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Original research article

Characteristics of the Semantic Layer of the Image of the World Among Young Representatives of the Indigenous Small-numbered Peoples of the North

Maryam A. Ryabova

Arktika Scientific Research Center, Far Eastern Branch of the Russian Academy of Sciences, Magadan, Russian Federation
E-mail: may_mi@mail.ru
ORCID ID: https://orcid.org/0000-0001-7912-1291

Abstract

Introduction. Research on the ethno-cultural characteristics of the image of the world in the in digenous small-numbered peoples of the North is important. This paper presents the results of an empirical investigation of the image of the world (a semantic layer) among young representatives of the indigenous small-numbered peoples of the North. This study is the first report on the application of a three-level model of the image of the world for describing its characteristics among young representatives of indigenous ethnic groups.

Methods. The study sample comprised 225 individual participants aged 16–25 years, living in the North and Northeast of Russia, 110 of whom were representatives of the indigenous small-numbered peoples of the North and 115 of whom were representatives of the non-indigenous population. The study employed the group associative experiment.

Results and Discussion. The findings indicate the presence of non-random differences in the structures of semantic assessments, which indicates the presence of specific characteristics of the semantic layer of the image of the world among representatives of indigenous peoples of the North. In the group of representatives of the indigenous small-numbered peoples of the North the first ranks in associations with the 'my life five years ago' stimulus correspond to the following descriptors: 'school', 'study', and 'friends'; with the 'my life now' stimulus – 'study', 'work', and 'sports'; with the 'my life five years later' stimulus – 'work', 'family', and 'children'; with the 'nature' stimulus – 'beauty', 'forest', and 'animals'; with the 'human' stimulus – 'kind', 'friend', and 'reasonable'; and with the 'happiness' stimulus – 'family', 'love', and 'children'.

In the group of representatives of the non-indigenous population the North the first ranks in associations with the 'my life five years ago' stimulus correspond to the following descriptors: 'school', 'friends', and 'carefree'; with the 'my life now' stimulus – 'study', 'love', and 'work'; with the 'my life five years later' stimulus – 'family', 'work', and 'children'; with the 'nature' stimulus – 'forest', 'beauty', and 'sea'; with the 'human' stimulus – 'kind', 'personality', and 'reasonable'; and with the 'happiness' stimulus – 'family', 'love', and 'children'.

The differences observed when comparing associative semantic universals indicate that associative links are determined by differences in subjective experiences and cultural contexts.

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Highlights

➢ Characteristics of the semantic structures of the image of the world among young representatives of the indigenous small-numbered peoples of the North manifest themselves in the representations of the past, present and future.

➢ The associations related to formalized events prevail over personal ones among young representatives of the indigenous small-numbered peoples of the North.

➢ Compared to the subjects of the experimental group, in the group of representatives of the indigenous small-numbered peoples of the North the structures of the semantic layer of the image of the world are characterized by less diverse associations.

➢ The differences observed when comparing associative semantic universals indicate that semantic structures of the image of the world are determined by differences in subjective experiences and cultural contexts.

Introduction

In Russian psychology the concept of the 'image of the world' has emerged relatively recently; it is associated with methodological issues of studying the processes of perception, as well as with the problem of human reflection of the objective reality. The analysis of the studies on the image of the world indicates that this concept can be defined as an integral multi-level construct, which basis is formed by the meanings and the systems of meanings of the subject. The subjective structure of the image of the world, on the one hand, is regulated by the individual experience of the subject and develops in the process of his/her activities. On the other hand, it orders the individuals' representations of the world and determines the ways of interacting with it (Leontiev, 1979; Serkin, 2018; Smirnov, 1985).

Empirical studies of specific characteristics of the image of the world deal mainly with professional aspects of this issue (Artemyeva, 1999; Klimov, 1995; Serkin, 2016; Skleinis, 2018; Smirnov, 1985; Strelkov, 2003). Meanwhile, no studies are available that are based on holistic theoretical models of the image of the world and take into account the characteristics of ethnic belonging to the indigenous small-numbered peoples of the North (hereinafter referred to as ISPN) in the context of a certain age period (youth). The study of psychological characteristics of young representatives of indigenous minorities is important because of the ongoing processes of loss of

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ethnic identity, cultural traditions, and traditional activities of indigenous ethnic groups not only in Russia but also all over the world (Armenta, Whitbeck, & Habecker, 2016; King, 2019; Barnes & Josefowitz, 2019; Nesdole, Lepnurm, Noonan, & Voigts, 2015; Pomerville, Burrage, & Gone, 2016; Houkamau & Sibley, 2011). Indigenous small-numbered peoples as a special group of the population are characterized by the presence of traditional types of management, as well as the specific features the social and cultural way of life (Buchek, 2016; Indenbaum, 2008; Ryabova & Serkin, 2016; Serkin, 2008). The relevance of the study of the image of the world among representatives of the indigenous peoples of the North is also explained by practical importance. The federal target programs aim at preserving and developing the traditional culture of northern ethnic groups and carry out projects for the socio-psychological support of the indigenous population. Thus, the relevance of the present study is determined by insufficient theoretical elaboration of the issues of the image of the world among representatives of the indigenous peoples of the North and practical importance.

There is a lack of generally recognized models of the image of the world (Serkin, 2018). Therefore, methodological issues of experimental research on the image of the world remain important in today's psychology. In order to operationalize the concept, V. P. Serkin addresses to a three-level model of the image of the world (Artemyeva, Strelkov, & Serkin, 1983), which includes nuclear (amodal goal-motivational complex), semantic (meaning systems), and perceptual (images of actual perception) structures. Various measurement tools may be used to describe the image of the world, including those for studying values, motivation, as well as psychosemantic and projective tests and personality questionnaires (Serkin, 2018).

The majority of international (Bertran & Nistal, 2017; Greaves, Houkamau, & Sibley, 2015; Sibley & Houkamau, 2013) and Russian researchers (Buchek, 2016; Vorobyova, 2018; Indenbaum, 2016; Ryabova, 2017; Serkin, 2018) emphasize the importance of ethno-cultural characteristics of the image of the world, which is formed in the context of individual and socio-cultural experience and manifests itself in intercultural differences of ethnic communities, including the perceptions of the world, subjective assessments of temporal characteristics, differences in ideas about the significance of life events, etc. Summarizing the results of previous studies of the psychological characteristics of indigenous minorities (Savani & Job, 2017; Johnson, Bowker, & Cordell, 2004; Cowie, Greaves, Milfont, Houkamau, & Sibley, 2016), our hypothesis states that the representatives of the ISPN and the representatives of non-indigenous ethnic groups have certain individual differences in the ways of perception and assessment of the world, which manifest themselves at all levels of the image of the world, including the level of semantic structures, and determine the ethnic specific characteristics of the image of the world.

Methods

The data collection was carried out in the period from 2016 to 2017. The study was partially conducted at the following educational institutions: North-Eastern State University of Magadan, secondary vocational schools of Magadan, Magadan region, and Chukotka Autonomous Okrug. In total, the study sample comprised 225 individual participants aged 16 to 25 years, living in the North and Northeast of Russia (Magadan region, Chukotka Autonomous Okrug). Participation in the study was voluntary. Tables 1 and 2 present sample characteristics.

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Table 1

Characteristics of the sample of representatives of indigenous and non-indigenous peoples

Group		Gender				Age		
	N	male	%	female	%	min	max	Mean (SD)
ISPN	110	49	44.55	61	55.45	16	25	20.35 (2.33)
non-ISPN	115	38	33.04	77	66.96	16	25	19.47 (1.62)
Total	225	87	38.67	138	61.33	16	25	19.89 (2.04)

Table 2

National composition of the sample of representatives of indigenous and non-indigenous peoples

ISPN	N	%	non-ISPN	N	%
Evens	57	51.82	Russians	110	95.65
Chukchis	25	22.73	Ukrainians	2	1.74
Koryaks	15	13.64	Azerbaijanis	1	0.87
Itel'mens	4	3.64	Ingush	1	0.87
ISPN	3	2.73	Lezghians	1	0.87
Essene Yakuts	2	1.82			
Kamchadals	2	1.82			
Yukaghirs	2	1.82			
Total	110	100.00	Total	115	100.00

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In Table 2 the representatives of indigenous peoples of the North are combined into a single group of the ISPN. A previous pilot study conducted in the framework of the questionnaire survey of young representatives of the ISPN helped determine the criteria by which the subjects distinguished different indigenous peoples. It was found that the majority of representatives of the ISPN did not distinguish representatives of different indigenous small-numbered ethnic groups, including according to ethno-cultural criteria (culture, origin, place of residence, way of life, appearance) and combined them into a single group (Ryabova & Serkin, 2016). Additionally, 89 % (n = 98) of the sample of the representatives of ISPN were residents of cities and urban settlements, and 12 % (n = 12) of them were residents of national villages; 15 % (n = 17) of the total sample of the representatives of the ISPN were engaged in traditional activities of northern ethnic groups (national dances, applied arts, bone carving, bead weaving, hunting, and fishing).

To identify ethnic specific characteristics of the image of the world of representatives of the indigenous peoples of the North, this study was operationalized on the basis of a three-level model (Artemyeva et al., 1983), which made it possible to identify specific characteristics of semantic, nuclear, and perceptual structures of the image of the world. This paper considers features of a semantic layer of the image of the world among indigenous youth using the group associative experiment (Serkin, 2009). Using this model, previous studies examined professional specific characteristics of the image of the world. This study is the first report on the application of a three-component structure to investigation of ethnic specific characteristics of the image of the world.

The group associative experiment is a projective measurement tool that examines individuals' associative links in a certain area in accordance with the stimulus (Serkin, 2009; De Deyne & Storms, 2008; King & Riggs, 1972). During the procedure, the subjects are asked to evaluate the word-stimulus, noting the first associations that come to mind. The following words and phrases were used as stimuli: 'my life five years ago', 'my life now', 'my life five years later', 'nature', 'human', and 'happiness'; these words and phrases are neutral for both groups. To interpret the results we identified associative semantic universals – combinations of non-random associations with the stimuli in the groups.

Results and Discussion
Tables 3–8 show the results for the group associative experiment.

Table 3
Distribution of significant non-random associations with the 'my life five years ago' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
School	34	1	School	37	1
Study	13	2	Friends	16	2
Friends	11	3	Carefree	13	3

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Table 3

Distribution of significant non-random associations with the 'my life five years ago' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
Carefree	**9**	4	**Merry**	**12**	4
Merry	**8**	5	**Study**	**7**	5
Childhood	**7**	6	**Childhood**	**6**	7
Home	**6**	7.5	Love	6	7
First love	**6**	7.5	**Exams**	**6**	7
Walking	4	11	**First love**	**5**	9
Sport	4	11	Brother	4	12.5
Happiness	4	11	**Games**	**4**	12.5
Student	4	11	Mother	4	12.5
Schoolchild	4	11	**Family**	**4**	12.5
Bicycle	3	16	Sister	4	12.5
Normal	3	16	Calm	4	12.5
Family	**3**	16	Excitement	3	19
Good	3	16	Graduation	3	19
Exams	**3**	16	Partying	3	19
			Home	**3**	19
			Interesting	3	19
			Uncertainty	3	19
			Parents	3	19
			Freedom	3	31.5
Sum	**100**		**Sum**	**113**	
Total sum	251		Total sum	282	

Note: identical non-random associations are indicated in bold here and in the following tables.

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Table 3 shows the results of ranking non-random associations (v ≥ 3) (Serkin, 2009) with the 'my life five years ago' stimulus. In general, representations of the past life are similar among the representatives of both groups. The following associations were identical: 'school' (34 and 37), 'study' (13 and 7), 'friends' (11 and 16), 'carefree' (9 and 13), 'merry' (8 and 12), 'childhood' (7 and 6), 'home' (6 and 3), 'first love' (6 and 5), 'family' (3 and 4), and 'exams' (3 and 6). Additionally, the 'school' descriptor corresponds to the first rank for the subjects in both samples. It is obvious that representatives of indigenous and non-indigenous ethnic groups associated the events of the past with the school. Several descriptors, including 'school' (34 and 37), 'study' (13 and 7), 'friends' (11 and 16), 'carefree' (9 and 13), 'merry' (8 and 12), 'home' (6 and 3), and 'exams' (3 and 6) had significant differences in frequency. In the experimental group, the 'study' descriptor was at the second place in the number of associations. On the contrary, the same rank corresponded to the 'friends' descriptor in the control group. For indigenous youth the past is apparently more associated with study and events related to it. On the contrary, for non-indigenous ethnic groups communication with friends was probably more important during this period. The quantitative ratio of the frequency of the descriptors of 'carefree', 'merry' and 'childhood' prevails in the control group. This may be explained by the fact that the past is more carefree and merry among non-indigenous youth. We should also note that the experimental group had more frequent associations related to the 'home' descriptor. This is probably because the majority of the surveyed representatives of the ISPN came to study in Magadan from their native national villages and towns.

An almost identical ratio in frequency distributed among the following descriptors: 'childhood' (7 and 6), 'first love' (6 and 5), and 'family' (3 and 4). Moreover, there were associations that differed in groups. 'Walking', 'sports', 'happiness', 'student', 'schoolchild', 'bicycle', 'normal', and 'good' were observed only among the subjects of the experimental group. 'Love', 'brother', 'mother', 'calm', 'excitement', 'graduation', 'partying', 'interesting', 'uncertainty', and 'parents' were observed only among the subjects of the control group. The respondents of the control group had a wider range of associations. The distribution of differing descriptors indicates that associations related to emotional and personal feelings ('love', 'uncertainty', 'excitement', and 'freedom') prevail in the control group. In the experimental group, associations related to educational activities prevail. Our results go in line with the data obtained in the study by V. P. Serkin and V. L. Solovenchuk (Serkin, 2008).

A comparative analysis of students' representations of their own lives showed that the ideas related to formalized events (educational activities, stating events) prevail in the ISPN group; these ideas prevail over personal ones and may be indicators of adaptation.

In general, the subjects of the experimental group had a positive attitude towards the past, which was associated with active types of activity ('sports', 'walking', and 'bicycle'). The control group showed a considerable concentration on personal events and feelings; a positive attitude towards the past prevails. There is a clear interconnection of ideas with family and kinship relations ('sister', 'mother', 'brother', and 'parents').

The sum of significant non-random associations and the total sum of the frequency of associations in the control and experimental groups differ significantly (ISPN = 251 (100), non-ISPN = 282 (113)). Associative links are established during the process of accumulation of subjective experience and are determined by the context of culture. Subjective experience contains the structures of individual knowledge and skills acquired in the process of education, training and interaction

with the world. From the point of view of Indenbaum (2016), the genesis of cognitive activities is associated with specific characteristics of children's communication and interaction with adults during early development, and not with ethnicity. According to the author, the infrastructure of the place of residence, including the characteristics and conditions of sociocultural deprivation, is a factor influencing the development of cognitive skills in indigenous children (Indenbaum, 2016). Consequently, we can identify the factors that determine specific characteristics of the subjective experience of representatives of the peoples of the North – upbringing as a child-adult interaction and the social infrastructure of the place of residence, which is characterized by limitations in the educational space and communication. The individual subjective experience of representatives of the non-indigenous population living in the city is probably more diverse and implies 'more' ways to interact with the world.

Table 4
Distribution of significant non-random associations with the 'my life now' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
Study	**27**	1	**Study**	**24**	1
Work	**11**	2	Love	13	2.5
Sports	**7**	3.5	**Work**	**13**	2.5
Student	7	3.5	**Family**	**12**	4
Friends	**6**	5.5	**University**	**10**	5
Interesting	**6**	5.5	**Friends**	**8**	6.5
Eventful	4	9.5	Happiness	8	6.5
New acquaintances	4	9.5	**Sports**	**7**	8
Excellent	4	9.5	**Independence**	**6**	9.5
Family	**4**	9.5	**Boring**	**6**	9.5
Boring	**4**	9.5	**Merry**	**5**	11.5
University	**4**	9.5	**Interesting**	**5**	11.5
Merry	**3**	14.5	Institute	4	14.5
Mother	3	14.5	Responsibility	4	14.5
Husband	**3**	26.5	Joy	4	14.5
Dormitory	3	14.5	Stability	4	22
Independence	**3**	14.5	Difficult	4	14.5

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Table 4

Distribution of significant non-random associations with the 'my life now' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
			Husband	**3**	22
			Communication	3	22
			Loneliness	3	22
			Plans	3	22
			Freedom	3	22
			Seminar	3	22
			Sleep	3	22
			Calm	3	22
			Student days	3	22
			Exams	3	22
Sum	**78**		**Sum**	**99**	
Total sum	238		Total sum	346	

Table 4 shows the results of ranking non-random associations (v ≥ 3) with the 'my life now' stimulus. In general, representations of the present life are similar among the representatives of both groups. The following associations were identical: 'study' (27 and 24), 'work' (11 and 13), 'sports' (7 and 7), 'friends' (6 and 8), 'interesting' (6 and 5), 'family' (4 and 12), 'boring' (4 and 6), 'university' (4 and 10), 'merry' (3 and 5), 'husband' (3 and 3), and 'independence' (3 and 6). Moreover, the 'study' descriptor corresponds to the first positions of the descriptor ranks for the subjects in both samples. It is obvious that ideas related to educational activity are relevant for representatives of indigenous and non-indigenous populations who are students.

Several descriptors, including 'study' (27 and 24), 'family' (4 and 12), 'university' (4 and 10), and 'independence' (3 and 6) had significant differences in frequency. The present life is more associated with educational activity in the experimental group and with family and personal relationships in the control group. This is confirmed by the data on differing associations. For example, there is no 'love' descriptor in the ISPN group. The associations differing in groups were distributed as follows: 'student', 'eventful', 'new acquaintances', 'beautiful', 'mother', and 'dormitory' were observed only among the subjects of the experimental group; 'love', 'happiness', 'institute', 'responsibility', 'joy', 'stability', 'difficult', 'communication', 'loneliness', 'plans', 'freedom', 'seminar', 'sleep', 'calm', 'student days', and 'exams' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations. In contrast to the experimental group, associations related to emotional and personal feelings and events prevail in the control group. We should note the 'dormitory' association that emerged in the ISPN group. This may be explained by the fact that the majority of representatives of the indigenous peoples of the North came to study in Magadan from national villages

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and live in a dormitory. An almost identical ratio in frequency was distributed among the following descriptors: 'work' (11 and 13), 'sports' (7 and 7), 'friends' (6 and 8), 'interesting' (6 and 5), 'boring' (4 and 6), 'merry' (3 and 5), and 'husband' (3 and 3). On the whole, associations related to positive feelings and emotions ('interesting', 'merry', 'eventful', 'beautiful', etc.) prevail in the representations of the subjects in both samples.

The sum of significant non-random associations and the total sum of the frequency of associations in the control and experimental groups differ significantly (ISPN = 238 (78), non-ISPN = 346 (99)). Such a distribution of the frequency of associations may be explained by the fact that the majority of young men and women from the indigenous population live in villages and towns, in sociocultural deprivation that manifests itself in the scarcity of educational space, communication, and access to the values of traditional culture (Indenbaum, 2008; Serkin, 2008).

Table 5

Distribution of significant non-random associations with the 'my life five years later' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
Work	**34**	1	**Family**	**41**	1
Family	**33**	2	**Work**	**38**	2
Children	**5**	4	**Children**	**21**	3
Home	**5**	4	**Happiness**	**8**	4
Friends	**5**	4	Moving	7	5.5
Interesting	**4**	8	**Success**	**7**	5.5
Car	4	8	Career	6	7
Independent	4	8	Uncertainty	5	8.5
Happiness	**4**	8	Good job	5	8.5
Success	**4**	8	**Friends**	**4**	13
Apartment	3	13	**Interesting**	**4**	13
Love	**3**	13	**Husband**	**4**	13
Husband	**3**	13	Travel	4	13
Child	**3**	13	Own house	4	13
Stability	3	13	Own apartment	4	13
			Sports	4	13
			Money	3	20.5
			Home	**3**	20.5
			Love	**3**	20.5
			New	3	20.5
			Responsibility	3	20.5
			Child	**3**	98.5
			Self-development	3	20.5
			Warmth	3	20.5
			Purposefulness	3	20.5
Sum	**103**		**Sum**	**129**	
Total sum	208		Total sum	338	

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Table 5 shows the results of ranking non-random associations (v ≥ 3) with the 'my life now' stimulus. In general, representations of the future life are similar among the representatives of both groups. The following associations were identical: 'work' (34 and 38), 'family' (33 and 41), 'children' (5 and 21), 'home' (5 and 3), 'friends' (5 and 4), 'interesting' (4 and 4), 'happiness' (4 and 8), 'success' (4 and 7), 'love' (3 and 3), 'husband' (3 and 4), and 'child' (3 and 3). The following descriptors had significant differences in frequency: 'work' (34 and 38), 'family' (33 and 41), 'children' (5 and 21), 'happiness' (4 and 8), and 'success' (4 and 7). For the subjects of the control group the associations with their future related to a family prevail over those related to work; for the subjects of the experimental group work is more significant than a family. In contrast to the experimental group, having children is significant to the subjects of the control group. Therefore, in contrast to young representatives of the peoples of the North, non-indigenous youth associate their future plans and prospects with a successful and happy life.

An almost identical ratio in frequency was distributed among the following descriptors: 'home' (5 and 3), 'friends' (5 and 4), 'interesting' (4 and 4), 'love' (3 and 3), 'husband' (3 and 4), and 'child' (3 and 3). The associations differing in groups were distributed as follows: 'car', 'independent', 'apartment', and 'stability' were observed only among the subjects of the experimental group; 'moving', 'career', 'uncertainty', 'good job', 'travel', 'own house', 'own apartment', 'sports', 'money', 'new', 'responsibility', 'self-development', 'warmth', and 'purposefulness' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations. The distribution of the frequency of associations differing in groups suggests that plans to leave the city of Magadan are more significant for the subjects from the non-indigenous population than for the representatives of the experimental group.

Table 6

Distribution of significant non-random associations with the 'nature' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
Beauty	**21**	1.5	**Forest**	**26**	1
Forest	**21**	1.5	**Beauty**	**21**	2
Animals	**16**	3	**Sea**	**20**	3
Sea	**12**	4	**Trees**	**12**	5
River	**11**	5.5	**Beautiful**	**12**	5
Sun	**11**	5.5	**Sun**	**12**	5
Recreation	**7**	7.5	**Animals**	**11**	7
Barbecue	**7**	7.5	**Recreation**	**9**	9
Birds	6	9.5	**River**	**9**	9
Tundra	6	9.5	**Barbecue**	**9**	9
Mountains	5	12.5	**Tranquility**	**8**	11
Trees	**5**	12.5	**Verdure**	**7**	12
Mosquitoes	5	12.5	Bonfire	6	14.5

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ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
Tranquility	**5**	12.5	**Lake**	**6**	14.5
Water	**4**	17	Beautiful	6	14.5
Animals	4	17	Fresh air	6	14.5
Grass	**4**	17	**Flowers**	**6**	14.5
Flowers	**4**	17	Clean air	5	17
Purity	4	17	Air	4	19
Harmony	**3**	23.5	Life	4	19
Verdure	**3**	23.5	**Grass**	**4**	19
Beautiful	**3**	23.5	**Water**	**3**	26
Bears	3	23.5	**Harmony**	**3**	26
Lake	**3**	23.5	Mushrooms	3	26
Hunt	3	23.5	Friends	3	26
Freedom	3	23.5	Insects	3	26
Warmth	3	23.5	Sky	3	26
			Unpredictable	3	26
			Landscapes	3	26
			Plants	3	26
			Hills	3	26
Sum	**140**		**Sum**	**178**	
Total sum	291		Total sum	365	

Table 6 shows the results of ranking non-random associations (v ≥ 3) with the 'nature' stimulus. In general, representations of nature are similar among the representatives of both groups. The following associations were identical: 'beauty' (21 and 21), 'forest' (21 and 26), 'animals' (16 and 11), 'sea' (12 and 20), 'river' (11 and 9), 'sun' (11 and 12), 'recreation' (7 and 9), 'barbecue'(7 and 9), 'trees' (5 and 12), 'tranquility' (5 and 8), 'water' (4 and 3), 'grass' (4 and 4), 'flowers' (4 and 6), 'harmony' (3 and 3), 'verdure' (3 and 7), 'beautiful' (3 and 12), and 'lake' (3 and 6). The following descriptors had significant differences in frequency: 'forest' (21 and 26), 'animals' (16 and 11), 'sea' (12 and 20), 'trees' (5 and 12) and 'beautiful' (3 and 12). Thus, besides the 'beauty' and 'forest' descriptors, respondents of the experimental group associate nature with the animal world; subjects from the control group associate nature with the forest, sea, and beauty. An almost identical ratio in frequency was distributed among the following descriptors: 'beauty' (21 and 21), 'river' (11 and 9), 'sun' (11 and 12), 'recreation' (7 and 9), 'barbecue' (7 and 9), 'water' (4 and 3), 'grass' (4 and 4), 'flowers' (4 and 6), and 'harmony' (3 and 3).

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The associations differing in groups distributed as follows: 'birds', 'tundra', 'mountains', 'mosquitoes', 'animals', 'purity', 'bears', 'hunt', 'freedom', and 'warmth' were observed only among the subjects of the experimental group; 'bonfire', 'beautiful', 'fresh air', 'clean air', 'air', 'life', 'mushrooms', 'friends', 'insects', 'sky', 'unpredictable', 'landscapes', 'plants', and 'hills' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations. We should also note that according to the differing associations, the subjects of the experimental group associate nature with the animal world ('birds', 'bears', 'animals', and 'hunt'), while the respondents of the control group associate nature with 'air' ('fresh air', 'clean air', and 'air'). The 'tundra' association (6) was identified only among the representatives of indigenous peoples. Tundra is a natural zone with a harsh climate; it has historically been one of the zones of residence of the indigenous small-numbered peoples of the North. Therefore, the indigenous population can associate nature with a harsh climate and extreme living conditions, namely tundra.

Table 7

Distribution of significant non-random associations with the 'human' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
Kind	**9**	1	**Kind**	**9**	1
Friend	**8**	2.5	**Personality**	**8**	2
Reasonable	**8**	2.5	**Reasonable**	**7**	3
Human	**7**	4	Communication	6	4
Personality	**5**	6.5	**Kindness**	**5**	6.5
Society	**5**	6.5	**Friend**	**5**	6.5
Family	5	6.5	Love	5	6.5
Honesty	**5**	6.5	**Honesty**	**5**	6.5
Kindness	**4**	10.5	Animal	4	12.5
Anger	**4**	10.5	Life	4	12.5
Responsive	4	10.5	**Anger**	**4**	12.5
Good	4	10.5	Destruction	4	12.5
Activity	3	14	Hands	4	12.5
Woman	**3**	14	Creature	4	12.5
Man	**3**	14	Dull	4	12.5
			Smart	4	12.5
			Merry	3	23
			Head	3	23
			Woman	**3**	23
			Sincerity	3	23
			Beloved	3	23
			Man	**3**	23
			Legs	3	23
			Society	**3**	23
			Work	3	23
			Strong	3	23
			Death	3	23
			Society	3	23
			Human	**3**	23
Sum	**61**		**Sum**	**55**	
Total sum	190		Total sum	288	

In general, representations of the human are similar (Table 7) among the representatives of both groups. The following associations were identical: 'kind' (9 and 9), 'friend' (8 and 5), 'reasonable' (8 and 7), 'human' (7 and 3), 'personality' (5 and 8), 'society' (5 and 3), 'honesty' (5 and 5), 'kindness' (4 and 5), 'anger' (4 and 4), 'woman' (3 and 3), and 'man' (3 and 3). For both groups of subjects, the first positions of the descriptor ranks correspond to the 'kind' descriptor. However, several descriptors have significant differences in frequency – 'friend' (8 and 5), 'human' (7 and 3), 'personality' (5 and 8), and 'society' (5 and 3). The subjects of the experimental group associate the human with the 'friend' concept; the human is primarily a personality for the subjects of the control group. We may assume that some representatives of the indigenous population express the need for personal relationships in which they can find mutual understanding and support. For the subjects from the control group, the human, first of all, is an independent subject of social relations and communication. An almost identical ratio in frequency was distributed among the following descriptors: 'kind' (9 and 9), 'reasonable' (8 and 7), 'honesty' (5 and 5), 'kindness' (4 and 5), 'anger' (4 and 4), 'woman' (3 and 3), and 'man' (3 and 3). In general, both groups have positive representations of the human as an individual with reason and consciousness, guided by moral and ethical judgments.

The associations differing in groups distributed as follows: 'family', 'responsive', 'good', and 'activity' were observed only among the subjects of the experimental group; 'communication', 'love', 'animal', 'life', 'destruction', 'hands', 'creature', 'dull', 'smart', 'merry', 'head', 'sincerity', 'beloved', 'legs', 'work', 'strong', 'death', and 'society' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations.

Table 8

Distribution of significant non-random associations with the 'happiness' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
Family	**37**	1	**Family**	**34**	1
Love	**21**	2	**Love**	**32**	2
Children	**13**	3	**Children**	**16**	3
Health of loved ones	**12**	4	**Joy**	**10**	4
Joy	**11**	5	**Friends**	**8**	5
Health	**9**	6	**Health**	**7**	6
Mother	**6**	7	Harmony	5	7.5
Home	**5**	8.5	**Home**	**5**	7.5
Peace	**5**	8.5	Money	4	13
Friends	**4**	10.5	Life	4	13
Child	4	10.5	**Health of loved ones**	**4**	13
Wealth	3	13.5	**Mother**	**4**	13

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Table 8
Distribution of significant non-random associations with the 'happiness' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
Work	3	13.5	**Peace**	**4**	13
Freedom	**3**	13.5	Parents	4	13
Sun	**3**	13.5	**Sun**	**4**	13
			Tranquility	4	13
			Smile	4	13
			Well-being	3	21.5
			Recreation	3	21.5
			Nearby close ones	3	21.5
			Freedom	**3**	21.5
			Laughter	3	21.5
			Warmth	3	21.5
			Satisfaction	3	21.5
			Appeasement	3	21.5
Sum	**129**		**Sum**	**131**	
Total sum	232		Total sum	309	

In general, representations of happiness are similar (Table 8) among the representatives of both groups. The following associations were identical: 'family' (37 and 34), 'love' (21 and 32), 'children' (13 and 16), 'health of loved ones' (12 and 4), 'joy' (11 and 10), 'health' (9 and 7), 'mother' (6 and 4), 'home' (5 and 5), 'peace' (5 and 4), 'friends' (4 and 8), 'freedom' (3 and 3), and 'sun' (3 and 4). In addition, for both groups, the first three positions of the descriptor ranks were identical, from which we can conclude that for indigenous and non-indigenous youth the main components of happiness are family, love, and children. However, several descriptors had significant differences in frequency: 'family' (37 and 34), 'love' (21 and 32), 'children' (13 and 16), 'health of loved ones' (12 and 4), and 'friends' (4 and 8). For the experimental group, happiness is more associated with a family and health of loved ones; for the control group happiness is more associated with love, children, and friends. We can assume that representatives of the indigenous population are characterized by greater anxiety and fear for the health and life of their close ones. This may explain such a significant difference in the ratio of the frequency of this descriptor. Representations related to personal relationships prevail in the control group.

An almost identical ratio in frequency was distributed among the following descriptors: 'joy' (11 and 10), 'health' (9 and 7), 'mother' (6 and 4), 'home' (5 and 5), 'peace' (5 and 4),

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'freedom' (3 and 3), and 'sun' (3 and 4). The associations differing in groups distributed as follows: 'child', 'wealth', and 'work' were observed only among the subjects of the experimental group; 'harmony', 'money', 'life', 'parents', 'calmness', 'smile', 'well-being', 'recreation', 'nearby loved ones', 'laughter', 'warmth', 'satisfaction', and 'appeasement' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations.

Conclusion

1. Comparison of associative semantic universals related to the 'my life five years ago', 'my life now', and 'my life five years later' stimuli makes it possible to identify subjective temporal characteristics of the semantic structures of the image of the world. The associations related to formalized events (educational activities, work, ascertaining events) prevail over personal ones (love, family, children) in the representations of the past, present and future among young representatives of the indigenous small-numbered peoples of the North.

2. The general distribution by the number of the frequency of associations for all the stimuli shows that the representations of the indigenous small-numbered peoples of the North have less diverse associations. Such a distribution of the frequency of associations may be explained by the influence of factors of the social infrastructure of the place of residence, sociocultural deprivation, limitations in the educational space and communication, and access to the values of traditional culture.

3. The differences observed when comparing associative semantic universals related to the 'nature', 'human', and 'happiness' stimuli indicate that associative links are determined by differences in subjective experience (for example, for the ISPN group, the human is more associated with the 'friend' concept, while for the control group, the human is, first of all, personality) and the context of culture (for example, nature is more associated with the animal world and a harsh climate among the representatives of the indigenous small-numbered peoples of the North).

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