

ВОПРОСЫ ТЕОРИИ И МЕТОДОЛОГИИ

PSYCHO-SEMANTIC METHODS IN THE STUDY OF THE PHENOMENON OF LONELINESS

Zh.V. Puzanova

Sociology Chair

Peoples' Friendship University of Russia

Miklukho-Maklaya str., 10/2, Moscow, Russia, 117198

In the article the author continues to introduce the reader to the findings of the exploratory research aimed to reconstruct some structural elements of the phenomenon of loneliness. In this instance, the article describes the application of psycho-semantic methods used in combination with the method of unfinished sentences. The approach used in the article enables the author to study loneliness turning directly to the affective level of the respondents' emotions.

Key words: Loneliness, psycho-semantic methods, semantic differential, semantic space, affective level, factor analysis.

Various techniques are used to measure the level of experiencing loneliness: the UCLA standard test; Elbing's questionnaire, which interprets loneliness as a loss of identity, idea, purport and meaningful aims and values; Russel and Ferguson's methods of determining the level of subjective perception of loneliness; Asher's questionnaire specially designed to study loneliness in juvenile age [1; 2; 6; 7; 8]. There are also other methods mostly based on the conception of loneliness as a deficiency of social or emotional ties. Almost all the methods enable the researcher to determine only the "level of experiencing" loneliness: high — average — low. At the same time, the inherent "content" of the measured phenomenon remains incomprehensible, after all, each individual experiences loneliness differently. Moreover, such methods cannot provide any information either on how the person understands loneliness or on the states close to it, such as estrangement, isolation, solitude, loss.

The aim of our exploratory research was to reconstruct the structural elements of the phenomenon of loneliness on the basis of revealing personal meanings, determining the emotional attitude to this phenomenon and finding the causes of the state of loneliness [5]. We proceeded from the assumption that the structure of loneliness has two levels: the emotional (affective) level and the reflexive (cognitive) level, that is, of "perception" and "awareness", — realizing that it is impossible to tell a lonely person from a non-lonely one judging by their external behavior.

In our view, the move to the empirical level of studying the phenomenon of loneliness requires understanding several basic problems:

— Multiple senses attached to the concept of “loneliness”, because the inner “content” and understanding of loneliness are specific in different people (by loneliness they may mean either *solitude*, or *isolation* or *estrangement*, etc.);

— Multiple reactions to loneliness in people, their emotional attitude to the phenomenon and to experiencing loneliness;

— Various reasons, leading to the state of loneliness. There are quite a few theoretical models describing such reasons, which are conditioned, among other things, by both psychological and social factors.

The tools of our research included several blocks, applying the method of unfinished sentences and the semantic differential.

The first block of the tools included unfinished sentences, which helped to ease the respondent’s anxiety arising from the necessity to give answers to sensitive personal questions and gave access to the information sought by the researcher. Earlier, we showed how the method of unfinished sentences allowed us to obtain data on the categories people operate with to describe their life experience, to collect personal meanings, as well as to define the meanings associated by the respondents with the concepts of “loneliness” and “a lonely person” [12].

While designing the second block of the tools, we proceeded from the fact that there are two overlapping realities in the individual’s mind, which manifest themselves in the immediate subjective emotions and sensations, and, indirectly, in the system of commonly established ways of perception (embodied in the language).

When finishing the sentences, the respondents are placed in a situation when they need to “identify” their emotions, which cannot always be “put into words”. In this case, the method of building a semantic space is effective as a means of communicating the meaning in simple phylogenetic and ontogenetic primary forms of perception and emotions. This method moves us from the system of social norms and public conventions to the sphere of motivations and needs of the individual, from the sphere of meanings on the cognitive level — to the sphere of meanings on the affective level [9].

As is well known the main thesis of psycho-semantic is the distinction between the meaning that is fixed in the language, super-personal, and the personal meaning, as a subjective emotional evaluation of the world around, which, as a rule, has no analogues in the units of the language [10]. This is why it is reasonable to build a special semantic space reflecting the perception of the phenomenon of loneliness. Quite often researchers introduce their own scales, but in this case subjectivity is largely inevitable. In our research however we traced the emotional level by applying two methods: both by using unfinished sentences and the semantic differential.

As we know, the semantic space set by the standard semantic differential has three integrating factors: evaluation, potency, activity (EPA). According to the data of Ch. Osgood and his team [3; 4] repeatedly confirmed by other researchers, the integrating factors are universal (invariant) in relation to the respondents’ language and correspond to the ternary model of emotion description (pleasure — tension — excitement) built by W. Wundt.

The three-factor description space (EPA — evaluation, potency, activity) is either insufficient in differentiating meanings, or gives no such opportunity altogether on essential parameters in describing objects, meanings and their systems in many special subject areas, which was shown experimentally [11; 13]. The respondents often experience difficulties in evaluating meanings using some scales of the standard semantic differential in a big number of areas (for example, politics, personality, art, profession etc.), as they find it hard to connect a stimulus (its meaning) with the scales (descriptors). It is for this reason that special subject semantic differentials are developed, for example, to evaluate advertising products, religious or political preferences, personality traits, interpersonal communication, business and professional skills of employees, professionally-significant qualities, tastes, political figures, complex concepts etc.

When choosing the initial bipolar scales, we analyzed the scales suggested by Ch. Osgood, as well as the set of scales singled out by V. Petrenko [11]. Besides, we conducted the ‘associations experiment’, in the course of which the respondents named adjectives describing various sensations related to loneliness. Another variant is possible, when the respondents are asked to write down pairs of adjectives, but in this case problems may arise with finding pairs of antonyms. This is why we find it more proper to select a number of adjectives first, and then to form antonymous pairs.

The associations experiment resulted in obtaining 37 adjectives. Basing on the fact that the scales should not be vague or ambiguous, and that they should need no additional explanations, all “ambiguous” adjectives were excluded from this list, leaving 19 pairs of adjectives (*light-dark, cold-hot, simple-complex, deep-superficial, complete-incomplete, friendly-hostile, active-passive, sad-joyful, closed-open, permanent-temporary, frequent-rare, transient-eternal, senseless-sensible, fruitful-unproductive, lofty-low, coercive-voluntary, guided-spontaneous, regular-accidental, deserved-undeserved*), which eventually formed the initial associative space. With the help of antonymous adjectives describing the simplest, primary forms of perceptions and emotions, a person is supposed to be able to evaluate the object under study by correlating the intensity of his/her inner emotional experience with the given scale.

The analysis was carried out on the basis of evaluating “loneliness” with the aggregate of 19 semantic scales. As we pursued the aim of building a semantic space, first of all we excluded the scales, by which neutral (zero) marks were given, as they did not affect the respondents emotionally and had no considerable semantic value. Among them were: *coercive-voluntary, guided-spontaneous, deserved-undeserved, transient-eternal, senseless-sensible*.

On the basis of similarity of evaluations made with the scales, we built the interval matrix to which the factor analysis was further applied. The factor analysis was done according to the program of the centroidal method and included the sub-program of rotating factor structures on the *varimax* principle. On the basis of the analysis we selected the scales improving the quality of the factor model.

The quality assessment criteria include the high values on the selected scales (in the interval from -3 to +3) and the high explanatory power of the model. 10 scales presented in Table 1 proved to be like this. By tracing the values on different scales, we can

find that some of them show both negative and positive values (such scales, for instance, as: *sad-happy, closed-open, friendly-hostile, fruitful-unproductive*).

This kind of distribution shows that the scales which received both negative and positive values describe more “disputable” characteristics of the word “loneliness”. As we can see, such a division is present in factors 1 and 2. Factorization of the scales enabled us to single out 4 factors giving 68% of the explained dispersion and forming the semantic space of perceiving the phenomenon of “loneliness”. Table 1 represents factor loads with values above 0,4.

Table 1

Values of Factor Loads

Initial scales	Factors			
	1	2	3	4
Deep-superficial		0,620		0,418
Friendly-hostile	0,737			
Sad-joyful	-0,688	0,454		
Closed-open	-0,552	0,630		
Permanent-temporary			0,754	
Frequent-rare			0,739	
Fruitful-unproductive	0,683			
Lofty-low	0,691			
Regular-accidental		0,711		
Simple-complex				0,828

The singling out of these main factors is basic for further adjustments in the list of scales initial for building the semantic space. The results of factorization are as follows. The first factor, accounting for 22% of the overall dispersion, shows a positive attitude to loneliness (the adjectives describing this factor are: *friendly, joyful, open, fruitful, lofty*). We may assume that it can be connected with the concept of “solitude”. The second factor (20%) is characterized by such adjectives as *deep, sad, closed, regular* and is connected with the psychological state of experiencing loneliness. The third factor (15%) describes the time spread (*constant, frequent*), the fourth one (12%) concerns the intensity of the emotional feeling (*deep, simple*).

Table 2

Values of Factor Loads (Men)

Initial scales	Factors			
	1	2	3	4
Deep-superficial			0,453	
Friendly-hostile			0,489	0,429
Sad-joyful	0,876			
Closed-open	0,809			
Permanent-temporary			0,875	
Frequent-rare			0,628	
Fruitful-unproductive		0,783		
Lofty-low		0,603		0,486
Regular-accidental	0,416	0,755		
Simple-complex				0,891

To testy the hypothesis of different emotional perception of loneliness by men and women, we examined the semantic space for these groups. Table 2 shows the values

of factor loads in constructing the semantic space for men. It is noteworthy that the explanatory power of this model is 72%. The higher percentage of the explanatory power in this case can be explained by two reasons: a decreased number of variables on the basis of which the factor analysis is done and a higher homogeneity of the group (in this case it is only men).

The first factor, which accounts for 20% of variables, is characterized by the following adjectives: *sad, closed, regular*. The strongest load falls on the scale *sad — joyful*. Most probably, in this case “loneliness” is perceived in psychological terms (as an emotional experience). It is noteworthy, that in comparison with the common space, the first factor in the all-men group has a rather negative coloring. The second factor includes the scales *fruitful-unproductive, lofty-low, regular-accidental* and accounts for 18% of variables. The adjectives characterizing this factor are: *fruitful, lofty, regular*. The scale *fruitful* has the biggest load. Within the framework of our study we may suppose that here one perceives loneliness rather as “solitude”, a positive emotional experience conducive to creativity and human development. It should also be noted that the scale “regular — accidental” is found both in the first negative and the second positive factor, but both these factors are evaluative in nature.

The third factor accounts for 16% of variables and is characterized by adjectives *deep, friendly, permanent, frequent*. The governing adjectives here are “permanent” and “frequent”. Thus, we may assume that in this case we speak of the temporal characteristic, whereas the adjectives “deep” and “friendly” here may be specifying in the context of loneliness-solitude. In the common semantic space these scales were found in other factors, too — loneliness and solitude respectively.

The fourth factor is formed by the scales: *friendly-hostile, lofty-low, simple-complex* and accounts for 12% of variables. It is described by the adjectives *friendly, lofty, simple*, with the biggest load falling on the adjective “simple”. The adjectives “lofty” and “friendly” in this case can act as specifying in the context of loneliness-solitude. The structuring of the semantic space in the all-men group as compared to the common semantic space shows a difference in the dominant factors (“loneliness” and “solitude”), as well as in the content of secondary factors.

To study the semantic space of “loneliness” for women we also built a factor model (table 3). It is noteworthy that the explanatory power of the model — 72% — is the same as for men and higher than in the common model.

Table 3

Values of Factor Loads (Women)

Initial scales	Factors			
	1	2	3	4
Deep-superficial	0,620			
Friendly-hostile	0,434	-0,511		-0,472
Sad-joyful		0,849		
Closed-open		0,892		
Permanent-temporary			0,835	
Frequent-rare			0,806	
Fruitful-unproductive	0,781			
Lofty-low	0,808			
Regular-accidental	0,463		0,434	0,446
Simple-complex				0,823

The first factor is characterized by the following scales: *deep-superficial, friendly-hostile, fruitful-unproductive, lofty-low, regular-accidental*. It accounts for 21% of variables and is characterized by the adjectives *deep, friendly, fruitful, lofty and regular*. The scale *lofty — mean* has the biggest load. Here, most probably, we speak about solitude.

The second factor, also accounting for 21% of variables, is characterized by the adjectives *hostile, sad, closed*. We may suppose that it reflects loneliness perceived as a psychological emotional experience.

The third factor accounts for 16% of variables and is described by such adjectives as *permanent, frequent and regular*. It reflects the time spread (the same as in the common semantic space). But unlike the common semantic space, it includes the scale *regular-accidental*. It should also be noted that this scale covers three factors at once (in the semantic space for women), almost equally increasing the factor load of each.

The fourth factor is formed by the scales *friendly-hostile, regular-accidental, simple-complex*. This factor explains 13% of variables and is characterized by the adjectives *simple, hostile and regular*.

Thus, having analyzed the factorization of the semantic space “loneliness” in the groups of men and women, we can draw the following conclusions:

- the semantic space of “loneliness” is defined by at least two dominant factors, close to understanding the psychological emotional experience of loneliness as seclusion, as well as by the factors of temporal spread and intensity of the feeling;
- in men as opposed to women the “weightiest” factor refers to feeling lonely, in women the factors of loneliness and solitude have equal loads (explanatory power);
- it is typical of the semantic space of “loneliness” for men and women separately that the fourth factor on the dominant scale “simple-complex” rather gives a specifying evaluation in the context of “loneliness-solitude”, in contrast to the common semantic space.

To test the hypothesis that students, who before entering university lived in other cities, and Muscovite students perceive loneliness in different ways we examined the semantic spaces for these two groups.

To study the specific nature of the semantic space for Muscovite students we carried out factorization (table 4). The explanatory power of the received model was 70%.

Table 4

Values of Factor Loads (*Muscovites*)

Initial scales	Factors			
	1	2	3	4
Deep-superficial	0,477	0,537		
Friendly-hostile	-0,418	0,645		
Sad-joyful	0,772			
Closed-open	0,859			
Permanent-temporary			0,905	
Frequent-rare			0,559	
Fruitful-unproductive		0,779		
Lofty-low		0,827		
Regular-accidental	0,582		0,500	
Simple-complex				0,941

The first factor comprises 5 scales with dominant adjectives *deep, hostile, sad, closed, regular*. It accounts for 22% of the studied variables, describes the psychological state of loneliness and contains a negative evaluation. The “weightiest” contribution to the formation of this factor is made by the scales *closed-open* (0,859), *sad-joyful* (0,772).

The second factor also accounts for approximately 22% of the aggregate under study and includes the scales with dominant adjectives *deep, friendly, fruitful, lofty*. We can say that it is evaluative in nature and correlates, rather, with seclusion. Interestingly, the scale *deep-superficial* is found in both the first and the second factors, the meaning on this scale being exactly “*deep*”. It could mean that these emotional experiences are highly significant for the respondents. The third factor is formed by the scales with the dominant adjectives *permanent, frequent, regular*. In this case we speak about the temporal characteristic. The fourth factor comprises only one scale: “*simple-complex*” (0,941).

To compare the semantic spaces for Muscovites and non-Muscovites (the students who did not live in Moscow before entering university) it is necessary to examine the semantic space for non-Muscovites. For this purpose we also built a factor model (table 5). The explanatory power of this model is 72%.

Table 5

Values of Factor Loads (Non-Muscovites)

Initial scales	Factors			
	1	2	3	4
Deep-superficial				0,811
Friendly-hostile				0,695
Sad-joyful	-0,679		0,566	
Closed-open			0,826	
Permanent-temporary		0,878		
Frequent-rare		0,903		
Fruitful-unproductive	0,702	-0,422		
Lofty-low	0,833			
Regular-accidental	0,624		0,510	
Simple-complex			0,479	0,536

The factorization for non-Muscovite students who came to study in Moscow revealed 4 factors. The first factor accounts for 21% of the overall dispersion. The adjectives describing it are: *happy, fruitful, lofty, regular*. Most likely, in this case we are dealing with “solitude”, and the factor is evaluative in nature.

The second factor accounts for 19% of the overall dispersion and is characterized by such adjectives as *permanent, frequent and unproductive*. This factor describes temporal characteristics (in contrast to the semantic spaces of the other groups where it occupied the 3rd or 4th place in significance).

The third factor accounts for 17% of the overall dispersion and is characterized as *sad, closed, regular* and *simple*. We may assume that this factor probably refers to describing the emotional experience of loneliness. The fourth factor includes the scales *deep-superficial, friendly-hostile, simple-complex*. This factor is responsible for 16% of the overall dispersion and is characterized by the adjectives *deep, friendly, simple* and, rather, reflects the intensity of the feeling.

The same way as in the common semantic space, in the “non-Muscovites” group, the factors forming the semantic space of loneliness include both the psychological feeling of loneliness and the features of solitude. However, while in the common space the factor “loneliness” comes second after “solitude”, with the non-Muscovites the second factor characterizes the temporal spread, and only the third factor describes loneliness itself. Thus, the evaluation of loneliness as a psychological experience prevails in the semantic space built for Muscovites. In the non-Muscovites group its contribution is considerably lower, with the “solitude” factor coming out to the fore. This can mean that Muscovites are both given to experiencing loneliness, and that they are more inclined to reflect on it.

Thus, on the basis of the methods of building the semantic space with reference to the phenomenon of loneliness we can draw the following conclusions:

— the methods allow us to find the main “axes of reference” to evaluate loneliness and its perception;

— the main factors may be characterized as solitude (*fruitful, lofty...*), psychological experience of loneliness (*sad, closed...*), temporal spread (*permanent, frequent...*) and the intensity of the feeling (*simple, deep...*). That is, in the ordinary mind the concepts “loneliness” and “solitude” belong to the same semantic field;

— the factorization also showed that the same scales may be found in different factors either with the same poles, thus increasing the weight of the factor itself, or with opposite poles. For instance, we may single out some scales where both positive and negative values are found: *sad-joyful, closed-open, friendly-hostile, fruitful-unproductive* (we considered all the semantic spaces for different groups of respondents). That is, the ordinary mind does not have a simple negative association with loneliness;

— the use of these methods did not create any problems for the respondents (they do not need to interpret their emotions on the cognitive level, or try to formulate or think of something, the methods are not time-consuming). Another merit is that the respondent cannot guess what result is sought by the researcher, and there is no point in “juggling” with the results. For example, in the case of the psychological test, the respondent can understand that the questionnaire aims to register his feeling of loneliness and he can knowingly describe not the actual state of things, but give answers “to his credit”. Consequently, the advantages of the methods of building the semantic space are obvious.

Summing up the results of the research, we can conclude that on the emotional level the semantic space of the word “loneliness” is formed by four factors: solitude, the psychological emotion of loneliness, the temporal spread and the intensity of the feeling.

The reconstruction of structural elements of the phenomenon of loneliness with the method of unfinished sentences enabled us to build a multi-component model, including *descriptive explanations* of loneliness (personal meanings), *causative explanations* and *emotional evaluations*. It matches the results of building the semantic space, which showed that a certain “duality” does exist in the perception of loneliness,

with positive evaluations existing side by side with negative ones. At the same time, people who have experienced loneliness are more reserved in their evaluations. However, the two methods also display certain differences in their results. Thus, the first method revealed “negative emotions” in 20% of the total elementary explanations — here the evaluation of loneliness as a negative emotional experience prevails. The second method showed that the factors of “loneliness” (negative) and “solitude” (positive) are approximately equal. Most likely, it is connected with different levels of perception, as well as with the fact that while working with the unfinished sentences the respondents give answers either about themselves or describe their idea of a lonely person and face the need to “identify” their emotions. While with the semantic differential method the respondents do not have to shift their emotions from the affective level to the cognitive level, which is an advantage in studying such a delicate subject.

So, in the course of the research we posed and solved a number of objectives connected with the study of loneliness on the empirical level; and it was confirmed that the method of unfinished sentences in combination with psycho-semantic methods are the most relevant for ensuring a fully comprehensive and adequate study of this phenomenon.

REFERENCES

- [1] *DiTommaso E., Brannan-McNulty C., Ross L., Burgess M.* Attachment Styles, Social Skills and Loneliness in Young Adults // *Personality and Individual Differences*. — 2003. — No. 35. — P. 303—312.
- [2] *Loneliness. A Sourcebook of Current Theory, Research and Therapy / Ed. by L.A. Peplau, D. Perlman*. — N.Y., 1982.
- [3] *Osgood Ch.E.* Focus of meaning. V. 1: Exploration of semantic space. — Hague, 1976.
- [4] *Osgood Ch.E., Suci Z., Tannenbaum P.* The measurement of meaning. — Urbana, 1957.
- [5] *Puzanova Zh.V.* The “Unfinished Sentences” Technique in Studying Loneliness Phenomenon // *Bulletin of Peoples’ Friendship University of Russia. Series Sociology*. — 2011. — N 1. — P. 5—10.
- [6] *Rokach A.* Loneliness Then and Now: Reflections on Social and Emotional Alienation in Everyday Life // *Current Psychology*. — 2004. — Vol. 23. — No. 1. — P. 24—40.
- [7] *Russel D., Peplau L.A. & Cutrona C.E.* The revised UCLA loneliness scale: Concurrent and discriminate validity evidence // *Journal of Personality and Social Psychology*. — 1980. — № 3 (39). — P. 472—480.
- [8] *Russell D.* UCLA Loneliness Scale (Version 3): Reliability, Validity and Factor Structure // *Journal of Personality Assessment*. — 1996. — No 66 (1). — P. 20—40.
- [9] *Baranova T.S.* Psyhosemanticheskiye metody v sotsiologii // *Sotsiologia: metodologiya, metody, matematicheskiye modeli*. — 1993—1994. — № 3—4. — P. 55—64.
- [10] *Klimov I.A.* Kompleksnoye ispol’zovaniye semanticheskogog defferentsiala i ontent-analiza otkrytyh voprosov dl’a izucheniya kul’turnyh fenomenov // *Sotsiologiya, metodologiya, metody, matematicheskiye modeli*. — 1998. — № 10. — P. 5—27.
- [11] *Petrenko V.F.* Osnovy psyhosemantiki. — SPb., 2005.
- [12] *Puzanova Z.V.* Metod neokonchennyh predlozeniy v izuchenii problemy odinochestva // *Vestnik RUDN. Seria Sotsiologiya*. — 2004. — № 6—7. — P. 92—111.
- [13] *Shmelev A.G.* Vvedeniye v experimental’nyu psyhosemantiku: teoretiko-metodologicheskiye osnovaniya i psyhosemanticheskiye vozmozhnosti. — M., 1983.

ИСПОЛЬЗОВАНИЕ ПСИХОСЕМАНТИЧЕСКИХ МЕТОДОВ В ИЗУЧЕНИИ ФЕНОМЕНА ОДИНОЧЕСТВА

Ж.В. Пузанова

Кафедра социологии
Российский университет дружбы народов
ул. Миклухо-Маклая, 10/2, Москва, Россия, 117198

В статье автор продолжает знакомить читателей с результатами поискового исследования, проведенного с целью реконструкции структурных элементов феномена одиночества. В данном случае речь идет об использовании психосемантических методов, примененных в сочетании с методикой неоконченных предложений. Использованный подход позволяет автору исследовать одиночество, обращаясь непосредственно к аффективному уровню переживания респондентами.

Ключевые слова: одиночество, психосемантические методы, семантический дифференциал, семантическое пространство, аффективный уровень, факторный анализ.