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Authors should submit manuscripts to:

Asoc. prof.. Malgožata Raščevska

Department of Psychology,

Faculty of Education and Psychology,

University of Latvia,

Jurmalas gatve 74/76

Riga, Latvia, LV 1083

Phone, fax: 371-7034018

E-mail: baltic.journ.psych@lu.lv

Executive secretary of the Journal: **Vizma Zaķe**

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Editorial

We would like to draw your attention to the fact that the publication of this journal is funded by the University of Latvia and is included in the Latvian Academy of Sciences listing of refereed publications. Hence it is a useful venue for the publication of dissertation data in preparation for the doctoral defense.

This issue presents the summaries of two recently defended doctoral theses.

Daina Škuškovnika of the University of Latvia conducted a cross-cultural comparison on State and Trait Anxiety of Latvians and Russians residing in Latvia.

Lithuanian-Canadian author Mary Balaisis obtained her degree at the Ontario Institute for Studies in Education of the University of Toronto based on a study of student adjustment at Vilnius University. Both studies are of considerable interest in view of their relevance to issues common to all the Baltic states and thus invite comment as well as replication in the other countries for comparative purposes. Mary Balaisis work stimulated interest in Latvia and Sarmite Voitkane has conducted an series of studies on a number of resiliency and risk factors associated with student adjustment at the University of Latvia. Papers on the results of her studies have been published in this journal since 2001.

Ivars Austers and Viesturs Reņģe have initiated a series of studies on the social representations of science, with a particular focus on Psychology. These studies yield provocative results which would be worth investigating further in Estonia and Lithuania since the historical evolution of training programs in Psychology differs considerably in the three Baltic countries. Thus it is possible that the popular understanding of concepts associated with Psychology may differ as well.

Along similar lines, Aleksandrs Koļesovs has begun a series of studies on time perspectives and this publication represents a follow-up on his earlier research in this area published in the *Baltic Journal of Psychology* in 2003.

Editors of *Baltic Journal of Psychology*
Solveiga Miezītis and Malgažota Raščevska

REPORTS OF EMPIRICAL STUDIES

Social Representations of Science and Psychology: Anchoring and Personification

Viesturs Reņģe, Ivars Austers

University of Latvia

A sample of 263 undergraduate students and 26 university faculty members of psychology participated in the study. Respondents were asked to name three words and three personal names associated with 'science' and 'psychology'. Answers were divided in categories and content analyzed to determine anchoring and personification of social representations of science and psychology. The results were interpreted within the theoretical framework proposed by Moscovici (2000). 'Science' was anchored in 'research' and 'scientific discourse' and personified with Einstein and Nobel. 'Psychology' was anchored in 'research objects', 'psychotherapy', and 'wisdom', and personified with Freud and Jung.¹

Keywords: social representations, science, psychology, content analysis, anchoring, personification

Social representations may be common for an entire society, or may act as knowledge structures enhancing the differentiation between social groups. They are values, ideas, and collectively practiced forms of cognition shared within society. They also facilitate communication and understanding of the world (Moscovici, 1984).

There are two processes involved in development of social representations (Moscovici, 1984). First, anchoring means that unfamiliar objects are classified and designed by comparing them to known and culturally available categories. It is a social inclination to provide names and labels by comparing them with a prototype. It is not exclusively an intellectual operation such as 'recognition'; it also contains the formation of an attitude towards the object. Second, objectification is a process that turns unfamiliar and abstract ideas and images into a concrete and objective reality of common sense. Unclear perceptions are transformed into clear images by the reality construction. The most common means of objectification is to personify, for example, psychoanalysis and Freud. The new knowledge is included into the prior structures by simplifying it.

In studies of social representations both quantitative (e. g., questionnaires, inquiries) and qualitative methods (e.g., interviews, open-ended questions, content analysis) are used (Reņģe & Austers, 2003a, in press). The range of research on social representations has widened both in content and methodology during the last decade. An overview of theories developed in social representations studies was presented in one of our previous papers (see Reņģe & Austers, 2003a), but social representations of science have not been widely studied yet.

¹ Author's note. Correspondence concerning this article should be addressed to Viesturs Reņģe, e-mail: reng@lu.lv. The present study was facilitated by the grant nr. Z-659 from Latvian Council of Science. The authors are grateful to Sandra Sebre for her suggestions, which helped us to improve the paper.

This paper presents part of a research project, focusing on the social representations of science in general, and psychology in particular. Results reported to date (Reņģe & Austers, 2003b) were based on quantitative methods. Respondents had to assess the similarity between the seven disciplines: physics, psychology, astrology, biology, mathematics, history, and philosophy. The results showed that university students as well as university teachers grouped the seven disciplines around two dimensions: 'precise' and 'human-oriented' sciences. Also, all the disciplines were rated to the extent that they use the principles of science. Humanitarian disciplines were regarded as less relying on scientific principles in comparison to the natural sciences. To prove the inferences derived from this study and to qualify important components of social representations of science, such as anchoring and personification (Moscovici & Hewstone, 1983), further research was done, using qualitative methods of data collection (Reņģe & Austers, in press). Results of this study are presented in this paper.

Method

A total of 289 students and faculty members of psychology took part in the study. Sixty-three were undergraduates of economics, 111 were undergraduates of psychology, 89 were undergraduates of biology, and 26 were faculty members of psychology. Respondents represented several universities and university colleges of Latvia. All the respondents filled in questionnaire containing several open-ended questions. The participants were instructed as follows: "Please name three words associated with 'science'!" "Please, name three words associated with 'psychology'!" "Please, name three personal names associated with 'science'!" "Please, name three personal names associated with 'psychology'!" The questionnaire was always filled out in a group setting. Associating three words with 'science' and 'psychology' was regarded as 'anchoring' of these concepts, associating three personal names with 'science' and 'psychology', as 'personification'.

First, we analyzed all answers and identified initial categories emerging from the answers. These initial categories were clarified, some of them were united into more general ones (for example, 'psyche', 'mind', and 'soul' into 'psyche') and some were divided in several more specific categories (for example, the categories 'general description', 'necessary abilities', and 'necessary experience' initially were included into a one larger category 'general description of science').

Those categories, which received less than 5% of the total number of answers in each group, had been eliminated. For instance, the category 'personal names of scientists' in three words related with science answers, categories 'profession', 'anatomy in physiology', 'self-understanding' in three words related with psychology answers. As a result of the initial analysis, the categories for associations to word 'science' and 'psychology' and personal names, related to these words, were formulated in the following manner: sixteen categories for words associated to 'science', sixteen categories associated to 'psychology'; three categories for personal names associated to 'science', and five categories for personal names associated to 'psychology' (see Appendix A for a complete list of categories).

All the answers were coded according to the coding scheme by both authors independently. Afterwards both sets of codes were compared. The initial agreement rate for coding words associated to science and psychology was 81.78 % and 83.68 %, respectively. After discussing the discrepancies in codes the agreement was achieved.

Results and Discussion

We computed the mean frequency of distribution of the words associated with ‘science’ and ‘psychology’ for each of the coding categories for each group of respondents. The Kruskal-Wallis test was used to determine the statistically significant differences between respondents’ groups for the frequency of using words belonging to the categories and the Friedman test to determine the statistically significant differences in the frequency of words belonging to different coding categories within respondents’ groups. All the within-groups’ comparisons yielded statistically significant results ($p < .01$). For the results of within-categories’ tests see Table 1 and Table 2.

Anchoring

Category ‘research activities’ is the main anchor for ‘science’ (mean frequencies for this category higher than 0.4 in each group of respondents, total mean frequency = 0.48). Another anchor for science is ‘scientific discourse’ (total mean frequency = 0.28), but it is important only for university teaching staff and psychology students (average mean frequency = 0.47), not for other groups (average mean frequency across the groups = 0.16). It is plausible that these two groups have to use scientific language more often during their everyday activities. See Table 1.

The category ‘general description’ has the third highest mean frequency of usage (0.24), but cannot be described as an anchor because it is too loose and vague. The same could be said about ‘necessary abilities’ and ‘research facilities’ (mean frequencies for the both groups = 0.22). What really could be another anchor for science is ‘fields of science’ (0.21).

University teaching staff mentioned ‘research activities’ more often (0.89) than students. The same pattern is present in the case of scientific ‘discourse’ – the mean frequency 0.54 for university teachers against the average mean across all student groups being 0.24. Psychology teachers tend to relate ‘science’ to research activities and scientific discourse, which probably should be expected also in the case of teachers of other disciplines. Students find it easier to characterize science in general (average mean frequency across all the student groups = 0.23) than teachers (0.15). The category ‘general description’ includes very vague characteristics such as ‘lots of information’, ‘future’, ‘width’, etc. It could be suggested that an understanding of research activities as the core of science develops as a result of education and experience.

Table 1. Mean frequency of words per category associated to 'science'

Group	Area of science*	Research activities	Profession	Placement/setting*	Wisdom	Outcome	General description	Necessary abilities*	Necessary experience	Positive attitude	Negative attitude	Sophisticated	Scientific discourse*	Research object	Research facilities	Stereotypical attributes*
Undergraduates of psychology	0.15	0.40	0.15	0.06	0.01	0.19	0.32	0.17	0.16	0.05	0.03	0.10	0.40	0.09	0.18	0.05
Undergraduates of economics	0.46	0.49	0.25	0.21	0.10	0.19	0.19	0.14	0.13	0.02	0.08	0.10	0.16	0.16	0.21	0.05
Undergraduates of biology	0.16	0.45	0.15	0.31	0.00	0.24	0.19	0.34	0.06	0.08	0.06	0.13	0.15	0.13	0.25	0.20
Faculty members of psychology	0.04	0.88	0.08	0.15	0.08	0.08	0.15	0.19	0.04	0.04	0.12	0.04	0.54	0.00	0.27	0.19
Total mean	0.21	0.48	0.17	0.18	0.03	0.19	0.24	0.22	0.11	0.05	0.06	0.10	0.28	0.11	0.21	0.11

Note. * Statistically significant differences between the groups determined by Kruskal-Wallis test, $p < .05$.

Table 2. Mean frequency of words per category associated to 'psychology'

Group	Medicine*	Manipulations*	Positive attitude	Negative attitude*	Psychological tests	Person*	Personality*	Psyche	Interpersonal relations	Wisdom	Psychotherapy/support*	Freud	Scientific research	Research objects	University studies*	Bizarre
Undergraduates of psychology	0.03	0.00	0.07	0.05	0.06	0.37	0.05	0.45	0.09	0.30	0.42	0.07	0.33	0.51	0.10	0.07
Undergraduates of economics	0.13	0.16	0.05	0.03	0.27	0.30	0.19	0.25	0.13	0.37	0.19	0.02	0.27	0.43	0.05	0.06
Undergraduates of biology	0.19	0.02	0.10	0.29	0.02	0.17	0.01	0.27	0.12	0.31	0.35	0.03	0.25	0.45	0.09	0.18
Faculty members of psychology	0.00	0.00	0.15	0.04	0.00	0.27	0.19	0.19	0.23	0.15	0.19	0.15	0.46	0.31	0.46	0.12
Total mean	0.10	0.04	0.08	0.12	0.09	0.28	0.08	0.33	0.12	0.30	0.33	0.06	0.30	0.46	0.12	0.11

Note. * Statistically significant differences between the groups determined by Kruskal-Wallis test, $p < .05$.

The economics undergraduates have relatively high mean frequency of usage for the category 'fields of science' (0.46) compared with the total mean frequency (0.21). At the same time, they display a tendency not to mention economics as a science. They also mentioned 'wisdom' the most often (0.09) compared to other groups of respondents (0.03) and have the most negative attitude towards science in comparison to other groups. It is plausible that the main subject of their studies (economics) is not perceived as a science.

Psychology students display a similar pattern of answers. They have the lowest mean frequency in 'research activities' (0.40) against the average mean frequency of other groups being equal to 0.60 and the highest in 'general description' (0.31) against average mean frequency of other groups being equal to 0.18. This is compatible with the findings in the previous research findings (Reņģe & Austers, 2003b), which showed that psychology undergraduates rate psychology quite low on the dimension of being 'scientific'.

At first glance, the category 'stereotypical attributes' is not important (total mean frequency only 0.11). However, if it is considered together with other small categories like 'profession', 'placement/setting', and 'necessary tools and arrangement', which could be regarded as being related to stereotypes, the total mean frequency increases to 0.56. So, it is also possible to suggest that the widespread stereotypes about science are the bases for social representations of science in universities.

As one may see from Table 2, for anchoring 'psychology' the words representing category 'research objects' are used the most often (group mean frequency not less than 0.4, total mean frequency = 0.46). It should be noted that this category is quite general and includes words such as 'activity', 'mechanisms', 'behavior' etc. Several other categories were eliminated from this category ('person', 'psyche', 'personality', 'relations') in the preliminary stage of analysis. However, in case if they were counted as one category, the total mean frequency would be very high (1.15). Thus, if 'science' is associated mainly with what it does ('research'), 'psychology' is related more with what it deals with ('objects').

The next two 'anchors' of psychology are 'psyche' and 'psychotherapy' (total mean frequency = 0.33). The category 'psyche' for psychology could be compared with the category 'general description' for science. If the total mean frequencies of these categories are compared, we see that the ambiguous word 'psyche' is used more often to describe psychology (0.38) than 'general description' for science (0.24). The representations of psychology are vaguer than those of science. 'Psychotherapy' seems to be especially important for psychology undergraduates (0.42), probably the curriculum of their studies provided the bases for this, as well for biology undergraduates (0.35).

The category 'research activities' is important only for psychology undergraduates (0.46) and teachers (0.33). The total mean frequency of 'research activities' in the case of psychology (0.30) is significantly lower than in the case of science (0.48). Surprisingly, words representing 'wisdom' on the average were mentioned ten times more often in relation to 'psychology' (total mean frequency = 0.30) than in relation to 'science' (total mean frequency = 0.03). As a category 'wisdom' includes words not related to scientific research ('intuition', 'inner peace', 'spirituality', 'teaching', etc.). The sharp difference

mentioned above confirms the earlier findings, that psychology is considered as 'scientific' to a lesser extent (Reņģe & Austers, 2003b). As could be expected, economy and biology undergraduates tended to relate psychology to 'wisdom' more often than psychology students and teachers.

The category 'person' also could be regarded as one of the 'anchors' of psychology meaning "something related to people" (total mean frequency = 0.28). Of course people is one of the research objects. It was extracted from the category 'research objects' because 'person' was mentioned much more often than other 'objects'.

Only undergraduates of economics anchored psychology in the category 'psychological tests' (0.29), while total mean frequency across other groups is only = 0.02. To some extent it contradicts the common-sense assumption that tests are highly associated with psychology because of the highly glamorized popular tests published in various magazines.

Biology undergraduates are outstanding in relation to other groups by their negative attitude towards psychology (0.29), against total mean frequency in other groups being only equal to 0.04. In line with these results there was also the highest mean for 'wisdom' (0.31) and the lowest mean frequency for 'scientific research' (0.25) in this group. Only among biology students' the negative attitude regarding psychology as a science prevails over the positive. It may be related to the way psychology was taught to them.

For the university teaching staff psychology is significantly related to their job, teaching psychology and personal relations. Biology and economics students tend to relate psychology to medicine. This could reflect the widespread opinion in Latvian society that psychology is a part of medicine (the same as psychiatry). Despite the widespread opinion that psychology is a kind of 'brainwashing', only the undergraduates of economics tend to see some manipulative aspects in psychology (mean frequency = 0.13).

Personification

First, we computed the mean frequency of the personal names associated with 'science' and 'psychology' for each of the coding categories for each group of respondents. The results are displayed in Table 3 and Table 4. 'Science' is personified most often with Einstein and Nobel and names from high school curricula (Mendeleyev, Pythagoras, etc.). In comparison to others psychology undergraduates more often mention natural scientists mathematicians. However, psychology teachers mention these names to a lesser extent, they name psychologists more often. If we compare the answers by biology undergraduates to psychology undergraduates and teachers, we see that there are more names of biologists in the answers by the first group than of psychologists in the answers of the second group.

Table 3. *Fields of science represented by personal names in association to 'science'*

Group	Mean frequency of items per category			
	Natural sciences and mathematics	Philosophy and social sciences	Medical sciences	Missing response
Undergraduates of psychology	2.15	0.43	0.19	0.5
Undergraduates of economics	2.06	0.29	0.06	0.57
Undergraduates of biology	1.69	0.21	0.20	0.91
Faculty members of psychology	0.74	0.19	0.27	1.16
Total mean	1.66	0.28	0.18	0.62

In general, psychology is represented by 'psychoanalysis'. Psychology is unanimously personified with Freud (about 60% of all personal names mentioned in the category 'psychoanalysis' and about 25% of all personal names associated with 'psychology'), the next is Jung (about 30% of all personal names mentioned in the category 'psychoanalysis'). Surprisingly psychology undergraduates mention psychoanalysts considerably more often than respondents of other groups. They also have a relatively high number of missing responses.

Despite the seemingly popular status of humanistic psychology in Latvian society, there is an unexpectedly low rate of responses where representatives of humanistic psychology are mentioned. As it can be expected, biology and economics undergraduates were less able to mention the names of psychologists; therefore they have the highest rate of no response. Biology students tend to mention only psychoanalysts and pseudo psychologists.

Table 4. *Fields of psychology represented by personal names in association to 'psychology'*

Group	Mean frequency of items per category					
	Psychoanalysis	Humanistic psychology	Behaviorism, experimental, and cognitive psychology	Philosophy and pseudo psychology	University teachers	Missing response
Undergraduates of psychology	2.06	0.14	0.33	0.13	0.2	0.39
Undergraduates of economics	0.78	0.19	0.24	0.16	0.19	1.32
Undergraduates of biology	0.67	0	0.03	0.31	0.12	1.82
Faculty members of psychology	1.35	0.31	0.57	0.19	0.27	0.31
Total mean	1.26	0.16	0.29	0.20	0.20	0.96

Conclusions

There are significant differences in the choices of anchors chosen for 'science' between the groups of students majoring in different sciences and university faculty members of psychology. This finding may be related to the differences in the teaching of main subjects represented in the curricula, i.e., the extent to which scientific principles are emphasized in it. Results of this study allow speculating that biology is perceived more as a science in

comparison to psychology and economics. The difference between associations reported by the students and the teachers confirms the idea that social representations of science tend to change in relation to higher levels of education and academic experience. In comparison to students teachers anchor science more in ‘research’.

Only psychology teachers and psychology undergraduate students tend to regard psychology as a science (i.e., to associate it to ‘scientific research’). For students majoring in other disciplines psychology is more a ‘wisdom of life’ and something related to psychotherapy. This perception could reflect how psychology is perceived in the contemporary Latvian society in general.

As ‘science’ is personified with Einstein, ‘psychology’ is personified with Freud. Probably the former is more related to contemporary science than the latter to contemporary psychology. This confirms the suggestion that psychology as a science is still misunderstood in contemporary Latvian society.

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Appendix A

Coding categories of words associated to ‘science’

- Fields of science (e. g., exact sciences)
- Research activities (studies, experiment)
- Profession (scientist, professor)
- Placement/setting (laboratory, institute)
- Wisdom (teaching, knowledge, intuitive wisdom)
- Outcome (discoveries, new technologies, etc.)
- General description (lots of information, future, logical, wideness, truth, development, etc.)
- Necessary abilities (mind, brain, preciseness, creativity, etc.)

Necessary experience (education, studies, experience, etc.)
 Positive attitude
 Negative attitude
 Sophisticated (complicated, important, time consuming, lots of work)
 Discourse (formulas, numbers, theories)
 Object (e. g., space, nature)
 Necessary tools and arrangements (e. g., computers, technologies, books, conferences)
 Stereotypical attributes (e. g., glasses, white robes, looking glass)

Coding categories of words associated to ‘psychology’ Medicine (psychiatry, psychopathology)

Manipulations (influence, cunning, makiavellism)
 Positive attitudes (e. g., exiting, interesting, useful)
 Negative attitudes (e. g., boring, mess)
 Tests (tests, questionnaires, inventories)
 Person
 Personality (personality, character)
 Psyche (mind, consciousness, soul)
 Personal relations (communication, conflicts)
 Wisdom (wisdom, intuition, thoughts)
 Psychotherapy/support (psychotherapy, counselling)
 Freud
 Research activities (studies, experiments, cognition, theories)
 Research objects (psychological processes and states, e. g., thinking, emotions)
 University studies (university teachers, learning)
 Bizarre (words not directly related to psychology, e. g., stability, logo, world, net)

Coding categories of personal names associated to ‘science’

Natural sciences and mathematics (Einstein, Newton, Pythagoras, Nobel, etc.)
 Philosophy and social sciences (Aristotle, Freud, etc.)
 Medical sciences (Pavlov, Selye, etc.)

Coding categories of personal names associated to ‘psychology’

Psychoanalysis (Freud, Jung, Adler, Erikson)
 Humanistic psychology (Maslow, Rogers)
 Behaviorism, experimental, and cognitive psychology (e. g., Pavlov, Wundt, Piaget)
 Philosophy and pseudo psychology (e. g., Aristotle, Plato, Carnegie)
 University faculty members

Gender Differences in Time Perspective of High School Students in Latvia

Aleksandrs Koļesovs

University of Latvia

This study investigated gender differences in time perspective (TP) in Latvia. Traditionally, studies of TP were focused on the future. This study included all three temporal frames: past, present, and future. Participants were 201 high school students (93 boys and 108 girls). Zimbardo Time Perspective Inventory and Time Attitude Scale were adapted for use in Latvia. Results showed significant main effect of gender on orientation toward the future, $F(1, 171) = 8.65$, $p < .01$. Girls were more future-oriented than boys. The results also showed significant gender and Latvian versus non-Latvian (ethnic minorities) school interaction on affective attitude toward the present, $F(1, 96) = 4.36$, $p < .05$. Latvian girls evaluated the present more positively than boys, $t(37) = 3.33$, $p < .01$. Gender differences in the non-Latvian sample were not significant.²

Key words: time perspective, gender.

Introduction

Time perspective (TP) emerges from the cognitive partitioning of individual experiences into past, present, and future temporal frames (Zimbardo & Boyd, 1999). Adolescence is related to significant changes in TP (Lewin, 1942/2000). Transition into adult life is related to the acquisition of adult gender roles, and that transition is reflected in the TP of adolescents (Nurmi, 2004). The aim of this research was to conduct a pilot study of gender differences in TP of high school students in Latvia and to identify directions for further research.

Traditionally, investigations of adolescents' TP were focused upon the future to the virtual exclusion of the present and the past (Nurmi, 1991). Research on TP in Australia, Finland, and Israel (Nurmi, Pool, & Seginer, 1995) demonstrated that in Western cultures boys are more interested in the material aspects of life and girls are more interested in interpersonal relationships. Moreover, gender differences of interest in future education and occupation vary across cultures.

Studies of future orientation also demonstrated the interaction of gender and culture. For example, Bentley (1983) found that Swazi girls in Southern Africa were less oriented toward the future than Swazi boys or Scottish adolescents of both genders. Nurmi (1991) concluded that gender differences in adolescents' future perspectives are more evident in traditional societies.

Newer research approaches encompass all temporal frames: past, present and future. Research on TP with United States students (Zimbardo & Boyd, 1999) found a main effect of gender on general orientation towards the future, and on reports of positive past experiences. Girls were more oriented towards the future and reported more positive views

² Author's note. Correspondence concerning this article should be addressed to Aleksandrs Koļesovs, e-mail: kolesov@one.lv

of the past than boys. In contrast to these findings, no significant gender differences were found in the study of affective attitude towards time categories (Nuttin & Lens, 1985).

In light of these results, it is necessary to pursue studies in gender differences in TP in order to replicate and extend the findings obtained. Cross-cultural research on TP demonstrated gender differences even in some Western cultures. Therefore, ethnicity should be taken into account in studies of ethnically heterogeneous populations.

The population of Latvia consists of 2.3 million people of whom Latvians constitute 58.2 percent, Russians 29.9 percent, Byelorussians 4 percent, Ukrainians 2.6 percent, Poles 2.5 percent, and other nationalities 3.5 percent (Central Statistical Bureau of Latvia, 2003).

For a variety of socio-political reasons schooling in Latvia is provided principally in two languages: Latvian and Russian. In 2003/2004, 70.3 percent of children studied in schools with Latvian as the language of instruction and 29.2 percent in schools where teaching was conducted in Russian (Ministry of Education and Science of Latvia, 2004). In schools with Latvian language of instruction 92 percent of pupils were Latvians, and in schools with Russian as the language of teaching 87 percent were non-Latvians.

Proceeding from the results of TP studies and the situation in Latvia, the following research question was posed: Are there gender differences in TP among Latvian and non-Latvian high school students and what is their nature? It was expected that gender differences in TP would be related to the ethnic group.

Proceeding from the results of TP studies and the situation in Latvia, the following research question was posed: Are there gender differences in TP among Latvian and non-Latvian high school students and what is their nature? It was expected that gender differences in TP would be related to the ethnic group.

Method

Participants

Participants in this study were 172 students drawn from the 12th grade of senior high schools in Riga, the capital of Latvia. Eighty-six Latvian school students (mean age 17.86, SD= 0.53, 43 females and 43 males) and 86 non-Latvian school students (mean age 17.84, SD= 0.65, 43 females and 43 males) were asked to answer questions and estimate the past, present, and future.

Materials

Zimbardo Time Perspective Inventory (ZTPI). This inventory (Zimbardo & Boyd, 1999) consists of 56 items. The ZTPI asks respondents to rate each statement on a 5-point Likert scale from “very uncharacteristic” to “very characteristic”. Below is a brief description of the ZTPI scales:

1. *Past-Negative*. This scale reflects a generally negative, aversive view of the past. It includes 10 items. A typical item is: “I think about the bad things that have happened to me in the past”. Cronbach alpha and retest coefficients after a four-week interval were .82. and .70, respectively.

2. *Present-Hedonistic*. The scale reflects a hedonistic, risk-taking attitude towards time and life. It contains 15 items. A typical item is: "I do things impulsively". Cronbach's alpha and retest coefficients amounted to .79. and .72, respectively.
3. *Future*. The scale reflects a general future orientation. It contains 13 items. A typical item on this scale is: "I keep working at difficult, uninteresting tasks if that will help me get ahead". The respective Cronbach alpha and retest coefficients were .77 and .80.
4. *Past-Positive*. The factor reflects a warm, sentimental attitude towards the past. It consists of nine items, typified by following statement "I like family rituals and traditions that are regularly repeated". Cronbach alpha and retest coefficients were .80. and .76, respectively.
5. *Present-Fatalistic*. The final factor of the ZTPI represents a fatalistic, helpless, and hopeless attitude towards the future and life in general. It compared nine items. The following item is illustrative: "My life path is controlled by forces I cannot influence". Cronbach alpha coefficient was .74 and retest coefficient, .76.

Time Attitude Scale (T.A.S.). This scale measures the affective attitude of a person toward his or her personal past, present, and future (Nuttin & Lens, 1985). This scale is based on Osgood's semantic differential technique. Each pair of adjectives constitutes a seven-point scale ranging from "very positive" to "very negative". Examples of polarities are "pleasant – unpleasant" and "beautiful – ugly". Nine bipolar pairs of adjectives were rated in this study. The internal consistencies for attitudes toward the past, present, and future were .93, .94 and .92 respectively. Test-retest reliabilities for the same three scales after an interval of three to four weeks amounted to .74, .62 and .57. In translating both instruments, the procedure recommended by Van de Vijver and Hambleton (1996) was followed. ZTPI items were translated from English into Latvian and then back into English. For the non-Latvian sample, the Russian version of ZTPI (Kolesovs, 2002) was used. Two translators translated the T.A.S into Latvian and Russian, and then two different translators translated it back into English. The adequacy of the translation and its shortcomings were discussed with translators and other experts. The translated versions were improved by taking the structural differences between the three languages into account.

Procedure

Research was conducted in the spring of 2004, three to four months before the senior high school final examinations. ZTPI and T.A.S. were completed without time limits in groups of 12 to 15 persons.

Results

First, the reliabilities of the two instruments were ascertained (Table 1).

Table 1. *Reliability coefficients of ZTPI and T.A.S. scales*

	Cronbach's alpha coefficient		Test-retest coefficient ^a	
	Latvian version	Russian version	Latvian version	Russian version
ZTPI scales:				
Past-Negative	.71	.76	.89	.90
Present-Hedonistic	.78	.71	.84	.73
Future	.80	.72	.82	.78
Past-Positive ^b	.63	.59	.74	.54
Present-Fatalistic ^b	.67	.63	.69	.81
T.A.S. scales:				
Past	.93	.79	.83	.88
Present	.89	.87	.56	.67
Future	.93	.86	.60	.85

^a after four weeks

^b scales with low reliability

Table 1 shows that most of the reliability coefficients were moderately high and fell within the accepted range for paper and pencil instruments. On the ZTPI, Past-Positive and Present-Fatalistic were the only two scales with low reliabilities. Consequently, they were excluded from further statistical analyses. The relatively low test-retest reliability coefficients for the T.A.S. Present scale were in accordance with the earlier results for this scale, as reported by Nuttin and Lens (1985).

Gender differences in Latvian and non-Latvian samples

The means and standard deviations of measures of TP in Latvian and non-Latvian samples are presented in Table 2.

Table 2. *Means and standard deviations of measures of time perspective*

Scale	Males				Females			
	Latvian school		non-Latvian school		Latvian school		non-Latvian school	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
ZTPI scales:								
Past-Negative	2.77	0.47	2.97	0.63	2.89	0.66	3.07	0.62
Present-Hedonistic	3.41	0.45	3.42	0.41	3.52	0.51	3.40	0.47
Future	2.98	0.64	3.19	0.51	3.32	.51	3.34	0.47
T.A.S. scales:								
Past	5.42	0.76	5.32	0.90	5.31	0.98	5.26	0.90
Present	5.06	0.65	5.37	1.11	5.80	0.72	5.25	0.99
Future	5.38	0.98	5.69	1.05	5.84	1.04	5.70	0.87

For testing Gender and Latvian/non-Latvian school effects 2 X 2 ANOVA was used. The results showed a significant main effect of Gender on the Future scale, $F(1, 171) = 8.65$, $p < .01$. Females demonstrated a more pronounced general orientation towards the future than did males (Figure 1).

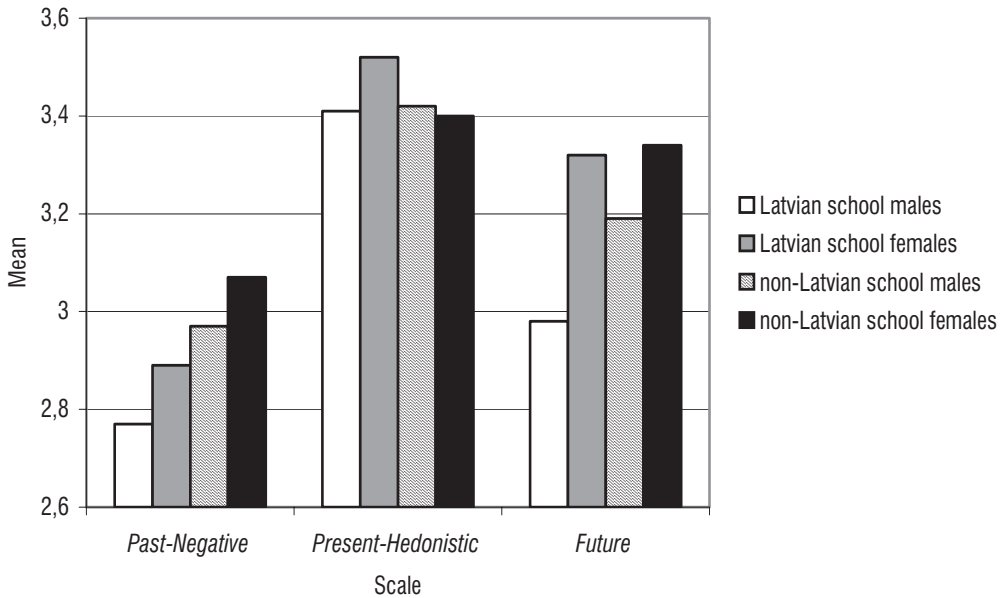


Figure 1. Gender differences in TP factors

There was a significant main effect of Latvian/non-Latvian school on the Past-Negative scale, $F(1, 171) = 4.21, p < .05$. Non-Latvian school students reported a higher level of negative past experiences in their TP than Latvian students (Figure 2).

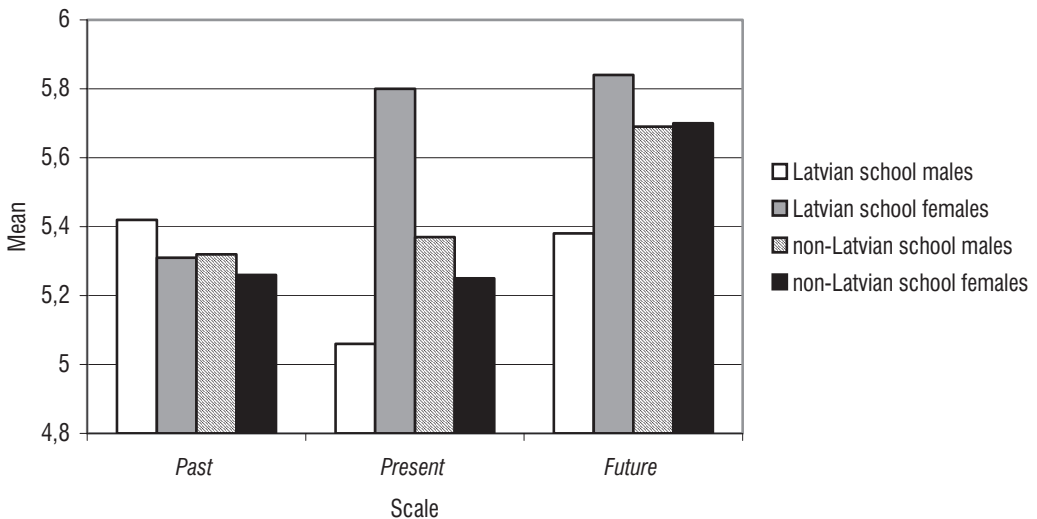


Figure 2. Gender differences in affective attitude towards the past, present, and future

The results showed also a significant Gender x Latvian/non-Latvian school interaction on affective attitude towards the present, $F(1, 96) = 4.36, p < .05$. Latvian females' affective attitude towards the present was more positive than males' attitude, $t(37) = 3.33, p < .01$. Differences in non-Latvian sample were not significant (Figure 2).

Discussion

The results of this study showed significant gender differences in general orientation towards the future. This finding is in keeping with Zimbardo and Boyd's (1999) results. According to their interpretation, senior high school females are more goal-directed than males. They are ready "to do", and are prepared to sacrifice present enjoyment in order to achieve their career objectives. Thus, the first direction for the future research is more thorough analysis of future-related differences between females and males. To this end, qualitative research methods and content analysis of future perspective should supplement quantitative approaches.

As expected, differences in TP were related not only to the future, and there were significant gender and ethnic group interaction. The results showed differences in affective attitude towards the present in Latvian sample. Females expressed a more positive attitude towards the present than males. However, there were no significant differences in Present-Hedonistic scale, which reflects orientation towards enjoyment, pleasure, and excitement here and now (Zimbardo & Boyd, 1999). Differences in attitude may reflect differences in gender roles. Latvian females are more open in expressing their affective attitude than are Latvian males. Tendencies in the Latvian and non-Latvian samples confirm that gender differences in TP are related to the culture, as it was demonstrated in studies of future-related hopes and fears in Australia, Finland, and Israel (Nurmi, Pool, & Seginer, 1995). Difference between Latvian and non-Latvian samples in relation to presence in TP of negative past experiences also confirm this statement. Therefore, the studies of TP open new perspectives in understanding of cultural differences in Latvia.

In sum, gender is an important factor in understanding of variety in adolescents' TP. Empirical findings confirm that gender interact with culture and ethnic group. The significant limitation of this exploratory study is that ethnicity and culture were not analyzed as multidimensional variables. Thus, additional studies are required to answer the question about particular cultural features that provide the basis for differences in TP in Latvia.

The question remains: What cultural factors are responsible for the differences obtained? As Betancourt and Lopez (1993) emphasized, it is not enough to identify cultural differences. Instead, they must be "unpacked" or attributed to specific dimensions that are characteristic of the culture in question. This is a task that must be pursued in future investigations.

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Comparison of State and Trait Anxiety of Latvians and Russians Residing in Latvia

Daina Škuškovnika

University of Latvia

State-Trait Anxiety³ has been extensively investigated in a number of intra-cultural and cross-cultural studies (e.g., Bergeron, 1983; Magnusson, Stattin, & Iwawaki, 1983; Emmite & Diaz-Guerrero, 1983; Ahlawat, 1986; Napieralski & Brooks, 1995; Iwata & Higuci, 2000; Rimoldi, Raimondo, Erdmann, & Hojat, 2002; Poltavski & Ferraro, 2002, etc). In the present study, the author has undertaken to investigate the level of anxiety of the two major ethnic groups of the population of Latvia: ethnic Latvians and ethnic Russians residing in Latvia. Moreover, these two groups were broken down further and were compared on the basis of gender, age and occupational grouping.¹

Keywords: state and trait anxiety, ethnic groups.

Anxiety concept in psychology

This section is devoted to the following major theoretical approaches to anxiety in contemporary psychology: psychodynamic, cognitive-behavioural, biological, existential-humanistic, and trait-based. Present research is primarily focused on the views of personality trait theorists and those of the representatives of the cognitive-behavioural approach.

Trait theorists assert that individuals differ in the intensity of traits that may vary over certain time intervals. Trait factors allow one to predict behaviour with more precision than do state factors, although in extreme situations state factors may have a crucial effect on an individual's behaviour. Anxiety is considered to be one of the most important personality traits in several personality trait models. The Eysenck Personality Profile assigns five primary factors to neuroticism: inferiority, unhappiness, anxiety, dependence (addition), obsessiveness. The Cattell 16 Personality Factor model considers factors QI (extraversion/ introversion) and QII (anxiety) to be the most important and easily identifiable second order basic traits. One of the five basic factors underlying the currently prominent Five-Factor Model (FFM; Costa & McCrae, 1992) is neuroticism, which represents the emotional instability of an individual and as such is related to negative emotional states of fear, anger, unhappiness, anxiety, and sense of guilt. Construct validity tests with the NEO-PI-R² have brought to the fore the following subfactors that underlies the neuroticism factor: anxiousness, depression, impulsiveness, sense of guilt, vulnerability, self-consciousness (Costa & McCrae, 1992). After summarizing the views

¹ State-Trait anxiety model developed by Charles D. Spielberger and colleagues distinguishes between situational anxiety, i.e. state anxiety and anxiety as a personality trait (trait anxiety). For the purposes of this study situational anxiety or state anxiety will be denoted as A-State, while the concept anxiety as a personality trait will be designated as A-Trait.

² NEO-PI-R – the leading personality five-factor model identification method (Costa & McCrae, 1992).

of trait theory authors, Matthews and Dreary (1998) concluded that a causal relationship exists between personality traits and behaviour: personality traits can be regarded as a cause and behaviour as a consequence.

Within the State-Trait Anxiety Inventory model (Spielberger, 1985) anxiety state (A-State) is regarded as an unpleasant emotional state during which an individual experiences subjective feelings of tension, nervousness, apprehension, and heightened activity of the autonomic nervous system. Anxiety as a personality trait (A-Trait) comprises an acquired behavioural disposition to perceive an objectively safe situation as threatening and dangerous and to respond to it with A-State anxiety, the intensity of which is not adequate to the objective situation.

The breakdown of anxiety as a temporary state and as a personality trait leads to the conclusion that the intensity and duration of A-State is the consequence of one's cognitive evaluation. This, to a large extent, depends on four determinants: 1) the external features of a situation; 2) the A-Trait of an individual; 3) the individual's evaluation of how successful he or she will be in reacting to the situation; 4) the impact of feedback from the situation on the current A-Trait of the individual (Spielberger, Ritterband, Sydeman, & Unger, 1995).

Anxiety in various age, gender, and ethnic groups

According to Cattell (1972), a relatively high level of anxiety is characteristic of young people while anxiety levels tend to drop around the age of 30. At the age of 60 and over, anxiety levels tend to increase again. Trait theorists have concluded that Big Five Factor changes occur before the age of 30, when stable factor scores become characteristic. Studies of the stability of anxiety (Costa, McCrae, Zonderman, Barbano, Lebowitz, & Larson, 1986; Nakazato & Shimonaka, 1989) have shown that anxiety tends to decrease gradually and smoothly as age advances. Costa et al. and Nakazato and Shimonaka also point out that changes in anxiety depend to a large extent on the characteristics of the sample, although they emphasize that the results obtained largely conform with Erikson's idea that the developmental task of old age is the integration of the ego whereby elderly individuals tend to be comparatively free of neurotic anxiety.

Gender differences in anxiety scores reported in a number of studies (Laux, Glanzmann, Schaffer, & Spielberger, 1981; Van der Ploeg, 1985; Virella, Arbona, & Novy, 1994; Nakazato & Shimonaka, 1989) are, in the majority of cases, traceable to the culturally accepted stereotypic views of socially desirable behaviour of men and women. Nakazato and Shimonaka explain gender differences in anxiety on the basis of the traditional perceptions of sex roles, Maccoby and Jacklin conclude that the causes of gender differences in anxiety are to be sought in childhood experiences, whereas Nolen-Hoeksema believes that the responses of men and women to stress caused by complex circumstances are best explained by the approaches chosen by the two genders for coping with negative emotions and with anxiety engendered by such emotions.

Although anxiety is considered to be a universal psychological phenomenon, the experience and interpretation of anxiety, as well as the distribution of various anxiety

types, differ across cultures. Magnusson, Stattin and Iwawaki (1983) concluded that people in different cultures identify threat and danger in closely similar situations. The intensity of their anxiety responses to such situations, however, tends to differ across cultures. The reason for cross-cultural and ethnic differences in anxiety levels may be related to traditional views ingrained in particular cultures regarding socially desirable or appropriate behaviour in specific situations. Cross-cultural or ethnic differences in anxiety levels may also be related to differences in goals and evaluation of priorities that are inculcated in different cultures (Diaz-Guerrero, 1981).

Similarly to Estonia and Lithuania there are several ethnic groups residing in the ethnocultural milieu of Latvia, the largest of those being the Latvian and Russian ethnic groups (57% and 29% respectively) (Latvijas demogrāfijas gada grāmata, 2002).

Previous research in Latvia has demonstrated that there are no fundamental differences in causes of anxiety between citizens, the majority of whom are Latvian in ethnicity, and noncitizens who are predominantly ethnically Russian nor do these two segments of the population of Latvia fundamentally differ in their perception of threats at the national and community level or at the individual level. However, differences have been found in the average intensity of feeling endangered. Major differences were demonstrated in the perception of various possible threats on a national or community level: 64 percent of citizens fear that Latvia may again be occupied by foreign powers, whereas the same fear is experienced by only 34 percent of non-citizens (Latvija. Pārskats par tautas attīstību 2002/2003). On the other hand, the inadequacy of social guarantees is a source of worry for a higher percentage of non-citizens than citizens. It is important to emphasize that ethnic relations in Latvia, though not free of tension and conflict, have avoided violent confrontation and have not led to bloodshed (Draguns, 2004).

Research carried out in Estonia (Ott, Clark & Ennuste, 1996) has shown that anxiety caused by economic reforms is correlated to the ethnic group, age and income level of respondents: Estonians have been found to be less anxious about possible unemployment than Russians living in Estonia; elderly respondents and Russians living in Estonia tend to be less supportive of economic and political reforms and are more worried about their consequences. Both Estonians and Russians living in Estonia show anxiety about their social status connected to the ongoing economic and political changes.

Based on the theories and research reviewed above, the following two research questions were proposed: (1) What are the A-State and A-Trait scores of Latvians and Russians residing in Latvia; and (2) What differences exist between A-State and A-Trait scores of Latvians and Russians residing in Latvia?

Method

Participants

The research sample consisted of 1610 respondents whose demographic characteristics met the following criteria: age from 19 to 69 years; ethnic origin, Latvian or Russian; occupation, student or working adult. Ethnic origin was determined on the basis of information provided by the respondents (see Table 1).

Table 1. *Description of research sample*

	Males		Females	
	Latvians	Russian residents in Latvia	Latvians	Russian residents in Latvia
Total (N= 1610):	514	216	695	185
Working (N=927)	383	150	314	80
education:				
elementary school	10%	12%	4%	5%
secondary school	69%	65%	56%	70%
university	21%	23%	40%	25%
occupation:				
telecommunication	88%	88%	59%	72%
customer service	12%	12%		
teachers			26%	18%
preschool teachers			15%	10%
Students (n=683)	131	66	381	105
speciality:				
political science	12%	5%	21%	20%
psychology	16%	45%	19%	35%
education	39%	26%	39%	25%
IT	33%	24%	21%	20%

Instruments

State-Trait Anxiety Self-Evaluation Questionnaire. (Spielberger, Gorsuch, Lushene, Vagg & Jacobs, 1983). The questionnaire consists of two scales, one for A-State and A-Trait, respectively. Each scale consists of 20 statements that must be scored by respondents on a Likert scale. The internal consistency (alpha) was found to range from .83 to .92 for the Latvian sample and from .76 to .94 for the Russian sample (Skuskovnik, 2003).

Taylor Manifest Anxiety Scale – TMAS (Taylor, 1953). When completing the TMAS, a respondent must evaluate 50 statements as true or false. Each answer counts one point toward the total anxiety score, which ranges from 0 to 50. TMAS taps the frequency of an individual's reactions related to the presence or absence of anxiety. TMAS treats anxiety as a personality trait. According to the Kuder-Richardson formula, in the Latvian sample the internal consistency was .84 and in the Russian sample it was .86.

Procedure

Research data were collected over a period of three years, from 2000 through 2003. Students completed the questionnaires in auditoriums, usually in groups of 40 to 50 students. Employed respondents completed the questionnaires at company training centres where they attended qualification improvement courses, usually in groups of 10 to 12 individuals.

Results

ANOVA was used to analyze A-State and A-Trait scores by gender and age categories. To compare the mean scores of A-State and A-Trait across age categories, the

Least significant difference (LSD) method from the General Linear Model (GLM) was employed. To compare the mean scores of A-State and A-Trait according to gender and occupation categories, t-test analyses were performed.

A-State and A-Trait in Latvians by gender and age groups

The analysis of descriptive and inferential statistics yielded the following results:

- a) The mean scores of A-State and A-Trait for men and women have a tendency to form a U-shaped curve (see Tables 2 and 3).
- b) The results of ANOVA in the Latvian subgroup indicate that age has a significant effect ($p < .01$) on A-state and A-Trait scores ($F_{A-State\ males} = 7.18, p < .01$; $F_{A-Trait\ males} = 10.37, p < .01$; $F_{A-State\ females} = 7.6, p < .01$; $F_{A-Trait, males} = 5.71, p < .01$).

The comparison of A-State and A-trait mean scores by age group shows that:

- a) A-State and A-Trait scores in the Latvian female sample between the ages of 19 to 25 years is significantly higher than for the age groups of 26 to 35 yrs ($p < .01$) and 36 to 45 yrs ($p < .05$).
- b) The male sample shows higher A-State and A-Trait scores in the 19 to 25 age group than in the three groups aged 26 to 35 years ($p < .01$), 36 to 45 years ($p < .01$) and 46 to 55 years ($p < .05$), respectively. The A-State score for the group of respondents aged 56 to 69 is considerably higher than that for the 26 to 35 age group ($p < .05$).
- c) Although the analysis of variance did not show any substantial effect of gender on A-State and A-Trait scores in the Latvian sample ($F_{A-State} = .53, p > .05$; $F_{A-Trait} = .99, p > .05$), there were several significant A-State and A-Trait gender differences both in the overall Latvian sample and between several age groups. Significantly higher A-State scores for women were found in the age groups of 26 to 35 years ($p < .05$) and 36 to 45 years of age ($p < .05$) and higher A-Trait scores were found in the groups of 19 to 25 year ($p < .01$), 26 to 35 year ($p < .01$), 36 to 45 year ($p < .01$) and 46 to 55 year olds ($p < .05$).

Table 2. *Descriptive statistics of A-State and A-Trait by age groups of Latvian and Russian men living in Latvia.*

	19–25 years		26–35 years		36–45 years		46–55 years	
	Latvians N=155	Russians r. in.Latvia N=74	Latvians N=167	Russians r. in.Latvia N=44	Latvians N=100	Russians r. in.Latvia N=43	Latvians N=70	Russians r. in.Latvia N=54
State Anxiety								
Mean	37.75	37.35	32.84	34.84	33.82	37.63	34.69	39.19
SD	10.28	11.04	7.21	7.92	8.66	10.80	8.25	12.43
Trait Anxiety								
Mean	41.2	41.12	35.96	35.91	36.10	37.04	37.14	40.83
SD	9.67	10.57	7.00	6.52	7.08	8.08	7.00	8.38

Table 3. *Descriptive statistics of A-State and A-Trait by age groups of Latvian and Russian women living in Latvia*

	19–25 years		26–35 years		36–45 years		46–55 years	
	Latvians N=155	Russians r. in.Latvia N=74	Latvians N=167	Russians r. in.Latvia N=44	Latvians N=100	Russians r. in.Latvia N=43	Latvians N=70	Russians r. in.Latvia N=54
State Anxiety								
Mean	39.71	36.70	34.71	36.17	36.5	37.36	36.73	47.18
SD	10.76	9.74	8.54	8.04	8.52	11.01	7.80	13.26
Trait Anxiety								
Mean	43.95	39.39	40.55	38.08	40.53	44.18	42.27	48.89
SD	9.12	9.00	8.90	5.61	8.00	9.55	10.1	9.07

A-State and A-Trait in Russians residing in Latvia by gender and age groups

The analysis of A-State and A-Trait scores of Russians residing in Latvia by gender and age groups produced the following results:

- a) A-State scores of Russian women living in Latvia tend to increase with age (See Tables 2 and 3) A-Trait scores of Russian women by age groups have a tendency to form a U-shaped curve. The tendency towards a U-shaped curve in both A-State and A-Trait is also seen in the sample of Russian men living in Latvia.
- b) The analysis of the sample of Russians residing in Latvia indicates a significant impact of age on State-Trait anxiety scores ($F_{A-State\ male} = .99, p > .05$; $F_{A-Trait\ male} = 3.55, p < .05$; $F_{A-state\ female} = 10.36, p < .01$; $F_{A-Trait\ male} = 13.59, p < .01$).

The comparison of A-State and A-Trait mean scores by age group shows that:

- a) A-State scores of the Russian female sample in the age group of 46 to 55 years ($p < .05$) were higher than in the other age groups. A-Trait scores in the Russian female sample in the 46 to 55 age group of were considerably higher than for the age groups of 19 to 25 years ($p < .01$) and 26 to 35 ($p < .01$) years.
- b) A-State scores of the Russian male sample in the age group of 46 to 55 years were higher than for the 26 to 35 age group ($p < .05$). A-Trait scores in the Russian male sample in the age groups 19 to 25 ($p < .05$) and 45 to 55 ($p < .05$) were significantly higher than for the age groups 26 to 35, and 36 to 45 years.
- c) A significant impact of gender on A-State and A-Trait scores was found in the sample of Russians residing in Latvia ($F_{A-State} = 6.03; p < .05$; $F_{A-Trait} = 11.06; p < .05$): Gender differences were demonstrated in the A-State scores of the 46 to 55 year age group ($p < .01$) and in the A-Trait scores of the 36 to 45 year ($p < .01$) and 46 to 55 year ($p < .05$) age groups.

Comparison of A-State and A-Trait between Latvians and Russians residing in Latvia

In the course of the study, the author examined differences between the A-State and A-Trait scores of Latvians and Russians residing in Latvia, further divided on the basis of gender, age and occupation groups.

Comparison of the state and trait anxiety scores of Latvians and Russians residing in Latvia shows several significant differences across age groups. Russian men scored

significantly higher for A-state in the age groups of 36 to 45 years ($p < .05$) and 46 to 55 years ($p < .05$). Latvian women obtained higher A-state scores in the 19 to 25 age group ($p < .01$), whereas Russian women scored higher in the 46 to 55 age group ($p < .01$).

In the male sample, Russian men scored higher for A-Trait in the 46 to 55 age group ($p < .01$). In the female sample A-trait scores in the 19 to 25 age group ($p < .01$) were highest among Latvian women while Russian women scored higher in the 46 to 55 age group ($p < .01$).

For the purpose of cluster analysis of anxiety in the two ethnic groups, respondents were grouped into six clusters: two clusters consisted of students (54.3% Latvians and 45.7% Russians), the remaining four clusters comprised employed respondents, which allowed an analysis of results by occupation group. In the 19 to 25 age group, which included the largest number of students, comparison of A-Trait and A-State scores of employed individuals and students was performed in order to see if there was overlap between the groups. Such an overlap was not found.

The comparison of state and trait anxiety scores of Latvians and Russians living in Latvia indicates a number of significant differences between the two occupational groupings. In the sample of working men and working women A-state scores of Russian respondents were higher ($p < .01$) than those of Latvians. Among the sample of working women, Russian women scored higher than Latvian women for A-Trait ($p < .05$). In the female student sample anxiety (A-state) scores of Latvian students were higher ($p < .01$) than those of Russian students.

The comparison of A-state and A-Trait mean score items between Latvians and Russians in Latvia shows that scores on anxiety-present items related to self-acceptance (Item No. 24) and cognitive problems (Items No. 29, 34, 37, 40) were higher among the sample of Latvian women than of Russian women, whereas Russian women scored higher than their Latvian counterparts on items related to self-acceptance (Item No. 21) and cognitive problems (Item No. 31). In addition, Russian women scored higher than Latvian women on Item No. 33, which measures an unsatisfied need for security.

The scores of the Latvian male sample exceeded the scores of the Russian male sample on anxiety-present items related to self-acceptance (Items No. 23, 24.) and lack of rest (Item No. 26.). Russian men scored higher than Latvian men on several items related to self-acceptance (Items No. 21, 25, 36), emotional control (27), cognitive problems (Items No. 31, 34, 40), an unsatisfied need for security (33), and inability to cope with problems (28).

Discussion

The age of Latvian and Russian women and men living in Latvia was found to be significantly correlated with the A-State and A-Trait scores. These results are similar to those obtained by McCrae and Costa (1994) who reported that within the Personality Trait Five Factor Model the indices of neuroticism factor (subfactor of anxiety trait) are higher at the age of 20 to 25 years.

A-State and A-Trait scores of both Latvians and Russians by age category tend to form a U-shaped curve. This corresponds to the ontogenesis of anxiety described on a theoretical basis by Cattell (1965) who postulated a progression from elevated A-State and A-Trait scores in young adulthood through a dip during the middle segment the life span to another increase while approaching old age. Moreover, the rise of both state and trait anxiety scores of Russian respondents tends to begin at an earlier age compared with the data presented in other studies, i.e. as early as in the age span between 36 and 45 years. Lievegoed (Lievegoed, 1994) points out that after the middle-age crisis individuals tend to engage increasingly in their professional career in order to enhance their occupational stability and security. This may lead to a situation where any change or innovation in policy, practices or personnel is perceived as a personal threat which, in turn, acts as a stressor, thereby triggering anxiety. It can be inferred that the inhabitants of Latvia between the ages of 40 to 50, who completed their schooling as well as professional training in the Soviet period, feel that their positions are more threatened than is true of the respondents in the same age group from USA, Japan and other countries whose anxiety scores have been studied by Costa et al. (1986) and Nakazato and Shimonaka (1989).

There are considerable gender differences in state and trait anxiety scores between Latvian and Russian respondents, both within the total sample and by age groups. In both ethnic groups, females score higher. Perhaps the reason for these differences can be sought in childhood experiences when views on sex roles, socially desirable behaviour as well as on ways of coping with stress are formed. Studies carried out in other cultures also demonstrate gender differences in A-State and A-Trait scores (Laux, Glanzmann, Schaffer, & Spielberger, 1981; Van der Ploeg, 1985; Virella, Arbona, & Novy, 1994; Nakazato & Shimonaka, 1989; Poltavski & Ferraro, 2002).

Anxiety scores of respondents in Latvia are related to individual perception of a situation, which in turn, may differ across ethnic groups.

These differences between the A-State and A-Trait anxiety scores support the conclusions of Magnusson, Stattin and Iwawaki (1983) to the effect that the representatives of different ethnic groups perceive threats in similar situations, but differ in the intensity of their anxiety responses. Latvian citizens and non-citizens scored differently in the intensity of feeling upon exposure to threat than and at an average level of feeling endangered (Latvija. Pārskats par tautas attīstību 2002/2003).

In the student sample significant differences were ascertained in A-State and A-Trait scores of female students; Latvian female students scored higher in anxiety. This finding is in keeping with the results of several studies (Diaz-Guerrero, 1981; Rimoldi, Raimondo, Erdmann, & Hojat, 2002), which suggest that the source of cross-cultural anxiety differences lies in different views on socially desirable behaviour acquired in specific situations during the process of socialisation. These views in turn may differ across cultures. Ethnic differences in anxiety manifestations may be related to the choice of goals and evaluation of priorities characteristic of each particular culture.

A comparison of the STAI scores of working Latvians, Russians living in Latvia, Russians living in Russia (Hanin & Spielberger, 1983), Americans (Spielberger et al., 1983) and Germans (Laux, Glanzmann, Schaffer, & Spielberger, 1981) was performed

using t-tests. The time of data collection, occupation and age of respondents, and sample size were taken into account. The results show that A-trait scores of Latvian working male respondents and their German counterparts tend to be similar. In both cases, these scores are higher than the A-Trait scores of American working men. The mean A-Trait scores of Russian working women living in Latvia are higher than the A-Trait scores of German and American working adults.

Similar to the original sample from Russia³, Russian men and women living in Latvia scored higher in A-State and A-Trait than the working respondents in Germany and the USA. Moreover, A-State and A-Trait scores of Russians, both those residing in Latvia and in Russia, are higher than the scores of respondents from other countries. The results of research carried out in Estonia (Ott, Clark, & Ennuste, 1996) demonstrated that the anxiety scores of Russians living in Estonia exceed the anxiety scores of Estonians. Consequently, the anxiety levels of Russian respondents may be attributed to a shared characteristic of their ethnocultural group. These findings may be related to differing views on social behaviour patterns in specific situations inherent in the particular ethnocultural group (Magnusson, Stattin, & Iwawaki, 1983), especially as they pertain to social learning of appropriate behaviour in threatening situations. Unlike the original American sample on which STAI was validated, neither of the two samples investigated in Latvia, has grouped the items forming factor 1 into positive and negative statements. By analogy with the differences between the Japanese and American respondents noted by Iwata and Higuci (Iwata & Higuci, 2000), there are also cross-cultural differences between Latvian and American samples, these differences being affected by socio-cultural norms for evaluating positive and negative items. Both Latvians and Russians living in Latvia do not select the positive items as frequently as Americans, and do not choose the negative items as frequently as the Japanese.

The A-Trait scores of Latvian and Russian students living in Latvia slightly exceeded the A-Trait scores of Lithuanian students (Balaisis, 2004). The A-State and A-Trait scores of Latvian female students are similar to the scores of Lithuanian and Japanese (Iwata & Higuci, 2000) female students, although they are higher than the corresponding scores of the original American sample.

The similarity of the A-State and A-Trait scores of Latvian and Lithuanian students can be attributed to the shared historic background and similar social, economic and political conditions in the two countries. Moreover, students living in Latvia and Lithuania may have developed similar anxiety control mechanisms, although this assumption should be tested on the basis of more extensive and representative samples including additional occupational and age groups.

Another research limitation of this study was the selection of respondents, especially of Russians living in Latvia. These respondents held jobs or were students in institutions with a Latvian internal culture in which communication is carried in the state language, i.e., Latvian, and in which about 60 percent of personnel or students are ethnic Latvians. It would be also desirable to study the respondents from institutions with a Russian cultural environment, i.e., organisations with predominantly Russian personnel, internal communication in Russian

³ Scores of Russian original sample – STAI-X adaptation scores (Hanin & Spielberger, 1983)

language and predominant influence by the Russian media. Another limitation of the research is the use of the self-report method which does not allow to consider sufficiently the impact of any psychological defence mechanisms of the respondents. It would be advisable to carry out longitudinal studies in Latvia, which would make it possible to collect more detailed information on A-State and A-Trait characteristics among various age, gender and national groups, combining standardized self-report instruments with interviews.

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Students' Adjustment at Vilnius University: The Role of Self-Orientation, Locus of Control, Social Support and Demographic Variables

Mary Balaisis

Ontario Institute for Studies in Education, University of Toronto

Juris G. Dragūns

Pennsylvania State University

Solveiga Miežītis

Ontario Institute for Studies in Education, University of Toronto

This study examined student adjustment at Vilnius University and the role of self-orientation (idiocentrism – allocentrism), locus of control, social support and demographic variables in adjustment. This investigation took place in the year 2000, in the context of rapid social, political and economic change in Lithuania. Six hundred seventy three students participated. Students filled out ten measures and additional open-ended questionnaires. Data was analyzed using quantitative and qualitative methods. On the whole, students were found to be reasonably well adjusted. Good adjustment was related to internal locus of control, idiocentric self-orientation and perceived social support. Students' idiocentric self-orientation was moderately correlated with an internal locus of control, whereas allocentric self-orientation was modestly correlated with an external locus of control. Allocentric self-orientation was correlated with perceived and utilized social support. About a third of students reported significant financial problems and difficult living arrangements, both of which were related to adjustment problems. Recommendations and suggestions for future directions were provided.

Keywords: self-orientation, idiocentrism, allocentrism, locus of control, social support, demographic, adjustment, Lithuania.

Introduction and Literature Review

The purpose of this study was to examine first year students' adjustment at Vilnius University in Lithuania. Since breaking away from the Soviet Union, Lithuania has been a country undergoing profound societal transformation. This study sought to examine how students were adjusting to university ten years later, in the year 2000.

This study also sought to examine the role of self-orientation, locus of control, social support and demographic variables in adjustment. Adjustment was operationalized in terms of perceived wellness, state anxiety, trait anxiety, depression, psychological problems, physical problems and grades. Each variable of interest was chosen in light of social, political and contextual changes in the region.

Of particular interest was the premise that an underlying feature of the sociopolitical changes throughout Central and Eastern Europe has been the movement from collectivism to individualism (Reykowski, 1994, Czaplinski, 1994). Reykowski (1994) proposed that a salient feature among the many regional changes was a movement away from collectivist forms of societal organization and mentality toward individualist forms. As a consequence of these societal changes, people may be viewing themselves and the social world differently.

This study examined the implications of these social changes for student adjustment by assessing individualism and collectivism at the personality level, in terms of idiocentrism and allocentrism. Individualism-collectivism was first identified as a major and basic cultural dimension in the course of a worldwide study of work-related attitudes by Hofstede (1980). Triandis (1994) carried out a systematic research program on individualism-collectivism and developed a variety of instruments for its measurement. Collectivism refers to the experience of being embedded and integrated into a cohesive social group throughout a person's lifespan; individualism is descriptive of a person experiencing himself or herself as an autonomous, self-contained entity, separate and distinct from other persons and from one's family, community, and society (Draguns, 2004). The two corresponding self-orientations are referred to as idiocentrism and allocentrism. Idiocentrism refers to a person's beliefs, feelings and acts that are based on the assumption of his or her uniqueness. This attitude is widespread in individualist cultures. A sample statement expressive of idiocentrism is: "When I succeed, it is usually because of my abilities" (Singelis & Triandis, 1995, p. 207). Allocentrism describes a cluster of attitudes that accord prominence to a person's affiliations with other persons and groups over personal inclinations and preferences. This orientation is prevalent in collectivist cultures (Triandis, 1994). It is exemplified by the following statement: "I feel good when I cooperate with others" (Singelis & Triandis, p. 207).

This study also examined the role of locus of control in adjustment. During the Soviet era external control was imposed from Moscow. For persons living in Lithuania dictates from the Russian capital were an inescapable part of sociopolitical reality. This experience was expected to foster externality in locus of control. Conversely, resumption of independence may have predisposed many Lithuanians to a shift toward an internal locus of control. Researchers in North America and Western Europe have generally found internal locus of control to be correlated with good adjustment in college and elsewhere (Cone & Owens, 1991; Mooney, Sherman & Io Presto, 1991). Researchers from various parts of the world have found a relationship between allocentric self-orientation and external locus of control (Adamska, 1997; Menon, 1995; Yamaguchi, 1994). Proceeding from these findings, the relationship between locus of control and self-orientation among Vilnius University students was examined, together with the distribution of internal and external loci of control and with the relationship between loci of control and several indicators of personal adjustment.

The role of perceived and utilized social support in relation to self-orientation and adjustment was also investigated. During the Communist era, an interdependent and explicitly collectivistic system was imposed. Researchers have found a link between an allocentric self-orientation and social support (Perez, 1997; Sinha & Verma, 1994). This study sought to examine the relationship between allocentrism and social support, both perceived and utilized, at Vilnius University, in the context of rapid desovietization. Many researchers have found that social support is helpful when coping with stress and that it constitutes a significant predictor of adjustment to college (Pratt, Hunsberger, Pancer, Alisat, Bowers, Mackey, Ostaniewicz, Rog, Terzian, & Thomas, 2000; Watters, 1999). On the basis of these results, the role of perceived and utilized social support was explored in relation to adjustment among university students in Lithuania.

The role of demographic variables was also examined. Specifically, the variables studied in relation to adjustment and self-orientation included age, gender, place of birth,

residence before entering university, current place of residence, faculty, grades, marital status, number of children, if any; financial situation, receiving a stipend, working while studying, ethnicity, religion, participating in any clubs, sexual orientation, parents' marital status, and number of siblings, if any.

Method

In the spring of 2000, one thousand first year students from all of the twelve Faculties of Vilnius University were invited to take part in the present study. Almost seventy percent of students agreed to participate. There were 673 respondents included in the sample. An overview of their demographic characteristics is presented in Table 1.

Table 1. *Overview of Demographic Characteristics*

Descriptor	N	% of total sample	Missing scores
Current place of residency	Living with parents	333	49.5%
	University dorm	197	29.3%
	Renting separately	81	12.0%
	Other arrangements	59	8.8%
Grades	5–6	60	8.9%
	7–8	367	54.5%
	9–10	240	35.7%
Marital status	Single	656	97.5%
	Married	14	2.1%
	Separated	0	0
	Divorced	0	0
Children	Widowed	0	0
	0	641	95.2%
Financial situation	1+	12	1.8%
	Can buy what wish	8	1.2%
	Enough money	448	67%
	Enough money for food	189	28.1%
Stipend	Not enough money for food	20	3.0%
	Receive	325	48.3%
Work	Did not receive	346	51.4%
	Did not work while studying	607	90.2%
Ethnicity	Worked while studying	62	9.2%
	Lithuanian	570	84.7%
	Russian	48	7.1%
	Polish	33	4.9%
Religion	Other	16	2.4%
	Important to them	338	50.2%
	Undecided	130	19.3%
Clubs	Unimportant to them	196	29.1%
	Did not participate	445	66.1%
	Sports	94	14%
	Singing and dancing	50	7.4%
Sexual orientation	More than one club	5	.7%
	In clubs not mentioned here	64	9.5%
	Heterosexual	653	97%
Parents' marital status	Homosexual	4	.6%
	Married	527	78.3%
	Single	11	1.6%
Siblings	Divorced	89	13.2%
	Brothers	275	40.9%
	Sisters	212	31.5%
	Brothers and sisters	75	11.1%
	No brothers or sisters	111	16.5%

Participating students completed the following measures: Adams and Bezner's (1997) Perceived Wellness Scale, State and Trait Anxiety Inventory, Form Y (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), Beck Depression Inventory-Second Edition (Beck-II) (Beck, 1996), Gallagher's (1998) University of Pittsburgh Survey of Student Needs, Smith's (1990) University of Toronto Health Services Checklist, Singelis and Triandis' (1995) Instrument 1: Subjective Individualism and Collectivism, Triandis and Singelis' (1995) Instrument 2: Are you an Individualist or a Collectivist?, Levenson's (1981) Multidimensional Locus of Control Scale and Zimet's (1998) Multidimensional Scale of Perceived Social Support.

Prior to the administration of the main study, each of the above measures was translated into Lithuanian, back-translated into English, and then modified for use with Lithuanian participants. Three pilot studies were conducted in the process of adapting the instruments for use with the present population of participants.

Data Analysis

Data were analyzed using statistical methods, both descriptive and inferential. Specifically, t- tests, analyses of variance (ANOVAs), correlations and multiple hierarchical regression were utilized.

Results

In this study students at Vilnius University were found to be reasonably well adjusted. The mean and standard deviation for the Perceived Wellness score for students (N=579) was M=16.64, SD= 3.90. This score is slightly above the mean for populations of college students (M=16.49, SD=3.12) and white collar employees (M= 16.51, SD= 3.54) in the United States (Troy Adams personal communication, Aug. 2000).

State anxiety (M= 40.51, SD=13.43, N=631) and trait anxiety (M=44.11, SD=10.00, N=638) scores fell within normal range, although they were above the mean relative to Spielberger et al.'s (1983) United States norms. On BDI-II, Vilnius University students' obtained scores with a M of 11.31 and SD of 8.07, N=539. This finding places their mean within the lowest range (0–13) for depression (Beck, 1996). Students identified a range of psychological needs/problems and physical health concerns similar to those of students in the United States (Balaisis, 2004).

Vilnius University students tended to have higher scores for idiocentric self-orientation in comparison to the means for the validating samples as reported by Singelis and Triandis (1995) and Triandis and Singelis (1995). As Table 2 shows, idiocentric self-orientation was modestly correlated with better adjustment.

Table 2. *Correlations Between Self-Orientation and Student Adjustment to University*

	I1	I2	A1	A2	W	S-A	T-A	D	PsP	PhP	Gr
Idio1 (I1)	--	.19**	-.33**	-.26**	.24**	-.19**	-.32**	-.18**	-.16**	-.00	.01
Idio2 (I2)		--	-.13**	-.03	.15**	-.01	-.05	-.05	-.03	.04	.12*
Allo1 (A1)			--	.56**	-.01	.08*	.21**	.07	.16**	-.04	-.02
Allo2 (A2)				--	.03	.07	.16**	.12**	.12**	-.00	-.02
Wellness (W)					--	-.44**	-.64**	-.57**	-.46**	-.17**	.02
Anxiety state (S-A)						--	.61**	.57**	.44**	.12**	.01
Anxiety trait (T-A)							--	.70**	.57**	.10*	
Depression (D)								--	.54**	.16**	-.04
Psychological problems (PsP)									--	.27**	.04
Physical health problems (PhP)										--	.06
Grades (Gr)											--

Listwise N=569, *p<.05. **p<.01

Table 3 demonstrates that the internal locus of control was positively correlated with wellness and negatively with four indicators of poor adjustment: anxiety state, anxiety trait, depression, and psychological problems. The two components of externality, beliefs in chance and in powerful others, were found to be positively correlated with all four of the above measures of distress, i.e., anxiety state, anxiety trait, depression, and psychological problems, while wellness yielded negative correlations with both externality scores.

Table 3. *Correlations Between Locus of Control Orientation and Adjustment*

	I	PO	Ch	W	S-A	T-A	D	PsP	PhP	Gr
Internal (I)	--	-.26**	-.13**	.44**	-.25**	-.38**	-.30**	-.23**	-.02	.06
Powerful Other (PO)		--	.41**	-.40**	.29**	.43**	.32**	.35**	.11**	-.04
Chance (Ch)			--	-.22**	.17**	.24**	.22**	.18**	.00	-.07
Wellness (W)				--	-.43**	-.65**	-.57**	-.45**	-.17**	.04
Anxiety state (S-A)					--	.59**	.57**	.44**	.11*	-.01
Anxiety trait (T-A)						--	.71**	.56**	.12**	-.02
Depres-sion (D)							--	.53**	.16**	-.05
Psycholo-gical problems (PsP)								--	.28**	.02
Physical health problems (PhP)									--	.05
Grades (Gr)										--

Listwise N=569, *p<.05, **p<.01.

In Table 4 significant positive correlation coefficients were observed between both perceived and utilized social support and wellness. However, significant negative correlations were only found between perceived social support and three maladjustment indicators, anxiety trait, depression, and physical problems; no significant relationships emerged between utilized social support and measures of adjustment.

Table 4. *Correlations Between Perceived and Utilized Social Support and Student Adjustment to University*

	Perceived social support	Utilized social support	Well-ness	Anxiety state	Anxiety trait	Depres-sion	Psychological problems	Physical health	Grades
Perceived social support	--	.53**	.33**	-.07	-.16**	-.3**	-.09*	-.07	-.02
Utilized social support		--	.14**	.04	.06	.04	.07	-.02	.01
Wellness			--	-.44**	-.65**	-.58**	-.48**	-.21**	.02
Anxiety state				--	.60**	.58**	.44**	.11*	.02
Anxiety trait					--	.72**	.59**	.13**	-.03
Depres-sion						--	.57**	.17**	-.05
Psych problems							--	.28**	.03
Physical health problems								--	.09*
Grades									--

Listwise N=515, *p<.05. **p<.01.

In Table 5, both measures of idiocentric self-orientation were found to be positively correlated with internal locus of control, whereas the two indicators of allocentric self-orientation yielded significant positive correlations with both measures of externality, i.e. belief in chance and in powerful others.

Table 5. *Correlations Between Self-Orientation and Locus of Control Orientation*

	Idio1	Idio2	Allo1	Allo2	Internal	Powerful Other	Chance
Idio1	--	.18**	-.34**	-.26**	.23**	.21**	-.17**
Idio2		--	-.16**	-.04	.22**	.05	.00
Allo1			--	.55**	-.08	.12**	.11*
Allo2				--	.00	.13**	.21**
Internal					--	-.22**	-.12**
Powerful Other						--	.43**
Chance							--

Listwise N=570, *p<.05. **p<.01.

Table 6 reveals several significant correlation coefficients between allocentricity and social support; students with an allocentric self-orientation tended both to perceive and utilize social support to a greater degree than their counterparts who score low in allocentricity.

Table 6. *Correlations Between Self-Orientation and Social Support*

	Idio1	Idio2	Allo1	Allo2	Perceived soc support	Utilized soc support
Idio1	--	.14**	-.36**	-.26**	-.01	-.08
Idio2		--	-.18**	-.06	-.01	-.03
Allo1			--	.56**	.23**	.24**
Allo2				--	.23**	.31**
Perceived soc support					--	.54**
Utilized soc support						--

Listwise N=519, **p<.01

The results of stepwise regression analyses, presented in summary form in Tables 7–11, identified internal locus of control as the strongest predictor of wellness, followed by the two measures of idiocentrism, low allocentrism scores on both measures of this construct, and perceived and utilized social support. State anxiety was predicted by high scores referring to belief in powerful others, with negative weights for internal locus of control and perceived social support. Male gender was also a negative predictor of state anxiety. Internal locus of control emerged as the strongest negative predictor of trait anxiety, with additional predictors being: perceived social support (negative), belief in powerful others (positive), idiocentrism I (negative), utilized social support (negative). Belief in chance and male gender were found to be significant if weak predictors of state anxiety. Depression was predicted, in descending order, by internal locus of control (negative), belief in powerful others (positive), male gender (negative), and perceived social support (negative). Psychological problems were associated with financial situation and internal locus of control as the two most potent negative predictors, followed by belief in powerful others as a positive predictor.

Table 7. *Regression Analysis Summary of Self-Orientation, Locus of Control and Social Support Predicting Perceived Wellness*

	β	R ²	ΔR^2
Step 1		.37***	.37***
Idiocentrism 1	.09*		
Idiocentrism 2	.11*		
Allocentrism 1	.02		
Allocentrism 2	.07		
Internal locus of control	.31***		
Powerful Other	-.22***		
Chance	-.10*		
Perceived social support	.26***		
Utilized social support	-.03		

Listwise N = 485, *p < .05, **p < .01, ***p < .001

Table 8. *Regression Analysis Summary of Self-Orientation, Locus of Control, Social Support and Background Variables Predicting State Anxiety*

	β	R ²	ΔR^2
Step 1		.15***	.15***
Idiocentrism 1	-.07		
Idiocentrism 2	.03		
Internal locus of control	-.16***		
Powerful Other	.18***		
Perceived social support	-.14*		
Utilized social support	-.05		
Gender (male)	-.20***		

Listwise N = 517, *p < .05, **p < .01, ***p < .001

Table 9. *Regression Analysis Summary of Self-Orientation, Locus of Control, Social Support and Background Variables Predicting Trait Anxiety*

	β	R ²	ΔR^2
Step 1		.33***	.34***
Idiocentrism 1	-.17***		
Idiocentrism 2	.04		
Internal locus of control	-.27***		
Powerful Other	.22***		
Chance	.10*		
Perceived social support	-.23***		
Utilized social support	.15***		
Gender (male)	-.10*		

Listwise N = 498, *p < .05, **p < .01, ***p < .001

Table 10. *Regression Analysis Summary of Self-Orientation, Locus of Control, Social Support and Background Variables Predicting Depression*

	β	R ²	ΔR^2
Step 1		.21***	.21***
Idiocentrism 1	-.04		
Idiocentrism 2	.02		
Alloentrism 1	-.07		
Alloentrism 2	.09		
Internal locus of control	-.22***		
Powerful Other	.20***		
Perceived social support	-.15*		
Utilized social support	-.09		
Gender (male)	-.16***		
Financial situation (can buy what I wish)	-.12*		
Financial situation (sufficient)	-.10		
Financial situation (enough money for food)	-.02		

Listwise N = 491, *p < .05, **p < .01, ***p < .001

Table 11. *Regression Analysis Summary of Self-Orientation, Locus of Control, Social Support and Background Variables Predicting Psychological Problems*

	β	R ²	ΔR^2
Step 1		.23***	.23***
Idiocentrism 1	-.06		
Idiocentrism 2	-.10*		
Alloentrism1	.08		
Alloentrism2	.058		
Internal locus of control	-.23***		
Powerful Other	.17***		
Perceived social support	-.14*		
Utilized social support	.12*		
Gender (male)	-.09*		
Financial situation1 (can buy what I wish)	-.08		
Financial situation2 (sufficient)	-.32*		
Financial situation3 (enough money for food)	-.17		

Listwise N = 502, *p < .05, **p < .01, ***p < .001

Based on the demographic questionnaires, about a third of the students reported significant financial problems and difficult living arrangements, both of which were found to be significantly correlated with poor adjustment. On the basis of t-tests, students who reported experiencing financial problems scored lower at the .01 level of significance in wellness and higher in trait anxiety and psychological problems in comparison with their fellow students who reported absence of financial problems. At the .05 level of significance, participants with financial problems acknowledged more state anxiety and psychological problems. In the one-way analysis of variance, the effects of current place of residence were significant, at the .05 level upon a variety of indicators of well-being, such as feeling depressed, controlling temper, feeling inadequate, anxiety about public speaking, and discomfort in social situations. In all of these cases, students living in the often crowded and poorly appointed dormitories presented higher distress scores when compared with their peers who rented their own apartments or stayed with their parental families. Male students were significantly ($p < .05$) more idiocentric than female students. Female students obtained significantly higher ($p < .001$) chance scores, indicative of externality, than their male peers, and the score for perceived social support was significantly higher ($p < .001$) among male than among female participants.

Profiles for well adjusted and relatively poorly adjusted students emerged from the quantitative and qualitative data. In general, internal locus of control was found to be the best predictor of adjustment. Idiocentric self-orientation was also found to be more adaptive, although to a lesser degree than internal locus of control.

Low internal locus of control was the best predictor of poor adjustment and of emotional distress (state and trait anxiety, depression and psychological problems). Poorly adjusted students also reported difficulties with what Maslow (1970) described as physiological and safety needs, specifically in their longings for affiliation with others, social acceptance and approval and belonging to a group

Discussion

The major findings obtained highlight the relationship of internal locus of control and of idiocentric orientation to the adjustment of incoming university students. It is important to consider these findings in their sociopolitical and socioeconomic context. In 2000 Lithuanians were enjoying the benefits of restored national independence and individual freedom. These positive changes were, however, accompanied by a great many stresses associated with unregulated free market economy: widespread economic and personal insecurity, erosion of social guarantees and a precipitous decline in standards of living for many individuals. At the same time exciting opportunities were there to be grasped and risk taking held the prospect of high, if uncertain, rewards. There were more choices and fewer restrictions than before, but also the necessity to rely primarily or even exclusively upon one's own resources.

In light of the high incidence of self-reported financial problems accompanied by other social and economic stressors, it is somewhat surprising that the average level of self reported adjustment of Vilnius University students was as high as or even higher than that of students in affluent and economically developed Western countries. Over and

above the information collected in this study, future investigators may explore the nature of personal and social resources that helped students during this trying transition period to cope successfully with the challenges of living.

Internal locus of control appears to be important in the adaptive process because internally oriented persons tend to be self-starters. If a person attributes success to his or her own efforts rather than to external causes, he or she will be more motivated to persist and actively work not just to survive but to prevail. All of these considerations may enhance both performance and adjustment. Similarly, an idiocentric self-orientation promotes self-reliance but loosens obligations toward others. This cluster of internal and individualistic features appears to be in synchrony with the increasingly competitive and achievement oriented environment that prevailed at Vilnius University when the data for the present study were collected.

Recommendations

Questions raised by the results obtained are numerous. Was idiocentric orientation and internal locus of control prevalent and adaptive at this specific point in time, or are these characteristics more deeply rooted in the Lithuanian culture? In addition to replicating and extending the operations and measures of this study in the future, when the socioeconomic situation of the country may change, it may be worthwhile to consult culturological, ethnographic and literary sources in attempting to get closer to the more fundamental themes in Lithuanian culture that may be relevant to individualism-collectivism and internality-externality. Ultimately, continuity may be sought between the results reported herein and the themes, traditions, and beliefs uncovered by the investigators of the origins of Lithuanian culture (Gimbutas, 1963; Greimas, 1992; Velius, 1989). More generally, to what extent are idiocentricity and internality responsive to social change, as Reykowski (1994) hypothesized, and to what extent do they reflect deeply embedded attitudes and values that tend to be transmitted across generations? In pursuit of the same goal, research may also be extended across age, occupational, and other categories in order to obtain a broader and collectively more representative picture of the population of Lithuania and of its various segments.

Moreover, differences observed across genders suggest that another basic cultural dimension may be worth exploring in future research in Lithuania. In his multinational investigation, Hofstede (1980, 2001) identified masculinity-femininity as one of the five major and fundamental axes of differentiation among cultures. Basically, masculine cultures value productivity, and feminine cultures are focused upon caring. The clash between masculine and feminine values has assumed prominence in the new free market democracies of Eastern and Central Europe. This bipolar cultural dimension is all the more relevant to explore because of the centrality attributed by Gimbutas (1989) to feminine themes and images in ancient Lithuanian culture. Moreover, these concerns may reverberate in the psyches of contemporary Lithuanians. For these reasons, the interplay of masculinity and femininity in the process of adaptation among students and other groups within the Lithuanian society may be a worthwhile research topic to pursue. If implemented, such studies would extend and complement the results of present research.

This study was focused on the two principal noxious emotional states, anxiety and depression. The experience and self-report of positive emotions such as happiness and joy may be desirable to incorporate into future stages of the research program on adjustment, self-orientation and locus of control.

Replicating the operations of the present study beyond Lithuania, especially to the other two Baltic states and Poland, may provide additional valuable information. Once this objective is accomplished, the road would be clear to meaningful comparisons across the several countries of the region. The first step toward the realization of these objectives was taken by Voitkane and Miezite (2001) who collected data by means of the University of Pittsburgh Survey of Student Needs in a large sample of Latvian first-year university students. Comparisons were initiated with their Lithuanian counterparts. With some exceptions, the results pointed to similarity between Lithuanian and Latvian students not only in students' needs, but also in depression and anxiety indicators. Future studies may, however, succeed in pinpointing some differences and perhaps even in tracing them to the distinctive cultural nuances of the several interrelated nations of the region.

On the practical plane, helping students and others develop an internal locus of control may promote more effective coping and greater self-satisfaction. Persons who experience a sense of control over the situation in which they find themselves would bring to bear greater self-confidence in seeking solutions to challenges and problems of adaptation.

Along similar lines, greater awareness of self-orientation and its implications may also promote adjustment. Many of the participating students appeared to have little knowledge or information about self-orientation. Being knowledgeable about these characteristics may increase self-awareness and understanding of different ways of experiencing and perceiving self and other, and this knowledge may in turn influence decisions and action. In addition to disseminating information on these variables and on their practical relevance, innovative techniques may be utilized. Thus, Pedersen (1995) pioneered culture-centered workshop interventions by constructing synthetic cultures, including outspokenly individualistic ones. However, caution is indicated in implementing these recommendations. In particular, it is an open question at what point, context, and level, if any, individualistic self-orientation and internal locus of control may become counterproductive or dysfunctional. Conversely, it may be hasty and ill advised to discount possible adaptive aspects of externality and allocentrism. Clinical and social personality research may need to be combined in order to explore the possible complexities and paradoxes of these interrelationships. Neither idiocentrism nor internality should be hastily construed as superior. Research based knowledge may eventually provide indications concerning the optimally adaptive self orientations and loci of control in specific contexts and for specific purposes.

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Notes on authors

Ivars Austers

Ph. D., currently is an associate professor in psychology at the University of Latvia. His research interests include inter-group perception and judgments with a particular emphasis on the role of aims and interests represented in different perspectives, which people are able to take when attributing stereotypes and giving causal explanations of behavior by different social groups as well as social representations

Mary Balaisis

recently defended her dissertation in the area of Counselling Psychology at the Ontario Institute for Studies in Education of the University of Toronto. She is past president of the Toronto-based Association for the Advancement of Baltic Psychology. She has worked closely with colleagues from Vilnius University since 1990.

Juris G. Dragūns

is a clinical and cross-cultural psychologist, interested among other things in the processes of adaptation and problem resolution in the Baltic countries in the course of their postindependence political, economic and social transformation. Born in Riga, he completed grade school in Latvia, graduated from high school in Germany, and from college in the United States. He holds a Ph.D. from the University of Rochester and was awarded an honorary doctoral degree by the University of Latvia. He is now Professor Emeritus at The Pennsylvania State University.

Aleksandrs Koļesovs

received his M Psych. from the Department of Psychology, University of Latvia in 2002 specializing in clinical psychology. He continues his studies on social psychology in the doctorate programme. He is a lecturer at the University of Latvia. Member of the International Society for the Study of Behavioural Development. Research interests: time perspective, adolescence.

Solveiga Miežītis

Ph.D., is a professor in the Department of Adult Education, Community Development and Counselling Psychology at the University of Toronto and Associated Professor of Psychology at the Department of Psychology, University of Latvia. Her main areas of research are in Adolescent Depression, Resiliency, and Coping. She teaches courses on Depression, Creativity and Wellness, Consultation, and Effecting Change.

Viesturs Reņģe

is professor of psychology at the University of Latvia. His fields of interest are personality psychology, social psychology and organizational psychology. His current research deals with social representations of science in contemporary Latvian society.

Daina Škuškovnika

Dr. psych., docent at the Department of Psychology, University of Latvia. Lectures on social psychology, conflict study and psychologist's professional work. Doctoral dissertation "Ethnic Differences in Stress and Alarm. Works under a grant "Social Adaptation problems for Teenagers in Latvia".

Notes for authors

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