

THE COMPARATIVE ANALYSIS OF SCIENTIFIC AND SOCIAL REPRESENTATIONS OF CONSCIOUSNESS AND THE UNCONSCIOUS

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The article deals with the research into social notions of such integral psychic phenomena as consciousness and the unconscious. The concept of social notions, proposed by S. Moscovici in 1961, was used. This research was carried out in several stages. Firstly, scientific definitions of consciousness and the unconscious were analyzed. Secondly, dictionaries of the Russian language were studied. Then an empirical study of social notions of consciousness and the unconscious was conducted. As many as 240 students of Perm State University took part in the study as subjects. The core-periphery structure of scientific and social representations of consciousness and the unconscious that is typical of modern Russian culture and common to such of its carriers as active researchers in psychology and students was reconstructed. Finally, notions of consciousness were compared to the notions of the unconscious. Studying the notions of psychic phenomena makes it possible to reconstruct the idea of the psychic that is typical of non-professionals. The process of constructing social notions can be explained by the "dynamic model" proposed in the study by S. Moscovici and M. Hewstone (1984).

Keywords: social representations, scientific representations, consciousness, the unconscious, "dynamic model" of S. Moscovici and M. Hewstone, the core-periphery structure of scientific and social representations, stages of objectivation.

According to many today's researchers, the concept of social representations, proposed by S. Moscovici in 1961, has made a significant contribution to the development of social psychology (Emelyanova, 2001; Brushlinsky, 1998; Shikhirev, 1999; etc.). The number of studies undertaken in the frames of this approach grows every year, so does the range of issues. As such, various phenomena may be the object of representation: from psychoanalysis (Moscovici, 1961) to democracy, political leadership, and social responsibility (Emelyanova, 2006).

The subject of our research is the social representations of such integral psychic phenomena as consciousness and the unconscious. The choice of the above subject is not incidental. During the past decades, the number of studies concerned with psychics and psychological phenomena by non-psychologists has notably increased. For example, the following subjects have been studied: children's representations of the soul (Subbotsky, 1985; Savina, 1995), implicit personality theories (Kruglanski, 2007), *implicit theories* of intelligence (Parkhomenko, 2003), mental representations of emotions (Podprugina, 2003), the "theory of mind" has been developed (Carroll, Apperly, & Riggs, 2007; Sobel, 2007).

The choice of consciousness and the unconscious as an object of representations was conditioned by the following reasons. First of all, the idea of consciousness has been systematically developed in psychology, beginning with its set-up and separation as an independent branch of knowledge. The idea of the unconscious came to be studied by psychologists later. The introduction of the term "the unconscious" as a scientific category is associated with the works of S. Freud. Besides, the Russian culture has featured an absolutely special approach to psychoanalysis. As such, due to ideological reasons, starting from the 1930s, psychoanalysis and consequently the very concept of "the unconscious" were banned, and free discussion and evaluation of works by S. Freud and his followers became possible only in the 1990s (Levchenko, 2008). Therefore, the idea of consciousness actively developing from the mid 19th century both in domestic and foreign psychology, will for the purpose of this analysis be referred to as a "relatively old" concept. The idea of the unconscious, which appeared in science later and remained prohibited in the Russian psychology of the Soviet period (which stood in the way of its systematic development), will be referred to as a "relatively young" concept. It should be noted that the "age" of idea is estimated with reference to its existence in a certain socio-cultural context, primarily, in the Russian one. Secondly, consciousness and the unconscious are in a fundamental opposition to one another, which simplifies the process of comparison of representations of these phenomena.

Therefore, the present study aims to identify the social representations of consciousness and the unconscious available today in Russia (as exemplified by the representations formed among the students) and describe the external process of their construction, i.e. changes facing the

aggregate of the given scientific ideas after they become a common sense property.

This research was carried out in several stages. During stage one, scientific definitions of consciousness and the unconscious were selected. These definitions were analyzed during stage two. Russian dictionaries were studied during stage three. Stage four focused on the empirical study of social representations of consciousness and the unconscious. At stage five, findings of the empirical study were processed using the qualitative and quantitative analysis methods. During stage six, a core-periphery system of scientific and social representations of consciousness and the unconscious was built. Further, at stage seven, we analyzed social representations of consciousness and the unconscious with reference to the phases undergone by a scientific theory in the course of its transformation into a social representation. And finally, representations of consciousness were compared to the representations of the unconscious.

Let us consider the above mentioned stages in a more detailed way. The first and second stages were set to identify the combination of scientific ideas of consciousness and the unconscious. During the first stage, proceeding from the reviews concerned with the issues of consciousness (Akopov, 2004; 2007) and the unconscious (Asmolov, 2002) and also from the analysis of the chapters devoted to the theoretical study of these phenomena in a number of dissertations (Vakhrusheva, 2003; Sitnikov, 2003; Shevchenko, 2003), we compiled a list of recognized leading researchers in the field. Some of these scientists' works in the field, as well as psychological dictionaries, provided definitions of the examined phenomena. The following criteria were used to select the texts containing a definition: 1. The sentence (or several sentences) must include phrases like "consciousness (the unconscious) is understood as ...", "consciousness (the unconscious) is ...", "consciousness (the unconscious) is regarded as ...", etc.; 2. The paragraph must constitute the author's complete idea; 3. If more than one definition of consciousness (the unconscious) has been given by the same author, we opted for the definition that has been quoted in works more frequently (reviewing the definitions of consciousness (the unconscious)). During the second stage, we carried out the content analysis of definitions of each phenomenon. A segmental, issue-related count of references to the categories was used, according to which only the first appearance of

a category in the unit of context was registered, whereas any repeated references to the category in the given unit of context were disregarded. The scale of categories was not set initially and was developed in accordance with the content of the selected definitions. A word or syntactically indivisible collocation served as an indicator of category. The distribution of empirical indicators among categories was controlled by the expert evaluation method.

A survey of scientific psychological literature dealing with the issue of consciousness revealed the traditional for the psychological knowledge polysemy of this notion. During the first stage, having analyzed a number of monographs by some researchers of consciousness (Agafonov, 2003; Allakhverdov, 2000; Bekhterev, 1999; Ganzen, 1984; James, 2001; Jaspers, 2001; Leontiev, 1975; Lomov, 1984; Platonov, 1972; Rubinstein, 1957; Wundt, 2002; Zinchenko, 2001; etc.) and several psychological dictionaries (Meshcheriakov & Zinchenko, 2003; Reber, 2000; Davydov et al., 1983; etc.), we came to a conclusion that while some authors distinctly articulate the definition of consciousness (Bekhterev, 1999; Zinchenko, 2001; Leontiev, 1975; etc.), others seem to avoid such clarity in every possible way (Vasilyuk, 2007; Luria, 1979; Subbotsky, 1999). For the second stage of analysis, a total of 41 texts containing distinctly articulated definitions were selected based on the criteria specified above (37 definitions given by the authors + 4 dictionary clauses). It should be noted that the selected definitions of consciousness cover the time period of 1888 (Bekhterev, 1999) to 2009 (Abulkhanova, 2009). Out of the above mentioned texts, 32 belong to domestic scientists and 9 are the products by foreign authors.

Upon the completion of content analysis of the selected texts, the following ideas were identified as more frequently used in the definition of consciousness: 1) consciousness as reflection, as learning; 2) consciousness as an attitude and experience; 3) consciousness as regulation; 4) consciousness as awareness (including self-awareness); 5) consciousness as an integration of inner mental life; 6) consciousness as the top level of mental evolution associated with historical and cultural origin and related to speech; 7) consciousness as a function of something; 8) consciousness as part of psychics. Apart from that, a series of rarely encountered ideas were identified. Those, for instance, included such ideas as "philosophical category" (Meshcheriakov & Zinchenko, 2003), "accompaniment and provision of a personality's existence with consciousness"

(Abulkhanova, 2009), “those aspects of mental life that attract a person’s attention” (Reber, 2000), “occurs in the morning upon awakening from sleeping without dreams and lasts the whole day until falling asleep again or until you develop a condition, which might be called ‘unconscious,’ e.g., a coma or death” (Searle, 1980), and some others.

Let us pass on to the representations of the unconscious. The difficulty that we faced in the course of studying scientific literature was the limited number of definitions of this term that was found (the total of 17). The time during which the texts containing the selected definitions were published, covered the period of 1921 to 2007. During the content analysis, all definitions were split into negative and positive. The above division dates back to the old times in the history of psychology. D.N. Uznadze stated that the definition of the unconscious in psychoanalysis had a negative nature and proposed the concept of “set” as its positive definition (as cited in Asmolov, 2002, pp. 31-32). Negative definitions of the unconscious were associated with the denial of characteristics of consciousness (apprehendability, controllability, etc.). The latter group included the overwhelming majority of the analyzed texts (over 80%). As this kind of research did not make it possible to reconstruct the profound characteristic of the unconscious, we also analyzed the psychological concepts of the examined phenomenon, in which the essence of the given phenomenon was disclosed through the description of its content (Agafonov, 2003; Asmolov, 2002; Freud, 2006; Grof, 2001; Herbert (cited in Zhdan, 2002); Jung, 1994; Leibniz, 1982; Simonov, 2001; Uznadze, 1966). The above analysis helped identify the phenomena that in the author’s mind belonged to the area of the unconscious, thus making up for the lack of full-fledged definitions or their undue laconism, like: strong feelings and desires disapproved by the society; low intensity perceptions; memory storage; primitive needs and instincts; archetypes; dream; non-conscious regulators of action performance; reflexes; non-conscious components of creative activity; birth-associated memories; mystical feelings.

Then, from studying the aggregate of scientific ideas related to consciousness and the unconscious, we went on to examine the corresponding social representations. During the third stage, the central core elements of social representations were identified. This was done by studying the details presented in modern definition dictionaries and associative dictionaries of the Russian language. Thus, the S.I. Ozhegov’s

dictionary (Ozhegov, 1989) offers the following interpretation of “consciousness”:

1. An ability to reproduce reality in thinking; a psychic activity as a reflection of reality.
2. A condition of an individual in healthy mind and memory, an ability to be aware of his behaviour and feelings.
3. A thought, a feeling, a clear understanding of something.
4. The same as responsibility: an ability to properly sort out reality and identify one’s behavior (Ozhegov, 1989).

The term “the unconscious” in Russian does not have the status of a noun and is used as an adjective. Modern definition dictionaries (Ozhegov, 1989; The Russian definition dictionary supplied with etymological data, 2007) provide the following meanings of this word:

1. Accompanied by the loss of consciousness;
2. instinctive, unaccountable.

Let us compare the lexical meanings of the words “consciousness” and “the unconscious” with the scientific ideas of consciousness and the unconscious. By comparing the scientific ideas of “consciousness” with the lexical meanings of this word, we noticed both similarities and differences. The similarity was found with regard to the following ideas: 1) consciousness as reflection and learning; 2) consciousness as awareness (including self-awareness). The dictionary gives two meanings: “a condition of an individual in healthy mind and memory” and “clear understanding of something” which we did not find in scientific definitions of consciousness.

The lexical meanings of the word “unconscious” comply with the scientific ideas of the unconscious identified in the course of the text analysis. The meanings presented in the definition dictionaries belong to the group of “negative definitions” and show similarity with the following scientific ideas of the unconscious: “something that is not apprehended,” “something that is not controlled.”

During the fourth stage, an empirical study of the social representations of consciousness and the unconscious was conducted. This study was assisted by first, second and third year students from various faculties of Perm State University: a total of 240 students ranging from 17 to 22 years old. The number of male and female subjects was about the same. The subjects were not supposed to specialize in psychology and philosophy. The study took place before the students were exposed to a course in general psychology.

As this work was performed in the traditions of S. Moscovici's school, the qualitative research methodology was selected for the study. Data collection methods included an association experiment, the drawing method and the method of definition. Beside the representations of consciousness and the unconscious, the students' representations of the soul and psychics were studied as well. Introducing the latter in the study enabled us to regard the representations of consciousness and the unconscious not in isolation but in the context of integral concepts used to display the psychic. In other words, we made an attempt to look at "consciousness" and "the unconscious" from the perspective of the idea of the psychic the subjects had.

The fifth stage included the processing of the data obtained during the empirical study. The data on the association experiment were processed with the use of both the prototypical analysis of P. Verges (Bovina & Dragulskaya, 2006) and the content analysis. The first technique makes it possible to reconstruct the core-periphery structure of social representations. The second method of data processing is a qualitative and quantitative method identifying the key concepts (ideas) and calculating the frequency of their use. Content analysis was also used to process the drawings and definitions obtained from the subjects. We developed the systems of categories of content-and-analytical study of the empirical material, common for the representations of consciousness, the unconscious, the soul and psychics.

As a result of the analysis, we identified an aggregate of the ideas characteristic of social representations of consciousness and the unconscious. The next stage of our study consisted in building the core-periphery structure of representations. As noted earlier, prototypical analysis is designed specifically for this purpose. As far as the data of content analysis of associations, drawings and definitions is concerned, a procedure similar to prototypical analysis was applied to these data. The same procedure was applied to the results of content analysis of scientific definitions. The key point of this procedure, which was borrowed from P. Verges' prototypical analysis, is that the criterion for the identification of the central core, the potential change area and the peripheral system itself is the frequency of the element, in our case, the category of content analysis. The resulting core-periphery structure of the scientific and social representations is shown in Table 1. The graphic image of the findings is shown in Figures 1 and 2.

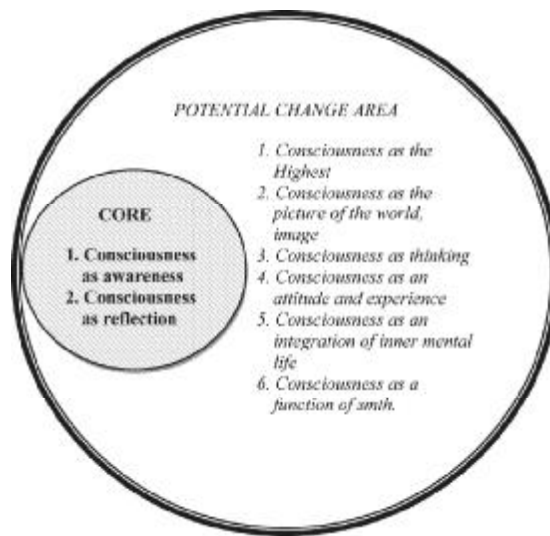


Figure 1. Scientific representations of consciousness



Figure 2. Social representations of consciousness

Others	12,2	Emotional phenomena	Knowledge	12.5	Localization in one's head	9,2	Emotional phenomena	11,3
Consciousness as regulation	12,2	Property of living matter	Philosophy	12.5	Awareness	4,6	Motivation	9.58
Knowledge	7,32	Synonym of "soul"	Behaviour and activity	12.1			Development	8.75
Characteristic of human psychics	7,32	Behaviour and activity	Property of living matter	10.8			Adequacy	8.33
Socio-historical origin	7,32	Adequacy	Emotional phenomena	10.4			Brain	7.5
Consciousness as part of psychics	7,32	Knowledge	Adequacy	10.0			Property of living matter	7.5
Association with speech	7,32		Reflection	8.75			Behaviour and activity	6.25
"Brain function" (empirical indicator)	4,88		Localization in one's head	7.08			Inner world	5.42
Philosophy	4,88		Personality	7.08				
			Synonym of "soul"	6.67				
			Part of psychics	5.83				

PERIPHERY

* In order to compile a compact and easily readable text, ideas forming ordinary perceptions of consciousness were reduced to key words and phrases (See Dictionary in Appendix). The compliance between the key word (phrase) and the original idea was controlled by expert evaluation method.

The resulting findings prove that the core of the scientific representations of consciousness is more compact and contains only two ideas: consciousness as awareness and consciousness as reflection. The core of social representations includes a larger number of ideas (nine), which are quite diverse. Both core ideas of the scientific representations are in a transformed way present in the core of social representations.

The area of potential changes of both scientific and social representations includes 6-7 ideas of each type, two of which are similar: consciousness as “the higher” (the top level of psychic evolution (Myasishev, 2001) and consciousness as the picture of the world. Two ideas from the potential change area of *scientific* representations – consciousness as the thinking and consciousness as a (brain) function – are present in the core of the *social* representations of consciousness. In other words, the frequency of the above ideas in collective consciousness is higher than that in scientific definitions.

The results of the comparison of the central core (Fig. 3) and the potential change area (Fig. 4) of scientific and social representations of consciousness are shown in Table 2.

Therefore, one can state that the potential area of changes of *scientific* representations contains a full range of ideas that have nothing in common with those contained in the core and the potential change area of *social* representations of consciousness. These ideas are: consciousness as an attitude and experience, and consciousness as an integration of inner mental life.

Besides, potential change area of *social* representations includes a number of ideas that are not present in the core and the potential change area of *scientific* representations. These ideas are: consciousness as an understanding of something, consciousness manifests itself in behaviour and activity, consciousness ensures human adequacy, consciousness receives a positive evaluation, consciousness as the opposite of the unconscious, and a difficulty in defining consciousness.

The analysis of ideas contained in the core and the potential change area of *social* representations of consciousness shows the dominance of the phenomena describing the learning activity of an individual, which supports the findings by M.S. Sheveleva (2003) and E.A. Shteinmets (2000).

The comparison of two types of representations makes it evident that *scientific* ideas are characterized with a higher abstractiveness, general-

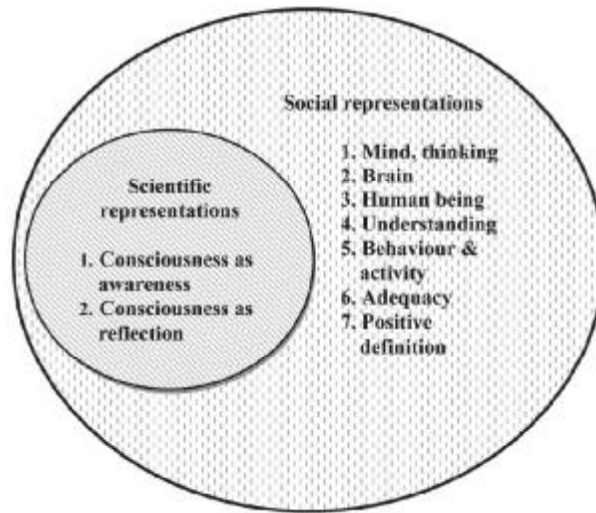


Figure 3. Graphic comparison of core areas of scientific and social representations of consciousness

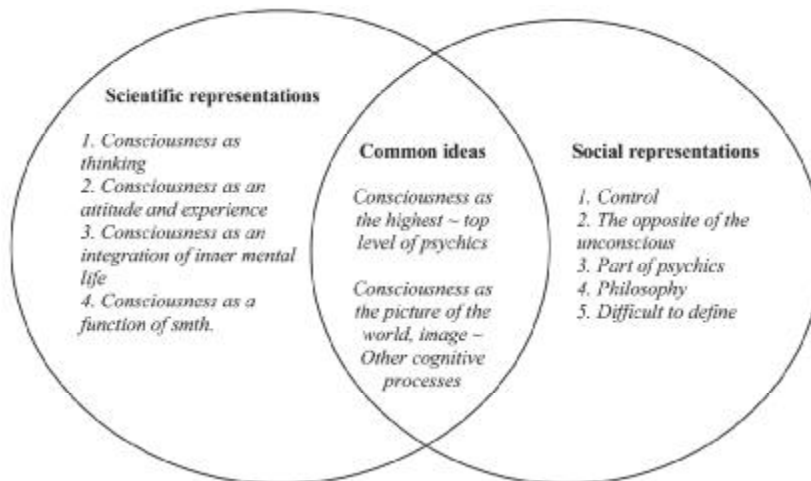


Figure 4. Graphic comparison of potential change areas of scientific and social representations of consciousness

Scientific representations			Social representations							
Scientific definitions			Association experiment		Drawing		Method of definitions		Definition dictionaries	
Idea	%	Prototypical analysis		Content analysis		Idea	%	Idea	%	
		Idea	%	Idea	%					
Ideas that are mostly typical of social representations										
		Brain		Brain	25.4	Brain	23.3			
		Understanding		Understanding	15.8			Understanding	18.3	Under- standing
		Human being		Human being	20.4	Human being	51.7	Human being	15.8	
				Other cognitive phenomena	18.8			Other cognitive phenomena	16.3	
				Control	13.3			Control	13.8	
						Positive definition	33.9			
						Behaviour and activity	24.6			
										Adequacy
		The opposite of the unconscious								
		Part of psychics								
		Philosophy								
								Difficulty with defining	15,0	

Ideas in the core area are in bold type; ideas in potential change area are in italics

Table 3
The core-periphery structure of scientific and social representations of the unconscious

Scientific definitions		Scientific representations about the content of the unconscious		Social representations		Definition-dictionaries																																																								
Idea	%	Idea	%	Prototypical analysis	Association experiment	Drawing	Method of definitions																																																							
						Content analysis																																																								
						Idea	Idea																																																							
						%	%																																																							
CORE	Smth. that is not apprehended*	82.4	Strong feelings and desires disapproved by society	55.6	Psychoanalysis	Instincts	28.3	Negative definition	43.6	The thoughtless	26.3	Thoughtless																																																		
													Memory storage	44.4	Spontaneous re- actions, reflexes, automatisms	22.5	Human being	30.0	The thoughtless	Lack of volitional control																																										
																					Low intensity senses	44.4	Spontaneous re- actions, reflexes, automatisms	22.5	Instincts	18.8																																				
																											Primitive needs and instincts	33.3	Emotional phe- nomena	21.3																																
																																	Archetypes	33.3	Dream	19.6																										
																																							Non-conscious regulators of activity performance	22.2	Psychoanalysis	18.3																				
																																													Dream	22.2	Difficult to define	13.3	Motivation	12.1												
																																																			Memories of traumatic events	22.2	The opposite of consciousness	11.3	Spontaneous re- actions, reflexes, automatisms	16.7						
																																																									Set	22.2	Illness	11.7	Connection with consciousness	14.6
				Emotional phenomena	11.3																																																									
										Instability of the term	11.3																																																			

POTENTIAL CHANGE AREA

PERIPHERY									
Non-conscious components of creative activity	11.1	Intuition	Misunderstanding	10.4	Instability of term	10.8	Dream	10.8	
Reflexes	11.1		Breach of public standards	7.50	Breach of public standards	6.3	Misunderstanding	10.0	
Birth-associated memories	11.1		Intuition	7.08	Lower level of psychics	5.4	Human being	10.0	
Mystical feelings	11.1		Motivation	6.67	Motivation	5.4	Inadequacy	7.50	
			Forgotten memories	6.67			Intuition	7.50	
			Inner world	6.67			Hidden from consciousness	6.67	
			Negative definition	5.83			Lack of volitional control	5.83	
			The thoughtless	5.42			Negative definition	5.83	
			Death	5.42			Illness	5.83	
			Connection with consciousness	4.58			Stress	5.83	
							Forgotten memories	5.00	
							Psychoanalysis	4.58	

In order to compile a compact and easily readable text, ideas forming ordinary perceptions of the unconscious were reduced to key words and phrases (See Dictionary in Appendix). The compliance between the key word (phrase) and the original idea was controlled by expert evaluation method.

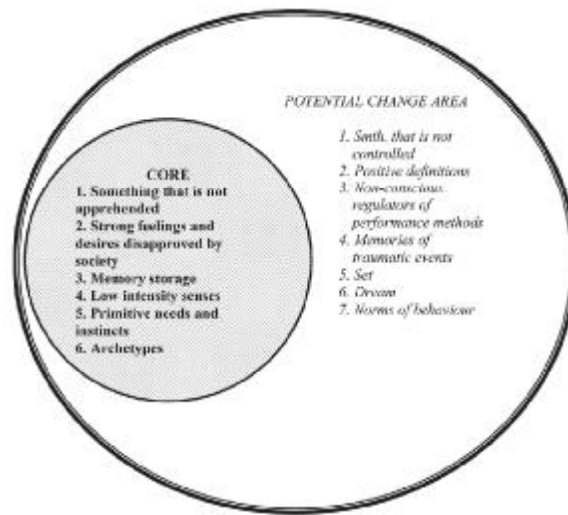


Figure 5. Scientific representations of the unconscious

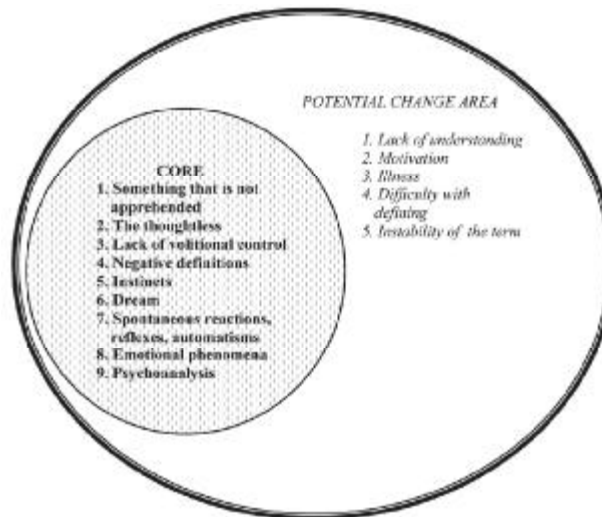


Figure 6. Social representations of the unconscious

ity, accuracy of wording, and laconism, whereas *social* representations are characterized by concreteness, clarity, a larger freedom in the use of terms, and by the introduction of ideas originating from various areas of knowledge. The latter may be explained by the difference in functions between scientific and social representations. Scientific representations target at searching the essence, the truth. Social representations aim at helping the human being in his or her everyday life.

Let us turn to the representations of **the unconscious**. In a similar way, let us look at the core-periphery structures of scientific and social representations of the unconscious first in Table 3 and then in a graphic form.

Findings of the analysis reveal that the core of *scientific* representations of the unconscious contains fewer ideas and is more compact than the core of *social* representations. At the same time, one can find a number of ideas that are common for both scientific and the social representations of the unconscious. As follows from the Table and the Figures, the unconscious is defined in the negative way both in scientific and social representations. Notably, social representations describe the unconscious through the negation of ideas used in defining consciousness. The comparison of the central core and the potential change area of scientific and social representations of the unconscious is represented in Figure 7 and Table 4.

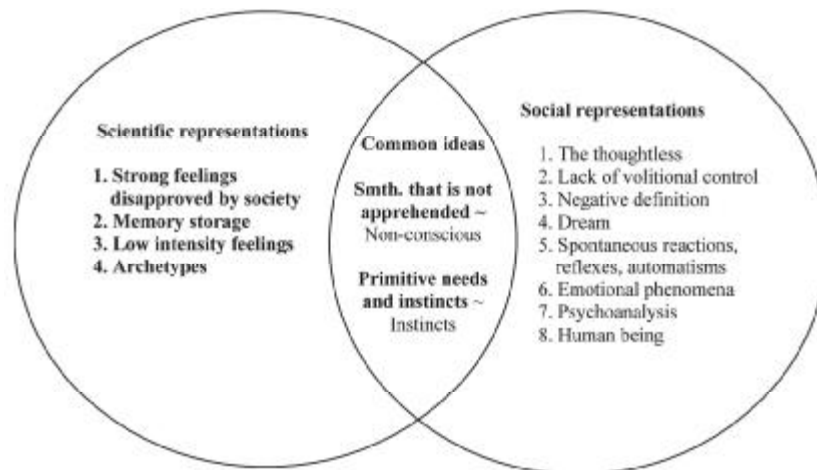


Figure 7. The graphic comparison of the core areas of scientific and social representations of the unconscious

Table 4

The comparison of central core and potential change area of scientific and social representations of the unconscious

Scientific representations and representations of the content of the unconscious	Social representations									
	Idea	%	Association experiment		Drawing		Method of definitions		Definition dictionaries	%
			Prototypical analysis	Content analysis	Idea	%	Idea	%		
Definition of the unconscious: Common ideas for scientific and social representations										
Smth. that is not apprehended		82.4						The non-conscious	26,3	The non-conscious
								Connection with consciousness	14,6	
Smth. that is not controlled	17.7			Lack of volitional control	11.3					Lack of volitional control
Other negative definitions	16.7			The thoughtless	22.5			The thoughtless	25.0	
				Misunderstanding				Negative definition	43.6	
Definition of the unconscious: ideas mostly typical of scientific representations										
<i>Positive definitions</i>	16.7									
Content of the unconscious: ideas common for scientific and social representations										
Primitive needs and instincts	33.3			Instincts	28.3			Instincts	18.8	
Dream	22.2			Dream	19.6					

Content of the unconscious: ideas mostly typical of scientific representations									
Strong feelings and desires disapproved by society	55.6								
Memory storage	44.4								
Low intensity senses	44.4								
Archetypes	33.3								
Non-conscious regulators of activity performance methods	22.2								
Memories of traumatic events	22.2								
Set	22.2								
Norms of behaviour	22.2								
Content of the unconscious: ideas mostly typical of social representations									
		Spontaneous reactions, reflexes, automatisms	Spontaneous reactions, reflexes, automatisms	22.5				Spontaneous reactions, reflexes, automatisms	16,7
			Emotional phenomena	21.3				Emotional phenomena	11,3
								Motivation	12,1
Others: ideas mostly typical of social representations									
		Psychoanalysis	Psychoanalysis	18.3		Human being	30.0		
			Difficulty with defining illness	13.3				Difficulty with defining	12,5
				11.7				Instability of the term	11,3

A comparison of the central core and the potential change area of scientific and social representations of the unconscious shows that ideas that are common for the core and the potential change area of scientific and social representations include instincts, dreams and automatisms in the sphere of the unconscious.

The idea of reflexes as elements of the sphere of the unconscious comes out of the periphery area of *scientific* representations of the unconscious and enters the core of *social* representations. The above fact proves that the level of “separability” of ideas (the term introduced by T.P. Emelyanova, 2006) in the group of scientists differs from that in the group of students.

The comparison also reveals the fact that the core of *social* representations of the unconscious does not contain any ideas that are not part of the core-periphery structure of *scientific* representations of the unconscious.

A number of ideas in the core and potential change area of *social* representations of the unconscious do not find support in collective consciousness. These include the idea that the unconscious may be defined in a positive way, as well as the ideas associated with various phenomena of the unconscious, such as memory storage, low intensity feelings, archetypes, memories of traumatic events, set, and norms of behaviour.

Social representations of the unconscious are characterized by the ideas describing various specific aspects of a phenomenon. This fact shows that social representations are more concrete. Analyzing the content of social representations of the unconscious one can note their orientation towards satisfying the everyday needs and wants of an individual.

Let us compare the obtained findings with the stages undergone by a scientific idea on the way of its transformation into social representations as they are described in literature. As seen in Table 5, social representations of consciousness show elements that indicate the second, the third and the fourth stages of objectivation. The first stage of transformation took place quite a long time ago, and therefore the names of scientists who developed this concept are no longer associated with social representations. Social representations of the unconscious include elements referring to the first, second and third stages of objectivation. Speaking of the fourth stage of the transformation of scientific ideas into social representations does not seem possible, as the word “the unconscious” itself has not been taken root in the Russian language yet and therefore cannot be regarded as a “substantial natural object.”

Table 5

Stages of transformation of scientific ideas into social representations

Stages of objectivation	Ideas of consciousness	Idea of the unconscious
1. Personification of scientific knowledge and phenomena.	Although 5% of the subjects mention the name of S. Freud in association with the word "consciousness," we believe that this stage took place quite a long time ago, and therefore the names of scientists who developed this concept are no longer associated with social representations.	Manifests itself in mentioning the names of S. Freud and C. Jung in the findings of the association experiment (13.75%) and the method of definitions. This is an evidence of penetration of ideas of psychoanalysis into collective consciousness. Let us remember that in this country, psychoanalysis was banned for a long time. On the other hand, regardless of the relatively frequent mentioning of reflexes as part of the unconscious, the name of I.P. Pavlov did not seem to appear. Therefore, the idea of reflexes has already grown into the minds of nonprofessionals.
2. Selection and exclusion of separate elements of the scientific theory (phenomenon) from context.	Not all scientific ideas are presented in collective consciousness. Besides, some scientific ideas have grown into social representations, whereas others are encountered rather seldom.	Only half of the scientific ideas describing the content of the unconscious are presented in collective consciousness. Others have either failed to penetrate collective consciousness or are not regarded as useful in everyday activities. Besides, some scientific ideas have grown into social representations (e.g. "instincts"), while others are encountered rather seldom (e.g. "memory storage").
3. "Formation of a figurative scheme," "image core."	The presence of figurative, tangible elements of high frequency: brain, human being, upper world objects (i.e. sun, sky, clouds, etc.) and others.	The presence of figurative, tangible elements of high frequency: lower world objects (soil, darkness, demon, etc.), human being, bottle (breach of social code), bed, etc.
4. "Naturalization," "ontization" of the "figurative scheme" and its comprising elements, i.e. "attributing material solidity to the image."	For instance, such phrases as "our consciousness may sometimes signal a coming disaster," "consciousness may control our thoughts and acts," "consciousness internally controls the brain" show that common sense operates elements of the "figurative scheme" as "substantial natural objects."	Speaking of this stage does not seem possible, as the word "the unconscious" itself has not taken root in the Russian language yet and therefore cannot be regarded as a "substantial natural object."

The following conclusions based on the findings of our study can be drawn:

1. The core-periphery structure of scientific and social representations of consciousness and the unconscious that is typical of modern Russian culture and common to such carriers of this culture as active researchers in psychology and students has been reconstructed. All ideas forming the central core of *scientific* representations of consciousness penetrate in a transformed form in the core area of *social* representations. The central core of scientific and social representations of the unconscious is formed by a larger number of ideas than that of the representations of consciousness, which proves that representations of consciousness are characterized by a higher degree of stability than those of the unconscious.

2. *Social* representations of consciousness are first and foremost characterized by the phenomena describing the learning activity of an individual.

3. Representations of consciousness are an inexplicit basis for the formation of representations of the unconscious. Representations of the unconscious are constructed as negation of ideas expressed in representations of consciousness.

4. The core of *social* representations of consciousness and the unconscious include the ideas coming from the non-core area of *scientific* representations of these phenomena. In other words, the frequency of the same ideas in scientific and social representations varies.

5. The core area of *social* representations of consciousness contains a number of independent ideas that have not been part of scientific definitions associated with the phenomenon considered, which means that representations of consciousness has turned into an independent, autonomous entity, a phenomenon endowed with its own objective reality.

6. It has been demonstrated that the core of *social* representations of the unconscious does not include ideas that are not part of *scientific* representations. Therefore, scientific and social representations of the unconscious show a higher degree of similarity than those of consciousness.

7. Social representations of consciousness seem to include elements that are indicative of the *fourth* stage of objectivation according to S. Moscovici. At the same time, social representations of the unconscious include elements only associated with the *third* stage of objectivation.

8. As far as *social* representations of the unconscious are concerned, the potential change area, which plays an important role in the adaptation of representations to the changing context, includes a larger number of ideas borrowed from science and characterized by specific content than the potential change area of *social* representations of the unconscious. This proves higher stability of social representations of consciousness and their capacity to adapt to a new environment.

9. On the whole, the differences between scientific and social representations of consciousness and the unconscious derive from the fact that *scientific* representations have a more generalized and abstract nature and set stricter requirements to using terms and following the laws of logic. *Social* representations are characterized by greater concreteness, clarity, freedom in the use of terms, and inclusion of fragments from various fields of knowledge. The above mentioned differences between scientific and social representations are conditioned by the different functions of these representations. *Scientific* representations are aimed at seeking the essence of the phenomenon examined, seeking the objective truth, whereas *social* representations are meant to serve the “everyday” needs of an individual.

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Appendix: Glossary

In order to make the text compact, the ideas forming social representations of consciousness and the unconscious have been reduced to key words and phrases. The degree of correspondence between the key word (phrase) and the original idea has been controlled by the expert evaluation method. For the reader's convenience, the following glossary has been compiled; it contains the list of the key concepts and reveals the ideas corresponding to them in the examined texts.

Table 6

The key words and ideas forming social representations of consciousness

Key word (phrase)	Ideas
Adequacy	1. Adequacy of behavior in a human being in a conscious state. 2. It ensures adequacy of perception and behavior. 3. "A condition of an individual in healthy mind and memory, an ability to be aware of one's behaviour and feelings" (Ozhegov, 1989).
Awareness	1. Consciousness as awareness of one's "ego," self-consciousness is part of the structure of consciousness. 2. Thanks to consciousness, one can be aware of oneself, one's actions and the outside world. 3. See "realize," "confess": same as to be aware of (Ozhegov, 1989).
Brain	1. Activity of consciousness (mind) is ensured by the brain activity. 2. The nervous system and the brain are the material foundation of activity of consciousness.
Behaviour and activity	1. Consciousness manifests itself through an individual's actions. 2. Consciousness manifests itself in behavior and activity. 3. Thanks to human consciousness, a world of culture emerges.
Control	It enables a human being to control his or her behavior.
Difficulty with defining	The concept of "consciousness" is hard to define.
Emotional phenomena	1. Apart from the rational component, consciousness also includes irrational components, i.e. feelings, senses, sensations. 2. Consciousness includes phenomena of the emotional sphere.
Development	Consciousness is subject to development.
Human being	1. The carrier of consciousness is a human being. 2. The carrier of mind is a human being.
Inner world	Consciousness may be regarded as the inner world of a human being.
Knowledge	1. Knowledge as a result of the activity of mind. 2. Consciousness ensures learning activity the product of which is knowledge.
Localization in one's head	Consciousness is located in one's head.

Mind, thinking	1. Consciousness is mind (intelligence). 2. Mind ensures the psychic process of thinking resulting in thoughts. 3. Consciousness is the same as mind, intelligence. 4. The same as conscientiousness: an ability to properly understand the surrounding reality, identify one's behavior (Ozhegov, 1989).
Motivation	Consciousness performs a driving function.
Other cognitive phenomena	It also includes other phenomena of the cognitive sphere.
Part of psychics	1. Consciousness is a directly given part of psychics. 2. Consciousness is the only directly observed part of psychics; consciousness is an object of psychological research.
Personality	It determines an individual's personality.
Philosophy	1. Philosophical understanding of consciousness as the antithesis of matter. 2. Consciousness is an object of study in philosophy.
Positive definition	The word "consciousness" receives a positive definition.
Property of living matter	1. Consciousness is the property of a living body; it is associated with life. 2. Consciousness is a property of a human being.
Reflection	1. Consciousness reflects the outside world. 2. It is a "human ability to reproduce reality in thinking; mental activity as reflection of reality" (Ozhegov, 1989).
Synonym to the word "soul"	1. Consciousness as similar in meaning to the word "soul." 2. Consciousness and soul may sometimes be used as synonyms.
The opposite of the unconscious	Consciousness is opposed to the subconscious, the unconscious.
Understanding	1. The activity of mind may also result in understanding something. 2. The activity of consciousness results in understanding something. 3. "A thought, a feeling, understanding something clearly" (Ozhegov, 1989).
Upper level of the psychics	Consciousness is the upper level of the psychics.

Table 7

The key words and ideas forming social representations of the unconscious

Key word (phrase)	Ideas
Breach of public standards	It manifests itself in the breach of rules accepted in society.
Connection with consciousness	The unconscious is defined in connection with the concept of "consciousness": either as its "continuation" or as its opposite.
Death	The dead person is unconscious.

Difficulty with defining	The phenomenon of the unconscious is hard to define and explain.
Dream	The unconscious is reflected in dreams.
Emotional phenomena	It includes emotions and feelings.
Forgotten memories	It contains forgotten memories.
Something hidden from consciousness	The unconscious is hidden from consciousness.
Human being	The carrier of the unconscious is a human being.
Illness	The unconscious is inherent to illness.
Inadequacy	The unconscious state is characterized by the inadequacy of perception, thoughts, behavior.
Inner world	The unconscious is part of the inner world.
Instability of term	The term "the unconscious" has not taken root in the Russian language.
Instincts	The unconscious includes animal instincts.
Intuition	1. Intuition as part of the unconscious is a way of learning. 2. The unconscious manifests itself through the phenomenon of intuition.
Lack of volitional control	1. The unconscious condition lacks volitional control. 2. "Unconscious" is instinctive, unaccountable (Ozhegov, 1989).
Lower level of psychics	The unconscious is the lower level of psychics.
Misunderstanding	1. The unconscious and its manifestations are misunderstood by respondents. 2. Unconscious behavior is beyond one's understanding.
Motivation	It is a driving force of human behavior.
Negative definition	The unconscious receives a negative definition.
Psychoanalysis	1. S. Freud is the founder of psychoanalysis, a school that regards the unconscious as the central phenomenon of human psychics. The concepts of "dream," "instinct," the "subconscious" constitute significant elements of the psychoanalytical conception. 2. The unconscious is an object of psychoanalytical study.
Something that is non-conscious	1. The unconscious is something that is non-conscious. 2. Accompanied by the loss of consciousness (Ozhegov, 1989).
Spontaneous reactions, reflexes and automatisms	1. The unconscious includes reflexes. 2. Unconscious behavior cannot be controlled by consciousness, it is reflected in spontaneous reactions, reflexes, and automatisms.
Stress	The unconscious reveals itself under stressful circumstances.
The opposite of consciousness	Consciousness is opposed to the unconscious.
Thoughtless	1. The unconscious is associated with thoughtless, irrational behaviors and actions. 2. It is characterized by the lack of logic manifested in thoughtless, irrational behavior.