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## Typological and factor analysis of personality in the context of architectural design

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**Abstract.** Contemporary development of architecture and design is characterised by a growing demand for environments that consider not only functional and aesthetic aspects but also the psychological characteristics of users. The relevance of the study lies in the need to integrate individual psychological traits into design solutions to ensure comprehensive human comfort. The purpose of the study was to develop a methodological approach to create a personalised architectural environment based on the Big Five model, which allows correlating personality traits with specific spatial, colouristic, material, and lighting parameters. The study employed methods of scientific literature analysis, logical-semantic comparison, generalisation, case analysis, and visualisation of results. Eight leading personality theories were examined and subjected to comparative analysis in terms of their applicability to design practice. Tables were developed to demonstrate the correspondence between psychological characteristics and design solutions, particularly the influence of the Big Five traits on the choice of spatial layouts, colour palettes, materials, and lighting scenarios. Examples were created to illustrate the adaptation of interiors and public spaces to user profiles with varying levels of openness to experience, extraversion, agreeableness, conscientiousness, and neuroticism. The results confirmed that a personalised approach enhances emotional comfort, productivity, and psychological well-being, while also ensuring a balance between individual and collective needs. The practical value of the study lies in the development of a system of recommendations for architects and designers, aimed at shaping individually comfortable, flexible, and psychologically balanced environments in residential, office, and urban architecture

**Keywords:** psychological profile; environment personalisation; comfort; spatial solutions; colouristics; architectural design; interior adaptation

### INTRODUCTION

Contemporary trends in design and architecture increasingly prioritise individualised approaches that consider not only aesthetics but also the psychological characteristics of the individual. A visually appealing space may prove emotionally uncomfortable if it does not meet the resident's needs. The integration of a psychological profile – particularly the Big Five model – into spatial design opens a new level of comfortable and functional environments. Therefore, the topic of targeted psychological customisation in design is highly relevant to the development of the field, which aims to create spaces that are not only beautiful but also psychologically harmonious.

In contemporary research, growing attention is paid to the relationship between a person's personality traits and architectural – design decisions. Y. Xu & T. Yu (2022) outlined how analysing psychological factors can help to understand how design is perceived at the sensory level, using artificial intelligence to visualise reactions to spatial solutions. X. Li *et al.* (2023) showed that traits such as extraversion, neuroticism, and openness to experience significantly influence aesthetic preferences, material choices, and behavioural responses within a space. Building on these findings, Z. Huang (2024) developed an adaptive interior design method for different MBTI personality types using generative artificial

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intelligence, while K. Zhou & T. Wang (2024) proposed scalable approaches for creating personalised interiors through AI-driven solutions. Similar conclusions were reached by M. Skorik & M. Kozlovska (2025), who confirmed that architectural preferences are closely linked to personality types, reinforcing the relevance of integrating psychological profiles into design practice. This growing body of research creates a strong foundation for the development of personalised design adapted to the individual psychological profiles of users.

A distinct research area focused on the impact of the architectural environment on emotional well-being and human productivity. For instance, J.G. Allen & J.D. Macomber (2020) demonstrated that parameters of indoor spaces – such as lighting, acoustics, and proportions – directly correlate with cognitive functions, influencing concentration and decision-making. Subsequent research has confirmed that the lighting environment is a key factor in shaping psychological comfort. In particular, Y. Fan *et al.* (2023) proposed a personalised daylighting regulation method that employs user-involved paintings to adjust natural light levels and quality according to individual needs. This approach significantly enhanced visual comfort and the aesthetic perception of interior spaces. The findings demonstrated that engaging users in the modelling of lighting conditions enables the creation of more flexible and psychologically harmonious interiors that can respond to diverse personality profiles.

Ukrainian research also addresses the connection between interior design solutions and the psychological state of users. For example, V.A. Vorobiova (2025) developed a conceptual interior design project for a rehabilitation centre for military personnel, placing special emphasis on creating a supportive psychological environment through the selection of colour schemes, lighting, and ergonomic solutions. V. Abyzov & D. Sheiko (2024) studied the influence of interior design on the psychological well-being of employees in contemporary offices, finding that a combination of natural lighting, flexible planning, and biophilic elements increases productivity and reduces stress.

Thus, the literature review confirmed the relevance of integrating typological and factor-based personality models into architectural design practice. Current research opened possibilities for personalising spaces according to the user's psychological profile. Given the trends identified by researchers and the insufficient practical comprehensiveness of previous works, the purpose was defined as developing a systematic approach that translates personality traits, as described by the Big Five model, into specific design solutions for interiors.

## MATERIALS AND METHODS

The study was conducted based on an interdisciplinary analysis of scientific sources for 2020-2025 on the relationship between personality traits and

architectural and design solutions. The methodological foundation consisted of eight leading psychological theories and personality models: S. Freud's (1923) psychoanalytic concept, C.G. Jung's (1921) typology and archetypes, I.B. Myers & K.C. Briggs' (1985) type indicator, socionics developed by A. Augustinavičiute (1995), A.H. Maslow's (1943) hierarchy of needs, R.B. Cattell (1946) and G.W. Allport (1937) model, H.J. Eysenck's (1967) theory, and the Big Five model proposed by P.T. Costa & R.R. McCrae (1992). This helped the research to integrate deep existential and motivational frameworks with data-driven systems of classification, offering both theoretical richness and practical applicability. The choice of methodological approach was determined by the purpose of the study. To analyse the relevance of the typologies, the following criteria were applied:

1. The presence of a connection with human needs.
2. The identification of personality dominants in spatial behaviour.
3. The potential for application in design practice.

The research materials included scientific studies on personality psychology, architectural theory, and design theory, and publications from related disciplines such as sociology, cultural studies, and cognitive science. This transdisciplinary scope ensured that the study did not limit itself to the psychological dimension but also accounted for socio-cultural dynamics and symbolic structures embedded in spatial experience. The results were obtained through critical analysis and data synthesis, which allowed formulating a substantiated conclusion regarding the advisability of further developing the concept of a personality-oriented architectural environment. However, it was important to recognise that the use of psychological models in design has certain limitations. First, the results of psychological testing depend on the respondent's subjectivity. Second, excessive personalisation may reduce the universality of the space.

## RESULTS AND DISCUSSION

The design of a comfortable environment involves the comprehensive development of a spatial-object composition in which functional, aesthetic, and sensory parameters are harmoniously aligned with the individual needs of the user. Consideration of personality type, lifestyle, and value orientations allows creating a space that is not only convenient but also artistically expressive. It is particularly important to identify universal factors that reflect differences in the hierarchy of needs and emotional expectations of individuals, using personality theory as a starting point. When designing an environment, the architect or designer must recognise that their decisions affect a person with a unique inner world and an individual perception of spatial rhythm, colour, and texture. In this context, the concept of personality becomes a tool not only for classifying

users but also for translating psychological characteristics into specific design parameters – from the choice of colour schemes and lighting to the scale of furniture and the plasticity of forms.

Psychology offers numerous personality theories, but not all of them are directly applicable to artistic and spatial design. For example, S. Freud's psychoanalytic theory, despite their in-depth interpretation of internal conflicts and motivations, are difficult to translate into the architectural language of colour, light and shadow, and composition. In contrast, other approaches – especially those describing temperament, activity level, need for control, or social openness – have direct design analogues. For instance, an introvert with high conscientiousness may feel comfortable in zoned spaces with subdued lighting and natural materials, whereas an extrovert with high openness to experience may thrive in open-plan layouts, vibrant colours, and dynamic compositions. From the 1950s

to the 2025, psychologists have developed typologies that help to predict human responses in various spatial conditions. None of them is absolutely universal; however, some models can be effectively adapted for applied design – particularly those that define the hierarchy of needs, dominant emotional states, and styles of interaction with the environment. For architects and designers, these models can serve as a methodological basis for creating individually oriented interiors and urban spaces, where proportions, colour, light, and texture operate as the visual-emotional code of personality. Table 1 summarised key personality theories, comparing them by approach type, main characteristics, strengths, and potential applications in architectural and design practice. Such a comparative overview helps to identify the most relevant models for developing a subject-oriented comfortable environment in which psychological traits form the basis for both artistic and functional solutions.

**Table 1.** Comparative table of personality theories in the context of architectural design

Theory	Key concepts	Advantages	Limitations	Application in design
<b>Freudism</b>	Behaviour is driven by the conflict between the conscious and unconscious. Focus on instincts and repressed experiences.	Deep understanding of subconscious motivations.	Subjectivity, difficult to empirically verify.	Designing environments with elements that enhance safety and emotional protection.
<b>C.G. Jung / Archetypes</b>	Personality consists of the ego, personal, and collective unconscious. Archetypes influence world perception.	Ability to work with deep imagery, cultural universality.	Difficulty in defining precise boundaries of archetypes.	Use of archetypes in visual solutions to meet users' emotional expectations.
<b>I.B. Myers &amp; K.C. Briggs (MBTI)</b>	16 personality types based on four dichotomies (E/I, S/N, T/F, J/P).	Popular, practical, easy to use.	Lacks depth, focuses on description rather than causality.	Typology helps to predict space usage style (e.g., introverts – need isolation, calm).
<b>A. Augustinavičiute / Socionics</b>	16 sociotypes based on information metabolism.	Models type interaction, considers group dynamics.	Lacks empirical verification.	Useful in designing multi-user spaces: hostels, co-working areas.
<b>A.H. Maslow</b>	Hierarchy of needs – from basic to self-actualisation.	Structures personality demands by levels.	Does not account for individual differences in priorities.	Designing environments by comfort levels: from physical to aesthetic.
<b>R.B. Cattell / G.W. Allport</b>	Factor model of personality (16 traits).	Accurate identification of traits, flexibility.	Difficult to apply practically without testing.	Can be a basis for personalised design for specific users.
<b>H.J. Eysenck</b>	Three main factors: extraversion, neuroticism, psychotism.	Empirically validated, simple model.	Limited number of dimensions.	Adapting design to user's arousal/ emotional reactivity level.
<b>Big Five</b>	Five main traits: openness, agreeableness, conscientiousness, extraversion, neuroticism.	Standardised, scalable, suitable for mathematical analysis.	May be culturally dependent, lacks motivational dimension.	Scalable personalisation: defining optimal stimulation, openness level, etc.

**Source:** developed by the author based on O.B. Stoliarenko (2012)

The psychoanalytic concept, initiated by S. Freud and developed by C.G. Jung, presents personality as a dynamic interaction between conscious and unconscious. While valuable for understanding human behaviour, these theories are difficult to formalise and have limited direct design application. However, C.G. Jung's archetypes provided a foundation for contemporary typologies. Typological theories such as Myers-Briggs, socionics, or Keirsey's classify individuals by psychological preferences, enabling prediction of behavioural tendencies and modelling user group needs. They are used in HR and education, and increasingly in design. The dispositional approach (G.W. Allport, R.B. Cattell, H.J. Eysenck) focused on stable traits in various situations. While assessing predispositions, it rarely considers needs hierarchy or deep motivation, limiting architectural relevance.

The cognitive approach studies perception, thinking, decision-making, and environmental response. It

underlies the Myers-Briggs typology and is relevant for designing tech-saturated environments, offices, or educational spaces where cognitive style matters. Humanistic theory, particularly A.H. Maslow's hierarchy of needs, is highly relevant to architectural design. It links comfort with satisfying physiological and safety needs before social, esteem, and self-actualisation needs. This enables creating environments that meet basic convenience while fostering psychological and emotional growth. Analysis of major theories revealed a common four-level structure – physiological, psychological, social, and spiritual. This supported the idea that comfortable environments should address all four, with proportions varying by dominant personality type. Table 2 summarised the relationship between dominant personality level, its core need, and resulting spatial requirements, guiding designers toward key characteristics of comfort for each personality dimension.

**Table 2.** Dominant personality levels, needs, and corresponding spatial requirements

Dominant personality level	Dominant need	Dominant spatial requirements
Physiological level	Order	Structured organisation, proportionality, safety.
Psychological level	Belonging	Prestige, self-sufficiency, identification with the environment.
Social level	Individualism	Transformability, presence of open communication spaces.
Spiritual lever	Freedom	Harmony, flexibility, space for reflection and inspiration.

**Source:** developed by the author

However, all of the aforementioned concepts, despite their informativeness and broad scope, share one significant limitation: they identify only the dominant personality traits without providing an exact measurement of a person's position along the continuum of each psychological characteristic. In other words, most typologies operate with dichotomies (e.g., extraversion-introversion) without the possibility of establishing an intermediate value, which reduces the accuracy of modelling a user within a given environment. A distinct place among contemporary approaches to studying personality is occupied by the Five-Factor Model, commonly known as the Big Five or OCEAN. This is a hierarchical model of personality describing five core traits: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Unlike typological models, the Big Five allows for the quantitative assessment of each trait along a scale – from minimal to maximal expression – making it suitable for precise customisation of design solutions to the individual user profile. In the context of art and design, this model has a key advantage: each personality trait can be translated into a set of spatial and visual parameters.

Openness to experience – often associated with a need for dynamic forms, bold contrasts, experimental

materials, and unconventional planning solutions. High openness aligns with interiors featuring art objects, bespoke décor, and transformable zones, whereas low openness gravitates toward classical proportions, restrained colour palettes, and predictable geometry. Conscientiousness – reflected in a preference for orderly spaces, symmetry, and clearly structured zoning. Users with high conscientiousness favour furniture with precise geometry, harmonious lighting rhythms, and logical sequences of colour accents. Extraversion – associated with open-plan layouts, spacious living areas, vivid colour schemes, and abundant natural light. For extraverts, the communicative function of space is crucial: bar counters, large communal tables, and interactive zones. Agreeableness – expressed through warm colour palettes (pastels and natural tones), soft textures, and comfortable areas for social interaction. Design for highly agreeable individuals often incorporates semi-private spaces for small-group conversations. Neuroticism – linked to a need for psychological stability. Users high in neuroticism prefer interiors with subdued lighting, minimal visual stimuli, calm colour schemes, and reduced acoustic chaos.

Through the Big Five's scalar approach, an architect can develop a "psychological interior profile" in which

each trait corresponds to specific colour, texture, and spatial solutions. For instance, in a home shared by one partner who is a highly open extravert and another who is a highly conscientious introvert, the design might combine an open, vibrant living area with intimate personal offices, contrasting the bright social zone with a restrained individual space. Thus, the Big Five not only identifies personality traits but also translates them into concrete visual and functional design elements. This makes the model a universal tool for adaptive

design focused on user comfort and emotional well-being. An analysis of the main personality theories within the typological (C.G. Jung, I.B. Myers & K.C. Briggs, A. Augustinavičiūte) and factor-based (Big Five) approaches reveals both shared features and fundamental differences between them (Table 3). All models address a similar set of basic personality characteristics – such as extraversion, intuition, sensing, logic, emotionality, and rationality – yet the methods of describing these traits vary significantly.

**Table 3.** Comparison of personality components in major personality theories

Typological analysis	Factor analysis	Carl Jung's theory	Myers-Briggs typology	Socionics / Big Five	Dominant need for this trait
Extraversion / Introversion	Extraversion	Extraversion / Introversion	Extraversion / Introversion	Extraversion / Introversion	Social comfort (the need for an appropriate level of social interaction)
Intuition / Sensing	Openness to experience	Intuition / Sensing	Intuition / Sensing	Intuition / Sensing	Emotional comfort (the need for a stable emotional background)
Feeling / Thinking	Agreeableness	Feeling / Thinking	Feeling / Thinking	Ethics / Logic	Psychological comfort (the need for inner balance)
Rationality / Irrationality	Conscientiousness	Rationality / Irrationality	Rationality / Irrationality	Rationality / Irrationality	Psychological, physical comfort (the need for alignment of space with lifestyle)
–	Neuroticism	–	Dynamic / Static	Neuroticism	Emotional, psychological, social, physical comfort (the need for security and stability)

**Source:** developed by the author

The column “Dominant need for this trait” emphasised how each personality dimension translates into specific requirements for spatial experience. Extraversion and introversion are primarily associated with social comfort, reflecting the need for an appropriate level of interaction or privacy. Intuition and sensing are linked to emotional comfort, since intuitive individuals tend to favour experimental and dynamic environments, whereas sensing individuals prefer stability and clarity. Thinking and feeling are associated with psychological comfort, balancing logic and structural order with emotional atmosphere. Rationality and irrationality correspond to both psychological and physical comfort, determining whether users require strict organisation or flexibility and adaptability in spatial design. Neuroticism is connected to complex comfort, encompassing emotional, psychological, social, and physical dimensions, as individuals with high neuroticism are particularly sensitive to instability, and therefore, need environments that ensure security and stability.

The typological approach operates with dichotomies – traits that have two polar values (e.g., extraversion or introversion, intuition or sensing). In design practice, this is convenient for a quick “sketch” analysis of the client and for shaping a general concept. For

example, in typological interpretation, an introvert will tend toward intimate spaces, subdued colour palettes, and structured lighting, whereas an extravert will prefer open layouts, saturated colours, and dynamic forms. This scheme works like an artistic palette with two dominant tones, where the designer chooses one and develops it throughout the composition.

The factor-based approach, particularly the Big Five model, works in a more nuanced way because it measures each trait on a scale, recording its intensity. This is comparable to working with tonal or colour gradations in painting: instead of two poles, the designer sees the full spectrum. For example, a moderate level of extraversion may lead to a balanced space combining open communicative zones with secluded niches. Such detailing opens up broader possibilities for adapting the environment – from zoning to selecting textures, rhythms of repeating elements, and lighting scenarios.

The Big Five also introduces two characteristics that are almost absent in classical typologies but have direct design equivalents. In fact, every trait in any system – whether dichotomous or scalar – has its own set of spatial and artistic counterparts: extraversion requires socially active hubs, intuition requires room for experimentation, sensing requires clarity and stability, and

conscientiousness demands order and rhythm. Thus, both approaches are valuable tools for the architect or interior designer. Typology offers a quick overall picture, while factor analysis allows the "completion" of the work with nuances, creating a space maximally responsive to individual characteristics. This method enables the transformation of a user's psychological profile into a multidimensional artistic image of the environment.

To effectively apply the Big Five model in design, it is necessary first to determine the user's individual psychological profile. This is done using a standardised questionnaire (e.g., NEO-PI-R or BFI-44), which measures the five main personality traits – openness

to experience, conscientiousness, extraversion, agreeableness, and neuroticism – on a scale from low to high values. The results allow the designer or architect to interpret psychological characteristics in the form of spatial, colouristic, material, and lighting parameters. This ensures the personalisation of the environment, enhancing comfort and the aesthetic alignment of the space with the user's expectations. Table 4 below provided examples of design solutions for high and low scores for each of the five traits in the Big Five model. This tool can be used both at the stage of conceptual design and in the detailed development of interiors, public spaces, and landscape objects.

**Table 4.** Correlation between personality trait levels (Big Five) and artistic-design parameters

Personality trait	Level	Spatial solutions	Colour palette	Materials & textures	Lighting scenarios
Openness to experience	High	Unconventional layouts, transformable zones, artistic accents.	Saturated contrasts, bold combinations.	Combination of traditional and innovative materials.	Dynamic, changeable lighting, interactive effects.
	Low	Classical layouts, predictable functional schemes.	Restrained, traditional palettes.	Natural, time-tested materials.	Stable, uniform lighting.
Conscientiousness	High	Symmetry, clear zoning, impeccable order.	Harmonious, logically coordinated colours.	High-quality, durable materials.	Regulated lighting, absence of random accents.
	Low	Free compositions, creative asymmetry, adaptability.	Contrasting or expressive colour solutions.	Combinations of materials with varied textures.	Lighting accents that alter the spatial mood.
Extraversion	High	Open spaces, social zones, expressive focal points.	Bright, energetic colours.	Smooth, glossy surfaces, modern materials.	Intense natural light, accent illumination.
	Low (Introversion)	Intimate spaces, private niches, clear zoning.	Muted, deep shades.	Warm natural materials (wood, textiles).	Soft local light, adjustable sources.
Agreeableness	High	Cozy spaces for small groups, ergonomic furniture.	Warm, pastel tones.	Soft tactile materials.	Soft diffused light.
	Low	Individualised work zones, personal space.	Cool or neutral tones.	Minimalist, functional materials.	Localised directional lighting.
Neuroticism	High	Protected, intimate spaces, acoustic isolation.	Calm, low-contrast palette.	Materials evoking warmth and safety.	Diffused stable light, no harsh shadows.
	Low	Open spaces, stimulating environments with multiple sensory cues.	Bright or contrasting colours.	Expressive textures, decorative details.	Dynamic lighting scenarios, accent illumination.

**Source:** developed by the author

Table 5 demonstrated, using two examples, how personality traits according to the Big Five model can influence the choice of interior design solutions. Often, a client, when viewing design examples, focuses only on the visual impression: they may like a certain style or colour scheme, but the interior might turn out to be psychologically uncomfortable in everyday life. Taking a personality test allows determining the client's

individual profile. Based on this data, the designer can select solutions that not only match the client's aesthetic preferences but also support their lifestyle, activity level, need for social interaction, emotional comfort, and the organisation of space. Thus, the interior becomes not just a beautiful picture, but a harmonious environment that considers the psychological characteristics of the resident.

**Table 5.** Examples of interior design according to the Big Five psychological profile

Client profile traits	Design solution	Example of interior design
		Balanced personality profile
<b>Openness to experience</b> – average	A combination of classic functional solutions with a single bright design accent – turquoise kitchen fronts that add creativity to the interior without overwhelming it.	
<b>Conscientiousness</b> – high	Clear spatial organisation, concealed storage systems, and a concise layout that promote order and easy maintenance.	
<b>Extraversion</b> – moderate	An open-plan kitchen-living area for gatherings with close friends in small groups, while maintaining the option to create a more intimate atmosphere.	
<b>Agreeableness</b> – high	The use of warm materials (wooden flooring, wooden countertop) and cozy textiles to create a friendly, welcoming atmosphere.	
<b>Neuroticism</b> – low	A calm, balanced palette of basic shades, soft combined lighting, and decorative elements (such as a seascape) that support emotional stability.	
Creative and sociable person		
<b>Openness to Experience</b> – high	Many unconventional solutions: a combination of textures (brick, glass, wood), a rich green kitchen colour, decorative lighting (chandelier, accent lighting), and artistic details (a bicycle as décor). This is an interior for a person who values creativity, individuality, and experimentation.	
<b>Conscientiousness</b> – moderate	The space is organised but not overly formal: there are open decorative elements that do not necessarily serve a utilitarian function, indicating a balance between order and informality.	
<b>Extraversion</b> – moderate to high	The interior encourages hospitality and social interaction: a spacious dining area, pleasant warm lighting, and an open-plan layout.	
<b>Agreeableness</b> – moderate	The combination of intimate and open areas indicates a willingness to engage in social interaction while maintaining personal boundaries.	
<b>Neuroticism</b> – low	Warm colours, natural materials, and the absence of excessive stimuli create a stable and balanced atmosphere.	

**Source:** developed by the author

The solutions presented are generalised examples and may vary depending on additional factors – such as room size, budget, and the client's stylistic preferences. Testing based on the Big Five model allows gaining a deeper understanding of the client's individual needs and to create an interior that not only meets visual expectations but also ensures psychological comfort in everyday life. The findings confirmed that psychological personality theories can serve as a reliable basis for individualised environmental design. This aligned with the conclusions of X. Li *et al.* (2023),

who demonstrated that integrating personality traits into the design process increases user satisfaction and emotional well-being. Such integration was implemented by correlating typologies (MBTI, Big Five, R.B. Cattell, G.W. Allport, H.J. Eysenck) with specific architectural and design solutions. The results are also consistent with the findings of E. Lee & Y. Lee (2021), who identified a close relationship between personality traits and colour preferences, which can be used to more precisely adapt interior solutions to a user's psychological profile.

According to O. Vartanian *et al.* (2015), spatial parameters such as ceiling height and degree of openness significantly influence aesthetic evaluations. This is evident in the proposed planning solutions for different levels of extraversion – from open social areas to intimate, individualised spaces. A similar approach was described by Y. Fan *et al.* (2023), who highlighted the importance of adapting lighting and colour schemes to the user's psychological profile. Compared with the results of D. Węziak-Białowska *et al.* (2019), where cultural context is considered a key factor in shaping environments, the current study expanded this approach by integrating individual psychological characteristics. This synthesis allows creating spaces that not only align with cultural norms but are also maximally comfortable for a specific individual. While Z. Huang (2024) focused on the use of artificial intelligence for adaptive design, the author showed that even without complex algorithms, it is possible to implement a personalised approach by applying basic psychological models. However, combining these two methods could greatly expand the potential for practical implementation.

Some results of the study partly differ from the conclusions of K. Mezentsev *et al.* (2020), who examined social comfort in urban spaces mainly through the lens of collective interaction. It has been argued that personality traits – particularly neuroticism and conscientiousness – can significantly influence how a person perceives and uses space, even in public environments. This opens a new direction for urban planning that considers the psychological diversity of residents. From a practical perspective, the presented examples of applying different theories (from S. Freud to Big Five) demonstrated that designers can obtain specific recommendations for selecting materials, colours, forms, and spatial organisation based on the client's psychological profile. As G. Stoyanov (2023) noted, such a humanistic approach contributes to improving quality of life and creating environments that reflect the user's values and needs. Moreover, according to the observations of R.A. Power & M. Pluess (2015) and O. Pohosov *et al.* (2024), it is important in design to maintain a balance between the individual needs of users and universal ergonomic standards. The practical dimension of the author's proposed approach finds a parallel in the study by H. Onan Demirel (2024), which proposed a human-centred generative design as a tool for early-stage project development, enabling simultaneous testing and evaluation of concepts with consideration of user characteristics.

Thus, the study confirmed the value of psychological personality theories as a tool for interior designers and architects, and underscored the need for further development of interdisciplinary approaches. Comparisons with other papers showed that integrating psychology into architectural and design solutions is a promising area that combines scientific validity with artistic expressiveness in projects.

## CONCLUSIONS

The study has demonstrated that integrating psychological personality theories into architectural and design planning allows for the creation of spaces more precisely adapted to the individual needs of users. Eight key models were analysed (Freudism, C. Jung, MBTI, Socionics, A.H. Maslow, R.B. Cattell and G.W. Allport, H.J. Eysenck, Big Five), each of which revealed specific guidelines for shaping interior solutions. The analysis showed that the levels of openness to experience, extraversion, conscientiousness, agreeableness, and neuroticism influence the choice of colour schemes, spatial layouts, materials, and lighting strategies. It was found, for example, that users with high openness tend to respond positively to unconventional colour combinations and mixed textures, whereas highly conscientious individuals prefer orderly, functional spaces with concealed storage systems. The findings confirmed that correlating the results of psychological testing with specific design parameters allows creating an "interior profile" – a set of spatial, coloristic, and decorative solutions that correspond to the client's psychological portrait. This approach contributes to enhancing emotional comfort, productivity, and satisfaction with the space. The results indicated that personalised design can be successfully applied not only in private residential interiors but also in public and office environments, ensuring a balance between individual and collective needs. A comparison with other studies showed that similar methods are already used in global practice; however, their systematic implementation, taking into consideration cultural and social contexts, opens new perspectives.

Future research should focus on the empirical study of the relationship between personality traits and users' spatial preferences, developing tools for determining the psychological profile (e.g., using the Big Five model) and automatically matching it with environmental parameters. The application of adaptive design that changes according to the needs of individuals or groups in residential, educational, medical, and public spaces appears promising. An important task is to foster interdisciplinary collaboration between architects, psychologists, and designers to create scientifically grounded methods for shaping comfortable, personality-oriented environments.

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## CONFLICT OF INTEREST

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# Типологічний та факторний аналіз особистості у контексті архітектурного дизайну

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**Анотація.** Сучасний розвиток архітектури та дизайну характеризується зростанням потреби у створенні середовищ, що враховують не лише функціонально-естетичні, а й психологічні особливості користувачів. Актуальність дослідження полягає у необхідності інтеграції індивідуальних психологічних характеристик у проектні рішення для забезпечення комплексного комфорту людини. Метою роботи було формування методологічного підходу до створення персоналізованого архітектурного середовища на основі моделі Big Five, що дозволяє співвіднести риси особистості з конкретними просторовими, колористичними, матеріальними та світловими параметрами. У дослідженні використано методи аналізу наукових джерел, логіко-семантичного зіставлення, узагальнення, кейс-аналізу та візуалізації результатів. Розглянуто вісім провідних теорій особистості та здійснено їх порівняльний аналіз щодо можливостей практичного застосування у проектуванні. Розроблено таблиці, що демонструють відповідність психологічних характеристик дизайнерським рішенням, зокрема вплив рис Big Five на вибір просторових схем, колірних палітр, матеріалів і сценаріїв освітлення. Створено приклади адаптації інтер'єрів та публічних просторів до профілів користувачів із різним рівнем відкритості до досвіду, екстраверсії, доброзичливості, сумлінності та нейротизму. Результати підтвердили, що персоналізований підхід дозволяє підвищити емоційний комфорт, продуктивність і психологічне благополуччя, а також забезпечити баланс між індивідуальними та колективними потребами. Практична цінність роботи полягає у створенні системи рекомендацій для архітекторів і дизайнерів, що сприяє формуванню індивідуально комфортних, гнучких та психологічно збалансованих середовищ у житловій, офісній та міській архітектурі

**Ключові слова:** психологічний профіль; персоналізація середовища; комфорт; просторові рішення; колористика; архітектурне проектування; адаптація інтер'єру