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THE SUBJECTIVE QUALITY OF CHOICE TECHNIQUE: QUALITATIVE DIMENSIONS OF CHOICE AS A SELF-ORIENTATION ACTIVITY[5]

This article is dedicated to the analysis of the main parameters of choice as a self-determination activity and to the elaboration of a special tool for their assessment. Our aim was to allocate process-related subjective indicators of the quality of concrete choices. We developed and validated a 16-item questionnaire called the *Subjective quality of choice technique* which measures four qualitative dimensions of choice: mindfulness, emotional valence, self-determination, and satisfaction with the outcome. This four-factor structure of choice parameters was relatively invariant in different real life situations of significant choices (local elections, university attendance, vocational orientation at high school, etc.). The Subjective quality of choice technique allows us to explicate the subjective picture of making personal choice as an intrinsically vs. extrinsically regulated process and to study its phenomenology.

Key words: choice, subjective quality of choice, self-determination activity, parameters of choice process, subjective construing of choice

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Problem and background

The phenomenon of choice has rarely been a subject of psychological studies over the last century, if one does not fully identify it with decision making, a cognitive evaluation of a number of alternatives resulting in a preferential judgment (see Simonson, 2007). Whether what is traditionally called choice is fully covered by the cognitive concept of decision making is still a debatable terminological issue. However, in the last two decades we learned that most decisions are made in a not so rational way (Gigerenzer, 2014). Now the scholars both inside and outside cognitive tradition are discussing the limitations of the cognitive paradigm of rational decision making (Peters & Slovic, 2000; Keys & Schwarts, 2007). Alternative approaches, though much less elaborated, are more comprehensive. They take into consideration individual strategies and the emotional price of the choice (Schwarts, 2004; 2012); cultural contexts that suggest or prevent us from seeing a situation as a choice option (Iyengar & Lepper, 1999; Iyengar, 2012; Savani, Marcus, Naidu, Kumar,& Berlia, 2010); self-regulation processes and energy distribution (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Moller, Deci, & Ryan, 2006). All this makes the difference between choice and decision making; if decision making is a process occurring in a person's mind and resulting in a judgement, choice is a process occurring in life and resulting in action. A lot of evidence shows that despite the decision firmly made in judgment, the actual action may go contrariwise when it comes to its implementation.

We treat choice as an intentional activity (Leontiev, 1994; Leontiev & Pilipko, 1995). Though this activity takes place in one's mind, it rarely can be reduced to cognitive accounting, including both motivational chains, energy expenditure (Baumeister a.o., 2008), and both external and internal mediating tools (Vygotsky, 1983). This activity of choosing, or choicework, may proceed at different levels of complexity and elaboration. In some cases, choice has a sophisticated, branched and deliberate character, being integrated with other parts of one's life and activities or even unpredictable and transformational. In other cases, choice is reduced to automatic unconscious operations proceeding without regard to other aspects of life and is well described by cognitive decision making models.

Choicework theory presumes that what matters is the way choice is done rather than what is actually being chosen. We distinguish three levels of objective complexity in a choice situation: (1) simple choice, when all options and criteria for choosing are given; (2) meaning-related choice, when the options are given but criteria are multiple or are still to be construed, and (3) existential choice, when options and criteria are to be construed. The construct of subjective quality of choice refers to individual differences in the capacity to fulfill a complicated choicework. There are few instruments of measuring variables similar to this capacity; probably only B. Schwartz' (2004) inventory for assessing maximization vs. optimization strategies of choice is relevant to some degree.

In order to validate choicework theory, we aimed to elaborate a special research technique of measuring the key parameters of choice activity – irrespective of what is being chosen. We assumed that the subjective quality of choice reflects the learned integrative capacity of choicework. Individuals with higher development of choice skills are able to fulfill a more developed choicework, and vice versa.

In line with this reasoning, we conducted a series of studies aimed at singling out process-related subjective indicators of the quality of concrete choices and at elaborating a tool for their assessment. We have chosen a method of semantic scaling of separate parameters of the choice activity, being aware of the restrictions imposed by such a methodology.

The next section summarizes the initial steps of the elaboration of the Subjective quality of choice (SQC) technique, including pilot studies that were described at length in our earlier publication (Leontiev, Mandrikova, & Fam, 2007). The last section describes the results of the main validation study.

Initial pilot studies

SQC was included in a number of studies of different choice processes fulfilled from 2004-2007. The aim as concerns the SQC technique was threefold: (1) revealing exploratory factor structure of SQC; (2) checking its invariance for different choice situations; (3) improving the instrument, selecting the most psychometrically reliable scales and items, and cutting away the least reliable ones.

The technique consisted of two parts with explicit reference to a special situation of choice the respondent was making at the moment of testing or has recently made. The respondents were asked to evaluate by a number of bipolar items the process of choice actually being made or made in the past (*I was making this choice…*) and its result (*The decision I've made was…*). All items were bipolar, of semantic differential type, and suggested seven gradations between the poles.

Three sets of research data were analyzed:

A. A study of attitude to one's choice in a local authorities election in the Moscow municipal parliament (Duma) in 2005 (Leontiev & Fam, 2011). The object of the study was the decision whether to go vote, rather than the preference for a special candidate or a party. The participants were non-psychology college students (Moscow Institute of Economics, Management and Law, N = 174).

B. A study of subjective construing of choice of a matrimonial partner (E. Udaltsova, D. Leontiev) in 2007. The respondents were couples (N = 56) who submitted an application to a marriage registry office.

C. A study of the choice of university to attend (T. Gordeeva, D. Leontiev, E. Osin) in 2007. The participants were enrolled in a psychological faculty of Moscow State University (N = 112).

In studies A and B we used the SQC version of 50 items (22 + 28), and in Study C a slightly updated version of 58 items (27 + 31). Before that, we had obtained some pilot data with still earlier versions of the technique that provided no meaningful structure and do not deserve description.

The sample size in all the three cases was not sufficient to treat the results of the factor analysis we applied in all three cases (Varimax-rotation, the method of principal components) as any reliable proof of the internal structure of SQC. However, the data provided us with fairly invariant and theoretically sound structure referring to the process of choice-making (three-factor solutions explained 45-55% of the total variance) and its outcome (one-factor solution explained 37-40% of the variance). We could now speak of a reasonable structural model to be checked on an appropriate empirical basis. The model included the following qualitative dimensions of choicework (Leontiev, Mandrikova, & Fam, 2007):

1. *Mindfulness of choice* (detailed choice vs. insufficient or lacking elaboration and argumentation choice and proactive vs. reactive choice);

2. *Emotional valence* (purely positive choice vs. ambivalent emotions in the process of making choice);

3. *Self-determination* (autonomous vs. controlled or enforced choice);

4. *Satisfaction* (approval and acceptance of the decision vs. doubts about the choice actually made).

Item selection in line with this structure allowed cutting the number of items down to 16 which proved to be the most informative for individual diagnostics of subjective constructing of choice (see Table 1):

Table 1. Scales and items of SQC-16 (11 + 5)

Scales	*Items*
Mindfulness	after thorough reflection – spontaneously
	responsibly – irresponsibly
	considering the consequences – disregarding the consequences
	not accidentally – accidentally
Emotional valence	joyfully – bitterly
	painfully – painlessly
	feeling burdened by the situation – enjoying the situation
	with pride – with discomfort
Self-determination	basing on one's own opinion – basing on family or friends' advice
	relying on oneself only – relying on help of other people or circumstances
	deliberately – under pressure
Satisfaction	accurate – inaccurate
	wrong – right
	depressing – encouraging
	suppressing – inspiring
	bad – good

Validation of the SQC technique

Data collected in all above-described surveys illustrated the importance of studying choice as an inner activity but did not allow us to make conclusions about reliability, validity and the universal representativeness of SQC-16. In order to develop the tool, we added a few items into the short version of the questionnaire. Some of them were not included into SQC-50 and SQC-58 and some items were used in the previous three surveys with a controversial result.

So, we used version **SQC-23 (16 + 7)** (see Appendix) in the Internet study of individual peculiarities of choice activity in situations of three levels of subjective importance (A. Fam, E. Osin, D. Leontiev, 2011-2013). The respondents were visitors of one of the most well-known Russian psychological sites (N = 1833; 149 male, 1684 female; average age – 27.8 years) who filled out forms of our online research on a voluntary basis.

Respondents were asked in turn to describe and name three choice situations from their own experience ranging in importance (an ‘everyday’, ‘fateful’, and ‘medium’). They were asked to evaluate each situation using the SQC technique and also to fill out several personality inventories.

Big data in the Internet survey allowed us to use the structure modeling method to check the assumption that a set of items that form the SQC technique was equally adequate for choice situations of different levels of subjective importance. As soon as the independent variable was not the content of the situation itself but the level of its importance for a person, respondents analyzed situations which concerned various spheres of life: choice of a spouse, place for living, job, how to spend free time, moral choice, and so on.

On a unionized massif of evaluations of three situations of choice (N = 5499) we made a confirmatory model (see Table 2):

Table 2. A confirmatory model of the SQC technique

Scales	*Items*
Mindfulness	3*, 5*, 6*, 10, 12*, 14, 22*
Emotional valence	4, 7, 8*, 9*, 16
Self-determination	1*, 2*, 11*, 13, 15*, 23*
Satisfaction	17, 18*, 19, 20*, 21
Notes: a sign * marks reverse items.	

Because scores on some items did not completely conform to normal distribution, we modeled items as ordered categorical variables and tested the model using an asymptotic distribution free estimator (WLS in Mplus). The fit indices of the resulting models are presented in Table 3.

First, we tested a measurement model with four scales. The resulting Model 1 demonstrated a relatively poor fit to the data. All the parameters of the model were significant and all the estimated factor loadings were above .4.

Table 3. Check of a theoretical model with a WLS method

Model	χ^2 *(df)*	*RMSEA (with 90% confidence interval)*	*CFI*	*TLI*
1	9751.38 (224)	.088 (.086-.089)	.899	.886
2	8504.67 (222)	.082 (.081-.084)	.912	.900
3	6658.20 (221)	.073 (.071-.074)	.932	.922
4	10961.69 (971)	.075 (.074-.076)	.910	.930
Notes: χ^2 (df) – the chi-squared distribution with k degrees of freedom, RMSEA – the root mean square error of approximation, CFI – the Bentler Comparative Fit Index, TLI – the Tucker-Lewis Index.				

Based on the inspection of modification indices, we introduced error covariances for two pairs of items that were similar in meaning, direction, and belonged to the same scales: Items 12 and 22 (chi-square=700.97), and Items 1 and 2 (chi-square=511.49). The resulting Model 2 exhibited a better fit to the data.

The largest remaining modification indices referred to Item 5 (‘after thorough reflection – spontaneously’), which could be loaded on each of the other three scales. Apparently, spontaneity vs. mindfulness is a fundamental characteristic of choice process that may influence all other parameters of its subjective experience. After adding a cross-loading for Item 5 on the Emotional valence scale, Model 3 showed a better fit to the data. The standardized loading of Item 5 on the Emotional valence scale was weak (.40) compared to its loading on the Mindfulness scale (.82). The remaining modification indices showed no pronounced outliers and the addition of new parameters did not lead to any significant improvement of model fit. The resulting structural model is presented in Figure 1.

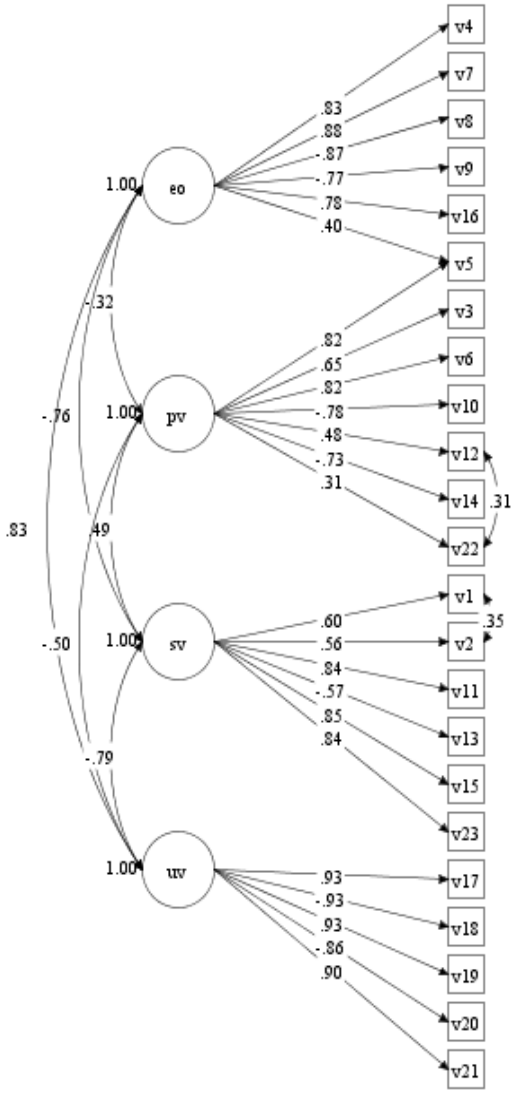

Fig. 1. The resulting model of the questionnaire

To check the assumption that the model is equally adequate for choice situations of different importance, we performed multigroup confirmatory factor analysis using the same WLS estimator with theta parameterization. The multigroup Model 4 was based on Model 3 with the main parameters (factor loadings, variable thresholds, and error variances) constrained across groups, which conformed to the strict invariance. Fit indices of the resulting model were similar to those of Model 3, suggesting invariance.

Therefore, the results of this series of studies allowed us to affirm that the SQC technique may be used as a psychodiagnostic tool for analysis of choice activity in different real life situations. As soon as new items added to the 16-item version of the questionnaire did not seem to change the factor structure of the test or improve its construct validity, we decided to choose SQC-16 (11 + 5) as the final version of the questionnaire.

Conclusion

Our research was devoted to an all-round analysis of qualitative parameters of choice process. In a series of surveys we singled out the subjective indicators of the quality of concrete choices (choosing a career, a spouse, voting in regional elections, etc.) and elaborated a special tool for their assessment. We obtained the relatively invariant four-factor structure of one's attitude to choice (mindfulness of choice, emotional valence, self-determination, and satisfaction with choice actually made).

The instrument we have developed allows us to explicate the subjective picture of making personal choice as an intrinsically vs. extrinsically regulated process. The items measure rationality, responsibility, meaningfulness, independence, subjective ease of one's choicework, and the emotional attitude both toward the process and to the result of choice.

We believe the use of this technique in combination with other tools could open an opportunity for more differentiated research of individual strategies of choice making, personality preconditions which influence on choice quality, and an attitude to any choice in dynamics.

Appendix

The form of SQC-23

Different people perceive choice situations and evaluate the decision they make in a different way. The following set of characteristics is dedicated to various aspects of choice process and its result.

Think of … *(here is supposed to be a name of choice situation, depending on an object of a study)*.

Please end the following sentences by choosing ONE of two bipolar characteristics in each line.

In each case, please circle ONE point on the scale that you feel is the most appropriate in describing the choice you've made in that particular situation (please use the key below).

3	2	1	0	1	2	3
The left characteristics is expressed greatly	The left characteristics is expressed moderately	The left characteristics is expressed weakly	It is impossible to describe the choice by any of these two characteristics	The right characteristics is expressed weakly	The right characteristics is expressed moderately	The right characteristics is expressed greatly

I was making this choice…

basing on one's own opinion	3 2 1 0 1 2 3	basing on family or friends' advice
relying on oneself only	3 2 1 0 1 2 3	relying on help of other people or circumstances
considering the consequences	3 2 1 0 1 2 3	disregarding the consequences
feeling burdened by the situation	3 2 1 0 1 2 3	enjoying the situation
after thorough reflection	3 2 1 0 1 2 3	spontaneously
responsibly	3 2 1 0 1 2 3	irresponsibly
painfully	3 2 1 0 1 2 3	painlessly
joyfully	3 2 1 0 1 2 3	bitterly
with pride	3 2 1 0 1 2 3	with discomfort
deliberately	3 2 1 0 1 2 3	under pressure
not accidentally	3 2 1 0 1 2 3	accidentally
with an eye to other people	3 2 1 0 1 2 3	without an eye to anybody
impulsively	3 2 1 0 1 2 3	deliberately
according to one's desire	3 2 1 0 1 2 3	reluctantly
with anxiety	3 2 1 0 1 2 3	with calm

The decision I've made was…

bad	3 2 1 0 1 2 3	good
encouraging	3 2 1 0 1 2 3	depressing
wrong	3 2 1 0 1 2 3	right
accurate	3 2 1 0 1 2 3	inaccurate
suppressing	3 2 1 0 1 2 3	inspiring
predictable	3 2 1 0 1 2 3	unexpected
'my'	3 2 1 0 1 2 3	not 'my'

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