

# **Questionnaire**

## **Summary of the main activities of a research institute of the Slovak Academy of Sciences**

*Period: January 1, 2012 - December 31, 2015*

### **1. Basic information on the institute:**

#### **1.1. Legal name and address**

(2012- September 2015)

Institute of Experimental Psychology, Slovak Academy of Sciences,  
Address: Dúbravská cesta 9, 841 04 Bratislava, Slovak Republic

(since October 2015)

Institute of Experimental Psychology, Centre of Social and Psychological  
Sciences, Slovak Academy of Sciences  
Office address: Dúbravská cesta 9, 841 04 Bratislava, Slovak Republic  
Centre address: Šancová 56, 811 05 Bratislava, Slovak Republic

**Please refer to point 1.1 in the Questionnaire by the Institute of Forecasting  
of SAS**

#### **1.2. URL of the institute web site**

[www.psychologia.sav.sk](http://www.psychologia.sav.sk)  
[cspv.sav.sk](http://cspv.sav.sk)

#### **1.3. Executive body of the institute and its composition**

<b>Directoriat</b>	<b>Name</b>	<b>Age</b>	<b>Years in the position</b>
<b>Director</b>	Prof.PhDr. Viera Bačová, DrSc.	66	2012-2015
<b>Deputy director</b>	Mgr. Lenka Čičmanová, PhD	39	2012
	PaeDr. Vladimíra Čavojová. PhD,	38	2012-2014
	Doc. Peter Halama, PhD.	41	2014-2015
<b>Scientific secretary</b>	PhDr. Eva Ballová Mikušková, PhD.	34	2012-2015

#### **1.4. Head of the Scientific Board**

Mgr. Lucia Adamovová, PhD. (2012- September 2015)

Prof. PhDr. Viera Bačová, DrSc. (October 2015-) – head of the Scientific Board of  
the Centre of Social and Psychological Sciences, Slovak Academy of Sciences

#### **1.5. Basic information on the research personnel**

**1.5.1. Number of employees with university degrees (PhD students included)  
engaged in research projects, their full time equivalent work capacity (FTE)  
in 2012, 2013, 2014, 2015, and average number of employees in the  
assessment period**

	2012		2013		2014		2015		total		
	number	FTE	number	FTE	number	FTE	number	FTE	number	averaged number per year	averaged FTE
Number of employees with university degrees	22,0	18,550	21,0	16,780	21,0	17,180	22,0	16,740	86,0	21,5	17,313
Number of PhD students	6,0	4,500	8,0	5,500	8,0	6,750	7,0	5,750	29,0	7,3	5,625
Total number	28,0	23,050	29,0	22,280	29,0	23,930	29,0	22,490	115,0	28,8	22,938

### 1.5.2. Institute units/departments and their FTE employees with university degrees engaged in research and development

Research staff	2012		2013		2014		2015		average	
	No.	FTE	No.	FTE	No.	FTE	No.	FTE	No.	FTE
Institute in whole	22,0	18,550	21,0	16,780	21,0	17,180	22,0	16,740	21,5	17,313

### 1.6. Basic information on the funding of the institute

#### Institutional salary budget and others salary budget

Salary budget	2012	2013	2014	2015	average
<b>Institutional Salary budget</b> <i>[thousands of EUR]</i>	219,808	215,444	218,126	232,304	<b>221,421</b>
<b>Other Salary budget</b> <i>[thousands of EUR]</i>	0,000	3,549	14,196	14,196	<b>7,985</b>

*Note.* Data for 2015 are only for Institute of Experimental Psychology SAS, which was part of Centre of Social and Psychological Sciences. Budget for the Centre was 600 909. Other salary budget was 65 452.

### **1.7. Mission Statement of the Institute as presented in the Foundation Charter**

Institute is focused on basic research in psychological sciences, especially on cognitive processes of personality with regard to coping with difficult situations.

### **1.8. Summary of R&D activity pursued by the institute during the assessment period in both national and international contexts, (recommended 5 pages, max. 10 pages)**

IEP SAS (further Institute) is an established institution for basic research in psychology in the Slovak Republic. The Institute continues in than 60 years long tradition (trade mark) and significant intellectual contribution in the form of research know-how. The Institute has housed for decades renowned scientists who introduced many topics and areas of psychology that were never before studied in Slovakia. Still today the Institute represents the research centre with the highest concentration of the basic research in psychology in the Slovak Republic.

The Institute has been actively educating new scientists in the field of psychological sciences in Slovakia for many years. In the past and in the present the Institute is responsible for Ph.D. study in the psychological sciences. Seven research scientists from the Institute of Experimental Psychology received the degree doctor of sciences (Dr.Sc.) from the Slovak Academy of Sciences during the whole period of existence of the Institute. At present, the Institute is the seat of the “ad hoc” committee for doctoral theses (Dr.Sc.) in the psychological sciences – 050100.

Since 1956 the Institute has been publishing the international journal STUDIA PSYCHOLOGICA, which is in the English language and exceeds the national level. It is indexed in the following databases: Web of Science/Social Sciences, Citation Index (SSCI), Journal Citation Reports (JCR), Current Contents/Social & Behavioral Sciences, PsycInfo.

Between 2012 - 2015 the Institute continued in the study of cognitive processes of personality that present the research programme of the Institute since its founding in the 1950's. Scientists from the Institute study cognitive functioning of an individual as an integral part of activities of a human being living in a social environment.

The main research topic at the Institute during 2012 - 2015 (evaluation period) were judgment and decision making processes at the individual level and related problems of the rationality of decision making individual behaviour. Choosing this research topic was caused by the fact that only small number of social scientists in Slovakia have studied decision making processes. Thus, the study of decision making processes follows the research tradition of the Institute and simultaneously results in a wide and complete research programme – school. Moreover, the research results in this topic have a wide practical application. Among a few examples are trainings of effective decision making; building of teams of experts; selection, training, evaluation of crisis managers; neuromarketing; financial planning and decision making; enhancing to the decision making of professional paramedics, firefighters, security services, etc.

The understanding of the Institute's role in the study of judgment, assessment and decision making follows in these directions:

- elaborating psychological dimensions of decision making in the complete scope of the problem (*international level*),
- introducing this topic into the Slovak research community (*national level*),
- creating space for cooperation with other fields of science that focus on this topic, especially behavioural economy and neurosciences.

Between 2011 – 2015, the main grant support was that of SAS grants, especially within the project “Centre of Excellence of SAS: Centre for Strategic Analyses SAS, Centre for

Interdisciplinary Research and Strategies of Society (CESTA)". For the 2013 – 2017 period, the Institute obtained the APVV grant with the project: "Decision making of professionals: processual, personality and social aspects". In addition, the researchers at the Institute have participated in projects of the VEGA agency of the Ministry of Education and SAS.

Between 2012 – 2015, researchers from the Institute were members of international scientific societies, they were active in programme and organizational conference committees, they applied for internships and made business trips abroad and the Institute hosted researchers from abroad. In the years 2012 – 2015 the Institute did not have any internationally funded project, nor did the researchers participate in such. However, in the course of these years, more and more young scientists sought international cooperation and they published in co-authorship with foreign authors in domestic and international journals. In the evaluated period an exceptionally large number of young scientists took active part in renowned international conferences abroad, where they presented the results of their research studies.

Since 2008 to the present (2015), the Institute has cooperated with Dr. Oleksiy Polunin, researcher at the National Academy of Education Sciences in Kiev, Ukraine, on the study of decision making. Dr. O. Polunin spent four long-term internships at the Institute, two of them during the evaluated period. His research focuses on cognitive processing of time, subjective perception of the present and modelling of time flow in decision making processes of individual.

Before we introduce the research results of the Institute, it is important to mention that during the evaluated period the Institute underwent changes in the age composition of its research fellows. In the evaluated period, four research scientists (over 65 years) retired from the Institute, and this number represents a third of all research scientists. Four new doctoral graduates were accepted to the Institute. As the middle generation of researchers is absent from the Institute, the mean age of employed researchers decreased. The change in the age composition of researchers affects also the scientific work and opportunities to obtain research support (grants).

Success in the personal development of the Institute in the evaluated period is documented by awards received by young research scientists in the evaluated period 2012 – 2015. All who participated in the Young research scientist of SAS to 35 years competition received top awards (V. Čavojová, J. Bašňáková, R. Hanák, E. Ballová Mikušková). The Institute's post-doctoral students were successful in receiving the SAS scholarship of the Š. Schwarz Foundation (M. Túnyiová, K. Dudeková, L. Kostovičová, L. Pitel). L. Kostovičová received two significant national awards as a Ph.D. student: 1. Individual grant for Ph.D. students of the Intenda foundation, programme "Supporting individualities" (1. place in the category Social sciences), 2. Student personality of Slovakia in the academic year 2012/2013, organized by Junior Chamber International – Slovak Republic, under the patronage of the President of SR. L. Kostovičová also received a scholarship of Jan Hus Foundation for Education. Ph.D. student H. Harenčárová received a SAIA scholarship for a six months' internship in Switzerland, University of Zurich, Institute of Psychology, and a European Association of Cognitive Ergonomics scholarship. Research scientists V. Čavojová and J. Gurňáková obtained the qualification degree IIa and they started to supervise Ph.D. students.

Young research scientists are the biggest human capital and research potential of the Institute. The proof is evident also in the fact that after several mature scientists left the Institute, the quality of the Institute's research results did not decline in the evaluated period (as shown in the tables of published works and resonances). There is a change in the quality of the research results, but in a positive aspect: young scientists publish comparatively more in renowned international journals (with high impact factor) and make new acquaintances and cooperation with research institutes abroad.

## *Review of research activities between 2012 – 2015*

### *R&D activities in the Centre of Excellence SAS CESTA (2011 – 2015)*

Centre of Excellence SAS – Centre for Strategic Analyses SAS, Centre for Interdisciplinary Research and Strategies of Society (CESTA) was already the third Centre of Excellence of the Institute. IEP SAS was a partner organization of the main research institution of the Centre, which was the Institute for Forecasting SAS. The cooperation of research institutes (Institute for Forecasting SAS, Institute for Sociology SAS, Institute of Applied Psychology FSES UK, IEP SAS) created an interdisciplinary theoretical and methodological basis for the study of strategic decision making. Strategic decision making studied in social sciences (forecasting, sociology, demographics, and experimental psychology) within an interdisciplinary context interconnected the study of individual preferences (based on assumptions of profit maximizing rational agents) with the study and modelling of social preferences (by means of strategic interactive decision making, cognitive and behavioural approaches). The Centre published results in the form of four collective monographs, dozens of journal articles and almost 40 presentations at domestic and international conferences.

### *R&D activities in the APVV project (2013 – 2017)*

The project focuses on the study of decision making processes in those professionals whose professional performance is significantly influenced by decision making. The research analyses decision making of professionals at the heuristic strategies level as well as on the level of identifying key process aspects of professional decision making. The main focus of the project is microcognitions in decision making (basic building blocks of thinking) and macrocognitions (complex cognitive adaptations to the complexity of a stimulus situation). Personality and social variables with the potential to enter into the decision making process are also analysed. Special part of the project describes intuitive and systematic strategies of decision making of professionals and their mutual comparison.

### *R&D activities in VEGA projects (2012 – 2015)*

Between 2012 – 2015, researchers at IEP SAS successfully have participated in eight research projects funded by the VEGA agency of the Ministry of Education and SAS. Research teams focusing on the development of the Institute's central research problem – decision making processes – were built within the mentioned VEGA projects in the evaluated period.

Integration of activities within the research teams was an “added value” for synergic effects. This enabled also to include new Ph.D. student into on-going team researches and thus obtain better research experience *in situ*. Simultaneously, by forming a strong research team, new possibilities to apply for international research grants have arisen. Moreover, the Institute is opening to new, interdisciplinary cooperation and cooperation with other teams and institutes of the SAS.

Topics of the VEGA projects included:

1. Elaborating of basic decision making theories (e.g. verification of prospect theory parameters, phenomenon probability assessment, multicriterial strategic decision making).
2. Decision making in real-life demanding situations (specifically paramedics).
3. Role of intuition and expertise in decision making.
4. Social influence in individual decision making (specifically in decision making about child vaccination).
5. Role of personality characteristics in decision making (need for structure in the decision making processes and such).

These primary areas of research were further developed and more aspects were introduced, e.g. complex solving of problems and decision making.

**VEGA projects finished in 2012:**

- Bačová, V. et al.: Interpretácie rozhodovacieho správania: pohľad psychológie a ekonómie [Decisional behaviour interpretations: psychology and economics perspectives].
- Kusá, D. et al.: Racionalita emócií a kvalita usudzovania v situáciách sociálnej výmeny [Rationality of emotions and a quality of judgment in situations of social mutuality].

**VEGA projects finished in 2013:**

- Gurňáková, J. et al.: Osobnostné aspekty efektívnej sebaregulácie a rozhodovania v situáciách emočnej záťaže [Personality aspects of effective self-regulation and decision-making in emotionally demanding situations].

**VEGA projects finished in 2014:**

- Sarmány-Schuller, I. et al.: Potreba štruktúry v procese rozhodovania a zvládania [Need for structure in the process of decision-making and coping].

**Running projects (expected termination in 2016, 2017, 2018):**

- Adamovová, L. et al.: Rozhodovanie v emočne náročných situáciách: výskum makrokognícií a emócií v paradigme naturalistického rozhodovania [Decision making in emotionally demanding situations: Research of macrocognitions and emotions in the naturalistic decision making paradigm].
- Kurincová Čavojová, V. et al.: Rozhodovanie expertov: Využívanie intuície expertmi pri riešení strategických úloh [Decision making of experts: Using intuition for solution of strategic tasks].
- Masaryk, R. et al.: Sociálne vplyvy v individuálnom rozhodovaní [Social influences in individual decision making].
- Sarmány-Schuller, I. et al.: Rozhodovanie a efektívne riešenie komplexných problémov v intrapsychických väzbách s kognitívnymi štýlmi [Decision making and effective complex problem solving in intrapsychic bonds with cognitive styles].

*Review of research results of projects finished between 2012 – 2015***Bačová, V. et al.: Decisional behaviour interpretations: psychology and economics perspectives (VEGA 2/0121/10)**

Original results of the finished project can be summarized as: a) We replicated Tversky and Kahneman's (1992) seminal experiment which verified the prospect theory and we assessed decision making parameters in Slovak participants. In agreement with our hypotheses, the obtained parameter (loss aversion, weighting and value function) values corresponded to results obtained in other countries. b) Two conducted intercultural studies of loss aversion as decision making parameter questioned loss aversion as a universal and omnipresent phenomenon. c) The study of the psychological importance of loss aversion showed that loss aversion can be perceived as personal characteristic of an individual that is closely related to an individual's values and interpersonal relations.

**Kusá, D. et al.: Rationality of emotions and a quality of judgment in situations of social mutuality (VEGA 2/0204/09)**

Significance of emotions was specified in relation to language, intuition and neurophysiological indices. In evolution psychology, emotions have the function of dominant programs in mental architecture, where emotions play a coordinating role. Emotions are far from perfectly reliable, but they are not "cognitively blind", ruled only by physical signals. They enable to distinguish adequate ways of reasoning to expose cheaters, find a reliable partner, and estimate social and material gains and losses. The importance and functionality of emotions in information processing and quality of reasoning is especially visible in situations of social mutuality, where reasoning is related to social and moral feelings of trust, embarrassment, guilt, etc. Empirical analyses of reasoning in experimental

games and strategies in spoken language emphasize constructive influence of emotions. Analyses further highlighted the value of emotions in the process of reasoning and judgment, and their evaluative and interpretation role, and thus increasing effectiveness of cognitions as a system.

**Gurňáková, J. et al.: Personality aspects of effective self-regulation and decision-making in emotionally demanding situations (VEGA 2/0095/10)**

Healthcare professionals have to make quick decisions in complex, vaguely structured situations with the risk of serious negative consequences of a wrong decision, which is a significant stressor of their profession. An important element in this process is emotional self-regulation, which if used effectively, can decrease the unwanted impact of negative emotions on the quality of their decision making. Effective self-regulation of emotions includes processes such as deliberate cognitive effort focusing directly on regulating own emotional experience: attempt to better understand the current situation and accompanying emotions, as well as redirecting focus to more positive aspects of own life situation.

**Sarmány-Schuller, I. et al.: Need for structure in the process of decision-making and coping (VEGA 2/0126/12)**

The study focused on the effect of simple recognition heuristics on financial decision making related to the choice and assessment of stocks, with regard to the relation between need for structure and heuristic processing in decision making. Participants of the experimental study (n=204) were randomly divided into two groups. In the experimental group that assessed five unknown and three known stocks (selected data from the financial sector but with fictional names), participants more often preferred recognized stocks of known companies, assessed them as less risky and with a better stock price development in the future. Preference of recognized stocks was moreover observed most often in the group of participants with high need for structure. Group of participants with high need for structure perceived unknown stocks as more risky in comparison to participants with low need for structure. After changing the unknown names of companies to known names, no difference in preference, risk assessment and expectation of future stock prices was found. In group comparison, the change of name of five stocks resulted in worse future stock price expectation of the remaining three companies. This result could prove a new heuristic approach in object assessment. Results support the concept of recognition heuristic and emphasize the need to study personality characteristics in the context of using heuristics in decision making.

## **2. Partial indicators of main activities:**

### **2.1. Research output**

**2.1.1. Principal types of research output of the institute: basic research/applied research, international/regional (ratios in percentage)**

**Basic research/applied research 100/0**

**International/regional 80/20**

**2.1.2 List of selected publications documenting the most important results of basic research. The total number of publications listed for the assessment period should not exceed the average number of employees with university degrees engaged in research projects. The principal research outputs (max. 5, including Digital Object Identifier - DOI) should be underlined**

**In alphabetical order:**

- 1) BALÁŽ, Vladimír - BAČOVÁ, Viera - DROBNÁ, Eva - DUDEKOVÁ, Katarína - ADAMÍK, Kamil. Testing Prospect Theory Parameters. In Ekonomický časopis, 2013, roč. 61, č. 7, s. 655-671. (0.194 - IF2012). (2013 - Current Contents, WOS, SCOPUS, EconLit). ISSN 0013-3035. CESTA (CE SAV CESTA - Contract No. III/2/2011). Available at: <https://www.sav.sk/journals/uploads/0621144607%2013%20Bal%C3%A1%C5%B5%20a%20kol.pdf>
- 2) BAŠNÁKOVÁ, Jana - BERKUM, Jos van - WEBER, Kirsten - HAGOORT, Peter. A job interview in the MRI scanner: How does indirectness affect addressees and overhearers? In Neuropsychologia, vol. 76, Special Issue: Semantic Cognition, 2015, p. 79-91. ISSN 0028-3932. Available at: <http://www.sciencedirect.com/science/article/pii/S0028393215001414> doi:10.1016/j.neuropsychologia.2015.03.030.
- 3) ČAVOJOVÁ, Vladimíra - HANÁK, Róbert. Assessing fluid rationality and its relations to cognitive styles. In Advances in Cross-Cultural Decision Making. - Published by AHFE Conference © 2014, 2014, s. 17-28. ISBN 978-1-4951-2095-4. Available at: <http://www.ahfe2016.org/files/books/2014CCDM.pdf>
- 4) GURŇÁKOVÁ, Jitka - HARENČÁROVÁ, Hana. How is the Diagnosis Made? The Observation of Paramedics Performance in Simulated Competition Task. In Proceedings of the 11th International Conference on Naturalistic Decision Making. - Paris : Arpege Science Publishing, 2013, 207-210. ISBN 979-10-92329-00-1. Available at: <http://arpege-recherche.org/ndm11/papers/ndm11-207.pdf>
- 5) SIROTA, Miroslav - KOSTOVIČOVÁ, Lenka - VALLÉE-TOURANGEAU, Frédéric. Now you Bayes, now you don't: effects of set-problem and frequency-format mental representations on statistical reasoning. In Psychonomic Bulletin & Review, 2015, vol. 22, no. 5, 1465-1473 (Impact Factor 2014: 3.369. doi: 10.3758/s13423-015-0810-y Type: ADCA
- 6) BALÁŽ, Vladimír - BAČOVÁ, Viera - ŠKRINIAR, Pavel. Experience and information search patterns in complex decision making. In Studia Psychologica : international journal for research and theory in psychological sciences, 2014, vol. 56, no. 1, p. 3-17. (0.414 - IF2013). (2014 - Current Contents, WOS, SCOPUS). ISSN 0039-3320. Available at: <http://www.psychologia.sav.sk/sp/index.php?id=abstract&numid=647>
- 7) BAŠNÁKOVÁ, Jana - WEBER, Kirsten - PETERSSON, Karl Magnus - BERKUM, Jos van - HAGOORT, Peter. Beyond the Language Given: The Neural Correlates of Inferring Speaker Meaning. In Cerebral Cortex, 2014, vol. 24, no. 10, pp. 2572-2578. (8.305 - IF2013). (2014 - Current Contents). ISSN 1047-3211. Available at: <<http://cercor.oxfordjournals.org/content/early/2013/05/02/cercor.bht112.short>>. doi: 10.1093/cercor/bht112
- 8) BREZINA, Ivan - VAN OUDENHOVEN, Jan Pieter. Do national cultures or religions shape conceptions of wisdom? In Studia Psychologica : international journal for research and theory in psychological sciences, 2012, vol. 54, no. 4, p. 299-311. (0.197 - IF2011). (2012 - Current Contents, WOS, SCOPUS). ISSN 0039-3320. Available at: <http://www.psychologia.sav.sk/sp/index.php?id=abstract&numid=614>
- 9) ČAVOJOVÁ, Vladimíra - HANÁK, Róbert. How much information do you need? Interaction of intuitive processing with expertise. In Studia Psychologica : international journal for research and theory in psychological sciences, 2014, vol. 56, no. 2, p. 83-97. (0.414 - IF2013). (2014 - Current Contents, WOS, SCOPUS).



- 10) DANIEL, Ella - BILGIN, Antoine Selim - BREZINA, Ivan - STROHMEIER, Charlotte Eva - VAINRE, Maris. Values and helping behavior: A study in four cultures. In *International Journal of Psychology*, 2015, vol. 50, no. 3, 186-192. DOI: 10.1002/ijop.12086. (1.198 - IF2014). (2015 - Current Contents). ISSN 0020-7594. DOI: 10.1002/ijop.12086
- 11) DE BOLLE, Marleen - DE FRUYT, Filip - MCCRAE, Robert R. - LÖCKENHOFF, Corinna E. - COSTA, Paul T., Jr. - FICKOVÁ, Emília. The emergence of sex differences in personality traits in early adolescence: A cross-sectional, cross-cultural study. In *Journal of Personality and Social Psychology*, 2015, vol. 108, no. 1, p. 171-185. (5.031 - IF2014). (2015 - Current Contents). ISSN 0022-3514. doi: 10.1037/a0038497
- 12) GREŽO, Matúš - SARMÁNY-SCHULLER, Ivan. The need for structure and the recognition heuristic in financial decision making. In *Československá psychologie : časopis pro psychologickou teorii a praxi*, 2015, roč. 59, č. 6, s. 534-548. (0.239 - IF2014). (2015 - Current Contents). ISSN 0009-062X. Available at: <http://search.proquest.com/openview/740c2fd815a66637d3800f750e170076/1.pdf?pq-origsite=gscholar>
- 13) HANÁK, Róbert - SIROTA, Miroslav - JUANCHICH, Marie. Experts use compensatory strategies more often than novices in hiring decisions. In *Studia Psychologica : international journal for research and theory in psychological sciences*, 2013, vol. 55, no. 4, p. 251-263. (0.215 - IF2012). (2013 - Current Contents, WOS, SCOPUS). ISSN 0039-3320. Available at: <http://www.psychologia.sav.sk/sp/index.php?id=abstract&numid=640>
- 14) HANULÍKOVÁ, Adriana - DEDIU, Dan - FANG, Zhou - BAŠNÁKOVÁ, Jana - HUETTIG, Falk. Individual differences in the acquisition of a complex L2 phonology: A training study. Adriana Hanulíková, Dan Dediu, Zhou Fang, Jana Bašnáková, Falk Huettig. In *Language Learning*, 2012, vol. 62, suppl. 2, p. 79-109. ISSN 0023-8333. doi:10.1111/j.1467-9922.2012.00707.x.
- 15) KAMHALOVÁ, Ivana - HALAMA, Peter - GURŇÁKOVÁ, Jitka. Affect regulation and decision making in health-care professionals: Typology approach. In *Studia Psychologica : international journal for research and theory in psychological sciences*, 2013, vol. 55, no. 1, p. 19-31. (0.215 - IF2012). (2013 - Current Contents, WOS, SCOPUS). ISSN 0039-3320. Available at: <http://www.psychologia.sav.sk/sp/index.php?id=abstract&numid=618>
- 16) KONEČNÝ, Matúš - BAČOVÁ, Viera. Hindsight bias and its reversal: What will time reveal? In *Studia Psychologica : international journal for research and theory in psychological sciences*, 2012, vol. 54, no. 4, p. 251-259. (0.197 - IF2011). (2012 - Current Contents, WOS, SCOPUS). ISSN 0039-3320. Available at: <http://www.psychologia.sav.sk/sp/index.php?id=abstract&numid=610>
- 17) LÖCKENHOFF, Corinna E. - FICKOVÁ, Emília - TERRACCIANO, Antonio. Gender stereotypes of personality: Universal and accurate? In *Journal of Cross-Cultural Psychology*, 2014, vol. 45, no. 5, p. 675-694. (1.746 - IF2013). (2014 - Current Contents). ISSN 0022-0221. doi: 10.1177/0022022113520075
- 18) MCCRAE, Robert R. - CHAN, W. - JUSSIM, L. - DE FRUYT, Filip - LÖCKENHOFF, Corinna E. - FICKOVÁ, Emília. The inaccuracy of national character stereotypes. In *Journal of Research in Personality*, 2013, vol. 47, no. 6,

- 19) SIROTA, Miroslav - KOSTOVIČOVÁ, Lenka - JUANCHICH, Marie. The effect of iconicity of visual displays on statistical reasoning: evidence in favor of the null hypothesis. In *Psychonomic Bulletin & Review*, 2014, vol. 21, no. 4, p. 961-968. ISSN 1531-5320. doi: 10.3758/s13423-013-0555-4.
- 20) SIROTA, Miroslav - KOSTOVIČOVÁ, Lenka - VALLÉE-TOURANGEAU, Frédéric. How to Train Your Bayesian. A Problem-Representation Transfer Rather Than A Format-Representation Shift Explains Training Effects. In *Quarterly journal of experimental psychology*, 2015, vol. 68, no 1, p. 1-9. Available at: <<http://www.ncbi.nlm.nih.gov/pubmed/25283723>>. doi: 10.1080/17470218.2014.972420

### 2.1.3 List of monographs/books published abroad

### 2.1.4. List of monographs/books published in Slovakia

- 1) BAČOVÁ, Viera (Ed.) *Rozhodovanie a usudzovanie III.: Aspekty, javy, aplikácie*. [Decision-making and judgment III.: Aspects, phenomena and applications]. Bratislava : Ústav experimentálnej psychológie SAV, 2012. 261p. ISBN 978-80-88910-37-4.
- 2) BALLOVÁ MIKUŠKOVÁ, Eva - ČAVOJOVÁ, Vladimíra (Eds.): *Osobnosti Ústavu experimentálnej psychológie SAV 1955 - 2015*. [Significant figures of Institute of Experimental Psychology SAS 1955 – 2015] Bratislava : Ústav experimentálnej psychológie SAV, 2015. 114 p. ISBN 978-80-88910-51-0.
- 3) DUDEKOVÁ, Katarína – KOSTOVIČOVÁ, Lenka (Eds.): *Cesty k rozhodovaniu: Šesť dekád psychologického výskumu*. [Roads to decisions: Six decades of psychological research] Bratislava: Ústav experimentálnej psychológie SAV, 2015. 151 p. ISBN 978-80-88910-50-7. Available at:
- 4) GURŇÁKOVÁ, Jitka et al.: *Rozhodovanie profesionálov: Sebaregulácia, stres a osobnosť* [Decision-making of professionals: Self-regulation, stress and personality]. Bratislava : Ústav experimentálnej psychológie SAV, 2013. 310 p. ISBN 978-80-88910-45-9.
- 5) HANÁK, Róbert - BALLOVÁ MIKUŠKOVÁ, Eva – ČAVOJOVÁ, Vladimíra (Eds.): *Rozhodovanie a usudzovanie IV. : Aplikácie a limity intuície*. [Decision-making and judgment IV: Applications and limits of intuition] Bratislava : Ústav experimentálnej psychológie SAV, 2013. 186 p. ISBN 978-80-88910-43-5.
- 6) HATOKOVÁ, Mária et al.: *Sprevádzanie chorých a zomierajúcich* [Accompanying the sick and dying]. Košice : EQUILIBRIA, 2013. 244 p. ISBN 978-80-8143-125-8.
- 7) KORDAČOVÁ, Jana: *Schémy v ľudskom poznávaní. Úvod do problematiky* [Schemes in human cognition. Introduction to the problem.]. Bratislava : Ústav experimentálnej psychológie SAV, 2014. 198 p. ISBN 978-80-88910-48-0.
- 8) KOVÁČ, Damián: *Umne starnúť : (Fragmenty)* [Aging ingeniously]. Bratislava : VEDA, 2013. ISBN 978-80-224-1280-3.
- 9) KUSÁ, Daniela (ed.). *Psycho-logika emócií*. [Psycho-logics of emotions] Bratislava: VEDA, 2013. 188 p. ISBN 978-80-224-1308-4.
- 10) MASARYK, Radomír (Ed.) *Rozhodovanie a usudzovanie V. : Sociálne vplyvy v rozhodovaní*. [Decision-making and judgment V: Social influences in decision-making] Bratislava : Ústav experimentálnej psychológie SAV, 2013. 206 p. ISBN 978-80-88910-46-6.

- 11) RUISEL, Imrich: *Epizódy z histórie poznávania* [Episodes from the history of cognition]. Bratislava : Ústav experimentálnej psychológie SAV, 2013. 370 p. ISBN 978-80-88910-44-2.
- 12) RUISELOVÁ, Zdena – PROKOPČÁKOVÁ, Alexandra: *Problémy adolescencie : Slovensko - švédske výskumné porovnanie 15-ročných* [Problems of adolescence: Research comparison of 15-year olds in Slovakia and Sweden]. Bratislava: Ústav experimentálnej psychológie SAV, 2013. ISBN 978-80-88910-42-8.
- 13) SARMÁNY-SCHULLER, Ivan et al.: *Kognitívna mozaika osobnosti človeka* [Cognitive mosaic of human personality]. Bratislava : Ústav experimentálnej psychológie SAV, 2014. 242 p. ISBN 978-80-88910-50-3.

#### 2.1.5. List of other scientific outputs specifically important for the institute, max. 10 items

In alphabetical order:

- 1) BAČOVÁ, Viera. Finančné rozhodovanie jednotlivcov: mentálne limity, zvládanie a možnosti optimalizácie [Financial decision making of individuals: mental limits, managing, and possibilities of optimization.]. In *Československá psychologie: časopis pro psychologickou teorii a praxi*, 2015, roč. 59, č. 3, s. 215-227. (0.239 - IF2014). (2015 - Current Contents). ISSN 0009-062X.
- 2) ČAVOJOVÁ, Vladimíra. Pozitívne emócie a rozhodovanie [Positive emotions and decision making]. In *Československá psychologie: časopis pro psychologickou teorii a praxi*, 2014, roč. 58, č. 4, s. 355-367. (0.292 - IF2013). (2014 - Current Contents). ISSN 0009-062X.
- 3) HALAMA, Peter. Meaning in Life and Coping: Sense of Meaning as a Buffer Against Stress. In *Meaning in Positive and Existential Psychology*. - New York: Springer, 2014, s. 239-250. ISBN 978-1-4939-0307-8.
- 4) HALAMA, Peter - GURŇÁKOVÁ, Jitka. Need for structure and Big Five personality traits as predictors of decision making styles in health professionals. In *Studia Psychologica: international journal for research and theory in psychological sciences*, 2014, vol. 56, no. 3, p. 171-180. (0.414 - IF2013). (2014 - Current Contents, WOS, SCOPUS). ISSN 0039-3320. Available at: <http://www.psychologia.sav.sk/sp/index.php?id=abstract&numid=658>
- 5) KAMHALOVÁ, Ivana. Naturalistický prístup v oblasti rozhodovania: Modely a stratégie rozhodovania v reálnych situáciách [Naturalistic approach in the area of decision making: Models and strategies of decision making in real-word situations]. In *Československá psychologie*, 2012, roč. 56, č. 4, s. 363-373. (0.087 - IF2011). (2012 - Current Contents). ISSN 0009-062X.
- 6) PITEL, Lukáš - GECKOVÁ, Andrea, Madarássová - REIJNEVELD, Sijmen A. - VAN DIJK, Jitse P. Socioeconomic gradient shifts in health-related behaviour among Slovak adolescents between 1998 and 2006. In *International Journal of Public Health*, 2013, vol. 58, no. 2, p. 171-176. (1.993 - IF2012). (2013 - Current Contents). ISSN 1661-8556. doi: 10.1007/s00038-012-0382-9
- 7) PROKOPČÁKOVÁ, Alexandra. Personal need for structure, counterfactual thinking and decision making. In *Studia Psychologica: international journal for research and theory in psychological sciences*, 2014, vol. 56, no. 3, p. 181-198. (0.414 - IF2013). (2014 - Current Contents, WOS, SCOPUS). ISSN 0039-3320.
- 8) SARMÁNY-SCHULLER, Ivan - KURAČKA, Peter. Dimension of the cognitive style "analytical-intuitive" and the successful problem solving in the "IGT" experimental situation. In *Studia Psychologica : international journal for research and theory in psychological sciences*, 2012, vol. 54, no. 2, p. 95-110. (0.197 - IF2011). (2012 - Current Contents, WOS, SCOPUS). ISSN 0039-3320. Available at: <http://www.psychologia.sav.sk/sp/index.php?id=abstract&numid=597>

- 9) SKOOG, Therése - STATIN, Håkan - RUISELOVÁ, Zdena - ŮZDEMIR, Metin. Female pubertal timing and problem behaviour: The role of culture. In International Journal of Behavioral Development, 2013, vol. 37, no. 4, p. 357-365. (1.591 - IF2012). (2013 - Current Contents). ISSN 0165-0254. doi: 10.1177/0165025413486761
- 10) STRÍŽENEC, Michal. Úloha kritického a strategického myslenia pri rozhodovaní = The role of critical and strategic thinking in decision making. In Československá psychologie: časopis pro psychologickou teorii a praxi, 2013, roč. 57, č. 4, s. 317-328. (0.128 - IF2012). (2013 - Current Contents). ISSN 0009-062X.

**2.1.6. List of patents, patent applications, and other intellectual property rights registered abroad, incl. revenues**

**2.1.7. List of patents, patent applications, and other intellectual property rights registered in Slovakia, incl. revenues**

### 2.1.8. Table of research outputs (as in annual reports).

Papers from international collaborations in large-scale scientific projects (Dwarf team, ALICE Collaboration, ATLAS collaboration, CD Collaboration, H1 Collaboration, HADES Collaboration, and STAR Collaboration) have to be listed separately.

Scientific publications	2012			2013			2014			2015			total			
	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	No. / FTE	No. / salary budget	number	averaged number per year	av. No. / FTE	av. No. / salary budget
Scientific monographs and monographic studies in journals and proceedings published abroad (AAA, ABA)	0,0	0,000	0,000	0,0	0,000	0,000	0,0	0,000	0,000	0,0	0,000	0,000	0,0	0,0	0,000	0,000
Scientific monographs and monographic studies in journals and proceedings published in Slovakia (AAB, ABB)	0,0	0,000	0,000	4,0	0,180	0,019	2,0	0,084	0,009	0,0	0,000	0,000	6,0	1,5	0,065	0,007
Chapters in scientific monographs published abroad (ABC)	0,0	0,000	0,000	0,0	0,000	0,000	4,0	0,167	0,018	1,0	0,044	0,004	5,0	1,3	0,054	0,006
Chapters in scientific monographs published in Slovakia (ABD)	8,0	0,347	0,036	33,0	1,481	0,153	0,0	0,000	0,000	0,0	0,000	0,000	41,0	10,3	0,447	0,046
Scientific papers published in journals registered in Current Contents Connect (ADCA, ADCB, ADDA, ADEB)	9,0	0,390	0,041	16,0	0,718	0,074	12,0	0,501	0,055	10,0	0,445	0,043	47,0	11,8	0,512	0,053
Scientific papers published in journals registered in Web of Science Core Collection and SCOPUS (ADMA, ADMB, ADNA, ADNB)	0,0	0,000	0,000	0,0	0,000	0,000	2,0	0,084	0,009	2,0	0,089	0,009	4,0	1,0	0,044	0,005
Scientific papers published in other foreign journals (not listed above) (ADEA, ADEB)	0,0	0,000	0,000	2,0	0,090	0,009	1,0	0,042	0,005	4,0	0,178	0,017	7,0	1,8	0,076	0,008
Scientific papers published in other domestic journals (not listed above) (ADFA, ADFB)	0,0	0,000	0,000	0,0	0,000	0,000	2,0	0,084	0,009	2,0	0,089	0,009	4,0	1,0	0,044	0,005
Scientific papers published in foreign peer-reviewed proceedings (AEC, AECA)	1,0	0,043	0,005	2,0	0,090	0,009	10,0	0,418	0,046	2,0	0,089	0,009	15,0	3,8	0,163	0,017
Scientific papers published in domestic peer-reviewed proceedings (AED, AEDA)	12,0	0,521	0,055	13,0	0,583	0,060	13,0	0,543	0,060	8,0	0,356	0,034	46,0	11,5	0,501	0,052
Published papers (full text) from foreign and international scientific conferences (AFA, AFC, AFBA, AFDA)	4,0	0,174	0,018	6,0	0,269	0,028	0,0	0,000	0,000	0,0	0,000	0,000	10,0	2,5	0,109	0,011
Published papers (full text) from domestic scientific conferences (AFB, AFD, AFBB, AFDB)	0,0	0,000	0,000	0,0	0,000	0,000	1,0	0,042	0,005	20,0	0,889	0,086	21,0	5,3	0,229	0,024

- Supplementary information and/or comments on the scientific outputs of the institute.

## 2.2. Responses to the research outputs (citations, etc.)

### 2.2.1. Table with citations per annum.

*Citations of papers from international collaborations in large-scale scientific projects (Dwarf team, ALICE Collaboration, ATLAS collaboration, CD Collaboration, H1 Collaboration, HADES Collaboration, and STAR Collaboration) have to be listed separately.*

Citations, reviews	2011		2012		2013		2014		total		
	number	No. / FTE	number	No. / FTE	number	No. / FTE	number	No. / FTE	number	averaged number per year	av. No. / FTE
Citations in Web of Science Core Collection (1.1, 2.1)	57,0	2,473	97,0	4,354	122,0	5,098	106,0	4,713	382,0	95,5	4,163
Citations in SCOPUS (1.2, 2.2) if not listed above	5,0	0,217	12,0	0,539	24,0	1,003	20,0	0,889	61,0	15,3	0,665
Citations in other citation indexes and databases (not listed above) (3.2,4.2,9,10)	1,0	0,043	0,0	0,000	7,0	0,293	5,0	0,222	13,0	3,3	0,142
Other citations (not listed above) (3, 4, 3.1, 4.1)	210,0	9,111	113,0	5,072	274,0	11,450	272,0	12,094	869,0	217,3	9,471
Reviews (5,6)	0,0	0,000	0,0	0,000	0,0	0,000	1,0	0,044	1,0	0,3	0,011

## 2.2.2. List of 10 most-cited publications, with number of citations, in the assessment period (2011 – 2014).

- 1) THORSON, James A. - POWELL, F.C. - SARMÁNY-SCHULLER, Ivan - HAMPES, Wiliam P. Psychological health and sense of humor. In *Journal of Clinical Psychology*, 1997, vol. 53, no. 5, p. 605-619. ISSN 0021-9762. **43 citations**
- 2) RUISEL, Imrich - HALAMA, Peter. *NEO päťfaktorový osobnostný inventár : (podľa NEO Five-Factor Inventory P.T. Costu a R.R. McCraeho)*. Praha : Testcentrum - Hogrefe, 2007. 45 s. **34 citations**
- 3) HALAMA, Peter. *Zmysel života z pohľadu psychológie*. Bratislava : Slovak Academic Press, 2007. 223 s. ISBN 978-80-8095-023-1. **19 citations**
- 4) LÖCKENHOFF, Corinna E. - DE FRUYT, Filip - TERRACCIANO, Antonio - MCCRAE, R. R. - DE BOLLE, Marleen - COSTA, Paul T., Jr. - FICKOVÁ, Emília. Perceptions of aging across 26 cultures and their culture-level associates. LÖCKENHOFF, Corinna E. - De FRUYT, Filip - TERRACCIANO, Antonio - McCRAE, Robert R. - De BOLLE, Marleen - COSTA, Paul T., Jr. - [...] - FICKOVÁ, Emília - [et al.]. In *Psychology and Aging*, 2009, vol. 24, no. 4, p. 941-954. (2.518 - IF2008. ISSN 0882-7974. **19 citations**
- 5) SARMÁNY-SCHULLER, Ivan. Potreba štruktúry a schopnosť vytvárania štruktúry ako osobnostné konštrukty. In *Psychológia pre bezpečný svet : zborník príspevkov z medzinárodnej konferencie Psychologické dni*. - Bratislava : Stimul, 2001, 336-339. ISBN 80-88982-53-7. **18 citations**
- 6) RUISEL, Imrich. *Inteligencia a myslenie*. Bratislava : IKAR, 2004. 432 s. ISBN 80-551-0766-1. **16 citations**
- 7) SARMÁNY-SCHULLER, Ivan. Decision making under time pressure in regard to preferred cognitive style (analytical-intuitive) and study orientation. In *Studia Psychologica : international journal for research and theory in psychological sciences*, 2010, vol. 52, no. 4, p. 285-290. (0.175 - IF2009). (2010 - Current Contents, WOS, SCOPUS). ISSN 0039-3320. **16 citations**
- 8) RUISEL, Imrich. *Múdrosť v zrkadle vekov*. Bratislava : IKAR, 2005. 293 s. ISBN 80-551-1059-X. **15 citations**
- 9) OREG, Shaul - BAYAZIT, Mahmut - VAKOLA, Maria - ARCINIEGA, Luis - ARMENAKIS, Achilles - BARKAUSKIENE, Rasa - BOZIOELOS, Nikos - FUJIMOTO, Yuka - GONZÁLEZ, Luis - HAN, Jian - HŘEBÍČKOVÁ, Martina - JIMMIESON, Nerina - KORDAČOVÁ, Jana - MITSUHASHI, Hitoshi - MLAČIĆ, Boris - FERIĆ, Ivana - KOTRLA TOPIĆ, Marina - OHLY, Sandra - SAKSVIK, Per Øystein - HETLAND, Hilde - SAKSVIK, Ingvild - van DAM, Karen, Dispositional Resistance to Change: Measurement Equivalence and the Link to Personal Values Across 17 Nations. In *Journal of Applied Psychology*, 2008, vol. 93, no. 4, p. 935-944. ISSN 0021-9010. **15 citations**
- 10) SARMÁNY-SCHULLER, Ivan. Procrastination, need for cognition and sensation seeking. In *Studia Psychologica*, 1999, vol. 41, no. 1, p. 73-85. ISSN 0039-3320. **15 citations**

## 2.2.3. List of most-cited authors from the Institute (at most 10 % of the research employees with university degree engaged in research projects) and their number of citations in the assessment period (2011– 2014).

Ivan Sarmány Schuller – 292 citations

Peter Halama – 203 citations

- **Supplementary information and/or comments on responses to the scientific output of the institute.**

## **2.3. Research status of the institute in international and national contexts**

- **International/European position of the institute**

### **2.3.1. List of the most important research activities demonstrating the international relevance of the research performed by the institute, incl. major projects (details of projects should be supplied under Indicator 2.4). Max. 10 items.**

International relevance of the research performed by the institute was shown in individual collaborative efforts of employees of the IEP SAS resulting in publications in international journals.

#### **1. Research in psycholinguistics in collaboration with Max Planck Institute for Psycholinguistics:**

1. HANULÍKOVÁ, Adriana - DEDIU, Dan - FANG, Zhou - BAŠNÁKOVÁ, Jana - HUETTIG, Falk. Individual differences in the acquisition of a complex L2 phonology: A training study. In *Language Learning*, 2012, roč. 62, suppl. 2, s. 79-109. ISSN 0023-8333. doi:10.1111/j.1467-9922.2012.00707.x.
2. BAŠNÁKOVÁ, Jana - WEBER, Kirsten - PETERSSON, Karl Magnus - BERKUM, Jos van - HAGOORT, Peter. Beyond the Language Given: The Neural Correlates of Inferring Speaker Meaning. In *Cerebral Cortex*, 2013, online May 3 2013 doi:10.1093/cercor/bht112. (6.828 - IF2012). (2013 - Current Contents). ISSN 1047-3211. Dostupné na internete: <<http://cercor.oxfordjournals.org/content/early/2013/05/02/cercor.bht112.short>>.
3. BAŠNÁKOVÁ, Jana - BERKUM, Jos van - WEBER, Kirsten - HAGOORT, Peter. A job interview in the MRI scanner: How does indirectness affect addressees and overhearers? In *Neuropsychologia*, vol. 76, Special Issue: Semantic Cognition, 2015, p. 79-91. ISSN 0028-3932. Dostupné na internete: <<http://www.sciencedirect.com/science/article/pii/S0028393215001414>>.

#### **2. Research in Personality and well-being in life-span perspective in collaboration with Institute of Psychology, Czech Academy of Sciences, Brno (M. Blatný), University of Kentucky, USA (Alexander T. Vazsonyi), University of Jyväskylä, Finland (K. Kokko):**

1. Well-Being in a Life-Span Perspective, Invited Symposium at European Congress of Psychology, Stockholm, 9-12 July, 2013
2. Blatný, M. (Ed.) (2015) *Personality and well-being across the life-span*. London, Palgrave Macmillan. ISBN 978-1-137-43995-6.

#### **3. Research in Bayesian reasoning in collaboration with Medical Decision Making and Informatics Research Group, School of Medicine, King's College London & Kingston University:**

1. Sirota, M., Kostovičová, L., & Juanchich, M. (2014). The effect of iconicity of visual displays on statistical reasoning: evidence in favor of the null hypothesis. *Psychonomic Bulletin & Review*, 21(4), 961–968. doi: 10.3758/s13423-013-0555-4. Impact Factor: 3.37
2. Sirota, M., Kostovičová, L., & Vallée-Tourangeau, F. (2015). How to train your Bayesian: a problem-representation transfer rather than a format-representation shift explains training effects. *The Quarterly Journal of Experimental Psychology*, 68(1), 1–9. doi: 10.1080/17470218.2014.972420. Impact Factor: 2.13
3. Sirota, M., Kostovičová, L., & Vallée-Tourangeau, F. (2015). Now you Bayes, now you don't: effects of set-problem and frequency-format mental representations on



statistical reasoning. *Psychonomic Bulletin & Review*, 22(5), 1465–1473. doi: 10.3758/s13423-015-0810-y. Impact Factor: 3.37

#### **4. Cross-cultural research of national stereotypes in collaboration with Florida State University College of Medicine and other research institutes worldwide:**

1. McCRAE, R.R. - CHAN, W. - JUSSIM, L. - De FRUYT, F. - LÖCKENHOFF, C.E. - DE BOLLE, M. - [...] - FICKOVÁ, EMÍLIA - [...] - TERRACCIANO, A. - FICKOVÁ, Emília. The inaccuracy of national character stereotypes. In *Journal of Research in Personality*, vol. 47, no. 6, p. 831-842. ISSN 0092-6566. (2.000 - IF2012).
2. LÖCKENHOFF, Corinna E. - CHAN, Wayne - McCRAE, Robert R. - De FRUYT, Filip - JUSSIM, Lee - De BOLLE, Marleen - [...] - FICKOVÁ, Emília - [...] - TERRACCIANO, Antonio. Gender stereotypes of personality: Universal and accurate? In *Journal of Cross-Cultural Psychology*, 2014, vol. 45, no. 5, p. 675-694. (1.746 - IF2013). (2014 - Current Contents). ISSN 0022-0221.
3. DE BOLLE, Marleen - DE FRUYT, Filip - MCCRAE, Robert R. - LÖCKENHOFF, Corinna E. - COSTA, Paul T., Jr. - FICKOVÁ, Emília. The emergence of sex differences in personality traits in early adolescence: A cross-sectional, cross-cultural study. In *Journal of Personality and Social Psychology*, vol. 108, no. 1, 2015, p. 171-185. ISSN 0022-3514.

#### **5. Research in problems of adolescent in collaboration with Örebro University, Center for Developmental Research:**

1. SKOOG, Therése - STATTIN, Håkan - RUISELOVÁ, Zdena - ÖZDEMİR, Metin. Female pubertal timing and problem behaviour: The role of culture. In *International Journal of Behavioral Development*, 2013, vol. 37, no. 4, p. 357-365. (1.591 - IF2012). (2013 - Current Contents). ISSN 0165-0254.

#### **6. Public health issues (adolescent health behaviours) in collaboration with Department of Social Medicine, University Medical Centre Groningen:**

1. Pitel L., Madarasova Geckova A., van Dijk J.P., Reijneveld S.A. Socioeconomic differences in adolescent health-related behaviour differ by gender. *Journal of Epidemiology* 2013; 23 (3): 211-218. (Impact Factor 2013: 2.862)
2. PITEL, Lukáš - GECKOVÁ, Andrea, Madarásová - REIJNEVELD, Sijmen A. - VAN DIJK, Jitse P. Socioeconomic gradient shifts in health-related behaviour among Slovak adolescents between 1998 and 2006. In *International Journal of Public Health*, 2013, vol. 58, no. 2, p. 171-176. (1.993 - IF2012). (2013 - Current Contents). ISSN 1661-8556.

#### **7. Research in Relationship of values and behaviour in collaboration with University of Toronto, University of Leuven, University of Hamburg a Cambridgeshire and Peterborough Trust Foundation, Cambridge:**

1. DANIEL, Ella - BILGIN, Antoine Selim - BREZINA, Ivan - STROHMEIER, Charlotte Eva - VAINRE, Maris. Values and helping behavior: A study in four cultures. In *International Journal of Psychology*, 2015, vol. 50, no. 3, 186-192. DOI: 10.1002/ijop.12086. (1.198 - IF2014). (2015 - Current Contents). ISSN 0020-7594.
2. DANIEL, E. - STROHMEIER, E. Ch. - BLIGIN, A. S. - BREZINA, Ivan - EHLERS, L. J. - HALE, D. - IOANNOU, M. - VAINRE, M. - KNAFO, A. The relations between values and behaviors: an international research project : Book of abstracts. In *Crossing Borders: Book of abstracts of the International Congress of the International Association for Cross-Cultural Psychology*. - Bremen : Jacobs Universita, 2008, s. 64.

#### **2.3.2. List of international conferences (co)organised by the institute.**

Social Processes and Personality 2012, Starý Smokovec, 17. - 19. 9. 2012

Social Processes and Personality 2013, Třešť, 23. - 25. 9. 2013

Social Processes and Personality 2014, Stará Lesná, 18. - 19. 9. 2014

**2.3.3. List of edited proceedings from international scientific conferences.**

HALAMA, P., HANÁK, R., MASARYK, R. (Eds.) Sociálne procesy a osobnosť 2012. Zborník príspevkov z 15. ročníka medzinárodnej konferencie [Social processes and personality 2012. Proceeding from the 15<sup>th</sup> year of international conference]. Bratislava, Ústav experimentálnej psychológie SAV, 2012.

**2.3.4. List of journals edited/published by the institute:**

**2.3.4.1. WOS (IF of journals in each year of the assessment period)**

Studia Psychologica ISSN 0039-3320 [www.psychologia.sav.sk/sp](http://www.psychologia.sav.sk/sp)

IF 0,215 (2012)

0,414 (2013)

0,442 (2014)

0,620 (2015)

**2.3.4.2. SCOPUS**

**2.3.4.3. other databases**

**2.3.4.4. not included in databases**

- **National position of the institute**

**2.3.5. List of selected projects of national importance**

**2.3.6. Projects of the Slovak Research and Development Agency (APVV)**

- 1) Decision making of professionals: processual, personality and social aspects. APVV-0361-12, Duration of the project: 2013-2017

**1.3.7. Projects of the Scientific Grant Agency of the Slovak Academy of Sciences and the Ministry of Education (VEGA)**

- 1) Decision making and effective complex problem solving in intrapsychic bonds with cognitive styles. VEGA 2/0116/15. Duration of the project: 2015 – 2018.
- 2) Decision making in emotionally demanding situations: Research of macrocognitions and emotions in the naturalistic decision making paradigm. VEGA 2/0080/14, Duration of the project: 2014 – 2017.
- 3) Social influences in individual decision making. VEGA 2/0154/13. Duration of the project: 2013 - 2016.
- 4) Decision making of experts: Using intuition for solution of strategic tasks. VEGA 2/0064/13. Duration of the project: 2013 – 2016.
- 5) Need for structure in the process of decision-making and coping. VEGA 2/0126/12. Duration of the project: 2012 – 2014
- 6) Personality aspects of effective self-regulation and decision-making in emotionally demanding situations. VEGA 2/0095/10. Duration of the project: 2010 – 2013.
- 7) Rationality of emotions and a quality of judgment in situations of social mutuality. VEGA 2/0204/09. Duration of the project: 2009 – 2012
- 8) Decisional behaviour interpretations: psychology and economics perspectives. VEGA 2/0121/10. Duration of the project: 2010 – 2012

### 1.3.8. Projects of SAS Centres of Excellence

**The Centre of Strategic Analyses SASc.**, the Centre for Interdisciplinary Research and Strategies of Society, acronym CESTA, 2011 – 2015.

The Institute of Experimental Psychology SASc. operated as partner for the main bearer of the Centre that was the Institute for Forecasting SASc.

### 2.3.9. National projects supported by EU Structural Funds

#### 2.3.10. List of journals (published only in the Slovak language) edited/published by the institute:

2.3.10.1. WOS (IF of journals in each year of the assessment period)

2.3.10.2. SCOPUS

2.3.10.3. Other databases

2.3.10.4. Not included in databases

- **Position of individual researchers in an international context**

#### 1.3.11. List of invited/keynote presentations at international conferences, as documented by programme or invitation letter

- 1) BAČOVÁ, V. Ne/Stabilita preferencií v rozhodovaní. [In/stability of preferences in decision-making] **Rozhodovanie v kontexte kognície, osobnosti a emócií 2014**. Bratislava : Ústav experimentálnej psychológie SAV, 20. 6. 2014.
- 2) BALLOVÁ MIKUŠKOVÁ, E., ČAVOJOVÁ, V., HANÁK, R. Stratégie rozhodovania: prehľad a možnosti overovania. [Strategies of decision-making: review and verification possibilities] **Rozhodovanie v kontexte kognície, osobnosti a emócií 2014**. Bratislava : Ústav experimentálnej psychológie SAV, 20. 6. 2014.
- 3) BAŠNÁKOVÁ, Jana. How does the brain deal with indirectness in communication? **Donders Discussions, 25.-26.10.2012, Nijmegen, Holandsko**
- 4) BAŠNÁKOVÁ, Jana. It is not easy to give a good talk: how the brain deals with indirect meaning. Invited talk at KNAW (Royal Dutch Academy of Sciences), Amsterdam, September 2013.
- 5) ČAVOJOVÁ, V., Intuícia vo (vedeckej) tvorivosti. [Intuition in (scientific) creativity] **X. Conference ČASP o.s. Olomouc, 22.-24. 3. 2013**.
- 6) HALAMA, Peter. Zmysel života v kontexte pozitívnej psychológie. [Meaning of life in the context of positive psychology] Invited talk at **1<sup>st</sup> Czech conference of positive psychology CPPC 2012**, Brno, 23.-24. 5. 2012, Filozofická fakulta Masarykovej univerzity v Brne
- 7) HALAMA, P., Maintaining Meaning in Life in Old Age: Personality and Social Factors. **ECP 2013**, Stockholm, Švédsko.
- 8) HALAMA, P. Sebaregulácia ako faktor v procese rozhodovania. [Self-regulation as factor in decision process] **Rozhodovanie v kontexte kognície, osobnosti a emócií 2014**. Bratislava : Ústav experimentálnej psychológie SAV, 20. 6. 2014.
- 9) RUISEL, I. Kognitívne skreslenia a sloboda myslenia. [Cognitive biases and freedom of thinking] **32. Psychologické dny 2014 "Fenomén svobody v kontextu psychologie a filosofie"**, Olomouc, 10.-12.9.2014.

### 2.3.12. List of researchers who served as members of the organising and/or programme committees

Name of researcher	Name, date, place of the international conference
Bačová Viera	XI. Czech-Slovak conference with international participation: Qualitative Approach and Methods in Sciences about Humans, January 23-24, 2012, Bratislava
Bačová Viera	Social Processes and Personality 2012, Nový Smokovec, September 17-19, 2012
Bačová Viera	Social Processes and Personality 2014, Stara Lesna, September 18-19, 2014
Bačová Viera	Work and Organisational Psychology 2014, May 15-16, 2014, hotel Academia Stara Lesna
Eva Ballová Mikušková	Social Processes and Personality 2012, Nový Smokovec, 17.-19. 9. 2012.
Vladimíra Čavojová	member of Scientific Advisory Board AHFE 2016 and affiliated conferences (Cross-Cultural Decision Making)
Vladimíra Čavojová	member of Scientific Advisory Board AHFE 2016 and affiliated conferences (Cross-Cultural Decision Making), <a href="http://www.ahfe2016.org/board.html#ccdm">http://www.ahfe2016.org/board.html#ccdm</a>
Vladimíra Čavojová	Social Processes and Personality 2012, Nový Smokovec, 17.-19. 9. 2012.
Peter Halama	The 2nd International Conference on Positive Psychology in the Czech Republic (CPPC 2013), Brno, Czech Republic, May 22-24, 2013
Peter Halama	Social Processes and Personality 2012, Nový Smokovec, 17.-19. 9. 2012.
Peter Halama	Social Processes and Personality 2013, Trešň, Czech Republic 23. - 25. 9. 2013
Peter Halama	Social Processes and Personality 2014, Stara Lesna, 18. - 19. 9. 2014
Lenka Kostovičová	Social Processes and Personality 2012, Nový Smokovec, 17.-19. 9. 2012.
Rado Masaryk	Social Processes and Personality 2012, Nový Smokovec, 17.-19. 9. 2012.

- **Position of individual researchers in a national context**

### 2.3.13. List of invited/keynote presentations at national conferences, as documented by programme or invitation letter

BAČOVÁ, Viera. Možnosti zlepšenia rozhodovania v normatívnom a naturalistickom prístupe. [Improvement opportunities in normative and naturalistic approach to decision-making] Ústav experimentálnej psychológie SAV, Bratislava. **XV. ročník medzinárodnej vedeckej konferencie: Sociálne procesy a osobnosť 2012**, Kongresové centrum Kúpele Nový Smokovec, 17.-19.9.2012.

MASARYK, Radomír. Aplikovaný vs. akademický výskum: možnosti, výzvy a niekoľko otázok. [Applied vs. academic research: opportunities, challenges and some questions] Ústav experimentálnej psychológie SAV, Bratislava. **XV. ročník medzinárodnej vedeckej konferencie: Sociálne procesy a osobnosť 2012**, Kongresové centrum Kúpele Nový Smokovec, 17.-19.9.2012.

RUISEL, Imrich. Kognitívne omyly pri rozhodovaní. [Cognitive biases in decision-making] Ústav experimentálnej psychológie SAV, Bratislava. **XV. ročník medzinárodnej vedeckej konferencie: Sociálne procesy a osobnosť 2012**, Kongresové centrum

Kúpele Nový Smokovec, 17.-19.9.2012.

RUISEL, I. Múdrost' - realita alebo fikcia? Psychický vývin dieťaťa a činitele, ktoré ho ovplyvňujú. [Wisdom – reality or fiction? Psychic development of child and its determinants] Vedecká konferencia **VÚDPaP**, Bratislava, 3.-4. 7. 2014

ADAMOVOVÁ, Lucia. Rozhodovanie zdravotníckych záchranárov z pohľadu makrokognícií - krok za krokom od prijatia výzvy. [Decision-making of medical rescuers from the perspective of macrocognitions – step by step from accepting the call] **Cesty k rozhodovaniu: Šesť dekád psychologického výskumu**. Bratislava : Ústav experimentálnej psychológie SAV, 2015

BAČOVÁ, Viera. Ako sa ľudia rozhodujú o svojej finančnej budúcnosti. [How people decide about their financial future] **Cesty k rozhodovaniu: Šesť dekád psychologického výskumu**. Bratislava : Ústav experimentálnej psychológie SAV, 2015

ČAVOJOVÁ, Vladimíra. Intuícia a (racionálne) rozhodovanie: Predbežné výsledky korelačného, experimentálneho a kvalitatívneho prístupu. [Intuition and (rational) decision-making: Preliminary results of correlational, experimental and qualitative approach] **Cesty k rozhodovaniu: Šesť dekád psychologického výskumu**. Bratislava : Ústav experimentálnej psychológie SAV, 2015

GURŇÁKOVÁ, Jitka. Výskum rozhodovania zdravotníckych záchranárov v simulovaných úlohách. [Study of decision-making of medical rescuers in simulated tasks] **Cesty k rozhodovaniu: Šesť dekád psychologického výskumu**. Bratislava : Ústav experimentálnej psychológie SAV, 2015

HALAMA, Peter. Možnosti výskumu osobnostných faktorov rozhodovania profesionálnych zdravotníkov. [Research of personality factors of decision-making of professional medical staff] **Cesty k rozhodovaniu: Šesť dekád psychologického výskumu**. Bratislava : Ústav experimentálnej psychológie SAV, 2015

HATOKOVÁ, Mária - TÚNYIOVÁ, Mária. Pediatri a/ versus rodičia: (ne)komunikácia a (ne)dôvera v rozhodovaní o (ne)očkovaní. [Pediatricians and/versus parents: (non)communication and (dis)trust] **Cesty k rozhodovaniu: Šesť dekád psychologického výskumu**. Bratislava : Ústav experimentálnej psychológie SAV, 2015

RUISEL Imrich: Skryté poznatky v poznaní. [Tacit knowledge in cognition] **33. Psychologické dni 2015**, Piešťany 3. - 4.9.2015

#### 2.3.14. List of researchers who served as members of organising and programme committees of national conferences

Name of researcher	Name, date, place of the international conference
Viera Bačová	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research]10.4.2015, Bratislava
Viera Bačová	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Eva Ballová Mikušková	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research]10.4.2015, Bratislava
Eva Ballová Mikušková	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and

	emotions IV.] 20.6.2014, Bratislava
Vladimíra Čavojová	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Vladimíra Čavojová	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research]10.4.2015, Bratislava
Katarína Dudeková	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Katarína Dudeková	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research]10.4.2015, Bratislava
Matúš Grežo	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Matúš Grežo	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research]10.4.2015, Bratislava
Peter Halama	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Mária Hatoková	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., 20.6.2014, Bratislava
Marek Jurkovič	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Marek Jurkovič	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research]10.4.2015, Bratislava
Lenka Kostovičová	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Lenka Kostovičová	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research]10.4.2015, Bratislava
Katarína Košíková	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Katarína Košíková	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research] 10.4.2015, Bratislava
Radomír Masaryk	Kvalitatívny prístup a metódy vo vedách o človeku [Qualitative Approach and Methods in Sciences about Humans]: 2012 Bratislava, 2015 Olomouc, 2016 Bratislava
Radomír Masaryk	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Martin Sedlár	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Martin Sedlár	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu, [Roads to decisions: Six decades of psychological research]10.4.2015, Bratislava
Mária Túnyiová	Rozhodovanie v kontexte kognície, osobnosti a emócií IV., [Decision-making in the context of cognition, personality and emotions IV.] 20.6.2014, Bratislava
Mária Túnyiová	Cesty k rozhodovaniu, Šesť dekád psychologického výskumu,

- **Supplementary information and/or comments documenting the international and national status of the Institute**

## **2.4. Tables of project structure, research grants and other funding resources**

- **International projects and funding**

**2.4.1. Major projects within the European Research Area and other important project – Framework Programmes of the EU, ERA-NET, European Science Foundation, NATO, COST, INTAS, etc. (here and in items below please specify: type of project, title, grant number, duration, total funding and funding for the institute, responsible person in the institute and his/her status in the project, e.g. coordinator “C”, work package leader “W”, investigator “I”),**

	Project title	Typ / Project number	Duration in months	Funding for the Institute (EUR)	Role of the Institute / Responsible person
2012					
2013					
2014					
2015					

**2.4.2. Other international projects, incl. total funding and funding for the institute**

**2.4.3. Other important, international projects and collaborations without direct funding (max. 10 projects)**

- **National projects and their funding**

**2.4.4. Projects supported by the Slovak Research and Development Agency (APVV)**

Role of the Institute e.g. coordinator “C”, investigator “I”.

	Project title	Typ / Project number	Duration in months	Funding for the Institute (EUR)	Role of the Institute / Responsible person
2012					
2013	Decision making of professionals: processual, personality and social aspects	APVV-0361-12	3	7 428	C
2014	Decision making of professionals: processual, personality and social aspects	APVV-0361-12	12	54 825	C
2015	Decision making of professionals: processual, personality and social aspects	APVV-0361-12	12	64 396	C

**2.4.5. Projects supported by the Scientific Grant Agency of the Slovak Academy of Sciences and the Ministry of Education (VEGA) for each year, and their funding**

VEGA	2012	2013	2014	2015
Number	4	4	4	4
Funding in the year (EUR)	32313	35527	33387	39868 <sup>1</sup>

- Summary of funding from external resources**

**2.4.6. List of projects supported by EU Structural Funds**

**2.4.7. Summary of external resources of the EU Structural Funds (ERDF/ESF)**

Role of the Institute in the project, e.g. coordinator “C”, work package leader “W”, investigator “I”.

<sup>1</sup> Excluding projects for the popularisation of science



Year	Project title	Project number	Duration in months	Funding for the Institute (EUR)	Role of the Institute
2012					
2013					
2014					
2015					

External resources	2012	2013	2014	2015	total	average
External resources (milions of EUR)					0,000	
External resources transfered to cooperating research institute (milions of EUR)					0,000	

- **Supplementary information and/or comments on research projects and funding sources**

## **2.5. PhD studies and educational activities**

### **2.5.1. List of accredited programmes of doctoral studies, period of validity**

3.1.13 social psychology and work psychology, in cooperation with Faculty of Social and Economic Sciences of Comenius University in Bratislava valid until regular university accreditation

### **2.5.2. Summary table on doctoral studies (number of internal/external PhD students; number of foreign PhD students, number of students who successfully completed their theses, number of PhD students who quit the programme)**

PhD study	31.12.2012			31.12.2013			31.12.2014			31.12.2015		
Number of potential PhD supervisors	6			6			7			7		
PhD students	number	defended thesis	students quitted	number	defended thesis	students quitted	number	defended thesis	students quitted	number	defended thesis	students quitted
Internal	6,0	0,0	0,0	7,0	2,0	0,0	6,0	2,0	0,0	5,0	2,0	0,0
External	0,0	0,0	0,0	0,0	0,0	0,0	1,0	0,0	0,0	0,0	1,0	0,0
Other supervised by the research employees of the institute	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

### 2.5.3. Summary table on educational activities

Teaching	2012	2013	2014	2015
Lectures (hours/year) <sup>2</sup>	412	374	265	760
Practicum courses (hours/year) <sup>2</sup>	230	316	182	316
Supervised bachelor theses (in total)	47	58	33	69
Supervised diploma theses (in total)				
Supervised PhD theses (in total)	7	7	9	8
Members in PhD committees (in total)	3	2	2	4
Members in DrSc. committees (in total)	2	0	0	0
Members in university/faculty councils (in total)	6	7	8	8
Members in habilitation/inauguration committees (in total)	2	0	1	1

2

### 2.5.4. List of published university textbooks

In alphabetical order:

ČAVOJOVÁ, V. & TABAČKOVÁ, K. (2014). *Psychológia tvorivosti v rôznych kontextoch*. [Psychology of creativity in various contexts.] Nitra: Constantine the Philosopher University.

HALAMA, P., ŠPAJDEL, M., ŽITNÝ, P. (2013) *Štatistika pre psychológov s využitím softvéru SPSS. I. Deskriptívna štatistika*. [Statistics for psychologists using SPSS. I. Descriptive statistics]. Trnava: Rapos.

<sup>2</sup> Do not include time spent with bachelor, diploma or PhD students during their supervising

MASARYK, R. (2013) *Medzi človekom a ľuďmi – úvod do sociálnej psychológie*. [Between individual and society – Introduction to social psychology.] Bratislava: IRIS. ISBN: 9788089238736

RUISEL, I. (2013). *Psychológia inteligencie*. [Psychology of intelligence.] Nitra: Constantine the Philosopher University. ISBN 978 -80-558-0301-2

RUISEL, I. (2014). *Psychológia myslenia*. [Psychology of thinking.] Nitra: Constantine the Philosopher University. ISBN 978-80-558-0742-3

#### **2.5.5. Number of published academic course books**

#### **2.5.6. List of joint research laboratories/facilities with universities**

We have a joint research laboratory with Centre for Cognitive Science (at Department of Applied Informatics, Faculty of Mathematics, Physics and Informatics, Comenius University). Since 2013 our Institute cooperates with Cognitive Science master's degree programme (part of joint master's programme MEI:COGSCI) as an external institution for hosting students from international MEI:COGSCI programmes, who are realizing their research projects in our laboratory.

- **Supplementary information and/or comments on doctoral studies and educational activities**

### **2.6. Social impact**

**2.6.1. List of the most important results of applied research projects. Max. 10 items**

**2.6.2. List of the most important studies commissioned for the decision-making authorities, the government and NGOs, international and foreign institutes**

**2.6.3. List of contracts and research projects with industrial and other commercial partners, incl. revenues**

**2.6.4. List of licences sold abroad and in Slovakia, incl. revenues**

**2.6.5. List of most important social discourses under the leadership or with significant participation of the institute (max. 10 items)**

*References in the brackets are from the point 2.7.1.*

1. *Judgment of risk and probability in medical and financial decision-making*. The judgment of risk and probability is vastly influenced by format, in which the information is presented and this has big effect whether you understand the structure of the problem and come to the right decision. Discourse regarding these issues aims to make people aware of this problem and to help them solve these kinds of problems involving risk and probability in more effective ways. [6, 14, 15 ]

We received feedback from several people who learned about our Institute after reading the blog and they asked for more information about our other publications and research. We were also asked to continue with the blog about illusions in financial decision-making. One of the attendants of our public lecture about decision-making under risk asked us about more materials and incorporated it into his marketing courses.

2. *Vaccination – issue of trust and mistrust in communication between parents and physicians*. Understanding discourse regarding vaccination is very important as the number of parents refusing vaccination increases dramatically (connected also with issues 1, 2, 5 and 6 on this list). Our researchers look for the ways how to increase trust in communication between parents and paediatricians to increase the understanding of the risks related to refusing vaccination, but at the same time how doctors should address the fears of parents. [5, 10, 11, 16, 17]

Some people, who could not attend our public lecture about vaccination, wrote to us and asked for electronic version or audiovisual recording of the lecture. Vaccination is topic of great interest among pro- as well as anti-vaxers, from who we received some feedback when looking for participants in our focus groups.

3. *Conspiracy theories – cognitive, motivational and social determinants of endorsing fallacious beliefs.* Researchers from IEP SAS publish articles in popular newspapers and magazines to address the issues, why some people are more susceptible to conspiracy beliefs than others and how to deal with explosion of information and not to fall prey to confirmation bias (leading to finding oneself in echo chamber confirming one's fallacious beliefs). [E.g. 12, 13]

Popularization on this subject was met with mainly positive responses from those that see necessity in fighting various conspiracy theories and hoaxes that flood media. Media also showed certain degree of interest in this subject and people from our Institute was asked to contribute some papers on this topic or asked to participate in the public debate. As it is a rather controversial subject, it was also met with an opposition from conspiracy theorists and such.

4. *Quality of medical service – stress and decision-making in the work of medical rescuers.* This discourse is aimed at medical professionals – paramedics, nurses and medical rescuers – by studying it in naturalistic or simulated context. The team of IEP SAS aims to understand risk factors in decisions arising from emergency situations and the ways how to best cope with them. [7, 8, 11]

Results of naturalistic research of decision-making have spread from purely psychological circles among the group of medical professionals – from practitioners to their head leaders. Positive feedback from acknowledged experts from the leadership figures of Slovak association of urgent medicine and medicine of catastrophes – doc. MUDr. Viliam Dobiáš and MUDr. Tatiana Bulíková within Central European congress of urgent medicine confirms that concrete feedback about non-technical skills of medical professionals (with decision-making as one of these skills) is one of the key factors required for improving the quality of urgent medical care.

5. *Emotions in professional decision-making.* It is important to address the issue of emotions especially in demanding jobs, such as medical profession, army or rescuers. It is important also for professionals to understand how to treat their emotions and in which ways they can influence their judgment and decision-making. [8, 11, 20]

Feedback from the previous point applies here, too.

6. *Critical thinking – how to deal with information search in misinformation age?* Newly emerging topic as it pertains into every other discourse mentioned in this section. The general aim of the researchers at the IEP SAS is to contribute to the awareness of cognitive errors and biases that can undermine our reasoning and judgment and thus affect decision-making. [12, 18, 19]

This is very resonating topic also among pedagogical professionals. We have started cooperation with Pedagogical Faculty in Nitra, where we try to incorporate critical thinking skills into their required courses. Our colleagues were asked to contribute to popular media with more reader friendly texts on this topic and we also received feedback from the Work group for research at the Ministry of Education with possibility of future participation in some of their activities.

#### **2.6.6. Summary of relevant activities, max. 300 words**

### **2.7. Popularisation of Science (outreach activities)**

#### **2.7.1. List of the most important popularisation activities, max. 20 items**

- [1] Bačová, V., Dudeková, K., Baláž, V., Kostovičová, L., Tunyiová, M., Čavojová, V., Gurňáková, J., & Stračina, J. (2013). "Ako sa ľudia rozhodujú" [How people decide]. *Theme and script for TV documentary SPEKTRUM VEDY*, Bratislava 15.10.2013.
- [2] Bačová, V. (2015). „60th Anniversary of the IEP SAS“. *Radio interview* with I. Haraj for RTVS Bratislava, NOČNÁ PYRAMÍDA, Bratislava 12.4.2015.
- [3] Bačová, V. (2014). „Architektúra voľby II. Kto je architekt voľby?“ [Architecture of choice II.: Who is the architect of choice?]. *Blog*, 26.11.2014. <http://rozhodovanie.blogspot.sk/>
- [4] Bačová, V. (2014). „Architektúra voľby I.“ [Architecture of choice I.]. *Blog*, 2.11.2014. <http://rozhodovanie.blogspot.sk/>
- [5] Bašnáková, J., Vavráková, E., & Zemandl, J. (2014 – 2015). *Series of magazine articles about developmental psychology*: MAMA A JA.
- [6] Dudeková, K., Harenčárová, H., & Kostovičová, L. (2013). „Rozhodovanie sa v podmienkach rizika: Prečo je dôležité rozumieť pravdepodobnosti.“ [Decision-making under condition of risk: why it is important to understand probability.]. *Lecture for the public* during the WEEK OF SCIENCE AND TECHNOLOGY in Slovakia 2013, IEP SAS 13.11.2013.
- [7] Gurňáková, J. et al. (2013). „Aj záchranári potrebujú starostlivosť“ [Man and society: Medical rescuers need care, too]. *Interview in daily print*, DENNÍK N, 19.5.2013. <http://science.dennikn.sk/clanky-a-rozhovory/spolocnost-a-kultura/clovek-a-spolocnost/1798-aj-zachranari-potrebuju-starostlivost>
- [8] Halama, P. (2014). „Emócie v profesionálnom rozhodovaní.“ [Emotions in Professional decision-making]. *Blog*, 16.4.2014. <http://rozhodovanie.blogspot.sk/>
- [9] Hanák, R. (2013). „Oblasti, kde sa (ne)môžete stať expertom.“ [Areas, in which you can(not) become expert]. *Blog*, 27.10.2013. <http://rozhodovanie.blogspot.sk/2013/10/oblasti-kde-sa-nemozetestat-expertom.html>
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## 2.7.2. Table of outreach activities according to institute annual reports

Outreach activities	2012	2013	2014	2015	total
Articles in press media/internet popularising results of science, in particular those achieved by the Institute	0	4	10	4	18
Appearances in telecommunication media popularising results of science, in particular those achieved by the Institute	4	4	4	8	20
Public popularisation lectures	0	5	10	10	25

- Supplementary information and/or comments on popularisation activities, max. 300 words

## 2.8. Background and management. Human resources and implementation of recommendations from previous assessment

### 2.8.1. Summary table of personnel

Personnel	2012	2013	2014	2015
All personnel	27,0	29,0	29,0	26,0
Research employees from Tab. Research staff	22,0	21,0	21,0	22,0
FTE from Tab. Research staff	18,550	16,780	17,180	16,740
Average age of research employees with university degree	45,2	45,9	44,9	40,8

#### 2.8.1.1. Professional qualification structure (as of 31.12. 2015) FEMALE

FEMALE	AGE								
Number of	< 30	31 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	> 65
DrSc. / prof.									1
II.a / Assoc. prof.			2	1			1		
Other researchers PhD./CSc.	2	2	1						
doc. / Assoc. prof.									

#### 2.8.1.2. Professional qualification structure (as of 31.12. 2015) MALE

MALE	AGE								
Number of	< 30	31 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	> 65
DrSc. / prof.									1
II.a / Assoc. prof.				1					1
Other researchers PhD./CSc.		1	3						
doc. / Assoc. prof.									

#### 2.8.2. Postdoctoral and mobility scheme

2.8.2.1. Postdoctoral positions supported by national and international resources

2.8.2.2. Postdoctoral positions supported by external funding

2.8.2.3. SAS stipends and SASPRO stipends

2.8.2.4. Internal funding - the Slovak Academy of Sciences Supporting Fund of Stefan Schwarz

Mária Túnyiová – supported from May 1, 2014

Katarína Dudeková – supported from January 1, 2015

Lenka Kostovičová – supported from May 1, 2015

#### 2.8.3. Important research infrastructure (max. 2 pages)

Laboratory at the Institute of Experimental Psychology was built as a research facility, enabling residential scientists to perform advanced behavioral and cognitive research.

Layout of the laboratory consists of waiting hall, facilities, primary and secondary experimental room. This layout enables researchers to perform task with participants in parallel or observe participants in the room without contacting them. Both experimental rooms are build neutral in fashion, not to evoke specific emotional state.

Research tools in laboratory.

- 1) The central computer unit in the laboratory provides researches with set of software tools for the cause of experiment design, methodology and statistical data analysis along with a database of pre-programmed on-line experiments and questionnaire batteries that could be adjusted to specific new applications. Except for the central computer, laboratory holds two notebooks optimized for field research and data collection.
- 2) Program SPSS, installed on main computer is widely used for statistical analysis in social science. In addition to statistical analysis, data management and data documentation are there are modules installed for advanced mathematical modeling and factor analysis. Licences of this installation are distributed to notebooks of individual researches.
- 3) Platform E-Prime, installed on main computer and both field-research notebooks, is a suite of applications for designing, implementing and running computerized off-line computer-based experiments of mostly cognitive focus. It also provides an easy to use environment for data collection and analysis and millisecond precision accuracy of collected data. The application suite installed in laboratory includes: E-Studio, a drag and drop graphical environment for creating experiments, E-Basic, the underlying scripting language of E-Prime. E-Run, program for millisecond precision of stimulus presentation, synchronization and data collection, E-Merge, application for merging and converting single session experimental data files for group analysis and historical record storage, E-DataAid data security and filtering and editing and exporting application, and E-Recovery, and application that recovers experimental data files in the event of early terminated experiments, or lost or corrupted files. Central computer also holds a database of more than 100 behavioral, cognitive and neuro-psychological computerized research designs of experiments, compatible with E-prime applications, ready for adjusting and data collection.
- 4) Program G\*Power, installed on main computer and both field-research notebooks, is a tool for computation of statistical power analyses for many different t tests, F tests,  $\chi^2$  tests, z tests and some exact tests. G\*Power is also used to compute effect sizes and to display results of power analyses.
- 5) Application Dot-probe installed on main computer is custom made tool for quick creation of word-based cognitive experiments with plugins to MS Office.

Laboratory also holds a BioPac station (software and hardware solutions) for collecting data on biological signals and reactions, specifically 4-way channel Electroencephalograph and system of electrodermal sensors for observation of differences in skin electrical potential from points on the skin surface - a widely used method of data collection on participants' emotional engagement. In combination with field-research notebooks, the station can be applied as biofeedback loop for participants.

Laboratory is used mainly by employees of IEP SAS, but it is open also to other researchers. For example, many students from MEI:COGSCI program used our laboratory for their projects and master thesis research. Our laboratory is also open to researchers from other institutes for joint projects. During the assessed period institute hosted two foreign researchers, who also used the laboratory for their projects.

#### **2.8.4. Description of how the results and suggestions of the previous assessment were taken into account**

The recommendation of the previous assessment was to maintain high effectiveness of the institute and to develop interdisciplinary cooperation.



Compared to the previous assessment period, the scientist of the institute increased their effectiveness in grant schemas (one hundred percent effectiveness in VEGA projects, newly obtained APVV project).

The management of the institute was successful in maintaining high output effectivity especially in the area of journal listed in Current Contents. Number of studies published in these journals is approximately the same as in previous years; however the number of various journals where scientists of the institute publish their work has increased.

Interdisciplinary cooperation was implemented through the cooperation with other institutes, such as Institute of Forecasting, Slovak Medical University, Max Planck Institute for Psycholinguistics etc.

All this cooperation resulted in scientific publications with researchers from other disciplines (including scientist from Economy, Neurolingusitic, Medicine).

Cooperation with Institute of Forecasting, Slovak Academy of Sciences resulted in common project – The Centre of Strategic Analyses SASc., the Centre for Interdisciplinary Research and Strategies of Society. This Centre was established by the Presidium of the Slovak Academy of Sciences on August 4, 2011 for the period of four years between 2011 – 2015. The Institute of Experimental Psychology SASc. operated as a partner for the main bearer of the Centre that is the Institute for Forecasting SASc. The main goal of the project was the research of strategic decision making on a theoretical, experimental and empiric level. The Institute of Experimental Psychology SASc., as well as its partner the Institute of Applied Psychology of the Faculty of Social and Economic Sciences of Comenius University, focused on psychological dimensions of individual and group strategic decision making.

In 2015, the interdisciplinary cooperation led to constitution of Centre of Social and Psychological Sciences, Slovak Academy of Sciences, composing of three institutes (Institute of Forecasting, Institute of Experimental Psychology, Institute of Social Sciences). One of the reasons for joining was an effort to make the interdisciplinary cooperation more intensive.

- **Supplementary information and/or comments on management, research infrastructure, and trends in personnel development**

### **3. Research strategy and future development of the institute for the next five years (2016-2020)** (Recommended 3 pages, max. 5 pages)

#### **3.1. Present state of the art in both the national and the international contexts**

As was documented in greater detail above, the present key characteristics of CSPS include, among others, the following features: CSPS is focused on basic research in the areas of social sciences, with focus mainly on psychology, history, sociology, and forecasting. It specializes also on interdisciplinary research of socio-cultural and socio-political aspects of Slovakia in the European and global contexts. Its research results are utilized by various institutions and organizations. CSPS provides consulting and other expert services to government as well as to national and international organizations. CSPS is accredited to provide post-graduate studies. CSPS publishes the results of its scientific research activities in periodical and non-periodical publications.

**In terms of basic research,** the scientists of the CSPS have been over a long period involved in research of cognitive processes, such as memory, intelligence, and in the last years especially decision making and judgment. These recent topics have brought increase of interdisciplinary cooperation with economic and cognitive scientists:

##### **a) Risk assessment in the field of finance**

One of the key concepts in financial psychology is a risk assessment in the field of finance. Risk can be defined as a certain possibility that our expectations about the future will not be fulfilled. Correct and objective assessment of the risk is considered to be the first step in its management and coping. Among other things, financial psychology examines how individuals actively assess risks when they make decisions in a) personal finance and b) corporate finance. When people manage personal finances or various financial matters, they use

cognitive skills and capacity and also other resources. However, considering the complexity of this area, we need to scientifically examine people's cognitive limitations in order to improve their decision making process, whether it is a decision about one's retirement or other financial decisions. These decisions are associated and influenced by many psychological factors, which individuals often do not reflect. The ability to do optimal financial decisions is often limited by individuals' little self-control, procrastination, loss aversion, financial in/competence, framing of financial decision-making, risk perception when deciding about the amount of savings needed and what financial products to use. The risk perception and decision-making process is also affected by financial literacy. The specific role is played by psychological risk assessment in the context of corporate finance investment, where a significant part is represented by an individual investors investing in start-ups. These investors invest in the early stages of company development. In this stage, an extensive array of management tools, various economic analyses, decision-making procedures and techniques have no predictive validity, so it is necessary to work with the decision-making in a psychological perspective. There are various psychological factors affecting the risk perception and risk assessment in this field and one of these is the overconfidence effect. Overconfidence effect is often considered to be the most common and robust cognitive bias in reasoning and decision making. In the process of estimating future returns of financial assets, creating a portfolio and trading on financial markets, where it was found that this effect results in suboptimal decisions associated with greater risk tolerance in the field of entrepreneurship where authors observed mainly the investment decision-making of new entrepreneurs and company managers. Psychological risk assessment is an important component of decision-making about the business opportunities and analysis of perception process, evaluation of opportunities and risks is therefore the essential factor in understanding the nature of entrepreneurship.

#### **b) Medical and paramedical decision making**

Decision making of different healthcare professionals in their work environment is the focus of intensive research. However, the obtained findings are not directly applicable to the decision making of the specific group of paramedics as the nature of their work is significantly different (immense time pressure, lack of information, wide range of complex problems, various environment conditions). Current findings on naturalistic decision making (NDM) are the focus of a regular international conference on NDM. There it became obvious that the paramedic profession is studied only marginally within the NDM paradigm. In the last few years, only two papers on the decision making of paramedics were presented on this conference, which indicates that paramedics often experience uncertainty in non-routine situations that they reduce using different strategies, and while diagnosing the patient they do not strictly follow set of procedures but mostly rely on their expectations formed by their previous experience. To improve the quality of decisions within the NDM paradigm, professionals are advised to purposefully improve their experience in order to form better tacit knowledge (perception skills, better mental models, professional intuition) as basis for making better decisions. Results of the present research conducted by teams at the IEP SAS show that despite high self-confidence, even in emergency services physicians the length of experience does not guarantee good performance in regard to objective criteria – according to expert medical evaluators. According to our findings, the best performed those paramedics who could combine their experience with constructive feedback from professional competitions and trainings.

#### **c) Cognitive limits of effective information communication and processing**

Focus of the research is to identify and describe factors contributing to people's better acceptance, comprehension and processing of expert information that are necessary for informed and evidence-based decision making. The amount and complexity of information is growing steadily nowadays, however, people tend to believe more in pseudoscientific theories, biases or they deny science altogether, which has a negative impact on the life of individuals (refusal of vaccination, financing ineffective "treatment" methods, ignoring medical recommendations, believing in conspiracies, etc.). Lack of comprehension and acceptance of expert information are caused by (1) cognitive limitations of the information recipient (e.g., confirmation bias), (2) the way information is phrased and presented (e.g., using percent instead of natural frequencies). By studying these limitations we should be able to design and test the possibilities of efficient communication of information for debiasing and optimization of decisions. People during judgment tend to make systematic cognitive errors, leading to suboptimal conclusions and actions. One of the most robust mental shortcuts in information processing is confirmation bias/myside bias. People prefer, search for, interpret and recall information in a way that corresponds to their original assumptions, beliefs and opinions. This tendency is in opposition to the principles of active-open critical thinking that is characterized by the ability to distinguish existing expectations and opinions from the assessment of arguments and evidence. Significant practical consequences range from a biased

assessment of evidence in courts of law to conservative procedures in the work of academics and researchers. Resilience to “myside bias” presents a competence of rational thinking, which is independent of intelligence. The findings of economic, psychological, and neuroscientific studies document the existence of robust differences in the perception of risk and probability in regard to individual and social factors, as well as aspects of problem, context, environment, and domains. For a deeper understanding of how people process information and how their judgments and beliefs transform into a decision and other forms of behaviour, analysis of a complex model of all these levels is necessary.

CSPS has been in the past few years collaborating in terms of basic research with the following international partners (this cooperation resulted in a number of foreign publications in current journals and foreign monographs or chapters therein, list of published results is available in the previous sections, upon request it is possible to provide the results according the points below):

1. Research in psycholinguistics in collaboration with Max Planck Institute for Psycholinguistics:
2. Research in Personality and well-being in life-span perspective in collaboration with Institute of Psychology, Czech Academy of Sciences, Brno (M. Blatný), University of Kentucky, USA (Alexander T. Vazsonyi), University of Jyväskylä, Finland (K. Kokko)
3. Research in Bayesian reasoning in collaboration with Medical Decision Making and Informatics Research Group, School of Medicine, King's College London & Kingston University:
4. Cross-cultural research of national stereotypes in collaboration with Florida State University College of Medicine and other research institutes worldwide
5. Research in problems of adolescent in collaboration with Örebro University, Center for Developmental Research
6. Public health issues (adolescent health behaviours) in collaboration with Department of Social Medicine, University Medical Centre Groningen
7. Research in Relationship of values and behaviour in collaboration with University of Toronto, University of Leuven, University of Hamburg a Cambridgeshire and Peterborough Trust Foundation, Cambridge
8. Research of international political and economic order under conditions of global competition in collaboration with the University of Kyoto and University of Toyama, Japan
9. Research of international migration and migration of youth in cooperation with the university of Surrey, United Kingdom.

Further current research activities of the CSPS include the improvement of knowledge base of the discipline, development of the new exploratory instruments, production and implementation of social-psychological influence programs, and also interdisciplinary cooperation. Scientific fellows of the department coordinated several research projects in the basic fields of the discipline: e.g. social intelligence and social competence relation; value orientations and wellbeing; attitudes to the different social objects and their change; small social groups study with special attention to the development of relations in the classroom; gender roles of women – mothers of young children in the work and family settings; processes of ethnic identity formation of young ethnic minorities members; quality of life of unemployed; behavioural strategies in demanding life situations; injunctive, descriptive and personal norms as behavioural regulators; cognitive processes in biological, social and artificial systems. In the period under evaluation (last 5 years) to the dominant activity belongs the participation in the leading European (ESFRI) interdisciplinary project, European Social Survey (ESS), the Department and its members carried out the task of national coordination. Members of the Department played a key role in Czecho-Slovak team of authors, which from the end of 90-ties continuously published the sourcebooks for this discipline. These activities gave the important impulse for the revival of the interest for PhD. studies in social psychology in the Slovakia and in the Czech Republic.

Another current trait of basic research at the CSPS has been the focus of historical research on the situation of ethnic minorities in Slovakia and in Central European context, with special attention to the period of 20-th century. National minorities represent cultural, social and political phenomena, which call for and require special attention. Historical experiences, past and present shape of interethnic relations in Slovakia offer a lot of arguments for the necessity of permanent objective scientific research of impact of ethnicity on development of society, and also for the transformation of this knowledge to the executive sphere. The study of the processes of ethnic identity formation and change requires a real multidisciplinary cooperation. The interdisciplinary character and methodology elaborated in the research activities of the Department of History ascribed to this team the

pioneering role and position on national and in part also on international level. For example, the Department together with 12 European scientific institutions (universities and institutes) participates in the project Urbanhist (20<sup>th</sup> Century European Urbanism) in the Excellent Science Marie Skłodowska-Curie Actions, Innovative Training Networks (ITN), European Joint Doctorates (EJD).

Finally, the current research orientation in the field of forecasting and foresight has been focused on the three topics prioritized in the Europe 2020 strategy and the seminal work by J. Stiglitz and A. Sen (Beyond GDP), i.e. applying foresight and forecasting methods in the field of the economic, social, and environmental developments. From the methodological point of view, the basic research in these areas was focused on:

- a) Testing the suitability of the methods of short-term and mid-term forecasting based on time series analysis for predicting the parameters of social and economic development of SR
- b) Introducing the foresight method with respect to assessing global megatrends at the national level
- c) Precising the methods of long-term forecasting focused mainly on the demographic developments in both national and international framework.

### **3.2. Research strategy of the institute in the national and the international contexts, objectives and methods**

The basic strategy of the CSPS for the future years is to use its increased interdisciplinary potential, the economies of scale and larger pool of researchers and collaborating institutions of the CSPS after the merger, in order to achieve the **following main goals**:

1. To further increase the quality of scientific output; the quality will be measured by output in quality international scientific magazines and prestigious publishers
2. To further increase the share of project financing from both national and international resources, At the national level to apply continuously for grant projects of Slovak Research and Development Agency (APVV) and the National Scientific Grant Agency (VEGA), At the international level to increase the share of European financing (mainly H2020 projects) on the overall Institute's financing, and to apply for the ESF grants (given that the location of the ISS Unit in Eastern Slovakia grants eligibility for the structural EU funds)
3. To continue the cooperation with Slovak central government bodies thus intensifying the social impact of the research carried out at the Institute.
4. To strengthen its position as the relevant stakeholder in public discussions on economic and social challenges,

The research strategy and activities of CSPS will be governed by the **following principles**:

#### **a) Interdisciplinarity**

Fusion of the Institute with two other SAS institutes into a unit under the new name Centre of Social and Psychological Sciences is expected to lead to the accumulation of research capacities and integration of several social sciences (in addition to psychology also economy, history, political science, etc.). Multidisciplinary perspective enriches research activities because it aids the understanding of a wider context of studied psychological phenomena and their social sources.

#### **b) Multi-method approach**

The research approach of the CSPS is based on methods that are firmly grounded in established practices of the respective scientific disciplines. The aim is to exploit the advantages of the multi-method approach in the study of selected phenomena while expecting that its application will result in several positive outcomes. There is a number of directions that cannot be described here for the shortness of space. One of the examples would be the possibility to increase results validity by triangulation and higher generalization of obtained results in relation to social environment.

#### **c) International cooperation and dissemination of the results**

Research results of CSPS will be presented in international journals and at international events. In the following years, our aim is to strengthen international cooperation and find new possibilities to include our research into the international context through cooperation with relevant research institutions abroad. International framing of research activities can aid a higher impact and contribution of our findings.

**Topically, objectives and methods of research in individual research areas will be focused on along the following themes:**

#### **a) Risk assessment in the field of finance**

Risk assessment in the field of finance will focus on risk assessment in two areas. The first is personal finance, where the research aim will be to identify socio-psychological and personality factors of investment behaviour and perception of risk in financial decision making. The second area is risk assessment in entrepreneurial environment, specifically in start-ups. The aim is to analyse risk perception, but also other cognitive and personality characteristics of entrepreneurs and investors. Regarding methodology, the research will combine self-response and experimental approach to exploit the mutual complementarity of these methods to increase the reliability and validity of research findings. Self-response methods are represented by personality characteristics questionnaires such as dispositional optimism and such, then financial literacy and also approach to finances. Experimental approach will be used to study financial heuristics, shortcuts, and mistakes in investment decisions closely related to financial literacy.

**b) Naturalistic decision making approach in medical area**

Constructive, early and specific feedback is essential for the development of reliable intuition (and intuition-based decision making). The main goal of our further research in the area of medical decision making is to continue in analysing the decision making of EMS crew commanders in simulated situations with special emphasis on decision making strategies used in various types of situation in regard to their non/routine character, emergency and number of casualties. Another goal is to describe different forms of team cooperation and communication in regard to their effectiveness in different types of simulated situations and verify the effect of different forms of feedback about chosen procedures to improve the decision making and performance quality in paramedics. Dominant methodology will be a combination of qualitative and quantitative analysis of objective data on the paramedic performance, and video feeds of solving various types of simulated tasks, and expert evaluation together with analysis of subjective responses (interviews and questionnaires) of participants in EMS crew competitions. These analyses will form the ground for a system of assessment and evaluation of non-technical skills of paramedics.

**c) Cognitive limits of effective information processing and communication**

Studying the circle of information and their appraisal contributes significantly to the understanding of how people process information they encounter. The focus will be not only in the negative point of view – systematic errors people make in judgments and decision making – but mainly in studying ways how to debias/update people's beliefs by means of a more efficient information phrasing. We want to analyse specific interventions in relation to personality and cultural variables with the aim to increase the acceptance and comprehension of information (with special focus on scientific information). Special focus of the research will be on efficient phrasing of information to prevent misunderstandings and reduce biases and consequently result in optimal decision making, when all risks and benefits are considered. Experimental approach will be applied to the study of the influence of information phrasing on risk and probability assessment, on people's beliefs and on expressed behaviour tendencies, and simultaneously identification of moderators and mediators of the given effects. Regarding information phrasing, qualitative and quantitative components of arguments, various aspects of problems, information structure and graphical visualization will be studied. The results will help understand factors and predictors of the information processing and judgment.

**d) Research focused on the situation of national minorities**

CSPS will continue with the analysis of inter-national relationships in years 2004-2016, strategies of national politics in Slovakia, demographic development of national minorities at the beginning of 21<sup>st</sup> century, cooperation between European and Slovak policies, relationships between majority and minority, Roma issues, new minorities, migration and security.

**e) Historical research**

CSPS will focus on the Slovak history in 20<sup>th</sup> century with a special accent on the period after 1918 and on examining of national issues in the "after war" period with link to the events after 1948 to present. In the field of newest history, it will aim to prepare first historical analysis from the period after 1989. A nouvelle feature of the future research will be the focus on the issues of inter-ethnic relations in the borders areas of Central European countries with an emphasis of Ukraine in particular

**f) Forecasting and foresight methodologies**

In terms of forecasting and foresight the strategy will be to test the validity of new methods for forecasting complex issues, notably the demographic change, social inclusion, complex decision making, environmental sustainability, and intelligent growth.

### **Applied research**

In the field of applied research, the period of the 3 to 4 coming years will be dedicated to the implementation of the new project of Cross-border cooperation by the Norwegian funds has been prepared and approved. The title of the project is: „Providing information and implementation of innovative approaches in the cross-border cooperation between Slovakia and Ukraine”. These activities can be extended depending on the results of the competition for another Cross-border cooperation project with Hungary (Acronym RARE) that has been submitted by the CSPS recently (the results are awaited in 2016).

The applied research activities of the CSPS in the foreseeable future will also lead to the concentration of research capacities in (Eastern) Slovakia to the domain of marginalised Roma community research within the common projects of several institutions with the ambition to succeed in competition about funding from Slovak Research and Development Agency (APVV) and ESF.

In the field of psychology, the focus of applied research activities will depend mainly on the participation of researchers at the research projects. Current project topics deal with measuring the perception of safety, job insecurity and work-family spillover. Some of the mentioned topics are also analysed within the PhD studies. Mutual and interdisciplinary research activities are planned within the three Institutes of the Centre of Social and Psychological Sciences. A common project has been submitted for the National Scientific Grant Agency (VEGA) oriented at the identification and measuring of entrepreneurial competencies and opportunities. The role of the Institute of Social Sciences is based on the analysis of perception and identification of entrepreneurial opportunities with the focus on support and experience learned from the family. Another issue will be measuring the perception of entrepreneurial opportunities by successful “startupists” and university students.

One of the important priorities of the applied research activities CSPS will be to continue in negotiations about the funding necessary to continue with the active participation in the European Social Survey.

### **Graduate studies**

In terms of graduate studies, further cooperation with Universities is assumed in the established programs. The program focused on Spatial Planning will be gradually phased out and replaced by a new program focused on public policies in cooperation with the Faculty of Social Sciences of the Comenius University in Bratislava.

<b>Project proposals submitted to 7RP or H2020</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Institute as coordinator</b>			1	
<b>Institute as participant</b>			4	1

## **4. Other information relevant for the assessment**

**Please refer to point 4 in the Questionnaire by the Institute of Forecasting of SAS**