

CREATIVE IDENTITY: INTEGRATING OPTIONS FOR COGNITIVE, PERSONAL, AND SOCIOCULTURAL RESOURCES OF SUBJECTS

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Креативная идентичность: варианты интеграции когнитивных, персональных, социокультурных ресурсов субъектов

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Abstract

The challenges of subjects' creative development are consistent with the global values of self-expression in the profession and everyday life, occur in the conditions of innovative changes and imply selective formation of creative identity. It is relevant to study the Identity of subjects with different creative resources involved in modern technological and informational processes: technical (with the priority to automation), humanitarian (with the priority to personalized communications), social (with the focus on human social adaptation). The aim of the study: to reveal the creative identity types of subjects with

Резюме

Вызовы креативного развития субъектов согласуются с глобальными ценностями самовыражения в профессии и в повседневности, происходят в условиях инновационных изменений и предполагают избирательное формирование креативной идентичности. Актуально исследовать идентичность субъектов с разными креативными ресурсами, включенных в современные технологические и информационные потоки: технические (с приоритетом автоматизации), гуманитарные (с приоритетом персонализированных коммуникаций), социальные (с ориентацией на социальную адаптацию человека). Цель исследования: выявить типы креативной идентичности субъектов со специфическими инновационными и адаптационными

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specific innovational and adaptational resources of creative thinking and corresponding variants of integration of cognitive, personal, sociocultural resources of subjects representing different professional fields (humanitarian, social, technical). Sample: 397 university students; 255 females, 142 males ($M = 20,5$ years). Methods. The Torrance Tests of Creative Thinking-Figural (Form A) (TTCT) and the methodology Role Relations between Social Subjects and Creative Personalities, by V. G. Gryazeva-Dobshinskaya et al. based on the psychosemantic method. Results. The factor structure of subjects' creative thinking includes an innovational factor and adaptational factor. According to the ratio of innovational and adaptational factors of creative thinking subjects were differentiated into four types: exploratory, adaptive, high-creative, and low-creative. The specificity of socio-role and sociocultural identity factor structure in subjects representing three professional fields was revealed. Conclusions. The types of creative thinking based on the structure of innovational and adaptational factors have been identified. Subjects of different professional fields show the specificity of creative identity types, including cognitive, personal, socio-cultural resources.

Keywords: creative thinking types, creative identity, the Torrance Tests of Creative Thinking (TTCT), socio-role identity, innovational factor, adaptational factor.

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ресурсами креативного мышления и соответствующие варианты интеграции когнитивных, персональных, социокультурных ресурсов субъектов, представляющих разные сферы деятельности (гуманитарную, социальную, техническую). Выборка: 397 студентов университета; 255 девушек, 142 юноши ($M = 20,5$ лет). Для диагностики использовались Тест креативного мышления Е.П. Торренса и методика «Рольевые отношения социальных субъектов с творческими личностями» В.Г. Грязевой-Добшинской с соавт., основанная на психосемантическом методе. Показано, что факторная структура креативного мышления субъектов включает инновационный фактор и адаптационный фактор. По соотношению показателей инновационного и адаптационного факторов креативного мышления субъекты дифференцированы на четыре типа: поисковый, адаптивный, высоко креативный, низко креативный. Выявлена специфика факторной структуры идентичности (социально-ролевой и социокультурной) у субъектов, представляющих три профессиональные сферы (гуманитарную, социальную, техническую). . Выявлены типы креативного мышления на основе структуры показателей инновационного и адаптационного факторов креативного мышления. Субъекты разных профессиональных сфер проявляют специфику типов креативной идентичности, включающую когнитивные, персональные, социокультурные ресурсы.

Ключевые слова: типы креативного мышления, креативная идентичность, тест Торренса (ТТСТ), социально-ролевая идентичность, инновационный фактор, адаптационный фактор.

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Modern studies of creativity have an integrative vector and are aimed at identifying universal cognitive and personal factors, as well as options for their integration and ascent to generalized creativity factors (Barbot et al., 2016; Corazza & Glăveanu, 2020; Fürst et al., 2016; Ushakov, 2020; Shumakova, 2021). At the same time, studies reveal a diversity of creativity factors that differentiate subjects according to the spheres of creativity, sociocultural contexts, reflection of subjectivity (Feist, 1998; Erez & Nouri, 2010; Kaufman et al., 2016; Lubart et al., 2022), and show the ascent to different typologies of creativity (Kroeger & Goldstein, 2013; Kim & Pierce, 2013; Puryear et al., 2017).

Studies have revealed two universal factors of creative thinking that unite its most researched properties – fluency, flexibility, originality (innovational factor), elaboration of ideas, abstractness of titles (adaptational factor) according to the results of the Torrance test (Kim & Pierce, 2013; Krumm et al., 2014; Nogueira et al., 2017). The most universal properties of a creative personality have been investigated: openness to experience, extraversion, reflexivity (Fürst et al., 2016; Puryear et al., 2017). The model of generalized creativity factors “chaos” – “order” is proposed for discussion, which includes, at different levels (cognitive, personal), the properties of creative thinking and creative personality with the opposition of “generating”, “divergent” – “evaluative”, “convergent” (Fürst et al., 2016).

The studies of diverse creativity factors have revealed the specificity of cognitive and personal manifestations of subjects in different domains, – technical, artistic, scientific, everyday creativity (Feist, 1998; Baer, 2016; Campos et al., 2015; Erez & Nouri, 2010; Kaufman et al., 2016; Lebedeva et al., 2019; Lubart et al., 2022). The cultural specificity of creativity has been identified and a sociocultural manifesto for creativity research has been pronounced (Erez & Nouri, 2010; Glăveanu et al., 2020; Cabra & Guerrero, 2022).

Differential psychology studies of creativity are oriented to the study of creative thinking styles during the creational process (Kim & Pierce, 2013; Campos et al., 2015; Puccio et al., 2019; Belova, 2021) and creative personality types (Kroeger & Goldstein, 2013; Barbot et al., 2016) as well as variants of their integration (Kaufman et al., 2016; Puryear et al., 2017; Gryazeva-Dobshinskaya et al., 2020).

The significant role of creative identity has been revealed: the conditionality of effective creativity by the specificity of reflection of the subjects' multiple Selves, acceptance of their own resources and possibilities of creative communities; a sociocultural concept of creative identity has been developed (Glăveanu & Tanggaard, 2014; Gołowska & Crisp, 2014; Karwowski, 2016; Haslam et al., 2013; Barbot & Heuser, 2017).

The problems of a modern person identity are discussed in several contexts. The diversity of self-identity 's structural components and their dynamic characteristics are studied: the plurality of personal identification structures is relevant to the diversity of a person's choice of his or her “Self” in a dynamic society (Belinskaya, 2018; Ivanova & Rumyantseva, 2009). The contributions of subjects' identities to the studied life activity sphere are revealed: from culturally specific to global value orientations as the foundations of local or global identity (Nestik & Zhuravlev, 2020), from personal to organizational role positions that determine the specifics of personal, microgroup, organizational identity (Sidorenkov et al., 2020). The com-

plex social identity of subjects is defined by cultural values, experienced activities and communications, and individual differences in information preference (Khukhlaev & Khayt, 2012).

Literature review reveals less variability of cognitive components of creativity, and a greater contribution of personal and sociocultural factors to the diversity of subjects' creative manifestations.

The assumption about variants of subjects' creative identities turns to personological studies of multiple Selves. Personological models include the multi-subject phenomena of Self – Others: “subjectness of Self” as self-causality, as creative Self, reflexive or spontaneous; “reflected subjectness” – “Self in Others” and “Others in Self”, mediated by joint activity (Petrovsky, 2021b; reflexive equivalence of “Self as Myself” and dialogical equivalence of “Self as The Other”, mediated by creativity and productive facilitation (Starovoytenko, 2020). The plurality of forms of Self reflects the paradoxical formation of an individual as the subject and object of their life, as its author and co-author (Petrovsky & Starovoytenko, 2023).

The reflexive complexity of the subject's Self reflects inclusion in the diversity of activities and communities, in the processes of adaptation-individualization-integration into these communities, and reveals the “supra-situational” ascent of the individual to their own uniqueness, as understood-accepted by Others (Petrovsky, 2021a). The subject's reflection of the dynamic opposition “uniqueness” – “integration” is a source of complex identity.

The creative identities of subjects manifest their reflections of the relationship between Self and Others, and reflect subjectness in the acceptance of creative resources, comprehension of the opportunities in life and activity in multidirectional sociocultural contexts. Creative identities of subjects include paradoxical acceptance of their own uniqueness and self-identity with other creators, creative movements, and groups. This study examines two types of creative identity. *The socio-role creative identity* – identification of Self with roles of collaborative creative activity. *The sociocultural creative identity* – identification of Self with the position of certain cultural subjects who have different priorities of existential values: oriented either to the preservation of traditions (“social individual”), to relevant social priorities (“social subject”), or to unique self-expression (“individuality of personality”). Types of creative identities have different foundations, genesis and personal resources. *The social-role creative identity* reflects the processes of adaptation-individualization-integration of personality in professional activities (creative, innovative), reflection and acceptance of their role in it. *The sociocultural creative identity* reflects the processes of adaptation-individualization-integration of personality outside the narrow professional sphere, in the domain of metacognition of meanings and cultural values, through identification with creators, innovators (historical figures or unique contemporaries), who determine the vectors of cultural development. “Social subject” is more focused on adaptive creativity, “individuality of personality” – to innovative creativity. Identity can be a resource or a barrier to the realization of creative abilities of subjects.

Researchers of creativity emphasize in their manifesto the necessity of studying the diversity of creativity, as it is determined by many factors – personality, field

of activity, situation, culture (Glăveanu et al., 2020). Differential psychology research allows us to reveal the diversity of variants of creative identity as resources of both individual and community sociocultural development (Asmolov et al., 2024; Leontiev, 2022).

The challenges of subjects' creative development are consistent with the global values of self-expression in professional activities as well as in everyday life, occur in the conditions of continuous innovative changes and imply selective formation of creative identity.

It is relevant to study the identity of subjects with different creative resources involved in modern technological and informational processes: technical (with the priority to automation), humanitarian (with the priority to personalized multimedia communications), social (with the focus on human social adaptation).

The aim of the study is to identify the types of subjects' creative identities with specific innovational and adaptational resources of creative thinking and the corresponding variants of integration of cognitive, personal, sociocultural resources of subjects representing different fields of activity (humanitarian, social, technical).

Methods

The sample consisted of 397 students from three professional fields: humanitarian (linguists, journalists, philologists), social (psychologists, social psychologists), technical (power engineering, motor transport, aerospace); 255 females, 142 males, $M = 19.5$ years old.

The Torrance Tests of Creative Thinking-Figural (Form A) (TTCT) was applied to diagnose the structure of creative thinking. The test results were used to calculate following indicators: originality, fluency, flexibility, elaboration, abstractness of titles (Matveeva & Markina, 2004; Tunik, 2006).

The originality indicator characterizes a respondent's ability to generate unique ideas. The fluency indicator characterizes a person's ability to generate a large number of ideas; the flexibility indicator characterizes the ability to apply different strategies in problem solving; the elaboration indicator characterizes the ability to elaborate ideas in detail. The abstractness of titles indicator characterizes the ability to highlight the main points, to understand the essence of the problem.

The psychosemantic methodology "Role Relations between Social Subjects and Creative Personalities" (RRSSCP) by V. G. Gryazeva-Dobshinskaya, N. Y. Bakun-chik, V. A. Glukhova, and A. S. Maltseva was used to diagnose the components of subjects' socio-role identities. The RRSSCP methodology is based on repertory grids method by J. Kelly (Gryazeva-Dobshinskaya et al., 2008).

Each participant created "their" project team by selecting 10 images from 27 pictures with different types of creative people representing mythological prototypes (Prometheus, Orpheus, Icarus, etc.) to the following role positions: Self, social roles (chiefs, deputies, dismissed – males and females), personal roles (creator, in-demand employee, rescuer in critical situation). Examples of images are shown in Figure 1.

The images selected for 10 role positions were evaluated according to 12 bipolar constructs created by respondents from 72 idioms expressing either a positive/negative attitude to one of six existential values: Labor, Knowledge, Love, Game, Life, Freedom. For each value, the idioms represented the attitudes of different cultural subjects: those oriented towards traditions (“social individual”), towards relevant social priorities (“social subject”), and towards unique self-expression (“individuality of personality”). For example, the following are idioms related to the value of Knowledge: “live and learn”, “curiosity killed the cat”, “wit works woe”, “blaze the trail”.

Subjects filled out a repertory grid, where 10 images are rated on 12 bipolar constructs. Example of RRSSCP protocol is shown in Figure 2.

Factor analysis was used to process the data. Indicators of socio-role identity were calculated on the basis of factor loadings as the basis of their ranking for each role in the factor, including the subject’s Self (ranking indicators from 10 to 1). The following indicators of the socio-role identity were used in the study: reflection clarity of one’s socio-role identity (Self), reflection of the roles of Creator, Chief and demand in the team (In-demand employee). Indicators of sociocultural identity were defined by the values of a cultural subject (social individual, social subject, individuality of a person) and were calculated as the sum of Self-assessments according to the relevant idioms.

The RRSSCP methodology was validated on samples of managers working in companies with different levels of innovativeness (Gryazeva-Dobshinskaya et al., 2023).

Figure 1

Examples of Stimulus Images from RRSSCP Methodology, Representing Different Types of Creative People: Hephaestus (Left) and Icarus (Right)



Figure 2

RRSSCP Protocol

Self	Male chief	Female chief	Male deputy chief	Female deputy chief	Creator	In-demanded employee	Rescuer in critical situation	Male dismissed employee	Female dismissed employee								
a											1	2	3	4	5	6	7
d	*	*									1	b					
	*		*	*							2						
		*			*	*					3						
			*				*	*			4						
*				*					*		5						
					*	*			*		6						
*					*	*	*		*		7						
	*				*			*			8						
		*	*						*		9						
			*	*		*	*		*		10						
			*		*				*		11						
e						*	*	*			12	c					

Note. a – boxes for filling in the numbers of the selected images; b through c – boxes for writing pair of idioms, forming bipolar constructs; d through e – boxes for evaluating chosen images based on bipolar construct of the corresponding row.

Results

Differentiation of Subjects into Types of Creative Thinking in Dependence to the Level of Generalized Factors Indicators

The factor structure of creative thinking of the whole sample includes the innovational factor – fluency, flexibility, originality indicators, and the adaptational factor – elaboration and abstractness of titles indicators (Table 1).

Factor analysis was conducted applying the principal component method with the use of varimax rotation. The limitation of the number of factors was carried out calculating eigenvalues (greater than 1). The Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett’s criterion of sphericity are 0.718 and 945.0 ($p \leq .001$), respectively.

Table 1

Creative Thinking Factor Structure

Generalized factors	Creative thinking indicators					% d
	Fluency	Flexibility	Originality	Elaboration	Abstractness of titles	
Innovational	.95	.93	.88			51.7
Adaptational				.73	.82	24.7

According to the ratio of indicators of innovational and adaptational factors of creative thinking, the subjects were differentiated into four types: exploratory, adaptive, highly creative, and low creative.

- exploratory type (N = 149). Subjects with average or above average results for indicators of the “innovational” factor, with below average indicators of the “adaptational” factor;

- adaptive type (N = 84). Subjects with average or above average results for indicators of “adaptational” factor, with below average indicators of «innovation-
al» factor;

- high creative type (N = 55). Subjects with above average results for indicators of “innovational” as well as “adaptational” factors;

- low creative type (N = 80). Subjects with below average results for indicators of “innovational” as well as “adaptational” factors.

The fifth group “Atypical” included subjects (N = 29) whose indicators of creative thinking were different from the above mentioned four types. These subjects were excluded from further calculations.

Descriptive statistics for the entire sample and for each type of subjects are presented in Table 2.

Significance of Creative Thinking and Identity Indicators for Subject's Differentiation into Types (Results of Discriminant Analysis)

The accuracy of differentiating subjects into types in dependence to the ratio of indicators of innovational and adaptational factors and identification of the most significant for this process indicators was performed using discriminant analysis with step-by-step selection of variables. The coefficients of the standardized canonical discriminant functions are presented in Table 3.

The accuracy of differentiating subjects into types in dependence to the indicators of creative thinking was 86.7%.

Only the first two standardized discriminant functions with dispersion values of 63.4% and 36.3% contribute to the subjects' differentiation. The first discriminant function corresponds to the “innovational” factor of creative thinking and includes indicators of fluency, flexibility and originality. The second discriminant function corresponds to the “adaptational” factor of creative thinking and includes indicators of elaboration and abstractness of titles.

Further, discriminant analysis was used to select those indicators of the RRSSCP methodology (clarity of reflection of Self, socio-role and sociocultural identity), which significantly differentiate the types of subjects by the indicators of creative thinking.

The accuracy of differentiating subjects into types based on the combination of indicators of creative thinking and indicators of socio-role identity and the combination of indicators of creative thinking and socio-cultural identity amounted to 84.0% and 83.2%, respectively.

The first two discriminant functions for both methods of subjects' differentiation correspond to the discriminant functions, revealed previously when using only

Table 2

Descriptive Statistics

Subjects' groups		Whole sample		Exploratory		Adaptive		High creative		Low creative	
Sample size		397		149		84		55		80	
Male/Female		142/255		61/88		29/55		13/42		30/50	
Indicator		M	SD	M	SD	M	SD	M	SD	M	SD
Creative thinking indicators (TTCT)											
Innovational	Fluency	23.6	7.1	28.7	4.8	16.9	3.6	29.6	5.7	17.7	3.8
	Flexibility	18.8	4.9	22.3	3.1	14.2	3.1	22.5	3.4	14.8	3.1
	Originality	34.9	13.9	43.2	11.1	23.0	6.8	46.1	13.4	25.2	8.1
Adaptational	Elaboration	99.4	44.0	92.2	41.6	107.9	38.7	146.4	43.2	67.0	18.4
	Abstractness of titles	5.8	4.2	4.3	3.2	8.1	4.1	9.7	3.2	2.7	1.7
Identity indicators (RRSSCP)											
Socio-role identity	Self	8.7	1.3	8.7	1.3	8.8	1.2	8.7	1.3	8.7	1.3
	Creator	5.0	2.8	4.9	2.7	4.9	2.9	4.8	2.9	5.2	3.0
	In-demand employee	5.1	2.7	4.8	2.7	4.9	2.8	5.3	2.5	5.3	2.9
	Chief	5.4	2.8	5.3	2.9	6.1	2.7	5.6	2.9	5.0	2.6
Socio-cultural identity	Social Subject	3.3	5.0	3.3	5.4	3.1	4.7	3.3	4.9	3.7	5.1
	Individuality of Personality	3.3	5.3	3.7	5.5	3.0	5.1	2.5	5.4	3.1	4.7

Table 3

Significance of Creative Thinking Indicators for Subjects' Differentiation into Types

Creative thinking indicators	Coefficients of the standardized canonical discriminant function		
	1	2	3
Fluency	.47	.08	-.13
Flexibility	.43	-.28	-.66
Originality	.21	-.10	.92
Elaboration	.16	.68	.38
Abstractness of titles	.13	.82	-.35
% d	63.4	36.3	0.3

creative thinking indicators. These functions correspond to the «innovational» and «adaptational» factors of creative thinking.

The third discriminant function for both methods of subjects' differentiation is formed by the indicators of Identity according to the RRSSCP methodology. In

the first differentiation it is the function of the socio-role identity, showing the subjects' reflection to the roles of a Creator (.20), an in-demand employee (.57), a Chief (-.22), and a Deputy (.48). In the second differentiation – the function of subjects' sociocultural identities, representing the reflection of individuality of a person (.41).

Variants of Integration of Identity and Creative Thinking Resources in Subjects of Different Professional Fields

There was investigated the specificity of identity (socio-role, sociocultural, value components) in subjects of different types of creative thinking (according to the ratio of indicators of innovational complex, – fluency, flexibility, originality, and indicators of the adaptational complex, – elaboration, abstractness of titles), representing three fields of professional education at the university, – humanitarian ($N_h = 120$), social ($N_s = 132$), technical ($N_t = 116$).

In order to reveal the specificity of identity and variants of integrative structures of cognitive, personal, sociocultural resources of subjects with different types of creative thinking, two factor structures were calculated for each of the groups:

- The structure of socio-role identity of personality and creative thinking;
- the structure of sociocultural identity and creative thinking.

Variants of Integration of Socio-Role Identity and Resources of Creative Thinking in Subjects of Different Professional Fields

The factor structure of socio-role identity and creative thinking resources in subjects of three professional fields was analyzed; the results are presented in Table 4.

The analysis of the results revealed that in subjects of the **low creative type of the three professional spheres** reflection of Self does not correlate with indicators of creative thinking.

Integrative Structures of Subjects from the Humanitarian Field

Subjects of the **exploratory** type. Factor structure: 1 – reflection of the *Creator role* and thinking indicators (*fluency–flexibility–originality*); 2 – reflection of the *Chief role* is opposed to the indicator of creative thinking *elaboration*; 3 – *creative identity of Self* with the *Creator role* is opposed to the indicators of *originality* and *abstractness of the titles*.

Subjects of the **adaptive** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) do not correlate with reflection of *Self* and team roles; 2 – *creative identity of Self with the Creator role* is opposed to being *demanded* in the team; 3 – *reflection of Self* and the indicator of *abstractness of titles* are opposed to reflection of the *Chief role* and the indicator of *elaboration*.

Subjects of the **high creative** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) and reflection of the *role of in-demand employee in the team*; 2 – *creative identity of Self* with the *Creator role* and indicators of *flexibility*

Table 4

Factor Structure of Socio-Role Identity and Creative Thinking Resources of Subjects

Factor	Socio-role identity components				Generalized creative thinking factors					% d
					Innovational			Adaptational		
	Self	Cr.	Ind.	Chief	Fluency	Flex.	Orig.	Elab.	Abstr.	
Exploratory N _h = 39				KMO = .508			Bartlett's c. 56.7*			
1		.45	–		.86	.81	.67			25.8
2			–	.80				–.82		18.4
3	.53	.46	–				–.59		–.70	18.3
Adaptive N _h = 35				KMO = .499			Bartlett's c. 87.8**			
1					.93	.90	.70	.41		26.6
2	.55	.58	–.79							18.6
3	–.58			.73				.49	–.53	16.1
High creative N _h = 20				KMO = .506			Bartlett's c. 69.5**			
1			.45	–	.93	.77	.85			31.7
2	.50	.76		–		.53			.75	22.0
3	.57		.69	–				–.87		21.1
Exploratory N _s = 51				KMO = .659			Bartlett's c. 94.4**			
1			.62		.89	.78	.82			28.8
2		.78							.80	15.4
3			–.45	.80						12.7
4	.41							.90		12.4
Adaptive N _s = 31				KMO = .590			Bartlett's c. 63.9**			
1		.45			.78	.91	.76			26.3
2				.69				.50	–.84	17.9
3	.77	–.70	.57							17.9
High creative N _s = 18				KMO = .544			Bartlett's c. 33.7*			
1		–.52	–	–	.87	.80	.80			33.8
2	–.88		–	–			.41	.60		20.6
3		.59	–	–				–.48	.77	17.9
Exploratory N _t = 59				KMO = .509			Bartlett's c. 81.5**			
1					.69	.73	.80	.65		23.3
2		.89	–.46	–.48						15.2
3			.67						.77	14.0
4	.81			.49						13.9
Adaptive N _t = 18				KMO = .549			Bartlett's c. 57.4**			
1			–	.48	.89	.94	.79			34.7
2		.87	–					.79		19.5
3	.85		–	.74						18.6
4			–						.95	13.6

Table 4 (ending)

Factor	Socio-role identity components				Generalized creative thinking factors					% d
					Innovational			Adaptational		
	Self	Cr.	Ind.	Chief	Fluency	Flex.	Orig.	Elab.	Abstr.	
High creative N _t = 17					KMO = .521			Bartlett's c. 34.8*		
1			–	–	.80	.86	.82			31.5
2	.90		–	–				–.90		26.1
3		–.87	–	–					.85	21.8

* – $p \leq .05$, ** – $p \leq .01$.

Note. Cr. – the role of a Creator, Ind. – the role of an In-demand employee; N_h – humanitarian field; N_s – social field; N_t – technical field; “–” – the parameter is not included in the calculated factor structure; Flex. – Flexibility; Orig. – Originality; Elab. – Elaboration; Abstr. – Abstractness of titles.

and *abstractness of titles*; 3 – identity of *Self* as *in-demand employee* is opposed to the indicator of *elaboration*.

Integrative Structures of Subjects from the Social Field

Subjects of the **exploratory** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) are reflected as *demanding from the employee*; 2 – the reflection of the *Creator* role and the indicator *abstractness of titles*; 3 – the reflected *roles of Chief* and *in-demand employee* are opposed; 4 – the reflection of *Self* and the indicator *elaboration* are not correlated by socio-role aspects.

Subjects of the **adaptive** type. Factor structure: 1 – reflection of the *Creator* role and thinking indicators (*fluency–flexibility–originality*), 2 – reflection of the *Chief* role and a set of indicators (*elaboration–abstractness of titles*); 3 – *identity of Self* as *in-demand employee* is opposed to the *Creator* role.

Subjects of the **high creative** type. Factor structure: 1 – reflection of the *Creator* role is opposed to thinking indicators (*fluency–flexibility–originality*); 2 – reflection of *Self* is opposed to the indicators *originality* and *elaboration* and does not correlate with social and role aspects; 3 – reflection of the *Creator* role and the indicator *abstractness of titles* are opposed to the indicator *elaboration*.

Integrative Structures of Subjects from the Technical Field

Subjects of the **exploratory** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality–elaboration*) have no social-role correlation; 2 – reflection of the role of the *Chief* as an *in-demand employee* is opposed to reflection of the *Creator* role; 3 – reflection of the role of the *in-demand employee* and the indicator of *abstractness of titles*; 4 – social-role identity of *Self* with the *Chief* role.

Subjects of **adaptive** type. Factor structure: 1 – reflection of the *Chief* role and thinking indicators (*fluency–flexibility–originality*); 2 – reflection of the *Creator* role and the indicator *elaboration*; 3 – socio-role identity of *Self* with the *Chief* role; 4 – the indicator *abstractness of titles* does not correlate with socio-role aspects.

Subjects of **high creative** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) do not correlate with socio-role aspects; 2 – reflection of *Self* does not correlate with socio-role aspects and is opposed to the indicator *elaboration*; 3 – reflection of the *Creator role* is opposed to the indicator *abstractness of titles*.

Thus, the comparison of variants of integration of socio-role identity and creative thinking in subjects of different professional fields revealed their specific features.

Creative identity is most pronounced in the subjects of the **humanitarian** field: there is a correlation of the reflection of *Self* and the *Creator role* with the indicator of creative thinking adaptational factor, and in case of high-creative ones – also with indicator of innovational factor. In subjects of the **social** field, reflection of *Self* and reflection of the *Creator role* more often form separate factors associated mainly with indicators of creative thinking adaptational factor. Students of the **technical** field are characterized by the manifestation of status socio-role identity.

In most variants of the subjects' integrative structures, the indicators of creative thinking innovational factor do not correspond with the reflection of *Self*, identity, but often corresponds with the reflection of the socio-role aspects of the personality (the *roles of Creator, in-demand employee and Chief*).

Variants of Integration of Sociocultural Identity and Creative Thinking Resources in Subjects of Different Professional Fields

The results of analyzing the factor structure of subjects' sociocultural identities and creative thinking resources in subjects of three professional fields are presented in Table 5.

The analysis revealed that subjects of the **low creative type of the three professional fields** have minimal integration of sociocultural identity and creative thinking: a variant of the opposition between the social subject and individuality of personality (in subjects of the **humanitarian field**); integration of the social subject and individuality of personality with the indicator of originality (in subjects of the **social field**) and with the indicator of elaboration (in subjects of the **technical field**).

Integrative Structures in Subjects of the Humanitarian Field

Subjects of the **exploratory** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) do not correlate with sociocultural identity; 2 – assessment of *Self* as an *individuality of personality* and the indicator of *abstractness of titles*; 3 – the indicator of *elaboration* does not correlate with sociocultural identity.

Subjects of the **adaptive** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) do not correlate with sociocultural identity; 2 – assessment of *Self* as a *social subject and individuality of personality* and the indicator of *abstractness of titles* are opposed to the indicator of *elaboration*.

Table 5

Factor Structure of Sociocultural Identity and Creative Thinking Resources of Subjects

Factor	Socio-role identity components		Generalized creative thinking factors					% d
			Innovational			Adaptational		
	Social subject	Individuality of personality	Fluency	Flexibility	Originality	Elaboration	Abstractness of titles	
Exploratory N _b = 39			KMO = .522			Bartlett's c. 44.6**		
1	–		.91	.76	.75			33.1
2	–	.78					.78	23.5
3	–					.94		18.6
Adaptive N _b = 35			KMO = .562			Bartlett's c. 80.2**		
1			.94	.93	.64	.42		34.1
2	.56	.80				–.50	.65	25.1
Exploratory N _s = 51			KMO = .577			Bartlett's c. 70.8**		
1			.90	.84	.81			32.3
2	.72						.73	17.8
3		.75				.72		17.0
Adaptive N _s = 31			KMO = .581			Bartlett's c. 41.4**		
1			.78	.91	.76			32.4
2		.54				–.53	.85	18.7
3	.83					.54		18.2
High creative N _s = 18			KMO = .600			Bartlett's c. 28.1*		
1	–	–.55	.94	.68	.87			41.1
2	–					.82	–.69	19.5
Exploratory N _t = 59			KMO = .587			Bartlett's c. 66.4**		
1			.77	.80	.73	.54		31.1
2	.57	.60					–.77	20.5
Adaptive N _t = 18			KMO = .600			Bartlett's c. 38.2**		
1		–	.87	.95	.85	.46		44.8
2	.81	–				.62	–.52	22.6

Subjects of the *high creative* type. No significant factor structure of integration of subjects' sociocultural identities and creative thinking was revealed.

Integrative Structures in Subjects of the Social Field

Subjects of the *exploratory* type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) do not correlate with sociocultural identity; 2 – assessment of Self as a *social subject* and the indicator of *abstractness of titles*; 3 – assessment of Self as an *individuality of personality* and the indicator of *elaboration*.

Subjects of the **adaptive** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) do not correlate with sociocultural identity; 2 – assessment of Self as an *individuality of personality* and the indicator of *abstractness of titles* are opposed to the indicator of *elaboration*; 3 – assessment of Self as a *social subject* and the indicator of *elaboration*.

Subjects of the **high creative** type. Factor structure: 1 – assessment of Self as an *individuality of personality* is opposed to thinking indicators (*fluency–flexibility–originality*); 2 – the indicators *elaboration* and *abstractness of titles* are opposed to each other and do not correlate with sociocultural identity.

Integrative Structures in Subjects of the Technical Field

Subjects of the **exploratory** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality–elaboration*) do not correlate with sociocultural identity; 2 – assessments of Self as a *social subject and individuality of the personality* are opposed to the indicator of *abstractness of titles*.

Subjects of the **adaptive** type. Factor structure: 1 – thinking indicators (*fluency–flexibility–originality*) do not correlate with sociocultural identity; 2 – assessment of Self as a *social subject* and the indicator of *elaboration* are opposed to the indicator of *abstractness of titles*.

Subjects of the **high creative** type. No significant factor structure of integration of the sociocultural identity of Self and creative thinking resources was revealed.

Comparison of variants of integration of sociocultural identity and creative thinking resources in subjects of different professional fields shows their specific features.

In all variants of subjects' integrative structures, the indicators of creative thinking innovational factor do not correspond with sociocultural identity, it is not reflected as the resource of subjectness manifestation in culture.

In subjects of *humanitarian and social fields* creative sociocultural identity as *individuality of personality* corresponds with the indicators of adaptational factor of creative thinking – with careful development and comprehension of the meaning, ideas.

In subjects of the *technical field* either the factor of the social subject or the factor of *social subject and individuality of personality* is revealed, in which socio-cultural identity is corresponded with thorough elaboration of ideas and is opposed to ascending to their meaning.

Thus, the study reveals the specificity of types of creative identity, – socio-role and socio-cultural – in subjects with different resources of creative thinking, representing three professional fields (humanitarian, social, technical).

Discussion

The study of creative identity types (socio-role and sociocultural) in subjects with different creative thinking resources confirmed the heuristics of the assumption about their professional specificity in the context of inclusion in modern technological and informational processes: technical (with the priority to automation),

humanitarian (with the priority to multimedia communications), social (with the focus on human social adaptation).

Identification of two generalized factors in the structure of creative thinking – innovational and adaptational – is consistent with the results of existing studies: a two-factor structure of creative thinking, innovative and adaptive creativity according to the Torrance test (Krumm et al., 2014; Kim & Pierce, 2013), two-factor model with the factors “innovativeness” and “adaptiveness” according to the Urban test (Nogueira et al., 2017), thinking styles of “innovators” and “adaptors” by the Curton test (Campos et al., 2015).

Subjects are differentiated into four types according to the structure of creative thinking indicators: exploratory, adaptive, high creative, low creative. The identified exploratory – adaptive types of creative thinking (with opposite dominant indicators) may correlate with preferred thinking styles in the creative process: “clarifier”, “ideator” – “developer”, “implementer” (Campos et al., 2015; Puccio et al., 2019).

Exploring creative identity in the context of integrating cognitive, personal and sociocultural resources of subjects from different professional fields correlate with the sociocultural theory of creative identity centered on the research of socio-role components, representation of creative personality in socio-cultural contexts (Glăveanu & Tanggaard, 2014), and with the study of the relationship between the choice of professional occupations and preferred activities in the creative process (Puccio et al., 2019).

The specificity of creative role identity in subjects of three professional fields has been revealed. In subjects of the humanitarian field, it includes adaptational and innovational resources of creative thinking; in subjects of the social field – adaptational resources of creative thinking; in subjects of the technical field the role identity is focused on achievements beyond the resources of creative thinking. The innovational complex of creative thinking is minimally connected with identity (in subjects of the social field it is opposed to identity), but it is included in the complex of reflected team roles. Achievements in the professional field require the balance of creativity resources: a study of business professionals, who were qualified the competitive selection for entrepreneurship training, revealed a balance of innovational and adaptational thinking styles, and a preference for the activity of the “ideator”, and openness to experience (Campos et al., 2015).

There have been revealed specific features of sociocultural identity in subjects of three professional fields. In all variants of integration of subjects’ sociocultural and cognitive resources, the innovational factor of creative thinking does not correlate with sociocultural identity and is not reflected as a resource of subjectness manifestation in culture. In subjects of *humanitarian and social fields* creative sociocultural identity as *individuality of a personality* correlates with the indicators of the adaptational factor of creative thinking, including the ability to develop ideas thoroughly and comprehend their meaning. In subjects of the *technical field* the variants of sociocultural identity are presented as complexes of properties of a *social subject* or a *social subject and individuality of a personality*, in which the ability of thorough development of ideas is opposed to comprehension of their meaning. This

correlates with the study of how creativity is influenced by the social contexts of professional activity (task structure), cultural values (individualism – collectivism, novelty – usefulness), and individual needs to be unique or assimilated (Erez & Nouri, 2010). The specificity of the value aspect of the sociocultural identity of university students from different professional fields can be understood in the context of the peculiarity of the formation of metacognition resources that give meaning to creativity (Lebuda & Benedek, 2023) and requires further research.

Creative identity is a dynamic phenomenon, formed in the process of learning, professional activity (Karwowski, 2016; Barbot & Heuser, 2017); the complexity of its structure is comparable to the structure of organizational identity (Sidorenko et al., 2020). Formation of creative identity includes subject's identification with real creative communities, with style trends in culture (Haslam et al., 2013); the "dual identity" intensifies creativity (Gocłowska & Crisp, 2014).

In this context, the phenomenon of the *multiple creative role identity in high creative subjects of the humanitarian field* can be interpreted. The positive meaning of this vector of creative identity development is based on the study of the phenomenology of multiple Selves as a variety of manifestations of human subjectness in activity and communication (Petrovsky, 2021b), as reflecting one's Self – Others relationships in culture (Starovoytenko, 2020).

The phenomenon of a discrepancy between the subjects' identities and creative thinking resources has been revealed. In *high creative subjects of the social and technical fields* the reflection of the Commanding-role Self is opposed to innovational and adaptational resources of creative thinking. The discrepancy between creative leadership resources and identity has been identified in studies of innovative leadership of managers (Gryazeva-Dobshinskaya et al., 2023). University students' positive perceptions of the demand for creative resources provide reasons to use them outside of team projects. This correlates with studies of everyday creativity: the links of its intensity and achievements with divergent thinking and creative personality properties were revealed in the sample of university students (Fürst et al., 2016); a cross-cultural study revealed links of global (everyday) creativity with values of openness, readiness for changes (Lebedeva et al., 2019).

Differential psychology studies of creativity integrative structures focus both on the theoretical foundations of this direction (Glăveanu et al., 2020; Asmolov et al., 2024; Leontiev, 2022) and on the development of technological capabilities to conduct empirical research (Barbot et al., 2016) and show possible prospects for future psychological research.

Conclusion

The types of creative thinking have been identified based on the structure of innovational and adaptational factors of creative thinking: exploratory, adaptive, high creative, low creative.

Determined the variants of integration of creative thinking indicators and identity components (socio-role, socio-cultural) among representatives of three professional fields – humanitarian, social, technical, which provides an opportunity for

differential identification of resources and learning barriers of creative and innovative activity for students of a university.

Subjects of different professional fields display the specificity of creative identity types – socio-role and socio-cultural – which includes cognitive, personal, and socio-cultural resources. The creative role identity of humanitarian field subjects includes innovational and adaptational resources of creative thinking. The creative role identity of social field subjects includes adaptational resources of creative thinking. The status socio-role identity of the technical field subjects does not include creative thinking resources. The creative socio-cultural identity of subjects includes various adaptational resources of creative thinking (specific for representatives of different fields) and does not correspond with the innovational resources of creative thinking.

The prospect for further differential psychology research is based on the possibility of revealing the diversity of variants of creative identity as resources of socio-cultural development of individuals and communities.

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