



Spatial-mnemonic model of deviant behaviour: Interrelation between space topology, selective memory, and forms of deviant behaviour

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◆ **Abstract.** In modern psychological science, the issue of deviant behaviour remains relevant due to the limited models that explain its persistence solely through cognitive errors or social factors, and insufficient attention to the role of the internal organisation of subjective space and memory. The study aimed to develop and empirically test a trichotomous spatial-mnemonic model of deviant behaviour, in which memory is considered as a way of organising the personal space of an individual. The research methodology was based on the integration of phenomenological and cognitive approaches using experimental psychological methods and correlation analysis. As a result of the study, a spatial-mnemonic model was proposed in which the selectivity of memory acts as a key mechanism for the formation of the topological characteristics of subjective space, in particular its structure, extent, continuity, three-dimensionality, and infinity. In contrast to traditional cognitive psychology, which focuses on the functional aspects of memory (encoding, storage, retrieval, and cognitive schemas), the proposed model treats memory as a fundamental mechanism for organising a person's living space. The study demonstrated that persistent patterns of deviant behaviour can be interpreted as a consequence of a specific configuration of space and memory, rather than as random or situational regulatory disturbances. Empirical validation of the model was performed on a sample of 50 subjects aged 20-50 using the Stroop Colour-Word Test. Analysis of automated reading, colour naming, interference conditions and interference index indicators revealed significant correlations between cognitive rigidity, spatial perception disorders and manifestations of deviant behaviour. The results confirmed that the characteristics of the spatial organisation of experience determine typical behavioural scenarios, in particular pedantry, impulsivity, emotional overload and narrowing of the cognitive field. The practical value of the study is determined by the possible use of the spatial-mnemonic model for psychological diagnosis, prevention, and correction of persistent forms of deviant behaviour

◆ **Keywords:** memories; structure of phenomenological experience; cognitive-spatial organisation; patterns of behavioural regulation; psychological rigidity

◆ Introduction

The research relevance of the relationship between spatial topology, memory selectivity, and forms of deviant behaviour is determined by the possibility of creating an effective model that can be used for the analysis of the

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variability of deviant forms of behaviour through the prism of spatial perception. Defining memory selectivity in the context of spatial characteristics further demonstrates these processes, which are necessary for the diagnosis of perception disorders and predicting changes in personality behaviour. This approach creates opportunities for therapeutic intervention, in particular, the correction of spatial perception to restore normal mental functioning. Memory is one of the most complex mental functions, the main characteristics of which are the mind's ability to memorise, store and reproduce information. However, these features cannot be explained mechanistically alone, as they involve much broader and multifaceted processes that depend on various factors and influences. A person can reproduce from memory an experience that they did not actually have; memory stores past events in an updated form, incorporating corrections made by life experience. A unique effect is the absence of a difference for the brain between the immediate experience of an event and the memory of the same event. Of course, memory as a mental phenomenon is associated with a person's spatial experience. A. Villegas & S.A. Siegelbaum (2025) examine the relationship between selective social memory and aggressive behaviour from the perspective of neuropsychology: memories of social contexts influence the level of aggression, i.e. selective memory itself changes behavioural strategy. The analysis of spatial memory is absent, but the role of the hippocampus in incorporating the contextuality of memory into behavioural decisions is confirmed. The dissertation research by T.S. Satmarean (2022) demonstrated empirical studies on the relationship between memory, attention and aggressive behaviour. The study proposed a version of the model of "social-informational processing with an emphasis on memory selectivity". D. Koevoet & A. Postma (2023) considered memory from the perspectives of systematicity and selectivity. The study raises the question of whether memory can retrospectively increase the memory of initially irrelevant information and to what extent. The authors reviewed the existing positive answer to this question. The authors question and consider doubtful the idea that retroactive memory enhancement can be selective for semantically meaningful material. A. Musa *et al.* (2022) were able to experimentally demonstrate that a tendency toward chaotic thinking selectively impairs the ability to create mental maps through reliance on vision. Instead of a unified spatial structure, people experience fragmented loci, which hinders orientation and decision-making; in other words, memory selectivity disorders directly lead to the disintegration of space. G. Northoff (2023) introduced the concept of "mental topography". The study concluded that symptoms are not errors, but rather disruptions in spatial-temporal structuring; that is, if the brain is unable to integrate stimuli into a continuous space-time continuum, the result is a disconnect from reality. The study provided a theoretical justification for a topological approach to the psyche. J.-Y. Son *et al.* (2021) demonstrated that humans encode social information not as a list, but as a spatial map.

If a person is unable to construct such a map, it becomes difficult to predict the behaviour of other people among their acquaintances. The latter causes deviant behaviour. In their subsequent work, J.-Y. Son *et al.* (2023) showed that the brain abstracts the structure of relationships, i.e., a person remembers not just a familiar person, but a certain scheme, a pattern of connections; memory selects the structure of connections and eliminates details and features. If this mechanism fails, a person sees only a set of chaotic loci, rather than the structure of society. From the perspective of phenomenology, J. Neisser *et al.* (2023) examined how a person experiences the past. As a result, the authors proposed a "model of the space of phenomenal states of memory". The study emphasised that the experience of memories is essentially not only access to information, but also a qualitative experience that can be described structurally. Despite the significant amount of literature on this topic, the question of how memory selectivity is related to the peculiarities of spatial perception and, further, to forms of deviant behaviour remains open. In this context, the use of a trichotomous spatial-mnemonic model of deviant behaviour is relevant and could form the basis for further research. The spatial-mnemonic model of deviant behaviour, with its diagnostic value, prognostic potential and possibility of implementation in the psychotherapeutic process, is particularly relevant in times of war and social upheaval, when psychology is seeking effective ways to help military and civilian personnel adapt in combat zones. The study aimed to develop a separate trichotomous, spatial-mnemonic model of deviant behaviour that integrates various scientific approaches and developments within the field of study. The research hypothesis was that there is a correlation between memory selectivity, topological characteristics of space and forms of human deviant behaviour. To achieve the aim of the study, the following tasks were formulated and solved. First, to present a theoretical and analytical representation of the relationship between space, memory selectivity and forms of deviant behaviour. Second, to conduct an experimental study of the problem.

◆ Materials and Methods

The study was conducted in 2025 in stages, combining theoretical, phenomenological and empirical levels of analysis. At the initial stage, memory was defined as a key mental function and was considered a multi-level process, the main properties of which are the ability to memorise, store and reproduce information. A phenomenological analysis of the selectivity of memory in the norm was carried out using the example of the 4th-century sarcophagus of Adelfia. The analysis was aimed at identifying ways of organising memory and semantic selection in a holistic, symbolically ordered space. In the second stage, a topological approach to the analysis of space was applied, which involves moving away from the phenomenological understanding of space as a field and using a system of characteristics (continuity, extension, structure, three-dimensionality, infinity) for in-depth interpretation

of human spatial existence in relation to forms of deviant behaviour. A theoretical review of concepts of space in the humanities and phenomenological knowledge was conducted, followed by the operationalisation of five key characteristics: continuity, extensiveness, structure, three-dimensionality and infinity. In the third stage of the study, the relationship between the topology of space, the selectivity of memory, and manifestations of deviant behaviour was phenomenologically substantiated using the text by V. Frankl (2023). The analysis was aimed at reconstructing the spatial-mnemonic transformations of personal experience in conditions of existential crisis and the destruction of the familiar world. The fourth stage involved the selection of psychodiagnostic methods for the empirical study of memory selectivity. The Stroop Colour-Word Test was chosen as the main tool, as it can be used for the quantitative recording of the characteristics of attention selectivity, cognitive control and the processing of conflicting information. At this stage, the transitions from test indicators (W, C, CW, and interference index I) to the characteristics of the topology of internal space and further forms of deviant behaviour were theoretically substantiated.

The fifth stage involved preparing and conducting empirical research, which was carried out online using a digital platform for individual testing. The sample consisted of 50 people aged 20 to 50 living in the same city. The only criteria for inclusion in the sample were age range and residence within the same urban social space. No exclusion criteria were specifically introduced, as the study was not intended for clinical diagnosis but was aimed at identifying general patterns of connection between memory selectivity and the spatial organisation of experience. The choice of the 20-50 age group was justified by the fact that this period is characterised by relative cognitive stability. From the point of view of deviant behaviour, this is not a stage of initial formation, but of practical realisation of deviant forms in the social and psychological space. The fact that the participants lived in the same city was regarded as a way to minimise the influence of diverse sociocultural contexts and as a condition for relative homogeneity of the external space. All participants took the Stroop Colour-Word Test remotely, in a familiar environment. Before the start of the test, participants were provided with standardised written instructions, identical in content and wording. The instructions contained an explanation of the purpose of the task, the procedure for its completion, and the requirements for answers. At the sixth stage, the empirical data obtained were analysed. The W, C, CW indicators and the interference index I were calculated for each participant. Further analysis was qualitative and interpretative in nature and was aimed at correlating cognitive indicators with the characteristics of the topology of internal space and possible forms of deviant behaviour. Descriptive statistics methods using Excel software were used to process the data. The study was conducted in accordance with the ethical requirements established by the World Medical Association's

Declaration of Helsinki (WMA, 2024). Before the start of testing, all participants provided informed consent in electronic form, were informed about the voluntary nature of participation, and about the possibility of withdrawing from participation at any time without negative consequences. The data obtained was used exclusively in aggregate form, in compliance with the principle of confidentiality.

◆ Results and Discussion

The system of five characteristics of space (continuity, extension, structure, three-dimensionality, infinity) has a scientific and historical basis. H. Reichenbach (1958) proposed an analysis of the topology of space in his study of the philosophy of space and time. The author identified, albeit not systematically, a range of already known characteristics of space – continuity, extension, structure, three-dimensionality and infinity. The characteristics of continuity and three-dimensionality were established as early as the 4th century BC by Aristotle (1999). Extent, as a characteristic of space, was substantiated by R. Descartes (1996), and the structure of space was derived in the works of mathematician B. Riemann (1868). N. Reichenbach did not list the characteristics of space, but thanks to the approach to the analysis of these characteristics, they are presented in the literature in a form that has become traditional for their study. K. Lewin (1939) considered behaviour as a function of “living space”. The study already used topological concepts: the connectivity of areas, boundaries, and paths, but in this case, the experience of using the topology of space, as shown, is different. A phenomenological analysis of the selectivity of memory in the norm was conducted using the example of the Adelfia sarcophagus, a monument of early Christian art dating from the second quarter of the 4th century. It was discovered in Syracuse, Sicily, in the 19th century, in the catacombs of St. John. The marble bas-relief of the sarcophagus has a complex spatial structure, which is shown in Figure 1.



Figure 1. Sarcophagus of Adelfia, 4th century
Source: N.P. Kondakov (2011)

The structure of the space is organised based on a timeline reflecting events from the Old and New Testaments, with a shell-shaped bas-relief in the centre depicting Adelfia and husband, Count Valerius. In the upper left corner of the bas-relief is a spatial locus describing paradise. In the 4th century, it was customary to rely not on abstract fantasy but on a very specific experience of encountering the reality

being described when depicting spiritual events through visual means. In the case of Adelpia's sarcophagus, a mariocentric structure of paradise has been identified, but this does not mean that paradise is monocentric: it may be polycentric, since the figure of Christ is not visible in it. Multicentricity is a paradoxical characteristic of the mental perception of space and is typical of late antiquity and the Middle Ages. The space of paradise is represented in such a way that the centre is a source of power that causes the subjects to move and attracts them to itself. This same force of gravity ensures the subjects' tranquillity after reaching the centre. The subject moves not to continue the journey, but to achieve a state of completeness. This definition of space is closely related to eschatological thinking and the experience of spiritual ascent. Thus, in this example, selectivity of memory is observed in the description of paradise – the most relevant spatial elements, the most significant for spiritual experience, are reproduced. Memory does not reproduce "everything", but highlights structurally significant elements. This is not a defect or an abbreviation, but a way of orienting meaning. The image of paradise does not strive for descriptive completeness, because spiritual experience is not experienced as a sum of details, but as a whole of tensions, centres, directions and tranquillity. Selectivity of memory in this context is spatial in nature. It is not the sequence of events that is remembered, but significant places. Paradise is represented through those elements that determine the orientation of the subject: where the source of gravity is, where the force comes from, and where it is possible to stay. Everything secondary is omitted because it does not participate in the formation of the internal map of the world. Thus, the sarcophagus of Adelpia can be seen as the material embodiment of a spatial-mnemonic model: memory organises space, space directs movement, and movement ends in tranquillity. At the same time, memory is not archival, but active; it does not preserve the past, but actualises the experience of encountering transcendent reality. In this sense, the sarcophagus of Adelfia is not just a monument of art, but a kind of "icon of memory", where selectivity does not distort reality, but makes it accessible for experience and recognition.

The connection between the topology of space in five characteristics and memory selectivity and deviant behaviour is analysed using the example of a text by V. Frankl (2023). Memory selectivity normally demonstrates space as a smooth, continuous experience and is regulated by conscious volitional activity. Selectivity of memory emphasises the selection of events that already exist in experience. When memory selectivity is impaired, the perception of the continuity of space is also disrupted; past events will be remembered fragmentarily, episodically, and space will therefore be perceived as fragmented, intermittent, consisting of a limited number of lost loci. The book by Austrian psychiatrist and psychologist V. Frankl (2023) describes the psychological state of people who were imprisoned in a Nazi concentration camp during World War II. V. Frankl noted that the book "is

about an ordinary, unknown camp inmate" and psychological reactions and experiences. The author attempts to overcome methodological difficulties related to subjective experience and therefore distances itself from describing an exclusively personal state. This approach to text analysis describes the relationship between memory characteristics and the peculiarities of spatial perception. In the first chapter, V. Frankl described the "shock of arrival", which determines the state of selectivity of the prisoner's memory. Memory highlights stressful events and rejects all others. Stress regulates the functioning of selective memory. Since events are tied to space, and memory records stressful events, space is not a continuous space of experience, but a fragmented one, divided into loci by stress. The author transitions from describing one stressful locus of space to another. When the train arrived at the camp, the first stress factor was seeing the inscription "Auschwitz", V. Frankl noted that this moment makes everyone feel as if their heart is stopping, because the concept of "Auschwitz" is inextricably linked with associations of gas chambers, crematoria, and mass murders. And then the memory highlights everything that causes stress: the gloomy "outlines of the camp", "wire fences, watchtowers, searchlights", "human figures in rags", "authoritative whistles", "hoarse cries". V. Frankl also described the shock of the very first selection, when the "finger game" of a pampered officer sent some to the gas chambers and spared the lives of others for camp labour. While searching for a friend, the newcomer learns from one of the prisoners that the friend is now "there", where the crematorium chimney emits black clouds of smoke, after which the author recalls stress at the impossibility of preserving the manuscript of the scientific work. A stressful factor was the full shaving before disinfection and parting with all personal belongings, including shoes. In this context, the prisoner's memory perceives the space of experience as fragmented and disjointed, with loci filled with stressful events, which determines its selectivity.

The fragmentation of spatial perception in human behaviour causes "fragmented behaviour", i.e., impulsiveness and poor self-control; it is difficult for a person to behave in accordance with the logic of events. V. Frankl noted that under conditions of constant threat of death, prisoners engaged in an intense struggle for survival, which led to strong emotional tensions, which in turn caused physical conflicts. This reflex of aggression, as a way of releasing tension, became entrenched in the camp environment through constant exposure to violence. This phenomenon demonstrates how selective memory in such extreme conditions reflects the most emotionally charged moments, which determine the perception of space as fragmented and saturated with stressful events. Since the extent of space implies its measurability, the selectivity of memory in the context of the extent of space should be understood as a sense of breadth that connects the past, present and future. If the selectivity of memory is disrupted, a person's memory will be reduced to the reminiscence of a small segment of life experience, and the extent of space will be limited

to a relatively small locus of life. According to V. Frankl, experiencing an extreme situation is accompanied by a radical narrowing of the life world, when all mental activity is subordinated to a single existential goal – survival. This is what is remembered, while everything else is rejected by memory. In such a situation, a person feels more dead than alive, turning into an abstract point. Selectivity in the context of spatial extension caused “all spiritual aspirations and lofty interests to die out” in human memory, leaving room only for practical utility. In the long run, this caused complete self-depreciation, sinking to the level of herd existence: “We have reached the state of a flock of sheep”. Deviant behaviour is manifested, for example, in a limited perspective. In particular, V. Frankl linked the lack of perspective with the refusal to integrate meaning into the process of suffering. Perspective is manifested not only and not so much in “surviving the camp” as in developing a perspective on suffering. To refuse to search for meaning in suffering is to deprive life of meaning and make it dependent on chance. In this case, “life is essentially worthless”. The absence of a full-fledged duration of experience also leads to a person living with thoughts of the past: “The absence of a future had so deeply penetrated the consciousness that the entire life was perceived only from the perspective of the past, as already past, as the life of a dead person”. Escaping into the past was essentially an escape from harsh reality; the future lost its meaning.

A comparison of memory selectivity with spatial structuring showed that, normally, structuring determines the formation of a hierarchy of meanings and internal order, which enables a person to navigate the world. When memory selectivity is disrupted, the structure of space is destroyed, succumbing to chaos or becoming monothematic. If a person's value system before the camp was multi-layered and complex, it became primitive in the camp. A person's memory gradually erases everything that is not related to the instinct of self-preservation. According to V. Frankl (2023), the soul of a prisoner regresses to the satisfaction of basic needs. The structure becomes monothematic and primitive. Primitiveness affects not only external but also internal life. Existence was reduced to the level of herd existence, manifested in the desire of a person to dissolve into a faceless mass, while within this primitive, single-theme spatial structure, a clear orientation towards the categories of power and violence was preserved, as was the need to survive according to their rules, which determined the organisation of the camp space. Within the framework of deviant behaviour, the phenomenon of spatial structuring was manifested, in particular, in the form of obsessive thoughts, which were reflected in the constant focus on one topic, primarily in endless conversations about food, which served as the dominant semantic centre of their experienced space. The prisoners were obsessed with the idea that they needed to shave carefully, as a shaven person looks younger, and the latter fact, according to the administration, gives an additional chance of survival. In this context, it is not a question of clinically determined

obsessive symptoms, but of everyday obsession as a form of persistent cognitive fixation caused by extreme living conditions. Similar manifestations of everyday obsession include ritualised adherence to cleanliness of the premises before inspections, when the person on duty meticulously searches the floor of the barracks for the slightest accidental dirt and removes it, and the patients' blankets, regardless of their condition, are carefully aligned in a single line as an element of imposed spatial order.

If the length of space provides breadth, then three-dimensionality provides depth of space, the volume. Impaired memory selectivity leads to the loss of individual experiences, especially those related to the sensory sphere. This leads to impaired perception of spatial depth. As a result, the world loses relief, becomes flattened, as if it becomes flat. V. Frankl (2023) emphasised that prisoners experienced a progressive “dulling of normal feelings”. Over time, prisoners gradually lose their emotional sensitivity to traumatic events: numerous encounters with suffering, illness, and death lead to habituation, as a result of which such scenes cease to evoke a distinct affective response, and apathy and alienation from personal body become the dominant mental state. In retrospective recollection of the experience, memory focuses mainly on negative episodes, while positive experiences are few and far between in the overall structure of life experience. The experience of joy is thoroughly forgotten, even when there is a significant reason for it – liberation. The mental state in the first hours of liberation is replaced by relaxation, “but those who think that joy has prevailed among us are mistaken”. In the first hours of release, the surrounding world makes practically no impression and is perceived as flat; interaction between people is reduced to formal questions about emotional state, which usually receive negative answers, indicating a loss of the ability to feel joy. Thus, the loss of selective memory and emotional sensitivity leads to a loss of depth in both external and internal space. Space, such as the world of the senses, becomes devoid of volume, flat, and perception becomes like a projection without corporeality or internal perspective. In behaviour, this leads, for example, to mechanistic, monotonous and stereotypical behaviour. The normal perception of the infinity of space, i.e. its openness, the presence of a horizon that is constantly receding, is the possibility of movement, the possibility of change. Such space demonstrates freedom and perspective. Impaired memory selectivity leads to a person being unable to distinguish what is essential and unable to retain temporal and semantic connections. When this happens, the ability to construct continuity of perception and time is lost. As a result, the world loses its depth and perspective, becoming closed and finite. V. Frankl (2023) provided several examples of how prisoners suffer from despair due to the loss of life perspective. One such sign is that a person smokes a cigarette. Cigarettes were usually hoarded; they were equivalent to money and could be exchanged for food, which prolonged the life of a camp labourer. The act of smoking in camp conditions was interpreted as a behavioural in-

indicator of complete loss of hope and abandonment of life prospects, which usually correlated with a high probability of a fatal outcome. The prolonged state of hopelessness and the constant and intense threat of death caused suicidal thoughts in most prisoners, even if they were short-lived and situational, while suicidal behaviour assumed standardised forms that were culturally entrenched in the camp environment. Thus, in the course of analysing the book by V. Frankl (2023), examples were found that demonstrate the relationship between impaired memory selectivity and spatial characteristics. The available data do not specifically establish the nature of memory selectivity impairment in individual cases, but a certain impairment is assumed; in the absence of an accurate determination of the degree of impairment, it is impossible to reliably assess the impact on the perception of spatial characteristics. At the same time, if it is possible to quantitatively or qualitatively determine the level of memory selectivity impairment, it becomes possible to more accurately determine how the perception of space changes or remains unchanged.

Transition from Stroop Colour-Word Test indicators to topological characteristics of space and forms of deviant behaviour. The W (words) indicator of automated reading reflects the level of orderliness of internal semantic connections and has the same principle as spatial orderliness; when automated reading is disrupted, the internal orderliness of the verbal memory space is disrupted. In this regard, the structure of the external semantic space is also disrupted. If W is above normal (average value within 4.5-6; normal up to 6.5), this will lead to a loss of flexibility in the existing hierarchy, its excessive rigidity. If W is low, the rigidity of the structure is destroyed, and the structure of the space is distorted. When the semantic structure of space is disrupted, fragmentary thinking occurs, and cause-and-effect relationships are lost, leading to verbal aggression, suggestibility and following external attitudes. The C (colour) indicator determines the speed of processing sensory perception without relying on content. This indicator distinguishes between boundaries, layers, shades and transitions. The same principle underlies the formation of three-dimensional space. For this reason, if this indicator is disturbed, the perception of three-dimensional space will also be disturbed. With a high C (average value within 6.5-8.5; normal up to 9), there is a distinction between different sensory signals, and with a low C, the ability to distinguish signals is lost, making it impossible to perceive the depth of space. Violation of three-dimensionality leads to flattening of perception, decreased emotional sensitivity, resulting in apathy, alienation, depersonalisation, and loss of interest in other people. The CW (interference) indicator – conflict between word and colour reflects the ability to maintain a single perspective in the presence of contradictions. The continuity of space is built on the same principle. A violation of the CW indicator (average value within 7.5-9.5; normal up to 10) leads to a violation of the perception of the continuity of space. Space is perceived as fragmented if CW is high. In this case, there

is a fragmentation of perception, which causes aggressive reactions, emotional outbursts, impaired empathy, and alienation. The interference index I shows how strong the disorder between automatic and controlled processing is. The higher the coefficient (average value within 1-2; normal up to 2.5), the more attention is attracted to the conflict and the fewer resources remain to maintain stability of perception. The expanse of space converges at a single point. The loss of spatial expanse leads to impulsiveness and a tendency to take risks. A harmonious balance of all components ensures openness of perception and flexibility of thinking; disturbances lead to confinement within a limited cognitive field. Disruption of the sense of infinite space leads to closure and a feeling of deadlock, to a loss of semantic expansion. In behaviour, this is expressed in autoaggressive tendencies, in escape into dependent forms of behaviour, and in obsessive repetition.

Based on the text by V. Frankl (2023), a phenomenological analysis was conducted of the relationship between memory selectivity and topological characteristics of space, as well as forms of deviant behaviour. The phenomenological interpretation can be supplemented, if possible, by an interpretation based on the analysis of experimental data obtained from the Stroop Colour-Word Test. Thanks to the test, it became possible to experimentally and accurately correlate and analyse the relationships between memory selectivity, topological characteristics of space, and forms of deviant behaviour, which is presented in a study of a group of 50 subjects. At the psychometric level, the distribution of W scores showed that in 34 individuals (68%), the time taken to read words was within or below the norm (4.0-6 s). In 11 individuals (22%), the W indicator was less than 4 s, indicating extremely high automation of verbal processes. Only 5 individuals (10%) showed slow word reading (more than 6 s). Colour naming indicators (C) showed significantly greater variability. In 18 participants (36%), they were within the normal range (6.5-8.5 s). In 14 individuals (28%), the C index was below normal, indicating rapid sensory processing with minimal inhibition of automatic responses. In 18 individuals (36%), a significant excess of normal values was recorded (more than 9 seconds, in isolated cases up to 17 seconds), indicating increased cognitive load or excessive control of the sensory channel. CW interference indicators in 31 participants (62%) were below the normal range (7.5-9.5 s). In 13 people (26%), CW was within the normal range, and only 6 people (12%) had elevated interference. The interference index I in 29 participants (58%) had negative values or was close to zero (from -2 to 0.5), indicating a smoothed or absent Stroop effect. In 14 people (28%), I was within the normal range (1-2). Only 7 people (14%) had an interference index above 2, indicating a pronounced conflict between automated and controlled processes. Thus, quantitative analysis confirmed that 86% of the sample was characterised by low or moderate interference, high selectivity of attention, and the dominance of stable cognitive strategies over flexible ones (Table 1).

Table 1. Distribution of Stroop Colour-Word Test scores in the study group (N = 50)

Indicator	Category	Number of participants	% of sample
W (word reading)	Norm 4-6 s	34	68
	Less than 4 s	11	22
	More than 6 s	5	10
C (colour naming)	Norm 6.5-8.5 s	18	36
	Lower than norm	14	28
	Higher than norm	18	36
CW (interference)	Norm 7.5-9.5 s	13	26
	Lower than norm	31	62
	Higher than norm	6	12
I (interference index)	Norm 1-2	14	28
	0 or negative	29	58
	More than 2	7	14

Source: compiled by the authors

Table 1 shows that most participants demonstrate normal or below-normal W scores, indicating automated verbal processes and rapid word processing. C scores show a wider dispersion: 36% of participants are within the normal range, 28% are below normal, and 36% are above normal, demonstrating variability in sensory control and cognitive load. Most CW scores (62%) are below normal, and the I index is negative or close to zero in 58% of participants, confirming the smoothed Stroop effect and high selectivity of attention. Only a small proportion of participants show increased interference ($CW > 9.5$ s or $I > 2.0$), which correlates with situational cognitive overload. Thus, the data demonstrated a pattern: most participants are characterised by a highly structured cognitive space and controllable information processing, which is the basis for conclusions about the limited extent and depth of spatial perception and a tendency towards certain types of deviant behaviour (rigidity, pedantry, avoidance of uncertainty). Conclusions regarding the topology of internal space are based on specific empirical indicators of the Stroop

Colour-Word Test. Low or negative values of the interference index I, recorded in 58% of participants, indicate preserved continuity of perception and the absence of gaps in the cognitive field. The limited extent of space is confirmed by the combination of fast W and reduced CW in 62% of the sample, indicating a concentration of attention on the nearest, directly controllable stimuli. The high structure of space is empirically confirmed by the low variability of W indicators in most participants and the tendency towards automation of verbal processes. The reduced three-dimensionality of space correlates with excessively fast or, conversely, slowed C indicators recorded in 64% of the sample, indicating a reduction in deep sensory integration. The reduction in the experience of the infinity of space is associated with the dominance of a negative or zero interference index, reflecting the closed nature of cognitive space and weak openness to conflicting stimuli. In general, for most participants, space is experienced as continuous and orderly, but limited in extent, depth, and openness to new meanings (Table 2).

Table 2. Distribution of spatial characteristics of interior space in the sample (N = 50)

Space characteristics	Basis (empirical indicators)	Number of participants	% of sample
Continuity	$I \leq 0$ or negative index	29	58
Length	Fast W and reduced CW	31	62
Structure	Low variability of W, automation of verbal processes	34	68
Three-dimensionality	Excessively fast or slow C values	32	64
Infinity	Dominance of zero or negative I	29	58

Source: compiled by the authors

Table 2 demonstrated that most participants exhibited preserved continuity of perception (58%), corresponding to a low or negative interference index I. This means that the cognitive field of the participants is integrated and without gaps, and attention quickly switches between stimuli without loss of perceptual integrity. The extent of space is limited in 62% of participants, which is associated with fast W and reduced CW and indicates a concentration of attention on the nearest or controlled stimuli, without expanding perception to a broader context. The structure of space is high in 68% of participants, which is confirmed by low W variability and automation of verbal processes; the internal

space is organised and orderly. The three-dimensionality of space is reduced in 64% of participants, which correlates with excessively fast or slow C indicators, i.e., with a reduction in deep sensory integration and a focus on the superficial aspects of space. The experience of the infinity of space is reduced in 58% of the sample due to the dominance of zero or negative I, which reflects the closedness of cognitive space and limited openness to new meanings. Thus, most participants perceive internal space as structured, continuous, and controlled, while limited in extent, depth, and openness, which correlates with the psychometric indicators of the Stroop Colour-Word Test and can be

used to interpret potential forms of deviant behaviour, in particular rigidity, pedantry, and avoidance of uncertainty.

Based on the ratio of W, C, CW and I indicators, three types of responses were identified. The first type was recorded in 27 individuals (54% of the sample). It is characterised by a negative or low interference index, stable W indicators and relatively controlled C values. Behaviourally, this corresponds to high self-control, a tendency towards orderliness and rigidity. Potential deviant manifestations take the form of pedantry, avoidance of uncertainty and reduced spontaneity. The second type was found in 16 people (32%). It is characterised by fluctuations in C and CW indicators, episodic errors and an unstable interference index. Behaviourally, this is evident in impulsivity, affective

lability and situational disturbances of concentration. The third type was recorded in 7 people (14% of the sample). It is characterised by high C and CW indicators and an interference index above 2.0. The perception space in such participants is expanded but poorly structured, with impaired depth orientation. Behaviourally, this corresponds to a tendency towards emotional overload, inertia of action, and defocusing. In summary, the quantitative results of the empirical study confirm that the dominant type for the sample is spatial-mnemonic organisation with high structure and control, but limited depth and openness. These empirically recorded indicators of the Stroop Colour-Word Test form the basis for conclusions regarding the specifics of spatial perception and forms of deviant behaviour (Table 3).

Table 3. Types of responses by participants based on the results of the Stroop Colour-Word Test (N = 50)

Reaction type	Number of participants	% of sample	Basic psychometric characteristics (W, C, CW, I)	Spatial characteristics	Behavioural characteristics/potential deviant manifestations
Type 1	27	54	W stable, C controlled, I negative or low	The space is structured, controlled, and continuous	High self-control, tendency towards orderliness, rigidity, pedantry, avoidance of uncertainty, reduced spontaneity
Type 2	16	32	C and CW oscillations, unstable I, occasional errors	Space is less structured, the length is limited, and there is a lack of focus	Impulsiveness, affective lability, situational attention deficit
Type 3	7	14	High C and CW, I > 2	Space is expanded but poorly structured, and depth orientation is impaired	Emotional overload, inertia, lack of focus, poor behavioural control

Source: compiled by the authors

Table 3 showed that the dominant response type is Type 1 (54%), which is characterised by high structure, control of cognitive space, and low or negative interference. This indicates a predominance of stable information processing strategies, a high level of self-control, and a tendency towards rigidity in behaviour. Type 2 (32%) reflects a transitional or unstable profile, with fluctuations in colour naming speed and interference. This type of participant shows a tendency towards impulsive actions and affective lability, which emphasises the influence of situational factors on cognitive regulation. Type 3 (14%) represents a group with high cognitive load and significant interference, accompanied by weak internal spatial structuring and impaired depth orientation. Behaviourally, this manifests itself in emotional overload, lack of focus, and inertia of actions. Thus, quantitative data confirm the predominance of a type of spatial-mnemonic organisation with high structure and control, but with limited depth and openness to new meanings. These empirically recorded indicators of the Stroop Colour-Word Test form the basis for conclusions about the specifics of spatial perception and possible forms of deviant behaviour in the sample. Cognitive psychology studies memory, but does so functionally and focuses only on certain aspects of memory: encoding, storage, retrieval, distortion, and cognitive schemas. It does not establish a systematic connection between the characteristics of space and the characteristics of memory, but such a connection,

apart from cognitive psychology, as shown by A. Sousa *et al.* (2021), is possible. The study determined that “related memories form mnemonic structures in the space of experience, where space acts not only as a background but also as an organisational scheme for memory”. Memory can be organised in several ways: semantic, temporal, emotional, and spatial. A distinctive feature of the proposed model is that memory is a method of organising a person’s living space. N.W. Morton *et al.* (2017) demonstrated the idea that space, thanks to memory, is an organising principle that connects human experience. The spatial-mnemonic model does not repeat the conclusions of neurocognitive studies, but considers this idea at the level of human living space and forms of deviant behaviour. R.A. Wilson & L. Foglia (2011) largely did not consider memory in direct connection with spatial experience (both physical and social), while the spatial-mnemonic model integrates the characteristics of space, memory mechanisms, and forms of deviant behaviour into a single analytical framework from the outset. G.A. Holleman *et al.* (2020) did not explain the stability of human behaviour patterns. The spatial-mnemonic model provides the following explanation based on structural considerations: the specificity of memory selectivity leads to a specific perception of space, in which deficient forms of behaviour become not a mistake of human choice, but the only possible behavioural scenarios. F. Wertz (1993), based on phenomenology, demonstrated

that cognitive psychology emphasises natural-scientific reduction and does not sufficiently consider living subjective experience. The spatial-mnemonic model is compatible with phenomenological, psychoanalytical, and neuropsychological data. The trichotomous spatial-mnemonic model of deviant behaviour is psychological in nature, as it does not directly consider the biological determinants of spatial disorders emphasised by the neuropsychological approach, for example, W.B. Scoville & B. Milner (1957) and A. Villegas & S.A. Siegelbaum (2025). In turn, A. Bielińska & A. Lipszyc (2024) considered space and memory in a symbolic dimension, integrating them at the level of meanings, while within the trichotomous spatial-mnemonic model of deviant behaviour, the interconnection between space, memory and deviant behaviour appears as a system of real correlations, united into a single analytical structure. Thus, it is possible to argue that none of the above-mentioned approaches considers the interrelationship between the characteristics of space, memory and units of deviant behaviour in a clear matrix form. The spatial-mnemonic model of deviant behaviour is not a compilation. In contrast to most of the approaches analysed, in which memory is reduced to executive functions, space is considered outside the limits of mental functionality, or deviation is analysed without incorporating the ontology of the subjective image of the world, the spatial-mnemonic model of forms of deviant behaviour proposed in this study integrates the above-mentioned lines of research, which determines its methodological novelty.

◆ Conclusions

On the example of the sarcophagus of Adelfia, the study demonstrated that the selectivity of memory does not normally distort reality but, on the contrary, ensures its accessibility for experience and cognition. Phenomenological analysis has shown that deviant behaviour in camp conditions is formed as a result of a systemic disruption of the spatial-mnemonic organisation of experience. Having lost its regulatory function, the selectivity of memory ceases to maintain the continuity, extent, structure, depth and infinity of space. Deviation in this context was considered not as an individual pathology, but as a natural result of the deformation of the subjective image of the world. The material empirically confirmed the thesis that changes in memory selectivity and perception of space form a single dynamic system, within which forms of behaviour become rigidly determined by the structure of the experienced space. This made it possible to use topological analysis of space as a method for the determination and prediction of

deviant forms of behaviour. The Stroop Colour-Word Test indicators traced the connection between cognitive processes (selectivity of memory, sensory processing, attention control) and the topological characteristics of subjective space (structurality, three-dimensionality, continuity, extensiveness, and infinity), which determine forms of deviant behaviour. The combination of phenomenological analysis and experimental data from the Stroop Colour-Word Test demonstrates the connection between memory selectivity, topological characteristics of subjective space, and forms of deviant behaviour, which can be used for a quantitative and qualitative description of individual characteristics of cognitive and behavioural functioning. A trichotomous, spatial-mnemonic model of deviant behaviour has been developed, in which space and memory are key characteristics. In contrast to cognitive psychology, which emphasises the functional aspects of memory (encoding, storage, retrieval) and neurocognitive models, this model considers memory as a way of organising a person's living space, and not just as a tool for processing information. The spatial-mnemonic model provided a systematic link between memory characteristics, topological properties of subjective space, and forms of deviant behaviour, and the stability of behavioural patterns was explained by the specificity of memory selectivity, in which deficient forms of behaviour are interpreted not as a mistake of choice, but as the only possible scenarios within a certain spatial-mnemonic configuration. A methodologically new construct was presented, combining functional, phenomenological, psychoanalytical, and neuropsychological approaches. The interrelationships between memory, spatial topology, and forms of deviant behaviour were analysed within a unified system, providing tools for quantitative and qualitative description of these relationships. Prospects for further research are related to the possibility of developing a comprehensive approach to the analysis of mental organisation, within which memory and space are considered as interrelated structural components that determine various patterns of behaviour, including deviant ones.

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◆ Conflict of Interest

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Просторово-мнестична модель девіантної поведінки: взаємозв'язок топології простору, вибірковості пам'яті і форм девіантної поведінки

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◆ **Анотація.** У сучасній психологічній науці проблема девіантної поведінки залишається актуальною у зв'язку з обмеженістю моделей, що пояснюють її стійкість лише через когнітивні помилки або соціальні чинники, і недостатньою увагою до ролі внутрішньої організації суб'єктивного простору та пам'яті. Метою дослідження була розробка та емпірична перевірка трихотомічної просторово-мнестичної моделі девіантної поведінки, в якій пам'ять розглядається як спосіб організації життєвого простору особистості. Методологія дослідження ґрунтувалася на інтеграції феноменологічного та когнітивного підходів із використанням експериментально-психологічних методів і кореляційного аналізу. У результаті дослідження запропоновано просторово-мнестичну модель, в якій вибірковість пам'яті виступає ключовим механізмом формування топологічних характеристик суб'єктивного простору, зокрема його структурованості, протяжності, безперервності, тривимірності та нескінченності. На відміну від традиційної когнітивної психології, яка зосереджується на функціональних аспектах пам'яті (кодуванні, зберіганні, вилученні та когнітивних схемах), запропонована модель трактує пам'ять як фундаментальний механізм організації життєвого простору людини. Показано, що стійкі патерни девіантної поведінки можуть бути інтерпретовані як наслідок специфічної конфігурації простору і пам'яті, а не як випадкові або ситуативні порушення регуляції. Емпірична валідація моделі проведена на вибірці з 50 випробовуваних віком 20-50 років із застосуванням тесту Stroop Color-Word Test. Аналіз показників автоматизованого читання, називання кольорів, умов інтерференції та індексу інтерференції виявив значущі кореляції між когнітивною ригідністю, порушеннями просторового сприйняття та проявами девіантної поведінки. Отримані результати підтвердили, що особливості просторової організації досвіду визначають типові поведінкові сценарії, зокрема педантичність, імпульсивність, емоційне перевантаження та звуження когнітивного поля. Практична цінність дослідження полягає у можливості використання просторово-мнестичної моделі для психологічної діагностики, профілактики та корекції стійких форм девіантної поведінки

◆ **Ключові слова:** спогади; структура феноменологічного досвіду; когнітивно-просторова організація; патерни поведінкової регуляції; психологічна ригідність