origin of this skill. This is proved by the results of a study with students of art specialities who made up the control group of the study. The vast majority of students with relevant artistic experience during the study chose images in their original, rather than mirror form (from 80 to 96%), which indicates, on the one hand, the development of their professional worldview and experience in perceiving and creating art, and on the other – the possession of the necessary knowledge regarding the construction of the composition of artworks. The results of the selection of respondents from the control sample are presented in Table 4.

Table 4. Number of responses of respondents of the control sample based on the presented paintings (original, mirror image, and undefined selection)

Presented paintings	Number of responses		
	Original image	Mirror image	Uncertain choice
Painting 1	25 (83.3%)	5 (16.6%)	0
Painting 2	29 (96.6%)	0	1 (3.3%)
Painting 3	27 (90%)	1 (3.3%)	2 (6.6%)
Painting 3.1	27 (90%)	2 (6.6%)	1 (3.3%)

Source: compiled by the author

As can be seen from Table 4, the choice of images by students of art specialities is almost unanimous: the least unanimity is observed in Painting 1, where 83.3% of respondents chose the original image. Students showed the greatest unanimity in choosing the original image in relation to Painting 2, when none of the respondents in this sample chose a mirror image. The mirror image for all four paintings generally has a small number of choices (from 3.3 to 16.6%), and the number of undecided subjects is very low (from 0 to 6.6%). These data indicate the presence of an established cognitive phenotype in art students. This indicates the functioning of perceptual circuits, which is the result of their educational and professional activities.

In psychological science, there is a separate direction – the psychology of creativity and art, which studies various aspects of creativity and giftedness, and the specifics of creative perception and artworks in particular (Andrijauskas, 2022; Starr & Smith, 2023). Creative perception and perception of creativity are defined by the authors as close, but not identical cognitive processes. Perception, as a perceptual process, is a holistic reflection of objects and phenomena of the surrounding world in the recipient's mind during their direct impact on the sensory organs (Lugova *et al.*, 2020). It follows that the perception of creativity will occur during the impact on the human senses of works of art: visual, musical art, and the like. A certain image is developed in the human mind, associated with the object of perception: for example, when a person contemplates, listens to works of art, they perceive them, forming a certain image, emotional attitude to the work, etc. But creative perception is the process and result of constructing "a subjectively new image, which to a greater or lesser extent modifies objects and phenomena of objective reality in a specific way". According to some researchers in the field of creative psychology, in the process of creative perception, there may be such variants of its manifestation: the perception of a new object, when creativity must necessarily manifest itself, or the desire to find something unknown in the perception of familiar objects, new elements, signs, etc. (Moliaco, 2021). In the process of perception of art, both options can be involved, since artworks often constitute a completely new and previously unfamiliar phenomenon for the recipient, and also during repeated contemplation, a person can discover new layers of already known works and perceive them in a new way. The traditional view of the perception of art is based on psychological theories created in the 20th century, which note that the perception of space and movement in a picture occurs from left to right (Pysanko, 1995). Modern scientific studies do not confirm this fact, referring to changes in the individual psychological characteristics of recipients, which can affect the process of their perception of art (Ansorge *et al.*, 2022).

In addition, psychologists note that the process of perception of an artwork is a complex phenomenon, like any perception that, according to O. Lozova *et al.* (2023), "is not a mechanical assimilation of data stored on the retina", but is at the same time "the construction of an image with a hierarchical structure", since it consists in finding a block diagram corresponding to the configuration of shapes and colours obtained from the retina. And the more complex this configuration is, the greater the "perceptual uncertainty", and therefore there are more variations for individual subjective perception and interpretation of an artwork (Lozova *et al.*, 2023). Individual and subjective psychological

features of the perception of artworks following the Danish psychologist Bjarne Sode Funch can be distinguished in the context of four approaches to their understanding: psychophysiological, cognitive, psychoanalytic, and existential (Funch, 1997). Among all these approaches, the *psychophysiological approach* reveals the influence on the process of perception of typological, innate individual properties associated with the nervous system, the human genotype, and therefore it is most difficult to carry out purposeful influence on them or develop them in the process of special training and upbringing. But they should be considered in the process of training, upbringing, and development of an aesthetic worldview of the individual. Features of this kind include the type of functional/interhemispheric asymmetry, which is congenital and the development of which is difficult to influence during life (Kovaleva *et al.*, 2022; Dehtiarenko & Kovylina, 2023).

In studies of the process of perception in the context of interhemispheric brain asymmetry, patterns of perception are distinguished, which consist in the fact that the right hemisphere of the brain better perceives the left, and the left – the right visual field of a person (Harrison & Strother, 2020). This means that people with a certain type of functional asymmetry of the brain will perceive objects and phenomena differently. However, numbers, letters, words, and symbols, according to researchers, are better perceived when presented in the right field of view. In particular, O.V. Vozniuk & S.M. Horobets (2019) note in their study that "interhemispheric asymmetry reflects the overall asymmetry of space and time in the universe." Thus, in the process of visual perception of space or its image on a plane, "a person's gaze usually moves in the process of viewing a certain object from left to right, and the space in the same trajectory should increase the height of objects that fill this space, and their number and compositional complexity increases". This feature of visual perception in psychology is called the "Gibson's law of right-hand stimulation", which is inherent in all forms of life on Earth.

Theory of perception by J. Gibson (1978) was developed in 1966 and was named *bottom-up processing*. It contradicts constructivist theories of perception, which assume that it occurs as a single-stage integral process. Unlike top-down perception, bottom-up perception is driven by sensory system data and does not require prior knowledge or training, but is mostly an innate process. This perception occurs at the moment of the here and now, when there is an impact on the human senses. For example, if an image of a single letter is seen on a screen, the eyes transmit information to the brain, and the brain simultaneously combines all this information into a single, holistic perception process (Levus & Kuchebo, 2021; Sedgwick, 2021). The researcher developed the idea of naturalising perception to understand it as a biological rather than logical function that evolved to control adaptive behaviour in the natural environment. However, he also uses this approach for *higher-order perceptual processes, spatio-temporal patterns of stimulation*, i.e., more complex forms of perception (Warren, 2021). This is manifested in the fact that in the process of visual perception (for example, in the case of perception of art), the process occurs from bottom to top and from right to left, and more complex perceptual processes occur through microporesis and sensory information processed in the cerebral cortex (Gibson, 1978).

The theory of visual perception, which puts forward opposing ideas to Gibson's theory, is the classical theory of *top-down processing*, which denies the innate nature of perception, and insists on the influence of previous experience and learning in the process of perception. One of the key elements of this concept is visual illusions (Gregory, 1997). According to the author, the previous experience gained in the environment, in a situation of limited sensory resources, helps to create an image even without the proper level of visual stimulation. This applies to cases where the brain makes unreliable predictions about reality, thus creating illusions. This suggests that human perception is not limited to recording information that enters the retina of the eye, the brain continues to process this information and eventually generates an image that is already present in the memory. Thus, based on previous experience, the brain chooses the patterns available to it and creates and constructs the perceived information (Gregory, 1997). According to the authors of this study, this concept is more consistent with the real situation of perception of artworks, since previous experience has a significant impact on the views and tastes of recipients, which can be observed in the example of the results of the main control sample in this study. However, the influence of psychophysiological mechanisms, which can also play a role in the process of holistic perception of art, cannot be excluded.

In addition, the type of functional asymmetry of the author of artistic or pictorial works can also significantly affect the process of their perception. However, the latest psychological research published by psychologists in 2024 shows the results of a survey among Instagram users (Røsvoll *et al.*, 2024), where a sample of more than 400 respondents showed that the perception of left – and right-handed artists, and the quality of their works, do not differ significantly, and indicates only individual psychological characteristics of the individual. To test what psychological characteristics determine the perception of works of fine art, namely, the visual perception of movement and time on canvas, the authors of this study developed and conducted an empirical study of this problem, where they confirmed their hypothesis.

Thus, the results obtained in the course of the study of the features of perception of works of art by persons with different types of functional brain asymmetry confirm the laterality of perception of paintings by representatives of different types of interhemispheric brain asymmetry. The attitudes of the individual regarding the perception of visual works of art that existed in traditional art, in particular, the tendency to perceive in the picture the movement from left to right as faster, and the movement from right

to left, respectively, as slower and more complex, did not confirm their relevance. However, a statistically significant difference was proved between the features of visual art perception in right-handed and left-handed subjects.

CONCLUSIONS

The perception of artworks is an individual psychological phenomenon, which may depend on various objective and subjective factors. Psychological theories and concepts consider the features of visual perception of space, movement, and its speed differently. The authors have identified two theories among the most famous psychological theories of perception that can be applied to the perception of works of art. The first is the "bottom-up" theory of perception, which emphasises biological and psychophysiological mechanisms as leading in the process of perception, and the second is the "top-down" theory of perception, which, on the contrary, considers perception to be an integral cognitive process, where the leading importance is not sensory stimuli and their coverage by the senses, but perception stereotypes, previous experience, the so-called cognitive phenotype, which determines the process of perception of art.

The perception of movement and its direction and speed in works of fine art traditionally occurs from left to right, but recently these features of perception have acquired new aspects and are no longer distinguished as leading ones. This is conditioned by the individual psychological characteristics of the subjects, in particular, the type of interhemispheric asymmetry of the brain. As a result of an empirical study conducted with volunteers who do not have an art education and with students who study art professionally, it was proved that the perception of movement from left to right as more natural and rapid is inherent in people with right-hand dominance, while left-handers are more characterised by a mirror perception of movement in paintings, and undefined movement, when it is difficult for respondents to decide on a choice. These results are inherent in a group of people without an art education, but students who have studied the rules for creating a composition perceive it from left to right, regardless of the type of functional asymmetry of the brain. Such results can be explained by the cognitive phenotype, that is, the influence of professional experience and professional education on students' perception. Prospects for further research in this area are the study of cross-cultural features of the perception of artworks by representatives of various national communities.

ACKNOWLEDGEMENTS

The gratitude is expressed to L.S. Mkhitaryan, a lecturer at the Department of Foreign Languages of the National Academy of Fine Arts and Architecture (Kyiv), for the assistance in conducting the empirical research.

CONFLICT OF INTEREST

None.

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Психологічні особливості сприймання творів мистецтва особами з різним типом функціональної асиметрії мозку

Анотація. Актуальність дослідження зумовлена підвищенням уваги сучасної психології до індивідуальних особливостей особистості та зменшенням її орієнтації на нормотиповість окремого індивіда. В процесі індивідуального розвитку споглядання мистецтва дозволяє особистості не лише розширювати власний світогляд, а й сприяє її культурному збагаченню. Метою статті стало емпіричне дослідження особливостей сприймання творів мистецтва особами з різними типами функціональної асиметрії мозку. Дослідження відбувалося за допомогою методу стандартизованого інтерв'ю з досліджуваними двох груп: основна група – особи, які не мають професійних знань про мистецтво (N = 43), а також контрольна група – студенти, що вивчають мистецтвознавство та образотворче мистецтво, як фахові дисципліни, і знайомі з правилами конструювання композиції на картині (N = 30). Результати були проаналізовані за допомогою статистичних критеріїв: тест Колмогорова-Смирнова та критерій кутового перетворення Фішера φ^*. В результаті емпіричного дослідження не було виявлено статистично достовірних закономірностей у сприйманні творів мистецтва у загальній групі, проте виявлені істотні відмінності в особливостях сприймання руху та його швидкості у творах мистецтва особами з різним типом функціональної/міжпівкульової асиметрії головного мозку, що свідчить про нелінійний характер сприймання, а також вплив когнітивних фенотипів на сприймання творів мистецтва. Сприймання творів мистецтва є індивідуально-когнітивним процесом, що може відрізнятися у автора та реципієнта художньої творчості, а авторський задум може бути некоректно зрозумілий глядачами, якщо не враховані особливості індивідуального сприйняття твору мистецтва, а також латеральність особистості. Практичне значення дослідження полягає у можливості застосувати його результати у процесі фахової підготовки студентів мистецьких спеціальностей з урахуванням особливостей латеральності реципієнтів мистецтва

Ключові слова: сприймання творів мистецтва; функціональна/міжпівкульова асиметрія головного мозку; праворукість; ліворукість; латеральність; когнітивний фенотип