

UNIVERSITY OF LATVIA

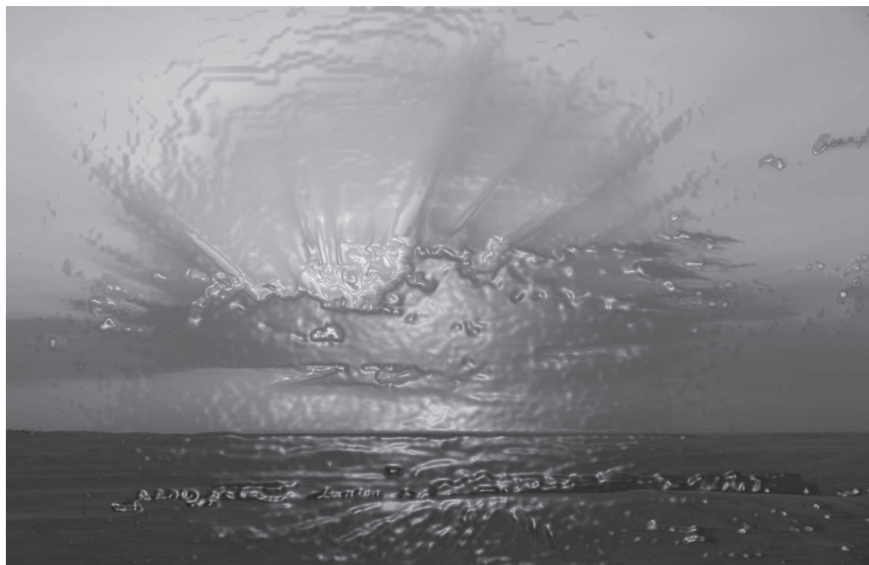


LATVIJAS UNIVERSITĀTE



Baltic

JOURNAL OF PSYCHOLOGY



Baltijas

PSIHOLOĢIJAS ŽURNĀLS

ISSN 1407-768X

2006, Vol. 7, No. 1
2006, sēj. 7, Nr. 1

2006, Volume 7, Number 1

Editors

Solveiga Miežītis, Ph.D, University of Latvia, University of Toronto

Malgožata Raščevska, Dr. Psych., University of Latvia

Members of International Editorial Board

Imants Barušs, Ph. D, University of Western Ontario, Canada

Linus A. Bieliauskas, Ph. D, University of Michigan Medical Center, USA

Robert L. Burden, Ph. D, University of Exeter, United Kingdom

Arthur Copley, Ph. D, University of Hamburg, Germany, Australia

Juris G. Draguns, Ph. D, Pennsylvania State University, University Park, USA

Ilze Kalniņš, Ph. D, University of Toronto, Canada

Ārija Karpova, Dr. habil. psych., University of Latvia

Rimas Kočiunas, Ph. D, Vilnius University, Lithuania

Thomas Oakland, Ph. D, University of Florida, USA

Aldis Putniņš, Ph. D, University of South Australia

Viesturs Reņģe, Dr. Psych., University of Latvia

Sandra Sebre, Ph. D, University of Latvia

Bernie Stein, Ph. D, Ministry of Education, Israel

Antanas Valantinas, Ph.D, Ministry of Education and Science, Lithuania

Authors should submit manuscripts to:

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

Cover design: Svetlana Narkevica

Layout: Latvijas Universitātes Akadēmiskais apgāds

ISSN 1407 - 768X

© Department of Psychology, University of Latvia, 2006

Contents

Introduction: Special Edition of VII International Baltic Psychology Conference Addresses and Presentations <i>Sandra Sebre</i>	4
KEYNOTES' PRESENTATIONS	9
Psychology in the Baltic Countries Between 1991 and 2006: An Outsider's Perspective <i>Juris G. Draguns</i>	9
Functional Creativity: A Socially-Useful Creativity Concept <i>Arthur Cropley</i>	26
Quantum Theories of Consciousness <i>Imants Barušs</i>	39
PRESENTATIONS OF EMPIRICAL AND THEORETICAL STUDIES	46
Student Motivation for Choice of Study Program, Psychological Well-being, Perceived Social Support and Needs at the Start of University Studies <i>Sarmīte Voitkāne, Solveiga Miezīte, Malgožata Rasčevska, & Mār tiņš Vanags</i>	46
Investigating Personality in Different Levels of Cognitive Ability <i>René Mōttus</i>	60
PROFESSIONAL EXPERIENCE IN BALTIC STATES	68
Pre- and Postadoption Psychological Services Available for Lithuanian Adoptive Families: Where do We Stand? <i>Julija Gaiduk</i>	68
Notes on Authors	77
Notes for authors	79

Introduction: Special Edition of VII International Baltic Psychology Conference Addresses and Presentations

Sandra Sebre

University of Latvia

This current issue of the Baltic Journal of Psychology has a special focus on keynote speeches and papers which were presented at the VII International Baltic Psychology Conference, held June 15 – 17, 2006 in Riga, Latvia, with the theme “Baltic Psychology in Global Context: Where Do We Stand?” The conference participants included representatives from Latvia, Estonia, Lithuania, Russia, Sweden, Great Britain, Germany, Australia, Canada and the United States.

President of Latvia Vaira Vīķe-Freiberga honoured the conference with a special Presidential Address during the opening ceremony. As former professor of psychology at the University of Montreal and former President of the Canadian Psychological Association, Vaira Vīķe-Freiberga spoke very directly and specifically about the challenges and opportunities faced by psychologists in the Baltic countries. She emphasized that the contemporary political situation enables freedom to engage in global scientific exchange and creates the necessity to confront issues which call for scientific study within the specific sociocultural context of the Baltic countries. The President elaborated upon various important topics of psychological research which could and should be addressed, including issues pertinent to the multicultural context of the Baltic countries, which thereby provides opportunity to study various aspects of bilingualism, and to engage in research aimed at increased understanding of factors which facilitate tolerance. The President also directed attention to the specifics of the geographical location of the Baltic states and the socioeconomic situation in relation to clinical symptomatology such as depression, making reference to the link between geographically induced seasonal darkness and exacerbation of depressive tendencies, but also calling for the need to study depression in relation to alcoholism, socioeconomic difficulties and conflictual traumatic crisis situations at the interpersonal level.

This special edition of the Baltic Journal of Psychology includes articles based upon the conference keynote presentations of three of the conference keynote speakers – Juris Draguns (USA), Arthur Cropley (German, Australia) and Imants Barušs (Canada). Also included are conference presentation based articles by Rene Mottus (Estonia), Julija Gaiduk (Lithuania), Sarmīte Voitkāne, Solveiga Miezīte, Malgożata Raščevska and Mārtiņš Vanags (Latvia). In the next volume of the journal will be included keynote presentation by Lars-Goran Nilsson (Sweden) and other conference presenters.

The opening paper of this volume “Psychology in the Baltic countries between 1991 and 2006: An outsider’s perspective” by Juris Draguns, Pennsylvania State Uni-

versity, provides an incredibly admirable and encompassing overview of research achievements in the Baltic countries during the period of renewed independence, in spite of limited financial resources. Draguns makes use of his incredible knowledge base, available publications from previous and contemporary periods, and deepened understanding of psychology within the sociohistorical context in order to present an overview in answer to the question posed by the conference theme: “Baltic Psychology in Global Context: Where Do We Stand?” Although Draguns insists that his article makes “no pretense of comprehensiveness or definitive review” and includes perhaps somewhat more information regarding the situation in Latvia, the Baltic country where he has more extensive contacts, nevertheless, the article provides insight regarding significant research movements in all three Baltic countries. Finally, Draguns also points to future directions for psychological research in the Baltics, calling for the necessity to expand contacts with researchers in other countries nearby, and to expand research programs regarding issues concerned with the universal foundations of psychology. Draguns provides encouragement to continue cross-cultural research endeavours, but with special focus upon examining and comparing psychological phenomena between the three Baltic countries, which has not been yet done. In regard to research concerning interethnic relations, Draguns points to the need of studying and reporting upon those intervention and remedation approaches which are most effective in fostering interethnic tolerance and cooperation.

The keynote presentation paper “Functional Creativity: A Socially-Useful Creativity Concept” by professor Arthur Cropley, University of Hamburg, brings to the forefront issues which are currently very relevant and with important practical implications in the Baltic states. As the author points out, the Latvian government in its National Development Plan specifically lists as high priority the importance of the development of an “Educated and Creative Person”. In this article Cropley provides a brief historical overview of previous theoretical conceptualizations of creativity, which were often based upon the importance of creativity in enhancing the self, for example, as an aspect of self-actualization. Cropley calls for a more socially useful creativity which is based upon the premise that creativity needs to be functional, and can be assessed according to the following criteria of the creative product: novelty, effectiveness, elegance and generalizability. He also emphasizes that in order to achieve this result, there must be a solid base of acquired knowledge – the “Educated Person”. Cropley refers specifically to the need for teachers to promote and facilitate creative thinking in light of these criteria which enable assessment and reward for novel, effective, elegant and generalizable products of the creative process.

These insights and principles provided by Cropley regarding the need for functional creativity are precisely what is needed in order to promote the development of an “Educated and Creative Person”. It is quite clear in reading the Latvian National Development Plan that the underlying aim is that the “educated and creative” person will proceed to be a major player in the development of innovative and useful new technology, methodology, etc. which will then further the economic growth and development of the nation. The Latvian educational system must now accept this challenge. The insights and principles provided by Cropley could serve as a very effective facilitator of this process, providing a foundation from which teachers could be

encouraged in recognizing and accepting the usefulness of creativity and in fostering creative products and results. Cropley asserts that teachers in other countries have often discouraged novelty or originality in the classroom, and that this seems to be a “universal problem”. Hopefully, increased understanding of the benefits of functional creativity will encourage “universal solutions” and enable teachers also in the Baltic countries to value and encourage the creative process leading to the functional creativity. It seems that Baltic psychologists, especially those with close ties to the educational system, could and should be important mediators of this functional creativity enhancing process.

Keynote speaker at the Baltic Psychology Conference was also professor Imants Barušs, University of Western Ontario, whose paper included in this volume is “Quantum Theories of Consciousness”. This paper provides an initial overview and insight regarding one aspect of the topic of his conference keynote presentation “Recent Advances in Consciousness Research”. Due to the time limitations of the conference, Barušs did not address the issue of quantum theories in relation to consciousness in his presentation, but agreed to give readers the opportunity to gain some insight into these aspects by providing the paper included in this volume. This paper will probably be most understandable to those who have at least a basic understanding of contemporary physics, particularly an understanding of the principles of quantum physics theory and methods. However, even for those of us who do not have such understanding of contemporary physics, there are certain implications of this paper which are of significance and relevance in thinking at our level of more traditional psychological constructs and approaches.

Essential in this regard is to acknowledge the significance of understanding and knowledge which can be gained through interdisciplinary approaches. At present understanding of the psychological processes of the mind are tied closely to knowledge of brain functioning provided by research in neurobiology, today referred to as neuroscience. Thereby, brain processes are studied primarily at the neuronal level, with particular emphasis in understanding neurochemical transmission and studying the interrelationship of neurochemical activity in different parts of the brain as it is observed with the advantages of modern brain imaging techniques. However, what Barušs argues is that research and understanding of brain functioning at the neuronal level does not provide understanding or explanation of the phenomena of consciousness. Instead, Barušs proposes that a more useful line of research in regard to understanding consciousness is to look at the principles and insights provided by contemporary physics, in particular certain principles of quantum theory. In simplistic terms, what this implies is to look “beyond” the neuron – to consider the processes which are taking place at the quantum level, at the level of subatomic particles (i.e. photons, neutrinos, quarks, W bosons).

Barušs asserts that traditional approaches to studying brain functioning have implicitly been based upon principles of classical physics, which “have been known to be fundamentally false for three-quarters of a century”. From historical overviews of quantum physics, we know that the birth of quantum physics is attributed to a paper by Max Plank in 1900, and that already in 1927 Niels Bohr and Werner Heisenberg

were presenting evidence that at the subatomic level, in order to measure the position and velocity of a subatomic particle one must bounce other subatomic particles off of it, and this process causes the original subatomic particle to move significantly. This means that the velocity of the subatomic particle has been altered during the process of measurement. Hence, the Heisenberg Uncertainty Principle states that at the subatomic level it is impossible to know both the position and the exact velocity of an object at the same time. There is general agreement among quantum physicists that at the subatomic level “the observer affects the observed”, or otherwise stated “in the realm of quantum physics observing something actually influences the physical processes taking place.” Although Barušs does not delve upon this relationship between the observer and the observed further in this paper, in previous publications he has pointed out that this principle from quantum physics has implications in regard to discussions of the possibilities of a purely “objective science”, unimpeded by the observer/researcher. Barušs has noted the effect of the observer’s choice of the matter to be studied, the methods of study which are chosen, and how these choices affect the end result of the research process.

In regard to psychological processes, in the paper presented in this volume Barušs refers to contemporary theoretical propositions based upon quantum physics principles which could provide explanation of psychological processes such as memory recall, and the effects of cognitive-behavioral therapy in the treatment of obsessive-compulsive disorder. Further, Barušs refers to various scientists who are conducting research which involves examining the possible relationships between consciousness and processes in the brain at the subatomic level of electron potentialities and electron cascades. Barušs ends the paper with brief discussion of a “more radical notion in quantum theory that physical reality as such emerges from a pre-physical substrate.” There is further suggested a link between consciousness and the pre-physical substrate. Barušs writes: “It is not that quantum theory explains consciousness, but rather that quantum theory allows for the understanding of a possible relationship of consciousness to physical matter.”

Rene Mottus, University of Tartu, examines the methodological problems of self-report personality assessment of individuals with lower cognitive ability levels in the paper “Investigating Personality in Different Levels of Cognitive Ability”. Mottus analyzes theoretical perspectives regarding the relationship of personality and cognitive ability, points to psychometric aspects of such comparisons, and presents the argument that individuals with lower cognitive ability have more difficulty in understanding items of traditional personality assessment measures. Therefore, Mottus points to the need for more simple and readable assessment instruments. This paper by Mottus provides a vivid illustration of the achievements and insights in personality testing which have been achieved by researchers at the University of Tartu, as also mentioned by Draguns in this volume.

The paper by Sarmīte Voitkāne, Solveiga Miezīte, Malgožata Raščevska and Mārtiņš Vanags, University of Latvia, concerns “Student Motivation for Choice of Study Program, Psychological Well-being, Perceived Social Support and Needs at the Start of University Studies”. This empirical study provides analysis of differences in

various aspects of psychological well-being, perceived social support and students' needs in relation to three study motivation factors: Career orientation, Interest orientation, and External influences (extracted in the study using principal component analyses). The results indicate differences in study motivation factors between different student demographic groups.

The professionally oriented article on "Pre and Postadoption Psychological Services Available for Lithuanian Adoptive Families" by Julija Gaiduk, Lithuania Christian College, provides an overview of the problems and complexities faced by psychologists in regard to the needs of adoptive parents. Whereas the needs of the adoptive parents are great in regard to their difficulties with adaptation to the new situation and its uncertainties, there is need for increased psychological assistance, especially in the post-adoption period. Psychologists also call for the necessity to receive additional specialized training regarding these issues.

Hopefully this special edition will provide insight regarding the achievements already attained by psychology researchers in the Baltic countries, give impetus to new and innovative research ideas as outlined by the conference keynote speakers, and contribute as a general source of inspiration for the advancement of psychology in the Baltic countries, as initiated in the conference opening address by President of Latvia Vaira Vīķe-Freiberga.

KEYNOTES' PRESENTATIONS

Psychology in the Baltic Countries Between 1991 and 2006: An Outsider's Perspective

Juris G. Draguns
Pennsylvania State University

Following the restoration of independence, psychology in Estonia, Latvia, and Lithuania has experienced an unplanned growth and open-ended transformation. An overview is provided on the developments in the various areas of inquiry, research, and application. Cross-cultural research and the investigations of interethnic relations, neither of which were substantially represented in the Baltic republics during the Soviet era, have grown rapidly, and major research effort has been undertaken to validate and adapt a variety of personality, intelligence, and other tests. Attachment styles and mother-daughter relationships have emerged as major topics of investigation, especially in Latvia. In general, Baltic psychologists have concentrated on research in applied clinical, industrial, and educational areas as well as on social, developmental, and personality psychology, although experimental psychology continues to be represented, notably in Estonia. Suggestions for areas of future study are appended.¹

Keywords: psychology in Estonia, Latvia, and Lithuania, cross-cultural research, Baltic psychologists.

In the period of fifteen years following the disintegration of the Soviet Union, psychology in the three Baltic states has undergone a momentous transformation. My task in this article is to sketch the nature of these changes and to describe some of the characteristic developments that have occurred in this time span. The account is written from the outside perspective of a participant observer who returned to his native country, Latvia, for numerous, though for the most part, short stays and who also visited Estonia and Lithuania on several occasions. Although the article purports to extend to the entire Baltic region, for reasons of intensity of contact and language skill it is more informative about Latvia than about its two neighbouring countries. In any case, there is no pretence of comprehensiveness or a claim of providing a definitive review, let alone a reasoned critique. The content of the article then is admittedly impressionistic and, inescapably, somewhat subjective.

Before 1991: Psychology during Independence and Soviet Rule

The state of psychology in the Baltic countries before 1940 is amply documented and does not need to be recapitulated (Bagdonas, 1996; Drillis, 1957; Niit & Draguns,

¹ *Author's note. Correspondence concerning this article should be addressed to Juris G. Draguns, e-mail: jgd1@psu.edu*

2000; Zusne, 1976). Suffice it to say that psychology was developing along the same lines as elsewhere in Europe: Experimental and statistical methods were being established, applications to industry, schools, and mental health were being sought, and the general public was aware of current trends in psychological conceptualization. With the imposition of Soviet power, the preexisting institutional structures for teaching and applying psychology were virtually dismantled, and achievements of Baltic psychologists before 1940 were denigrated and dismissed as subjective and idealistic. In the 1940's and early 1950's the ideology foisted upon the Baltic states was exceptionally dogmatic and restrictive even by Soviet standards (Petrovsky, 1990; Stepanov, 2001). As a result, psychology in the Baltics experienced three concurrent trends: The official ideology served as the ultimate criterion of what was permissible to teach, investigate, or write, bureaucratic controls were imposed upon all facets of academic and professional activity; and this control was centralized. As Bagdonas (1996) pointed out, the confluence of these restrictions led to reduction of research output, lowering of standards, and meagre allocations, as the three Baltic Republics were regarded peripheral in location and importance. As a consequence, status and image of psychology declined relative to other disciplines, and psychology in the Baltic region remained an essentially academic, field with few if any applications. Moreover, the conception of inner personal world was dehumanized, dogmatic views held sway and brooked no contradiction, and, unlike North America and Western Europe, psychology was never incorporated into popular culture (cf. Bagdonas, 1996).

Despite these strictures, psychology in the three republics survived. It did so by adapting in a number of ways. Thus, ideologically safe topics were pursued and sometimes investigated with great technical skill and conceptual sophistication. Contracts with various institutions were negotiated, and self-supporting agreements were concluded (Bagdonas, 1996). Baltic psychologists gradually succeeded in carving out niches of relative autonomy, especially as ideological constraints upon psychology were increasingly relaxed, though not completely rescinded, during the last decades of Soviet domination. In the process, continuity with pre-Soviet trends and emphases of activity was maintained or partially restored. Thus, Konstantin Ramul at Tartu University was instrumental in assuring the continuation of traditional psychophysical, perceptual, and cognitive research (Niit & Draguns, 2000). Similarly, at Vilnius University, after some ups and downs, distinctively Lithuanian research on personality, social psychology, and cognition was pursued (Bagdonas, 2001). Estonia emerged as the center of environmental psychology for the entire Soviet Union (Niit, Heidmets, & Kruusvall, 1994), and a significant contribution was published on the application of the culturalist approach to verbal thinking (P. Tulviste, 1991). In Latvia, where the break with pre-Soviet traditions and practices in psychology had been more thoroughly and ruthlessly executed, psychologists concentrated on investigating personality, motivational, and attentional factors, mainly in the school context (Niit & Draguns, 2000; Zusne, 1976).

After 2001: Challenges and Difficulties of Transformation

When Soviet power collapsed in August 1991, psychology in the newly independent Baltic countries faced both challenges and opportunities. Taboos upon conceptu-

alization, research, and application disappeared without a trace, but so did sources of support. Pluralism replaced dogmatism, and fascination with previously forbidden areas of professional activity and currents of thought ensued. Major, previously proscribed Western theories, such as psychoanalysis, were reintroduced, and there was a rush to apply, adapt, and validate intelligence, personality, and other tests. At the same time, a host of schools on the fringes of scientific psychology or beyond them made an appearance and attracted followers (Renge, 2003).

Contacts with Western psychology were rapidly re-established. At the First Baltic Congress of Psychology at Lielupe, Latvia, psychologists of Baltic birth or descent from Canada, United States, Australia, United Kingdom, and Sweden participated together with their colleagues who had kept psychology alive in the Baltics during the Soviet era. At the same time, the Association for the Advancement of Baltic Psychology based in Toronto emerged as a major catalyst of exchanges and collaborations with psychologists in the Baltics that continue to bear fruit to this day. At the Congress in Lielupe, Draguns (1994) urged Baltic psychologists to initiate studies on interethnic relations and to pursue cross-cultural research in the Baltic context. Over the ensuing twelve years, both of these areas of investigation have experienced explosive growth.

The rather narrow slot for psychological as an auxiliary field of study to pedagogy was expanded beyond schools into industry, mental and behavioral health, courts of law, correctional institutions, police work, and the military establishment. During the Soviet era, open-ended investigation of social problems and stresses was discouraged. Once these prohibitions were removed, Baltic psychologists plunged into research and intervention on a great many previously taboo topics. Varnik (1991) reported on the fluctuations of Estonian suicide rate between 1921 and 1989. Gailiene (2000) studied the distribution of suicides in Lithuania as well as characteristic attitudes toward it and proposed a suicide prevention model encompassing both direct and more general approaches. Research and program development on child abuse was initiated and vigorously pursued, as exemplified by an international project with prominent Latvian and Lithuanian participation (Sebre, Springevica, Novotni, Bonevski, Pakalniskiene, Popescu, Turchina, Friedrich, & Lewis, 2004). A study of attachment styles, child abuse, and violence in intimate relationships was conducted in Latvia (Bite, 2002). More recent work along these lines focused on the symptoms experienced in early adolescence by Latvian victims of earlier childhood abuse (Lebedeva, 2006) and targeted breaking the cycle of abuse behavior across generations (Sebre & Lebedeva, 2006). Podziunas (2006) investigated the complexities of the relationship of severity of symptoms of Latvian adolescent victims of childhood abuse to both the level of abuse and the extent of awareness of such experience. Attitudes toward prostitution were explored in a sample of Lithuanian adolescent girls (Navaitis & Caplinskas (2004), and characteristics of Lithuanian drug abusers were described by Leonavicius (1998). Trends over the entire range of juvenile criminal antisocial behavior in Latvia were surveyed by Kristapsone (2001), including drug and alcohol abuse and prostitution, and the broader issue of antecedents and correlates of aggressive behavior in childhood was addressed by Zukauskiene (1998) in Lithuania. Based on Western models and experience, the range of research and program development was extended to health promotion through identification and remediation of mental and physical distress in

schools. Within the framework of World Health Organization's Cross-National Survey of Health Behaviour in School-Aged Children, extensive data were collected in Latvia on self-reported depression and attitudes toward school, and trends over time and across genders and age levels were mapped (Kalnins & Ranka, 2000; Miežitis & Kalnins, 1995; Miežitis, Kalnins, & Ranka, 2001; Ranka, Miežitis, Kalnina, & Ervina, 1996). In 1990, Latvian scores on the Children's Depression Inventory were considerably above the mean for the standardization sample; by 2000 they corresponded to North American and Western European norms. The consequences of depression in social and scholastic functioning were also identified, and the role of parents' and teachers' support in preventing or reducing depressive manifestations was demonstrated (Nobel, Miežitis, & Ranka, 2003). Under the same auspices, Sagrati, Dunlap, Miežitis and Ranka (2002) performed a major survey of smoking among adolescents in Latvia and compared the characteristics of smoking teenagers and of their nonsmoking peers. In Lithuania, Jusiene, Bielauskaite, Cimbalistiene, and Kucinskas (2002) provided data on adjustment of children with phenylketonuria. In Estonia, Cohn (1998) reported on the correlates of Eating Disorder Scale scores in preadolescent and adolescent girls, and Isat (1996) shared observations based on grief counseling with children who lost family members during the *M/S Estonia* disaster in September 1994, and this catastrophe sparked the founding of a comprehensive crisis intervention center in Tallinn (1996).

At the University of Latvia, Voitkane and Miežite (2001) surveyed first-year students' adjustment problems. In the course of subsequent research, Voitkane (2003, 2004) demonstrated positive relationships between psychological well-being and life satisfaction as well as hope of attaining life goals and presence of social support. Depression was negatively correlated with these variables.

Popular interest in and curiosity about psychology sparked increasing representation of psychologically relevant themes in electronic and print media, highlighting the need for quality control in psychological reporting and popular writing. Renge and Austers (2004) found, however, that in Latvia the link between science and psychology was weak and tenuous even in the social representations of university faculty members. Instead, psychology tended to be anchored in, presumably intuitive, wisdom rather than in empirically and systematically grounded science. It would be interesting and instructive to replicate research on social representations of psychology across time and also to compare the conceptions of what the psychologists do and on what basis across the three Baltic states. Of greater practical relevance, legislation on credentialing psychologists remains absent or incomplete, and the need for it assumes an ever greater urgency.

Current Trends and Characteristics: Baltic Psychology Fifteen Years after Independence

Similarly to a number of countries in which psychology is new or has been recently re-established, researchers in the Baltics have immersed themselves into problem areas of great relevance and complexity. In this manner, they are attempting to contribute to the resolution of social entanglements and dilemmas that their societies are facing. Current research in the Baltics attempts to do justice to real-life problems

that are multifaceted and ramified. This challenge calls for the combination of appropriate and diverse research methods in a rigorous yet flexible manner. Special attention has been paid to the development and use of sophisticated qualitative research methods (Cropley & Rascevska, 2004; Renge & Austers, 2004), and Baltic psychologists (Maslovska, 2004, Rakfeldt, 2003, Sebre, 2000) shuttle easily between qualitative and quantitative approaches in dealing flexibly with the objects of their investigations.. Fortunately, the tendency to subordinate the problem to a rigorous if rigid research design has not been characteristic of Baltic researchers.

Under Soviet rule, empirical, open-ended research on unresolved social problems and on potentially conflictual intergroup relations was frowned upon. During the five decades of Soviet domination, there was a major influx of Russian speakers, especially in Latvia and Estonia. Integrating these newcomers and their descendents into the civil society of the Baltic states continues to be a major challenge for policymakers and citizenry alike. Psychologists have plunged into this area of investigation and have produced noteworthy findings.

Studies in Estonia (Hansen & Stsipletsova, 1994; Valk, 2001) document the complexity of ethnic stereotypes by both Russians and Estonians and highlight the fact that for both ethnic groups the traits attributed to the other nationality are not entirely or even predominantly negative. These findings are broadly consonant with those by Latvian researchers (Austers, 2002a, 2002b; Dimdins, 2003; Ruza, 2001). Social psychologists have also brought to light more problematic aspects of Baltic interethnic relations, such as the complex relationship of ethnic pride and differentiation, both of which bolster ethnic identity, yet may contribute to the devaluation of the other group (Valk, 2001) and decreasing tolerance (Sebre, 2000). Results are moot on insecurity levels of ethnic Russians in the Baltic states in comparison with members of the respective titular nationalities. Thus, Ott, and Ennuste (1996) concluded on the basis of opinion polls in Estonia that ethnic Russians tend to feel less secure than their Estonian counterparts. Skuskovnik (2004) in Latvia relied on self-reported anxiety test scores and failed to find a clear association between anxiety and ethnicity. Instead, the pattern of findings was complex, pointing to a variety of interactions, with some Russian subsamples more anxious than their Latvian counterparts, and vice versa. Similarly, Robinson and Breslav (1996) found that relative deprivation in the form of loss of power did not affect adversely the self-concepts of Russian high-school shortly after the demise of Soviet power. Several of the studies of intergroup relations were conceived within explicit theoretical frameworks of contemporary social cognition (Austers, 2002a; 2002b) Dimdins, 2003; Robinson & Breslav, 1996). Thus, they shed light on a unique situation of interethnic contact, yet are relevant to elucidating phenomena of intergroup relations regardless of their locale. As an offshoot of ethnic comparison, research has appeared on conditions that promote tolerance, in Latvia and beyond its borders (Makarevich, 2001; Sebre, 2000; Sebre, Gundare, & Plavniece, 2004).

Overshadowing specific results, the accumulated data point to a remarkable "lack of interpersonal hostility" (Heidmets & Lauristin, 2002, p.326) across ethnic lines, a finding consistent with the conclusions of other researchers (Putnins, 2000; Ruza, 2001). It is also complementary to the reports of compatibility of values of Russians and those of Estonians (Heidmets & Lauristin, 2002) and Latvians (Dimdins, 2003).

Perhaps Heidmets and Lauristin (2002) were not presumptuous in suggesting that parties to ethnic conflict elsewhere have something to learn from the copiously documented Estonian, and by implication Latvian and Lithuanian, experience in handling, though as yet not definitively resolving, a difficult situation of ethnic contact and interaction. And psychologists in the Baltic countries can certainly claim to have made a substantial contribution to this data base.

The effect of the sudden, though peaceful, political and economic change in the Baltic states upon behavior and experience is another potential subject of investigation. American researchers, Bergquist and Weis (1994) collected, with the help of Estonian colleagues and collaborators, narratives of the experience of restored independence as early as 1992. Their phenomenological account has the advantage of directness and immediacy of experience, but allows for relatively few generalizations. Rakfeldt (2003) combined quantitative and qualitative methods of inquiry addressed the singular importance of mental maps, memories, and life stories in preserving Estonian national identity through the decades of Soviet rule. The vital role of close ties to parents and grandparents, of memories orally transmitted or preserved through books, and of an attitude of superiority toward the Soviet occupiers were some of the major influences upon preserving an Estonian identity across generations. Conversely, several researchers have raised the issue of the possibly enduring effects of socialization into the Soviet society. Thus, a spirited debate ensued (Allik & Realo, 1996; Draguns, 1999; Gulens, 1995; Noor, 1994; Sebre, 2000), but no hard data have as yet been generated. On the trauma of Soviet incarceration and deportation, Vidnere (1997) and Vidnere and Nucho (2000) made a start by collecting self-reports on the adjustment and coping of Latvian ex-deportees. Moreover, an extensive sample of these survivors continues to be investigated, and a research conference in Vilnius chaired by Dainute Gailiene featured several papers on the political persecutions in the Baltic region and their sequelae. There is a paucity of data on the stresses on individuals and families suffered following the dislocations in the wake of the collapse of the Soviet command economy, a topic that Kutsar (1995) has addressed in his Tartu University dissertation.

Importation and Validation of Psychological Tests

Under the Soviet regime, standardized tests were proscribed. They could not be developed, investigated, used or interpreted. In the 1970's and 1980's these prohibitions were no longer systematically enforced, and some personality scales started to be translated and adapted in Lithuania (e.g., Gostautas, 1972). At approximately the same time, work on the construction of intelligence tests began in Latvia (cf., Renge, 2003).

After the restoration of independence, Baltic psychologists rushed to make up the fifty-year lag. Only a few examples of this continuing effort will be presented. Perhaps the most impressive achievement in this regard is the Estonian validation of NEO-PI-R (Allik & McCrae, 2002) following which Estonian psychologists took a leading role in coordinating the worldwide effort of developing internationally comparable versions of this major five-factor personality test. In Latvia, steps in pursuit of the same

general goal have been taken by participating in the International Personality Item Pool as a stepping stone toward the eventual construction of an international five-factor test (Gabrane, 2001).

At this point, research is underway toward the construction and validation of the Latvian version of MMPI-II. (S. Sebre, Personal communication, December 2006) In Lithuania, Eysenck Personality Inventory was standardized as early as 1991 (Eysenck, Pakula, & Gostautas, 1991). Among the more "narrow band" personality scales, Spielberger's State-Trait Anxiety Inventory (STAI) has been translated, adapted, and revalidated in Latvia (Skuskovnika, 2003) Applied in equivalent Latvian- and Russian-language versions, STAI yielded a set of coherent and meaningful results in a comparison of these two ethnic groups in Latvia (Skuskovnika, 2004). A Lithuanian version of the same instrument was included along with other measures in a sample of Vilnius University students by Balaisis, Draguns, and Miežitis (2004). It yielded a set of correlates consistent with theoretically based expectations and thus suggested potential construct validity and eventual practical usefulness of the Lithuanian adaptation of this instrument. Other specific personality measures that have been translated, adapted, and revalidated for research purposes in Latvia include the Satisfaction of Life Scale (Maslovska, Voitkane, Miežite, & Rascevska, 2005), the Liverpool Stoicism Scale (Gaitniece-Putane, 2005), and Zimbardo Time Perspective Inventory (Kolesovs, 2002). In order to meet the need for a standardized measure of practical intelligence, Rascevska (2004) and Rascevska and Berzina (2001a, 2001 b) constructed a questionnaire of Self-Evaluation Practical Skills including 95 activities, grouped into six areas: household, small repairs, farm work, active sports, leisure and hobbies, and communication. Factorial structure was ascertained and gender and age trends were identified. Moreover, relationship was established between this measure of practical intelligence and indicators of well-being and social adjustment (Rascevska, Voitkane, & Miežite, 2003).

With international backing and participation, Rascevska, Sebre and Ozola have embarked upon the Latvian validation of Wechsler Intelligence Scale for Children – Fourth Edition (WISC-IV), Adaptive Behavior Assessment System (ABAS-II), and Child Behavior Checklist (Achenbach & Rescorla, 2001). This work is planned to be completed in 2008. This ambitious project was preceded by the validation of the Woodcock-Johnson Cognitive Ability Tests (Rascevska & Upzare, 2001). This test has been successfully applied in differentiating children with mild mental retardation from their nonretarded counterparts (Brika-Dravniece, 2003). Rascevska and Hazenfuse (2006) have also embarked upon the construction of a Latvian instrument based on Sternberg's triarchic theory of intelligence.

Original or modified inventories have also been developed in Latvia. Maslovska (2004) provided data on reliability, validity, and factorial composition of the Coping with Bereavement Inventory. In Estonia, Realo and Allik (1998) adapted the Estonian Self-Consciousness Scale from Self-Consciousness Scale constructed in the United States by Fenigstein, Scheier, and Buss (1975). It was found to yield all the five factors of the NEO-PI-R.

Cross-Cultural Research: Multinational and Worldwide Studies

For a combination of political and ideological reasons, participation of Baltic psychologists in multinational research projects was virtually impossible until shortly before the reestablishment of independence. Thus, the project that initiated this trend (Hofstede, 1980) included no Baltic samples. Since 1991, a number of studies in Estonia have been conducted with Hofstede's measures and within his framework. The results of these studies have been incorporated into the second edition of Hofstede's (2001) major work, *Culture's Consequences*. Draguns (1994) has called for a systematic application of Hofstede's procedures in all three of the Baltic states so as to render their scores comparable to those included in Hofstede's original investigation. This objective remains to be realized. In the meantime, however, Baltic psychologists have contributed samples and have participated in several other multinational investigations. The earliest of these projects concerned international preferences in selecting mates and encompassed data from 37 cultures (Buss et al., 1990), with Toomas Niit of Tallinn Pedagogical University as one of its co-authors. A more recent project of comparable size was undertaken by Bond et al. (2004) who investigated social axioms and their correlates across 41 national cultures and included among its collaborators Ivars Austers of Latvia and Toomas and Kaiso-Kitri Niit of Estonia. Schmitt et al. (2004) focused on adult romantic attachment across 62 cultural regions; among its authors Juri Allik and Kaia Laidra (Estonia), Ivars Austers (Latvia), and Margita Jankauskaite (Lithuania) were listed. A fascinating task, beyond the scope of the present paper, would be to tease out the distinctive features of the Baltic countries, collectively and discretely, from the accumulated results of these multinational investigations.

Cross-Cultural Research: Comparing a Limited Number of Cultures

Most of the cross-cultural research extant concentrates on a limited number of cultures, most often two, perhaps three, rarely more than five. To judge from the articles in international refereed journals, Estonian psychologists are clearly more active and productive in this area of research than their Latvian and Lithuanian counterparts. Thus, T. Tulviste (2000) reported the results of comparisons of mothers' interaction with their adolescent children in Estonia and the United States. Tiggemann and Ruutel (2001) investigated body images of Australian and Estonian young adults in relation to differences in media exposure. In an applied area, Sebre et al (2003) have completed a comparative study of child abuse in four countries, Latvia, Lithuania, Moldova, and Macedonia. A comparison of Armenian and Lithuanian preschool children was performed by means of a role playing test by Vardanian and Sargautyte (1998).

Finland and Estonia are close to ideal as sites of cross-cultural comparison of the effects of experiencing recent totalitarian vs. democratic rule, similar as the two countries are in language, ecology, history, and religion. Making use of this opportunity, Keltingas-Jarvinen and Terav (1996) studied social decision making of Finnish and Estonian adolescents, and Keltingas-Jarvinen, Terav, and Pakaslahti (1999) concentrated on moral reasoning of the Finns and Estonians of the same age group.

Cross-Cultural Research: Focus on Individualism-Collectivism

On the basis of research by Hofstede (2001) and Triandis (1995), individualism-collectivism has emerged as a pivotal concept in cross-cultural psychology. Over the last ten years it has sparked a substantial amount of research in the Baltics, Realo (1999) demonstrated that Estonians are high in individualism by comparison with the more collectivistic Russian fellow residents. This finding has been considerably extended in recent years. In five Central and Eastern European countries, Realo and Goodwin (2003) studied the relationship of family-related allocentrism, akin to collectivism, to HIV risk behavior and found similarities between the more individualistic Estonians and Hungarians on the one hand and the collectivistically inclined Georgians and Russians on the other hand. An ambitious multinational and multistate study was undertaken by Allik and Realo (2004) on the basis of the available statistical information from 42 countries. The results pointed to greater social engagement in the more individualistic countries in international comparison; the same relationship was found within the United States across fifty states of the union. According to Renge (2003), research on individualism-collectivism with Realo's and Triandis' instruments has also been conducted in Latvia, although the results have not yet been reported. In Lithuania, Balaisis, Draguns, and Miežitis (2004) were able to demonstrate the relationship of individualism with internal locus of control and good adjustment. Further conceptual analysis and empirical work underscore the multifaceted and complex nature of individualism. It may be recalled that in Schwartz's (1994) worldwide study of individualism Estonia unexpectedly was found to be highly collectivist. Although more recent data have provided no further support for this finding, Schwartz's results caution against dichotomizing cultures on this dimension. In a similar vein, Katylis-Boydston (1889) recognized the problem of disentangling indigenous and externally imposed aspects of both individualism and collectivism in contemporary, post-Soviet Lithuania, a challenging task for the investigator of these dimensions and their polarities in the entire Baltic region.

Attachment Styles, Mother-Daughter Ties, and the Effects of Their Disruption

A significant series of research studies in Latvia has been concerned with the assessment of attachment style (Martinsons, 2003) in relation to variables such as adult abusive behavior in partner relationships (Bite, 2002), abuse against their children (Sebre, 2005), adult daughters' independence and self-esteem (Miltuze, 2003), and student adjustment to university life (Voitkane, Miežite, & Vanags, 2003). The common denominator of these research projects is their reliance on multiple methods, quantitative and qualitative, self-report scales and autobiographical accounts.

Although these results are not substantially discrepant from analogous research in Western Europe and North America, they do contribute some incremental information on these formative experiences in the sociohistoric context of the Baltic countries in the second half of the 20th century. Independent of these Latvian studies, yet compatible with them in orientation and framework is the investigation by Raceyte (2001) of mother-toddler relationships in Lithuania. It substantiated the impact

of maternal depression and anxiety on children's insecurity about their attachment with mothers. Attachment theory was also applied in a study of attachment styles of Lithuanian mother-infant dyads by Cekuoliene (1998), which resulted in the conclusion that mothers value independence over conformity.

Closely conceptually related to the foregoing series of studies is research by Maslovska, Martinsone, Miltuze, Upmane, and Bite (2006) by means of structured interviews with Latvian women who had recently experienced bereavement or divorce. Maslovska et al. document coping by means of individually shaped combinations of mental processing, self-help activities, and use of personal and social resources.

Needs and Prospects in Baltic Psychology: A Subjective Wish List

The foregoing account, though subjective and incomplete, testifies to the variety of areas of activity in Baltic psychology. It also bears witness to the dramatic expansion in quantity, scope, diversity, and quality of psychological endeavours in the three countries over the relatively short, if period of the last fifteen years. In the remaining part of the paper, emphasis will shift to what has not yet been done, and a number of suggestions will be offered in the hope of removing unevenness and imbalance that perhaps are the inevitable result of rapid growth. Of necessity, this listing is personal and subjective, based on one observer's impressions and preferences. As such, it does not pretend to be authoritative, comprehensive or balanced. With these caveats in mind, the following suggestions are offered:

First, the bulk of the work done so far has been relevant to the unique sociohistoric situation of the Baltic states at this point in time. Perhaps, the time has come to address the timeless and universal foundations of psychology and to investigate them experimentally. The experimental tradition has never been lost in the Baltics, but it has been powerfully overshadowed by the methods of inquiry that are characteristic of developmental, social, industrial, and clinical psychology. A possible exception to this generalization may be found in Estonia where, especially at Tartu University, experimentation has continued apace. As an example one can mention the monograph by Bachmann (2000) that summarizes and integrates recent work, including Bachmann's own, on microgenesis, the development of percepts over brief periods of time. Research on the interface of neuroscience and psychology, the cutting edge of current scientific advance, should also ideally be represented in the Baltic countries.

Second, Baltic psychologists have reoriented their orientation and their modus operandi to Western Europe and North America smoothly and rapidly. Now has come the time to balance this development, lest Baltic psychology become an appendage of psychology in English speaking countries. It is encouraging, for example, that some Baltic psychologists have turned to Vigotsky's theory (e.g., Rakfeldt, 2003) in line with recommendations by Wertsch and Tulviste (1990) and Breslav (1994). Contacts within the region with Nordic countries should be solidified and expanded; they should be cultivated with Germany and Poland, and inaugurated with France.

Third, Baltic psychologists, of necessity, have been consumers rather than originators of theories. Although this development cannot be forced, formulation of theoretical models and frameworks should be envisaged. Vorobjovs (1998) at Daugavpils

University in Latvia, has developed a systemic process model of content and activities of personality. Earlier work by P. Tulviste (1990) in Tartu on the sociohistoric conception of language acquisition awaits elaboration and expansion. Karpova's (1994) work on individual styles among Latvian ventures into a new area of inquiry and combines Western instruments with ideas derived from Russian theoreticians. Perhaps the time is ripe for taking another look at the Latvian concept of *passajuta* or self-sentiment (Renge, 2003) and see if it has something to add to the current conceptualizations of the self.

Fourth, in elaboration of the preceding point, one of the most promising areas of research that has been pursued in the Baltics pertains to the memory of complex and often adverse events (e.g., Sebre, 2000; Skultans, 1998; Rakfeldt, 2003). Integrating these observations with mainstream research on memory, perhaps along the lines suggested by Norvilas (1998), is an exciting challenge.

Fifth, psychotherapy in the Baltic states is extensively practiced and even innovative. A case in point are the contributions to existential humanistic consultation and group therapy by Kociunas (2003) have been recognized internationally beyond Lithuania. The next major objective should be to initiate research on the process and outcome of psychotherapy at Baltic sites so as to eventually maximize its relevance and effectiveness.

Sixth, Baltic psychologists have initiated, or participated in, an impressive number of cross-cultural studies, yet they have only rarely engaged in comparisons across two or all three of the Baltic states, even though it has been said that Estonia, Latvia, and Lithuania are more diverse than the three Benelux or the four Nordic countries (with the exception of Finland). Theoretically relevant and practically useful results may emerge from such comparisons, and they should be ever more frequently implemented.

Seventh, one of Hofstede's factorially based cultural dimensions has been extensively studied in the Baltics, but what about the other four axes of appraisal beside individualism-collectivism? Research should be initiated on power distance, uncertainty avoidance, masculinity-femininity, and short-term vs. long-term orientation, that, according to Hofstede, are basic dimensions on which all cultures can be placed.

Eighth, another source of information about interethnic group differences is the accumulation of opinion poll data, pursued in the Baltic countries for over fifteen years at a high degree of technical sophistication, and integrate them with other relevant sources. Ott and Ennuste (1996) used this information in making inferences about Estonian-Russian differences in anxiety and Draguns (2003) integrated it in his account of interethnic relations in the first post-independence decade.

Ninth, it is not enough to describe interethnic relations in their positive, negative, and neutral aspects. Instead, knowledge is sufficient to guide intervention and remediation. Indeed, programs to that end have been inaugurated in the Baltics that deserve to be better known and vigorously pursued (e.g., Volkan, 1999; cf. Draguns, 2000).

Tenth and finally, it may be worthwhile to compare Estonians, Latvians, and Lithuanians in their homelands with persons of corresponding nativity or dissent

in the diasporas, East and West Implementation of this objective may contribute empirically based information on the three Baltic identities and their abiding features, if any.

References

- Achenbach, T. M., & Rescorla, L.A. (2001). *Manual for the ASEBA school age forms and Profiles*. Burlington, VT: ASEBA.
- Allik, J., & McCrea, R. R. (2002). A Five-Factor Theory perspective. In R.R. McCrea & J. Allik (Eds.) *The Five-Factor model of personality across cultures* (pp. 302-322). New York: Kluwer Academic/Plenum Publishers.
- Allik, J., & Realo, A. (1996). On the relationship between personality and totalitarian regimes: Actitique of Western stereotypes. *Journal of Baltic Studies*, 27, 331-340.
- Allik, J., & Realo, A. (2004). Individualism-collectivism and social capital. *Journal of Cross-Cultural Psychology*, 35, 29-49.
- Austers, I. (2002a). Ability to take an out-group's perspective in explaining positive and negative behavior. *Scandinavian Journal of Psychology*, 43, 407-412.
- Austers, I. (2002b). Attribution of value stereotypes as a consequence of group membership: Latvian students and Russian students in Latvia compared. *International Journal of Inter-group Relations*, 26, 273-285.
- Bachmann, T. (2000). *Microgenetic approach to the conscious mind*. Amsterdam: Benjamins Publishing Company.
- Bagdonas, A. (1996). Lithuanian psychology or psychology in Lithuania? In T. Niit & A. Baltin (Eds.) *Identity, freedom, values and memory: Proceedings of the 2nd International Psychology Conference* (pp. 18-33). Tallinn: Union of Estonian Psychologists.
- Balaisis, M., Draguns, J.G., & Mieziute, S. (2004). Students' adjustment to Vilnius University: The role of self-orientation, locus of control, social support, and demographic variables. *Baltic Journal of Psychology*, 5, 33-45.
- Bergquist, W., & Weiss, B. (1994). *Narratives of change in Hungary and Estonia*. San Francisco: Jossey-Bass Publishers.
- Bite, I. (2002). Adult attachment styles, child abuse experience and violence in intimate relationships. *Baltic Journal of Psychology*, 3, 19-33.
- Bond, M.H. et al. (2004). Culture-level dimensions of social axioms and their correlates across 41 nations. *Journal of Cross-Cultural Psychology*, 35, 548-570.
- Brika-Dravniece, A. (2003). Mentally retarded children's cognitive abilities by using Woodstock-Johnson Tests of Cognitive Abilities, Latvian International Edition. *Baltic Journal of Psychology*, 4(2), 44-51.
- Breslav, G. (1994). Vigotsky's concept of the "social situation of development." Presented at International Society for the Study of Behavioral Development, Amsterdam.
- Buss, D. et al. (1990). International preference in selecting mates: A study of 37 cultures. *Journal of Cross-Cultural Psychology*, 21, 5-47.
- Cekuliene, D. (1998). Attachment in context: The interplay between attachment formation, culturally shared parental ideas, and communication modes. In B. Pociute & A. Bagdonas (Eds.) *Multidimensionality of contemporary psychology: Social, political, and cultural influences* (pp. 23-24). Vilnius: Special Psychology Laboratory.

- Cohn, M. (1998). Eating behavior and perceived body image in 10- to 13-year old girls: A comparison of the United States and Estonia. In B. Pociute & A. Bagdonas (Eds.) *Multidimensionality in contemporary psychology: Social, political, and cultural influences*. Vilnius: Special Psychology Laboratory.
- Cropley, A., & Rascevska, M. (2004). *Qualitative research methods: An introduction for students of psychology and education*. Riga: Zinatne (in Latvian).
- Dimdins, G. (2003). *Shared reality and false polarization in intergroup perception*. Stockholm: Department of Psychology, Stockholm University.
- Drillis, R. (1957). Latviesu praktiskas psihologijas 30 gadi. [30 years of Latvian applied psychology]. *Amerikas Latviesu humanitaro zinatnu asociacija. Rakstu kraujums. 1*, 98-114.
- Draguns, J.G. (1994). Cross-cultural and intercultural psychology and the problems of the Baltic States: Its possible relevance and applications. Presented at the First Baltic International Psychology Conference, Lielupe, Latvia.
- Draguns, J.G. (1999). Homo sovieticus or homines postsovietici? The psychological impact of Soviet rule in the Baltics. *Lithuanian Papers, 13*, 18-23.
- Draguns, J.G. (2000). Groups and workshops in interethnic conflict resolution: Their accomplishment and promise, with special reference to the Baltic context. *Journal of Baltic Psychology, 1*, 4-11.
- Draguns, J.G. (2004). Interethnic relations in the Baltic States: Between confrontation and integration. In Y.-T. Lee, C. McCauley, F. Moghaddam, & S. Worchel (Eds. Eysenck, S.B.G., Pakula, A., & Gostautas, A. (1991). Standartizatsiya lichnostnogo oprosnika Eysenckov dlia vzrosloy populjatsii Litvy [Standartization of Eysenck Personality Questionnaire for Lithuanian adult population]. *Psikhologicheskij Zhurnal. 12*, (3), 93-89.
- Fenigstein, A., Scheier, M.F., & Buss, A. H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Personality and Social Psychology, 37*, 75-86.
- Gabrane, L. (2003). International Personality Item Pool: A scientific collaboratory and its implications for Latvia. *Baltic Journal of Psychology, 4*, 16-22.
- Gailiene, D. (2000). *Selbstmorde in Litauen: Sozialpsychologische Aspekte der Verbreitung und Modell der Pravention*. Kaunas: Vytautas Magnus Universitat.
- Gaitniece-Putane, A. (2005). Liverpool Stoicism Scale adaptation. *Baltic Journal of Psychology, 6*, 57-64.
- Gostautas, A. (1972). Primineniye lichnostnogo oprosnika v diagnostike paranoidnoy shizofrenii. [Using the Personality Inventory in psychodiagnosis of paranoid schizophrenia]. *Matematicheskiye metody v psikhiiatrii I nevrologii*.
- Gulens, V. (1995). Distortions in personality development in individuals emerging from a long-term totalitarian regime: A critique of Western stereotypes. *Journal of Baltic Studies, 26*, 267-284.
- Hansen, H., & Stsipletova, T. (1994). O natsional'nykh stereotipakh [About National stereotypes]. *Kultura un Vards, 7* (2).
- Heidmets, M., & Lauristin, M. (2002). Learning from the Estonian case. In M. Lauristin & M. Heidmets (Eds.) *The challenge of the Russian minority: Emerging multicultural democracy in Estonia* (pp. 319-332). Tartu: Tartu University Press.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related Values*. Beverly Hills, CA: Sage Publishers.

- Hofstede, G. (1991). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage Publishers.
- Isat, P. (1996). Grief work with children after the *M/S Estonia* disaster. In T. Niit & A. Baltin (Eds.) *Identity, freedom, values, and memory. Proceedings of the 2nd International Baltic Psychology Conference* (p.105). Tallinn: Union of Estonian Psychologists.
- Jusiene, R., Bieliauskaite, R., Cimbalistiene, L., & Kucinskas, V. (2002). The psychological adjustment of children with phenylketonuria. *Baltic Journal of Psychology*, 3, 34-41.
- Kalnins, I., & Ranka, I. (2000). Development of an academic base for public health research and practice in Latvia. *Journal of Baltic Psychology*, 1, 46-56.
- Karpova, A. (1994). *Personība un individualais stils* [Personality and individual style]. Riga: Latvijas Universitāte.
- Katylis-Boydston, D. (1998). Baltic psychology: A community of scholars or an object of study? In B. Pociute & A. Bagdonas (Eds.) *Multidimensionality of contemporary Psychology: social, political, and cultural influences* (pp.51-66). Vilnius: Special Psychology Laboratory.
- Keltingas-Jarvinen, L., & Terav, T. (1996). Social decision-making strategies in individualist and collectivist cultures: A comparison of Finnish and Estonian adolescents. *Journal of Cross-Cultural Psychology*, 27, 714-732.
- Keltingas-Jarvinen, L., Terav, T., & Palaslahti, L. (1999). Moral reasoning among Estonian and Finnish adolescents. *Journal of Cross-Cultural Psychology*, 30, 267-290.
- Kociunas, R. (2003). *Osnovy psichologicheskogo konsultirovaniya i grupovoy terapii* [Basics of psychological consultation and therapy]. Moscow: Akademicheskij Proyekt.
- Kolesovs, A. (2002). Zimbardo Time Perspective Inventory. The relation between time perspective and locus of control in high school students. *Baltic Journal of Psychology*, 3(2), 7-19.
- Kristapsone, S. (2001). Statistical characterization of deviant behaviour of minors in Latvia in 1990-ies. In S. Sebre & M. Rascevska (Eds.) *New developments in psychology in the Baltics: Theory and practice* (pp. 197-211). Riga: University of Latvia.
- Kutsar, D. (1995) *Transformation of Estonia as reflected in families. Insight into social stress and poverty*. Tartu: Tartu University Press.
- Lebedeva, L. (2006) Uzvedības traucējumu iezīmju saistība ar vardarbības pieredzi un traumas simptomiem 11-13 gadus veciem bērniem. [Behavior problems, abuse history and trauma symptoms of 11-13 year old children]. *Latvijas Universitātes Raksti*, 698, 68-81.
- Leonavicius, R. (1998). Certain aspects of mentality and behaviour of those using psychotropic substances. In B. Pociute & A. Bagdonas (Eds.) *Multidimensionality of contemporary psychology: social, political, and cultural influences* (pp. 80-82). Vilnius: Special Psychology Laboratory.
- Makarevich, V. (2001). Tolerance as a psychological problem. In V. Makarevics (Ed.) *Tolerance un citas psiholoģiskas un pedagoģiskas problēmas* (pp, 29-38). Daugavpils, Latvia: Saule.
- Martinsone, B. (2003). *Adult attachment assessment with self-report measures*. Unpublished doctoral dissertation. University of Latvia, Riga, Latvia.
- Maslovska, K. (2006). Serosanas izpetes metodes un to izmantojums Latvija veiktos pētījumos [Assessment of grief inventories in Latvian research]. *Latvijas Universitātes Raksti*, 698, 7-18.
- Maslovska, K., Martinsone, K., Miltuze, A., Upmane, A., & Bite, I. (2006). Krīzes parvaresanas veidi Latvijas sievietēm ar tuvu cilvēka naves un ar skirsanas pieredzi [Latvian women's coping styles in situations of bereavement or divorce experience]. *Latvijas Universitātes Raksti*, 698, 19-35.

- Maslovska, K., Voitkane, S., Miežite, S., & Rascevska, M. (2005). Reliability and validity of the Adaptation of the Satisfaction with Life Scale in Latvia. *Baltic Journal of Psychology*, 6, 25-36.
- Meres, T., (1996). Crisis intervention in Tallinn: Problems and perspectives. In T. Niit & A. Baltin (Eds.) *Identity, freedom, values, and memory. Proceeding of the 2nd International Baltic Conference* (p.114) Tallinn: Union of Estonian Psychologists.
- Miežitis, S., & Kalnins, I. (1995). Mental health and depression among adolescents in Latvia. *Journal of Baltic Studies*, 26, 211-220.
- Miežitis, S., Kalnins, I., & Ranka, I. (2001). Relationship between depressive tendencies and attitudes to school reported by adolescents in Latvia: Implications for prevention. In M. Rascevska & S. Sebre (Eds.) *New developments in psychology in the Baltics: Theory and practice* (pp. 6-17) Riga: University of Latvia.
- Miltuze, A. (2004). Mates un meitas savstarpejo attiecību raksturojums [Mother and daughter's relationships]. *Latvijas Universitātes Raksti*, 664, 69-88.
- Narvaitis, G., & Caplinskas, S. (2004). Lithuanian juvenile girl's attitude toward prostitution. *Baltic Journal of Psychology*, 2004, 5 (2), 19-30.
- Niit, T., & Draguns, J.G. (2000). Baltic States. In A. Kazdin (Ed.) *Encyclopedia of psychology. Vol.1* (pp. 364-370) New York: Oxford University Press.
- Niit, T., Heidmets, M., & Kruusvall, J. (1994). Environmental psychology in Estonia *Journal of Russian and East European Psychology*, 32,(3), 5-40.
- Nobel, R., Miežitis, & S., Ranka, I. (2003). School attitude, parental and teacher support, and student depression in Latvia: A mediator model. *Baltic Journal of Psychology*, 4, 22-33.
- Noor, H. (1994). Politische Aspekte der psychischen Krisen im nachkriegszeitlichen Estland. *Jahrbuch des baltischen Deutschtums*, 41, 178-184.
- Norvilas, A. A. (1998). Memory as a discursive process. In B. Pocciute & A. Bagdonas (Eds.) *Multidimensionality in contemporary psychology: social, political, and cultural influences* (pp. 92-99). Vilnius: Special Psychology Laboratory.
- Ott, A.F., & Ennuste, U. (1996). Anxiety as a consequence of liberalization: An analysis of opinion surveys in Estonia. *Social Science Journal*, 33, 149-164.
- Petrovsky, A. (1990). *Psychology in the Soviet Union. A historical outline*. Moscow: Progress Publishers.
- Poudziunas, I. (2006). Parciestas vardarbības pieredzes apzināšanas jauniesiem [Awareness of adolescents' abuse experience]. *Latvijas Universitātes Raksti*, 698, 36-52.
- Racelyte, D. (2001). Mother-toddler relationship and several aspects of mother's emotional and relationship well-being.. In S. Sebre & M. Rascevska (Eds.) *New developments in psychology in the Baltics: Theory and practice* (pp.58-65). Riga: University of Latvia.
- Rakfeldt, J. (2003). Mental maps, memories, and life stories: Preservation of Estonian national identity. Presented at AAASS National Convention, Toronto, Ontario, Canada.
- Rascevska, M. (2004). The structure and gender differences of self-evaluation practical skills. *Baltic Journal of Psychology*, 4 (2), 5-18.
- Rascevska, M., & Berzina, A. (2001b). Praktiska intelekta struktūra jauniesiem no 16-22 gadu vecumam. [Structure of Practical intelligence in youth aged 16-22]. *Journal of Baltic Psychology*, 2, (1), 59-82.
- Rascevska, M., & Berzina, A. (2001b). Structure of practical intelligence. In M. Rascevska & S. Sebre (Eds.) *New developments in psychology in the Baltics: Theory and practice*. (pp.118-130). Riga: University of Latvia.

- Rascevskā, M., & Upzare, I. (2001). Structure of practical intelligence. In M. Rascevskā & S. Sebre. (Eds.) *New developments in psychology in the Baltics. Theory and practice* (pp. 139-149). Riga: University of Latvia.
- Rascevskā, M., Voitkane, S., & Miezīte, S. (2003). Saistība starp praktisko intelektu un psiholoģiskās labklājības un sociālās pielāgošanās rādītājiem [Relationships between practical intelligence, psychological well-being and social adjustment indices]. *Latvijas Universitātes Raksti*, 644, 89-121.
- Realo, A. (1999). *Individualism and collectivism: An exploration of individual and cultural differences*. Tartu: Tartu University Press.
- Realo, A., & Allik, J. (1998). The Estonian Self-Consciousness Scale and its relation to the Five-Factor model of personality. *Journal of Personality Assessment*, 70, 109-124.
- Realo, A., & Goodwin, R. (2003). Family-related allocentrism and HIV risk behavior in Central and Eastern Europe. *Journal of Cross-Cultural Psychology*, 34, 690-702.
- Renge, V. (2003). Development of the science of psychology in Latvia after the regaining of independence (1992-2002). *Baltic Journal of Psychology*, 4 (1), 34-52.
- Renge, V., & Austers, I. (2004). Social representation of science and psychology: Anchoring and personification. *Baltic Journal of Psychology*, 5 (1), 5-14.
- Robinson, W.P., & Breslav, G. (1996). Academic achievement and self-concept of Latvian adolescents in a changed social context. *European Journal of Psychology in Education*, 11, 399-410.
- Sargati, S., Dunlap, H., Miezītis, S., & Ranka, I. (2002). Psychosocial factors and smoking behaviour in a Latvian adolescent population. *Baltic Journal of Psychology*, 3, 41-54.
- Schmitt, D.P. et al. (2004). Patterns and universals of adult romantic attachment across 62 regions. *Journal of Cross-Cultural Psychology*, 35, 29-49.
- Schwartz, S.H. (1994). Beyond individualism-collectivism: New cultural dimensions of values. In U. Kim, H.C. Triandis, C. Kagitcibasi, S.-C. Choi, & G. Yoon (Eds.) *Individualism and collectivism: Theory, method, and applications* (pp.85-119). Thousand Oaks, CA: Sage Publications.
- Sebre, S. (2000). Dissociation, hostility, resentment, and intolerance in relation to familial and political abuse. *Journal of Baltic Psychology*, 1 (1), 27-45.
- Sebre, S. (2005). *Attachment style, anger, and continuation vs. discontinuation of intergenerational abuse*: Presented at the 9th European Congress of Psychology, Granada, Spain.
- Sebre, S., Gundare, I., & Plavniece, M. (2004). Piesaistes stili, pasciena, empatija un tolerance. [Attachment style, self-esteem, empathy and tolerance]. *Latvijas Universitātes Raksti*, 664, 89-121.
- Sebre, S., & Lebedeva, L. (2006). Piesaistes stils, dusmas un vardarbības starppaudžu pārmanģtoģamģbas parģtrauksana [Attachment style, anger and intergeneration abuse discontinuation]. *Latvijas Universitātes Raksti*, 698, 81-96.
- Sebre, S., Sprugeģvģca, I., Novotni, A., Bonevski, D., Pakalnģskģene, V., Popescu, D., Turchina, T., Friedrich, W., & Lewis, O. (2004). Cross-cultural comparison of child reported emotional and physical abuse: Rates, risk factors and psychosocial symptoms. *International Journal of Child Abuse and Neglect*, 28, 113-117.
- Skuskovģnģka, D. (2003). Psychometric properties of the Latvian and Russian version of the State Trait Anxiety Inventory (Form Y) *Baltic Psychology Journal*, 4 (1), 7-15.
- Skuskovģnģka, D. (2004). Comparison of state and trait anxiety of Latvians and Russians in Latvia. *Baltic Journal of Psychology*, 5 (1), 21-32.

- Stepanov, S. (2001). *Psikhologiya v litsakh*. Moscow: Ekspmo Press.
- Tiggemann, M., & Ruutel, E. (2001). A cross-cultural comparison of body dissatisfaction in Estonian Australian young adults and its relationship with media exposure. *Journal of Cross-Cultural Psychology*, 32, 736-743.
- Triandis, H.C. (1995). *Individualism and collectivism*. Boulder, CO: Wetview Press.
- Tulviste, P. (1991). *Cultural-historical development of verbal thinking: A psychological study*. Commack, NY: Nova Publisher.
- Tulviste, T. (2000). Socialization at meals: A comparison of American and Estonian mother-adolescent interaction. *Journal of Cross-Cultural Psychology*, 31, 537-556.
- Valk, A. (2001). *Two facets of ethnic identity: Pride and differentiation*. Tartu: Tartu University Press.
- Vardanian, G., & Sargautyte, R. (1998). The role-play test: Cross-cultural study of the mental development of preschool children. In B. Pociute & A. Bagdonas (Eds.) *Multidimensionality of contemporary psychology: social, political, and cultural influences* (pp. 117-124). Vilnius: Special Psychology Laboratory.
- Varnik, A. (1991). Suicide in Estonia. *Acta Psychiatrica Scandinavica*, 84, 229-232.
- Vidnere, M. (1997). *Ar asaram tas nav pieradams* [It cannot be proven with tears]. Riga: University of Latvia.
- Vidnere, M., & Nucho, A.O. (2000). *Latvian survivors of deportations*. Riga: RA KA.
- Voitkane, S. (2003). The relationship of social support, anxiety, depression, and student needs to psychological well-being in first year university students. *Baltic Journal of Psychology*, 4 (2), 43-53.
- Voitkane, S. (2004). Goal directedness in relation to life satisfaction, psychological Immune system and depression in first-semester university students in Latvia *Baltic Journal of Psychology*, 5 (2), 19-30.
- Voitkane, S., & Miezite, S. (2001). Pirma kursa studentu adaptācijas problemas [The first year students' adjustment problems]. *Baltic Journal of Psychology*, 2 (1), 43-53.
- Voitkane, S., Miezite, S., & Vanags, M. (2003). *Psychological well-being and attachment style in the process of first year student adjustment to university*. Presented at the 8th European Congress of Psychology, Vienna, Austria.
- Volkan, V. (1999). The Tree Model. A comprehensive psychopolitical approach to Unofficial diplomacy and the reduction of ethnic tension. *Mind and Human Interaction*, 4 (4), 169-190.
- Vorobjovs, A. (1998). *Personibas satura un aktivitates sistempoceduralais modelis* [Personality and activity in a systemic procedural model]. Summary of Habilitation Dissertation, University of Latvia, Riga.
- Wertsch, J.V. & Tulviste, P. (1992). L.S. Vigotsky and contemporary developmental Psychology. *Developmental Psychology*, 28, 548-557.
- Zukauskene, R. (1998). Childhood aggression: Parents and peer group influence. In B. Pociute & A. Bagdonas (Eds.) *Multidimensionality of contemporary psychology: social, political, and cultural influences* (pp. 125-135). Vilnius: Special Psychology Laboratory.
- Zusne, L. (1976). Development of psychology in Latvia. *Catalog of Selected Documents in Psychology*, 6.

Functional Creativity: A Socially-Useful Creativity Concept

Arthur Cropley

University of Hamburg

Creativity is sometimes regarded as mainly promoting the psychological welfare of individuals. However, there is now increasing acceptance of the contribution of creative people to the welfare, not just of themselves but of society too, in both economic/industrial and social/cultural domains. Despite this, there is surprisingly little governmental and bureaucratic support of efforts to foster the development of such people, while many teachers too are even hostile to them. This is largely because of poor understanding of creativity rather than malice. What is needed is a concept of socially-useful creativity accompanied by guidelines on how to foster such creativity. This article outlines such a concept based on products rather than on processes and personal properties (functional creativity), and makes suggestions for grading students' assignments in order to foster functional creativity.²

Keywords: Creativity, creative products, assessment.

The 2006 national development plan (*nacionalais attīstības plāns*) of the Latvian Government emphasized the importance of devoting resources to development of the educated and *creative* person (*izglītots un radošs cilvēks*). But why should a society invest in the development of such a person—what benefits do creative people bring, except to themselves? Associated with this is the question of whether a society really can promote creativity in its citizens and how this can be done. Some aspects of thinking about creativity in the last 10 years are helpful in looking at such issues. A number of these will be examined in this article, with particular emphasis on education and educational assessment, since schools are the chief instrument through which societies seek to influence the development of their future citizens.

Creativity and society

The individualistic view of creativity

In the past, creativity has frequently been treated as intimately connected with promoting personal dignity, expressing one's inner being, self-actualization, and similar personal processes (e.g., Maslow, 1973; May, 1976; Rogers, 1961). Cropley (1990) worked out psychological mechanisms through which creativity promotes *individual* mental health. Not infrequently, this self-actualization is seen as requiring a fight against the surrounding society: Moustakis (1977) summarized this approach by see-

² Author's note. Correspondence concerning this article should be addressed to Arthur Cropley, e-mail: acropley@bigpond.net.au

ing creativity as the pathway to living you own life your own way. Barron (1969) even concluded that creativity requires *resistance* to socialization, and Burkhardt (1985) took the theme of the individual against society further by arguing that the creative individual must fight against society's pathological desire for sameness. Sternberg and Lubart (1995) called this fight "defying the crowd," and labelled the tendency of certain creative individuals to resist society's pressure to conform "contrarianism."

This individualistic view is by no means new. The argument could be made that it originated in the renaissance in the notion of *il divino artista* who was above the rules that were obligatory for other humans, e.g., Benvenuto Cellini. Later, the same view received a powerful boost during the heyday of romanticism, and was exemplified by such outstanding (but morally flawed) creators as Lord Byron and Richard Wagner. Going even further, creativity has sometimes been seen as having no practical usefulness at all. An extreme position of this kind is to be found in the art for art's sake movement in nineteenth century Paris: As the novelist Theophile Gautier put it in the preface to his novel *Mademoiselle de Maupin*, published in 1835, "Nothing is truly beautiful unless it is *useless* [my italics]." As a result, some psychological and educational writers see creativity as involving "the glorification of individuals" (Boden, 1994, p. 4), and it is sometimes regarded as socially divisive and as favouring a privileged few over the majority. My interest here, however, is not in useless, self-serving creativity, but in *useful* creativity, especially *socially useful* creativity, that serves the majority. The next step is to explain what is meant by this.

Socially useful creativity

A more social approach to creativity was already visible when Rhodes (1961, p. 305) added the fourth "P" (press; i.e., environment) to the "three Ps" of creativity: person, product, process. Since Rhodes, creativity has increasingly been seen as a social phenomenon. Csikszentmihalyi (1999, p. 315) put it very clearly: "... original thought does not exist in a vacuum." The non-vacuum factor he had in mind was the surrounding society, and especially "social agreement" (Csikszentmihalyi, 1988, p. 327), which is "... one of the constitutive elements of creativity, without which the phenomenon would not exist." However, although he emphasized one particular social aspect of creativity, Csikszentmihalyi was most interested in the role of the society in determining what is creative rather than in the usefulness of creativity to a society.

A more direct interest in creativity as a socially useful phenomenon goes back to antiquity. The Chinese Emperor, Han Wu-di, who reigned until 87 BCE, was intensely interested in fostering creative fantasy, because he saw it as an important resource of the state. In seventeenth century Europe, Francis Bacon and René Descartes, two leaders of the enlightenment, wrote that the main purpose of scientific creativity was to serve the common good. This theme has frequently been repeated in modern times too: At their meeting in Cologne in June 1999 the members of the Group of Eight (Britain, Canada, France, Germany, Italy, Japan, Russia, and the United States)—essentially the world's biggest economies—identified "entrepreneurship" as the key property that needs to be developed in students for the good of society. In a newspaper interview a few days before his election on May 23, 2004, the incoming president of the Federal Republic of Germany called for "a new spirit of initiative" to enable Germany

to deal with problems of contemporary life in creative ways. The 2006 development plan of the Latvian Government has already been mentioned. Thus, the idea of creativity as the servant of society is longstanding and widespread.

How is creativity socially useful?

In technologically highly developed countries more recent public discussion of the value of creativity, especially at policy level, is dominated by economic issues. Economic theory suggests that returns on investments in rich countries should have been lower during the second half of the twentieth century than during the first half, because the stock of capital was rising faster than the workforce. However, the fact is that they were considerably higher. How was this possible? The decisive factor that defeated the law of diminishing returns in industry and business was the value-adding effect of new knowledge and technology. In fact, this currently accounts for more than half of economic growth (*The Economist Technology Quarterly*, 2002, p. 13). At the level of actual practice in corporations, factories, and firms, new knowledge and technology manifest themselves in the form of *innovation*. However, innovation itself cannot occur without production of novelty, and this is the domain of creativity. Thus, one aspect of socially useful creativity is its *contribution to economic welfare* through its function as the basis of innovation.

In economically and technologically less highly-developed countries, however, discussions of socially useful creativity often give greater emphasis to its role as a guiding principle in *social* development: As Oral (2006, p. 65) eloquently put it, in these countries creativity is vital “... for shaping their future orientations and actualizing reforms in political, economic and cultural areas.” Key social issues are demographic (e.g., ageing of the population, changing family patterns), social (e.g., inequality, integration of minorities), environmental (e.g., destruction of ecosystems, replacement of outdated energy sources), medical (e.g., raising of life expectancy, combating chronic diseases related to diet or lifestyle), political (e.g., achieving fairness in international relations, eliminating corruption), and industrial (e.g., modernizing outdated plant and methods, coping with globalization). In some domains social and economic issues overlap: One of the most obvious examples is information technology, where change is affecting business and industry to be sure, but people’s everyday life as well. The fear is that societies will stagnate, even deteriorate, and with them their people, unless their leaders and thinkers find innovative ways of dealing with issues of the kind just outlined. Thus, a second trend in recent thinking involves a *focus on creativity’s positive contribution to social, political and cultural life*.

Neglect of creativity

In view of such arguments it might be thought by enthusiasts that governments, educators and researchers would be keenly interested in creativity. Unfortunately, the reality is otherwise. Although the European Union has established programs bearing the names of famous innovators such as SOCRATES or LEONARDO, its guidelines for the development of education in the Community make no mention of “innovation” or “creativity.” At least until recently, the Max Planck Institute for Human Development, Germany’s leading research institute for the development of talent in research in the

social sciences, had never supported a project on the topics of creativity or innovation. In a letter from the office of the president dated April 26, 2006, the Max Planck Society rejected the suggestion of making creativity a priority research area, and confirmed that it does not regard creativity as one of the “challenging areas of research.”

The problem is not confined to the bureaucratic level. The 1996 report of the Alliance of Artists’ Communities (1996) concluded that “American creativity” is “at risk”. The problem also goes beyond artistic/aesthetic areas. Tilbury, Reid and Podger (2003) reported on a survey in Australia in which employers complained that Australian graduates lack creativity (p. viii). Cooper, Altman and Garner (2002) concluded that in the United Kingdom the higher education system discourages innovation—the British General Medical Council, for instance, recognized that medical education is overloaded with factual material that discourages higher order cognitive functions such as evaluation, synthesis and problem-solving, and engenders an attitude of passivity.

In schools the situation is not much better. Despite the fact that research about 30 years ago (e.g., Feldhusen and Treffinger, 1975) showed that already then most teachers claimed to have a positive attitude to creativity, even today in classrooms in many different countries, properties and behaviours actually associated with creativity are frequently frowned upon. The evidence summarized by Cropley and Cropley (2007) is that teachers in many countries discourage traits such as boldness, desire for novelty or originality, or even actively dislike children who display such characteristics. As Oral (2006, p. 65) put it, “... teachers’ insensitivity to creativity and teachers’ discouraging of creativity ... continues to be a universal problem in various cultures.” Thus, although there are calls for creativity, there may be limited effort to foster its emergence, or even dislike of people who display it.

Despite this pessimistic conclusion I believe that this state of affairs is largely the result, not of ill will, but of lack of understanding of creativity. It has often been seen as not only mainly to do with aesthetics, but also as involving simply letting yourself go. It is not infrequently regarded as a matter of unfettered thinking and behaviour, and thus as linked with lack of rigour, pandering to impulses, or free expression of ideas without regard to quality or even sense. Cattell and Butcher (1968, p. 271) called this “pseudocreativity”. To this can be added “quasicreativity” (Cropley, 1997a, p. 89, translating Heinelt, 1974), which has many of the elements of genuine creativity—such as a high level of fantasy—but only a tenuous connection with reality. An example would be the novelty generated in daydreams. Such misunderstandings mean that the nature of socially useful creativity urgently needs to be clarified.

Functional creativity

What is the essence of creativity? More than 50 years ago Morgan (1953) surveyed then current writings on creativity and concluded that the single common element in all definitions was novelty. Of course novelty is of major importance: How could creativity occur without it? However, my view is that, absurd as it sounds, until recently *novelty has been given too much emphasis* in discussions of creativity. Despite its importance, novelty is not sufficient on its own. If it were, every crazy idea or absurd suggestion would be creative. However, this is not the case: As Amabile and

Tighe (1993, p. 9) emphasized, products must be “appropriate,” “correct,” “useful,” or “valuable.” Thus, creative products must not only be novel, but also socially tolerable and capable of doing what they were designed for: They must be *relevant* and *effective*, as Bruner (1962, 3) put it.

The criteria of functional creativity

Cropley and Cropley (2005) focussed on relevant and effective novelty that serves some social purpose, calling the resulting creativity *functional* creativity. They argued that, although in the case of creativity novelty seems intuitively to take precedence over effectiveness, in the real, practical world the first criterion of creativity (or at least of functional creativity) is *effectiveness*. To take a simple example, a bridge must get traffic across a river. If it does not do what the engineers were hired to build it for, it is a bad product, no matter how novel it is. Even in artistic domains, effectiveness is important. Emile Zola displayed extraordinary imagination and poetic fantasy (novelty) in his novels, it is true, but without his mastery of the French language, painstaking research, and detailed drafting of plot his manuscripts may well have been surprising, even shocking, but would have lacked effectiveness and may well have produced no more than quasicreativity. Vincent Van Gogh lacked technical knowledge of how to paint, and had to return at the age of 32 to the Academy of Art in Antwerp, where he was taught to express his flair for colour and light in an effective way. He did not have to learn how to generate novelty, but how to convey it effectively to others.

Cropley and Cropley (2005) proposed two additional criteria of the creativity of socially-useful products. The first of these is *elegance*. Einstein argued that it is not difficult to find novel solutions to problems: The difficult part is finding solutions that are *elegant* (see Miller, 1992). Grudin (1990) reinforced this idea when he referred to “the *grace* of great things [our italics]”. Such solutions not infrequently cause a more or less instantaneous “shock of recognition” when they occur, and provoke a “Why didn’t I think of that?” reaction. Indeed, an elegant solution may look so simple and obvious—after the fact—that viewers may under-rate its creativity or denigrate it as “banal”. The second additional criterion is *generalizability*. Generalizable creativity not only offers new possibilities for the situation for which the novelty was generated, but is also applicable in other apparently unrelated situations. It may introduce a new way of conceptualizing an area, open up new approaches to existing problems (*germinality*), or demonstrate the existence of previously unnoticed problems (*seminality*).

Cropley and Cropley classified useful products using the four dimensions just listed, arranging them in a hierarchy ranging from the “routine” product (characterized by effectiveness alone) at one pole to the “innovative” product (characterized by effectiveness, novelty, elegance and generalizability) at the other, with “original” and “elegant” products between these poles. This relationship is shown in Table 1, where a plus sign means that a property is necessary for this kind of product, a minus sign that it is not. The schematic in Table 1 can also be used to demonstrate the position of pseudo- and quasicreativity, where the only *necessary* property of products seems to be novelty. The table shows that each product higher in the hierarchy incorporates all the properties of products at lower levels, but adds something to them.

Routine products should not be dismissed as worthless. They may be very useful: In areas such as engineering, for example, a very large number of products perform important functions that benefit humankind and contribute to the advancement of society, even though they are devoid of novelty. However, because they lack novelty they are not creative. They are effective, but that is all. Improvements to these products, rather than representing creativity, are instead simply *evolutionary* changes that develop what already exists according to existing lines of thought. It is only when people move beyond routine products that they enter the realm of *revolutionary* change, i.e., creativity.

Table 1. The hierarchical organization of products

Criterion	Kind of Product				
	Routine	Original	Elegant	Innovative	Pseudo- or quasi-creativity
Effectiveness	+	+	+	+	?
Novelty	-	+	+	+	+
Elegance	-	-	+	+	?
Generalizability	-	-	-	+	?

The hierarchical organization of products shown in Table 1 introduces a further important principle into the discussion of creativity: Creativity is not an all-or-nothing quality of a product, but *there are both levels and kinds of creativity*. It is not something that products either have or do not have. Different products can have creativity to greater or lesser degrees, or they can display different kinds of it. Cropley and Cropley (2005) suggested different labels for different *kinds* of creativity (“original,” “elegant,” “innovative”), while the hierarchical organization of these kinds of creativity means that there are also *levels* of creativity (innovative is more creative than elegant, while elegant is more creative than original).

Where does functional creativity come from?

Among the most important aspects of socially-useful creative products is that they largely derive from what already exists. A number of researchers such as Sternberg (1999) and Savransky (2000) have emphasized the link between existing knowledge and novel products. To take a concrete example, many of the innovations introduced by perhaps the world’s most distinguished producer of socially-useful novel products, Thomas Alva Edison, were improvements on existing technology or ideas. Edison worked with a large staff of engineers and technicians who constantly improved their own existing ideas: For instance, over the course of time they took out more than 100 patents for the electric light bulb alone. In an aphorism that became famous after being printed in *Harper’s Monthly* in September 1932, Edison concluded that “genius is 1% inspiration, 99% perspiration,” thus coming down squarely on the side of existing knowledge. Indeed, the Canadian Intellectual Property Office recently reported (http://strategis.gc.ca/sc_mrksv/cipo/patents/pat_gd_protect-e.html#sec2) that 90% of new patents are improvements of existing patents.

A further example from a more “artistic” field is also useful here: Much of Coleridge’s exotic imagery in *The Rime of the Ancient Mariner* is taken from ideas he found in the course of his wide and eclectic reading. He did not invent the ideas, so to

speak from nowhere, but adapted existing images to suit his new purpose, the writing of the poem. Weisberg (2004) showed that even an extraordinarily radical product such as Picasso's *Les demoiselles d'Avignon* arose out of what Picasso had experienced up until the time he painted it. Thus, there is a link between novelty and the already known, even in artistic/aesthetic fields.

Lubart (2000-2001) expressed the link between knowledge and creativity in a homely but convincing way: He suggested that there may well be no difference between the *processes* of divergent and convergent thinking, but that differences in outcome may depend instead on "... the quality of the material (e.g., knowledge) (p. 301)". Lubart extended this thought with the concrete metaphor: "The engine is the same, but some people use better grade fuel (p. 301)." Those who have only limited or narrow knowledge (the poorer grade of fuel) would not be able to combine ideas, make unexpected associations between pieces of knowledge, or synthesize apparently unrelated facts, since they would not possess the ideas, knowledge or facts upon which to operate.

Scott (1999a) listed a number of creativity researchers who all give a prominent place to knowledge in creativity (e.g., Amabile, Albert, Campbell, Chi, Gardner, Gruber, Mednick, Simon, Simonton, Wallas, Weisberg). Ericsson and Lehmann (1999, p. 706) summarized the link between knowledge and creativity by concluding that:

... the empirical evidence on creative achievement shows that individuals have not been able to make generally recognized creative contributions to domain unless they had mastered the relevant knowledge and skills in the course of a long preparatory period.

They repeated (1999, p. 700) the idea usually attributed to Gardner (1993) that there is a "10 year rule": An apprenticeship of at least 10 years is necessary for acquiring the fund of knowledge and skills necessary for creativity. Thus, the first element that is receiving renewed attention in recent discussions of creativity is *knowledge*. As Cropley (2006) argued, knowledge provides a wellspring of ideas that can be operated upon to generate novel products, determines whether a product is surprising, and permits a judgment of relevance and effectiveness. Thus, perhaps surprisingly, functional creativity starts with knowledge.

Neglect of products in education

Despite what has just been said, early in the modern era I took the view (e.g., Cropley, 1967) that there is no point in discussing creative products in educational settings, on the grounds that they are too difficult to pin down. This call was later repeated by writers such as Albert (1990). Indeed, despite the efforts of early researchers who called for discussion of products (such as Barron, 1969), discussion of creativity in psychology and education for a long time focused on person and process. In the classroom, fostering creativity was seen almost exclusively as a matter of promoting creative processes (such as divergent thinking) or creative personal characteristics (such as openness or risk-taking). Bailin (1988, p. 5) was a strong critic of this view. She argued against the tendency to look at creativity purely in terms of psychological

processes, and urged writers to focus on products, labelling efforts to foster creativity without reference to products “misleading” and “dangerous”. A focus on products is not new: MacKinnon (1978, p. 187) concluded that “analysis of creative products” is “the bedrock of all studies of creativity.” Even in his groundbreaking 1949 address to the American Psychological Society Guilford (1950) emphasized that creativity must “lead somewhere”.

The effects of evaluation on creativity

A barrier to acceptance of efforts to foster creativity in the classroom is the frequent assumption by educators that Amabile’s research (e.g., 1996) established unequivocally that extrinsic rewards inhibit creativity, and thus that grades and other forms of evaluative feedback (since they are given by the teacher, not by students themselves, and are thus extrinsic) are bad for creativity. However, Eisenberger and Armeli (1997) showed that the giving of grades can promote creativity, even in such intrinsically “creative” areas as music, provided that:

- (a) instructors know what it is that they are trying to promote and
- (b) students know what it is that they are expected to do differently in order to be creative.

It must be admitted that the area is still beset by differences of opinion (for a summary see Clydesdale, 2006). However, even Amabile has accepted that external rewards are not always the enemy of creativity (e.g., Hennessey and Amabile, 1998). What seems to be important is that the external assessment is focused on providing *information* about performance, not on controlling it. This means that teachers need to be familiar with what it is that they want students to do in assignments and able to pass this information on to students. To do this they need to be able to

- (a) recognize aspects of students’ work that can be said to be “creative,”
- (b) show students where this creativity lay,
- (c) show them where they have *not* been creative,
- (d) give guidelines on how to do better, and
- (e) show them how to evaluate their own work from the point of creativity.

Thus, an educational effort aimed at fostering the development of creative people would have to be able to do these things. How is this to be done?

Focus on assessment

Students at all levels produce many products. Of special interest here are the products they produce in the course of evaluation: essays, term papers, project reports, and the like. My focus now is on how such products can be assessed in ways that foster creativity. A problem for teachers at all levels is that they are accustomed to analyzing the *orthodoxy* of products, for instance factual correctness and breadth of coverage of these facts. What they need, however, is to be able to provide purposeful, systematic feedback about *departures from orthodoxy*; about how creative a product is and what it is about it that is creative. Cropley and Cropley (2007) suggested a system for doing this by building on the criteria of *functional* creativity listed in Table 1 (see above) and the relevant literature on creativity of products.

Creativity of products

The most straightforward way of determining the creativity of a product is to ask people whether it is creative. This sensible idea is at the heart of the method of *consensual assessment* (for a summary, see Hennessey and Amabile, 1999). Amabile and her colleagues have developed and refined this approach, and the *Consensual Assessment Technique* (CAT) is now relatively well known among creativity researchers. The important point for the present discussion is that, provided they have some guidance, people are able to recognize creativity when they see it—even people without expert knowledge of a field. A number of psychologists have developed instruments based on observers' ratings for systematically (but not objectively, it must be admitted) determining the creativity of products.

An early example is Taylor's (1975) *Creative Product Inventory*, which measures the dimensions Generation, Reformulation, Originality, Relevancy, Hedonics, Complexity, and Condensation. The criterion of hedonics raises an interesting issue: It is reminiscent of Jackson and Messick's (1965) very early distinction between *external* criteria of the effectiveness of a novel product (i.e., does it work?) and *internal* criteria such as logic, harmony among the elements of the product, and pleasingness (i.e., is it beautiful?). Taylor thus added to the definition of the functional creativity of solutions what are to some extent *aesthetic* criteria. More recently, Besemer and O'Quin (1987) developed the *Creative Product Semantic Scale*, which is based on three dimensions: Novelty (the product is original, surprising and germinal), Resolution (the product is valuable, logical, useful, and understandable), and Elaboration and Synthesis (the product is organic, elegant, complex, and well-crafted). These studies suggest a number of criteria of the creativity of a product, which are summarized in Table 2.

Table 2. Criteria of effective novelty in a product

Kind of criterion	Level of novelty	Kind of novelty
External	<ul style="list-style-type: none"> • differs from what already exists • leads to surprise • is generalizable • is seminal • is germinal 	<ul style="list-style-type: none"> • relevant • valuable • effective • useful
	Internal	<ul style="list-style-type: none"> • generates many ideas • leads to substantial reformulation of ideas • opens up new principles

The Solution-Diagnosis Scale

In an early application of the criteria of functional creativity listed in Table 1 (relevance and effectiveness, novelty, elegance, generalizability) to evaluating student assignments, Cropley and Cropley (2000) used them to assess a variety of products built by engineering students at university level such as a wheeled vehicle powered by the energy stored in a mousetrap or a lifting device capable of raising and/or lowering a

delicate object (an uncooked egg) at least one metre without using any wheels, pullies, chains, ropes, or motor. They found that criteria such as elegance could be understood and accepted by students.

More recently, Cropley and Cropley (2007) combined these criteria with the indicators outlined in Table 2 to develop a scale for assessing the creativity of assignments. This scale involves

- (a) *principles of creativity* (relevance and effectiveness, novelty, elegance, generalizability),
- (b) *criteria* of the principles (possession and use of knowledge, problematization, adding to existing knowledge, going beyond existing knowledge, external elegance, internal elegance, going beyond the immediate problem), and
- (c) *indicators* of the presence of the criteria (e.g., diagnosis, prescription, redefinition, reconstruction, convincingness, completeness, germinality, seminality, etc).

The scale, which is shown in Table 3, can be used to assess (or diagnose) both *amount* of creativity and also *kind* of creativity. The material in Table 3 is an improved version of an earlier scale (Cropley, 2005).

Although their data are only of a preliminary nature, Cropley and Cropley (2007) reported findings supporting the validity and reliability of the 2005 version of the scale. In the case of validity, members of a group of student teachers (N = 13) were able to distinguish systematically between two models constructed by engineering students and to explain which was *more* creative (quantitative criterion) and *how* it was creative (qualitative criterion), as well as making differentiated, specific suggestions for how to increase the creativity of both models. Their ratings also agreed well with those of “expert” raters—concurrent validity. The raters also agreed with each other to a substantial degree—inter-rater reliability—and their scores were fairly stable over time (test-retest reliability = .79), a reasonable figure for a first draft of a scale with such a small group. These findings suggest that it is possible to assess the creativity of assignments, and that the Solution-Diagnosis Scale is worth using and refining.

In closing, then, it can be said that creativity can be defined in socially-useful terms, not just as something that enhances the life of individuals. Furthermore, socially-useful creativity can be recognized in assignments and fostered in educational settings.

This article suggests a system for doing the latter. However, as Cropley (2005) emphasized, the way in which problems are presented to students has a profound effect on the kinds of products they produce. Thus, the use of assignments to foster creativity depends not only upon appropriate assessment procedures, but also on appropriate ways of setting the problems to which students are asked to respond. This second leg of the creativity-assessment link can only be mentioned here, but it must be kept in mind.

Table 3. The solution diagnosis scale for assessing the creativity of assignments

Principle	Kind of solution	Criterion	Indicator (explanation of indicator)
Relevance and Effectiveness	Routine solution	Satisfying requirements in the problem statement	<ul style="list-style-type: none"> • <i>correctness</i> (solution accurately reflects conventional knowledge and/or techniques) • <i>effectiveness</i> (solution does what it is supposed to) • <i>appropriateness</i> (solution fits within task constraints)
		Problematization	<ul style="list-style-type: none"> • <i>diagnosis</i> (solution draws attention to shortcomings in what already exists) • <i>prescription</i> (solution indicates how what already exists could be improved) • <i>prognosis</i> (solution indicates likely effects of changes)
Novelty	Original solution	Adding to existing knowledge	<ul style="list-style-type: none"> • <i>replication</i> (the known is transferred to a new setting) • <i>redefinition</i> (the known is seen or used in a new way) • <i>combination</i> (generation of new mixtures of existing elements); • <i>incrementation</i> (the known is extended in an existing direction) • <i>reconstruction</i> (an approach previously abandoned is shown to be useful)
		Developing new knowledge	<ul style="list-style-type: none"> • <i>redirection</i> (the known is extended in a new direction) • <i>reinitiation</i> (solution indicates a radically new approach) • <i>generation</i> (construction of fundamentally new—but at least potentially effective— solutions)
Elegance	Elegant solution	External elegance: Effect on other people	<ul style="list-style-type: none"> • <i>recognition</i> (the beholder sees at once that the solution has something) • <i>convincingness</i> (the beholder is convinced by the solution) • <i>pleasingness</i> (the beholder finds the solution “beautiful”)
		Internal elegance: Ideas are well worked out and hang together	<ul style="list-style-type: none"> • <i>completeness</i> (the solution is well worked out and “rounded”, not just fragmentary) • <i>harmoniousness</i> (elements of the solution fit together in an internally consistent way)
Generalizability	Generalizable solution	Ideas go beyond the immediate problem	<ul style="list-style-type: none"> • <i>foundationality</i> (solution lays down a general basis for further work) • <i>transferability</i> (solution offers ideas for other, apparently unrelated problems) • <i>germinality</i> (solution suggests new ways of looking at existing issues or problems) • <i>seminality</i> (solution draws attention to previously unnoticed problems)

References

- Albert, R. S. (1990). Identity, experiences, and career choice among the exceptionally gifted and talented. In M. A. Runco (Ed.), *Theories of creativity* (pp. 13-34). Newbury Park, CA: Sage.
- Alliance of Artists' Communities. (1996). *American creativity at risk: Restoring creativity as a priority in public policy, cultural philanthropy, and education*. Portland, OR: Alliance of Artists' Communities.
- Amabile, T. M. (1996). *Creativity in context*. Boulder, CO: Westview Press.
- Amabile, T. M., & Tighe, E. (1993). Questions of creativity. In J. Brockman (Ed.), *Creativity* (pp. 7-27). New York: Simon and Schuster.

- Bailin, S. (1988). *Achieving extraordinary ends: An essay on creativity*. Dordrecht: Kluwer.
- Barron, F. X. (1969). *Creative person and creative process*. New York: Holt, Rinehart and Winston.
- Besemer, S. P., & O'Quin, K. (1987). Creative product analysis: Testing a model by developing a judging instrument. In S. G. Isaksen (Ed.), *Frontiers of creativity research: Beyond the basics* (pp. 367-389). Buffalo, NY: Bearly.
- Boden, M. A. (1994). Introduction. In M. A. Boden (Ed.), *Dimensions of creativity* (pp. 1-12). Cambridge, MA: MIT Press.
- Bruner, J. S. (1962). The conditions of creativity. In H. Gruber, G. Terrell and M. Wertheimer (Eds.), *Contemporary approaches to cognition* (pp. 1-30). New York: Atherton.
- Burkhardt, H. (1985). *Gleichheitswahn Parteienwahn* [Obsession with equality]. Tübingen: Hohrenrain.
- Cattell, R. B., & Butcher, H. J. (1968). *The prediction of achievement and creativity*. New York: Bobbs-Merrill.
- Clydesdale, G. (2006). Creativity and competition: The Beatles. *Creativity Research Journal*, 18, 129-139.
- Cooper, C., Altman, W., & Garner, A. (2002). *Inventing for business success*. New York: Texere.
- Cropley, A. J. (1967). *Creativity*. London: Longman.
- Cropley, A. J. (1990). Creativity and mental health in everyday life. *Creativity Research Journal*, 3, 167-178.
- Cropley, A. J. (2005). *Creativity and problem-solving: Implications for classroom assessment*. Leicester: British Psychological Society.
- Cropley, A. J. (2006). In praise of convergent thinking. *Creativity Research Journal*, 18, 391-404.
- Cropley, A. J., & Cropley, D. H. (2007). *Fostering creativity: A diagnostic approach for higher education and organizations*. Creskill, NJ: Hampton Press.
- Cropley, D. H., & Cropley, A. J. (2005). Engineering creativity: A systems concept of functional creativity. In J. C. Kaufman and J. Baer (Eds.), *Faces of the muse: How people think, work and act creatively in diverse domains* (pp. 169-185). Hillsdale, NJ: Lawrence Erlbaum.
- Csikszentmihalyi, M. (1988). Society, culture, and person: a system view of creativity. In R. J. Sternberg (Ed.), *The nature of creativity* (pp. 325-339). New York: Cambridge University Press.
- Csikszentmihalyi, M. (1999). Implications of a systems perspective for the study of creativity. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp. 313-335). Cambridge: Cambridge University Press.
- Economist Technology Quarterly*. (September 21, 2002). Thanksgiving for innovation (pp. 13-14).
- Edwards, S. M. (2000-2001). The technology paradox: Efficiency versus creativity. *Creativity Research Journal*, 13, 221-228.
- Eisenberger, R., & Armeli, S. (1997). Can salient reward increase creative performance without reducing intrinsic creative interest? *Journal of Personality and Social Psychology*, 72, 652-663.
- Ericsson, K. A., & Lehmann, A. C. (1999). Expertise. In M. A. Runco and S. R. Pritzker (Eds.), *Encyclopedia of creativity*, Vol. 1 (pp. 695-707). San Diego: Academic Press.

- Feldhusen, J. F., & Treffinger, D. J. (1975). Teachers' attitudes and practices in teaching creativity and problem solving to economically disadvantaged and minority children. *Psychological Reports*, 37, 1161-1162.
- Gardner, H. (1993). *Creating minds*. New York: Basic Books.
- Grudin, R. (1990). *The grace of great things: Creativity and innovation*. New York: Ticknor and Fields.
- Guilford, J. P. (1950). Creativity. *American Psychologist*, 5, 444-454.
- Heinelt, G. (1974). *Kreative Lehrer/kreative Schüler* [Creative teachers/creative students]. Freiburg: Herder.
- Hennessey, B. A., & Amabile, T. M. (1998). Reward, intrinsic motivation and creativity. *American Psychologist*, 53, 674-675.
- Jackson, P. W., & Messick, S. (1965) The person, the product, and the response: Conceptual problems in the assessment of creativity. *Journal of Personality*, 33, 309-329.
- Lubart, T. (2000-2001). Models of the creative process: Past, present and future. *Creativity Research Journal*, 13, 295-308.
- MacKinnon, D. W. (1978). *In search of human effectiveness: Identifying and developing creativity*. Buffalo, NY: Creative Education Foundation.
- Maslow, A. H. (1973). Creativity in self-actualizing people. In A. Rothenberg and C. R. Hausman (Eds.), *The creative question* (pp. 86-92). Durham, NC: Duke University Press.
- May, R. (1976). *The courage to create*. New York: Bantam.
- Miller, A. I. (1992). Scientific creativity: A comparative study of Henri Poincaré and Albert Einstein. *Creativity Research Journal*, 5, 385-418.
- Morgan, D. N. (1953). Creativity today. *Journal of Aesthetics*, 12, 1-24.
- Moustakis, C. E. (1977). *Creative life*. New York: Van Nostrand.
- Olken, H. (1964, December). Creativity training for engineers—its past, present and future. *International Association for Engineering Education Transactions in Education*, 149-161.
- Oral, G. (2006). Creativity of Turkish prospective teachers. *Creativity Research Journal*, 18, 65-73.
- Rhodes, M. (1961). An analysis of creativity. *Phi Delta Kappan*, 42, 305-310.
- Rogers, C. R. (1961). *On becoming a person*. Boston: Houghton Mifflin.
- Savransky, S. D. (2000). *Engineering of creativity*. Boca Raton, FL: CRC Press.
- Scott, T. E. (1999a). Knowledge. In M. A. Runco and S. R. Pritzker (Eds.), *Encyclopedia of creativity*, Vol. 2 (pp.119-129). San Diego: Academic Press.
- Sternberg, R. J. (1999). A propulsion model of types of creative contributions. *Review of General Psychology*, 3(2), 83-100.
- Sternberg, R. J., & Lubart, T. I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. New York: Free Press.
- Taylor, I. A. (1975). An emerging view of creative actions. In I. A. Taylor and J. W. Getzels (Eds.), *Perspectives in creativity* (pp. 297-325). Chicago: Aldine.
- Tilbury, D., Reid, A., & Podger, D. (2003). *Action research for university staff: changing curricula and graduate skills towards sustainability, Stage 1 Report*. Canberra: Environment Australia.
- Weisberg, R. W. (2004). On structure in the process: A quantitative case-study of the creation of Picasso's *Guernica*. *Empirical Studies in the Arts*, 22, 23-54.

Quantum Theories of Consciousness

Imants Barušs

King's University College at the University of Western Ontario

The assumption is often made in conventional cognitive science that consciousness is a computational process resulting from macroscopic neural activity as described by classical physics. That assumption has been questioned both because it has been unsuccessful in explaining consciousness and because it is based on outdated ideas about the nature of matter. More contemporary quantum theories may be more successful for understanding cognition. For example, Mari Jibu, Kunio Yasue, and Yasushi Takahashi have proposed a theory of memory as a spinor field underlying cortical dipoles in which quantum mechanical tunnelling instantiates memory decay and in which the creation of Goldstone bosons is the process of memory recall. Or, more radically, as proposed by Eugene Wigner, consciousness itself could be a causal agent that collapses the state vector describing physical reality. For Evan Harris Walker, such an effect occurs at synapses in the brain thereby regulating its electrochemical activity. According to Henry Stapp, Jeffrey Schwartz, and Mario Beauregard it is the attention density of our ongoing experiential stream that modulates neural activity through the quantum Zeno effect with demonstrated implications for the treatment of Obsessive-Compulsive Disorder. Such ideas address the possibility of the existence of a pre-physical substrate, akin to David Bohm's implicate order, which could also be the referent of the transcendent consciousness experienced by John Wren-Lewis and Franklin Wolff. The notion of a deep consciousness as a pre-physical substrate from which physical reality is precipitated is one way in which some of the ideas of the theorists presented here could be integrated. It would be worth pursuing this line of investigation to determine eventually the goodness of fit of the resultant theories with observational data.³

Keywords: Consciousness, quantum theories, cognition.

Motivation for Quantum Theories

Why should we consider quantum theories of consciousness? There are a couple of reasons. The first is the failure of classical computationalism to adequately explain cognition and, in particular, consciousness. By "classical computationalism" I am referring to standard computer analogue and connectionist models of cognition (e.g., Pylyshyn, 1986). These models have some value as metaphors, just as the psychodynamic conceptualization of the psyche as a hydraulic system or the behaviourist telephone switchboard have their usefulness. But intractable problems arise when these metaphors are taken seriously as actual explanations of reality. These problems have always existed (e.g., Barwise, 1986), but have become more obvious with time. As Jerry Fodor (2000) has said: "I would have thought that the last forty or fifty years have demonstrated pretty clearly that there are aspects of higher mental processes into

³ *Author's note. Correspondence concerning this article should be addressed to Imants Barušs, e-mail: baruss@uwo.ca*

which the current armamentarium of computational models, theories, and experimental techniques offers vanishingly little insight” (p. 2). In my case, over the course of more than a decade of carefully analysing them, I have found computational theories of consciousness to be so riddled with lacunae (e.g., Barušs, 1990a; 1990b; 1992; 1995; 1998) that I do not see any hope for them in the near future and have stopped paying attention to them. The point is that we need a good alternative to computationalism.

The second reason why we should consider quantum theories of consciousness has to do with grounding our understanding of the psyche in the best theories of physical reality. We need to understand the biological substrate of cognition, as, indeed, we try to do in neuroscience. But as Patricia Churchland (1980) has said: “For purists, the real bottom will of course belong not to neuroscience but to physics” (p. 207). Well, I am certainly a purist and welcome the role of physics in explanations of consciousness. However, “until recently, virtually all attempts to understand the functional activity of the brain have been based, at least implicitly, on some principles of classical physics that have been known to be fundamentally false for three-quarters of a century” (Schwartz, Stapp, & Beauregard, 2005, p. 1310). Neuroscientific theories based solely on classical physics are bound to fail because they do not take into account the occurrence of quantum phenomena. For this we need quantum theory. As Jibu and Yasue (2004) have pointed out: “It seems of much importance now to let the neuro- and cognitive scientists know the truth: it is necessary to rely on quantum theory . . .” (p. 287) and “incorporation of quantum theory into the investigation of brain functioning is an inevitable turning point of the consciousness research” (p. 288). Thus, it is necessary to consider quantum processes in any theory of cognition.

Relinquishing traditional computational theories and embracing quantum theories of cognition leads to a shift in the level of physical reality at which mental events can be thought of as taking place. Rather than emerging as a byproduct of cellular activity, mentation can be viewed as occurring within the molecules constituting biological organisms. In particular, consciousness, as an experiential stream, could be a phenomenon associated with subatomic events. Furthermore, consciousness could be inextricably interwoven into the fabric of physical reality in essential ways.

Condensation Theories

One way of thinking about mentation as a quantum process is to associate it with Fröhlich’s Bose-Einstein-like condensation. When a boson gas, such as a dilute gas of rubidium atoms, is cooled sufficiently, it undergoes a phase transition whereby the condensed bosons collectively fall into their lowest possible energy states. The resulting condensate is an ordered state in which the condensed particles behave in a coordinated manner (cf. Annett, 2004; Daintith, 2005). Something similar occurs in a biological system. According to Herbert Fröhlich, if energy is supplied to oscillating electrical dipoles, such as “protein molecules or parts of cell walls,” (Marshall, 1989, p. 80) some of that energy will go into the “lowest collective frequency mode” (p. 79) of the oscillators. Because of the properties of matter at the subatomic scale, the effect that this would have would be that of creating greater coherence between the separate parts of that biological system.

Mari Jibu, Yasushi Takahashi, and Kunio Yasue used these types of ideas to try to account for memory. For Jibu et al., proteins surrounded by water in the brain constitute a system of “corticons” which can go into an ordered state known as a “spinor field.” Incoming energy, gated through interactions with classical constituents of a cell, is a source of data for the corticons which then encode that information through a phase transition until such time as it decays through quantum mechanical tunnelling. Memory retrieval occurs when a signal similar to the encoded information prompts recall through the creation of Goldstone bosons (Jibu & Yasue, 2004; Takahashi & Jibu, 2004). Quantum mechanical tunnelling is a process whereby subatomic particles can escape energy barriers that would not be possible to transcend through classical means (cf. Goswami, 1997/2003), whereas Goldstone bosons are massless particles created in conditions such as those considered by Jibu et al. (Daintith, 2005; Sudbery, 1986). Although some of the details of this theory need clarification, it does suggest a way in which memory could be encoded in the quantum states of electrical dipoles in the brain rather than being a function of cellular biochemistry.

Collapse Theories

Before it is observed, there is no single state in which physical reality exists. Rather, there is a superposition of possible physical realities whose description is called the “state vector.” At the time of observation, one of the possibilities becomes the physical reality that is actually experienced. All of the other possibilities either disappear or continue on their own trajectories as alternate physical realities, depending upon one’s point of view. Or, as some physicists have posited, environmental effects introduce “decoherence” that erases some of the possibilities, although it does not appear as though all of them can be thus made to vanish (Adler, 2003). If the alternate realities are believed to disappear entirely in addition to any decoherence effects, then the state vector is said to have “collapsed.” The problem, known as the “measurement problem,” becomes that of determining the cause of the collapse.

One solution to the measurement problem has been to say that consciousness, acting as a non-physical source of intervention, causes the collapse of the state vector. This was the position taken, for example, by Eugene Wigner (1972): “. . . the ‘reduction of the wave packet’ . . . takes place whenever the result of an observation enters the consciousness of the observer or, to be even more painfully precise, my own consciousness, since I am the only observer, all other people being only subjects of my observations” (p. 137). However, if we are going to go down this road, then it makes sense to separate out two aspects of measurement, namely one which notes the effects of the collapse of the state vector and the other which triggers the collapse. And so consciousness can be thought of as having both an observational capacity and a volitional agency (Barušs, 1986). Evan Harris Walker (2000) has also, in effect, made this distinction, noting that it is the will which causes the collapse of the state vector.

Walker (1970; 1977; 2000) has said that the exercise of the will to collapse the state vector occurs, in particular, at synapses between nerve cells, resulting in modulation of electrochemical communication processes taking place in the brain. An electrochemical impulse arriving at a synapse creates an electrical potential across the synaptic cleft

leading to quantum mechanical tunnelling of electrons from postsynaptic to presynaptic structures. According to Walker, the tunnelling electrons induce conformational changes to presynaptic macromolecules thereby triggering the release of neurotransmitter. Walker has postulated that these effects are propagated throughout the brain by “hopping conduction” along ribonucleic acid molecules (Walker, 2000, p. 229). Because all of the electrons involved in this process are indistinguishable, the tunnelling and propagation of these electrons can be regarded as the activity of a single electron, thereby producing the kind of coordinated activity necessary to account for the nature of consciousness. For Walker, “consciousness is the collection of potentialities that develop as these electrons and these structures of the brain interact” (p. 237). Will, by causing the state vector to collapse in a particular manner, initiates this electron cascade, thereby selecting which synapses will fire and, hence, determining our experience and behaviour.

Henry Stapp, together with some colleagues, has developed a similar idea. For Stapp, when we talk about consciousness collapsing the state vector, we are talking about the influence of our ongoing subjective stream of consciousness. The example that Stapp has used is that of raising one’s arm. I think I would like to raise my arm and then my arm goes up. In this manner we have mental causation. The evidence to substantiate such a causal notion of volition comes from Jeffrey Schwartz’s brain-imaging studies of “self-directed neuroplasticity,” whereby changes to the right caudate nucleus were found after ten weeks of cognitive-behavioural therapy for Obsessive-Compulsive Disorder. Furthermore, he found that “dispassionate self-observation” appeared to be a critical aspect of the cognitive treatment for it to be effective (Schwartz, 2005; Schwartz & Begley, 2002). Of course, one’s experience of volition could be after the fact since the brain’s cybernetics operating through more conventionally conceptualized physiological processes could be the causal agents also in cases of neuroplasticity.

Stapp et al. call on a quantum phenomenon known as the “quantum Zeno effect” to suggest a mechanism for wilful action. Closely spaced repeated observational acts can hold a quantum system in a constant state even if there is pressure through classical mechanisms for it to change. They suggest that what happens is that, as we increase the amount of mental effort, we increase the rapidity with which the selection of alternatives occurs. For Stapp et al., “oscillating states of macroscopic subsystems of the brain” (Schwartz, Stapp, & Beauregard, 2005, p. 1320; emphases removed) acting in a widespread coherent manner instantiate the intended actions, thereby modulating the electrochemical neural activity of the brain. In practical terms, then, effort can hold in place a “template for action” (p. 1324; emphases removed) by increasing the density of attention so that an intended action has a higher probability of occurrence than it otherwise would. It should be noted that the quantum Zeno effect, which has been observed experimentally outside the context of mind-body interaction, is considered by some physicists to be, not an effect of consciousness during an observational process, but a decoherence effect (e.g., Polkinghorne, 2002).

The Notion of a Pre-Physical Substrate

With these collapse theories of consciousness, what we have essentially, is the notion of a pre-physical substrate from which causal effects on physical reality can emerge.

But there has been a more radical notion in quantum theory outside the context of consciousness studies, namely, that physical reality as such emerges from a pre-physical substrate. And this applies not just to physical bodies, but to physical space itself, within which physical bodies are situated. For example: "... space is no longer the all-embracing theatre of reality, but a structure that has emerged together with the macroscopic material entities that have emerged from the microworld" (Aerts & Aerts, 2005, p. 153).

David Bohm has used the notion of an "implicate order" to conceptualize a pre-physical substrate (Bohm, 1980/1983; Bohm & Hiley, 1993; Factor, 1985). His ideas can be illustrated with the following analogy. One of the physical phenomena that is predicted by quantum mechanics but whose existence is not possible within classical physics, is that of entanglement. In some cases, subatomic processes remain connected in non-local ways. For example, under some conditions, a photon moving away from another in the opposite direction from it can nonetheless behave in such a manner as to "take into account" the activity of the distant photon. Bohm has used the example of fish in a tank to discuss such quantum entanglement: Imagine two images taken with two separate cameras, from two different angles, of a single fish, projected onto two separate television screens. How is it that the fish on the second screen can so perfectly copy what the fish on the first screen does? Well, it is not at all unusual since they are both images of the same fish. In the same way "... we may regard each of the 'particles' constituting a system as a projection of a 'higher-dimensional' reality" (Bohm, 1980/1983, p. 188). According to Bohm, what we experience, our consciousness as well as the physical world, is an explication of an implicate order.

The notion of a pre-physical substrate is also found in some cases of alterations of consciousness. For example, following an opiate-induced coma, John Wren-Lewis (1994) felt that "some kind of brain-cataract [had been] removed, making unobscured perception possible for the first time" (p. 109). Upon examination of his experience, he found a "dazzling darkness" (p. 109) underlying his ordinary consciousness that was so palpable that it seemed as though the back of his head were exposed to the infinite reaches of space. This underlying darkness gave rise to the physical world so that: "... what I perceive with my eyes and other senses is a whole world that seems to be coming fresh-minted into existence *moment by moment* ..." (Wren-Lewis, 1988, p. 116). Similarly, following his experience of enlightenment, Franklin Wolff has maintained that our subject-object experience of reality arises from a generative underlying substrate. In fact, for Wolff, "... consciousness is itself the substantial substrate ..." (Merrell-Wolff, 1995, p. 195).

I agree with Wolff, in that I think that the pre-physical substrate has the quality of consciousness. Not consciousness in the sense of an ongoing experiential stream, but "deep consciousness" as a normally inaccessible aspect of our psyches of which our ordinary consciousness is a byproduct. This is consistent with Amit Goswami's (1993) contention that "... our consciousness is the consciousness of the Being that is beyond the subject-object split" (p. 187; emphases removed). Thus it is possible that such "... non-local consciousness... collapses the brain-mind from outside space-time..." (Goswami, 1993, p. 186). In such a quantum theory of consciousness, it is not that quantum theory explains consciousness, but rather that quantum theory allows for the understanding of a possible relationship of consciousness to physical matter.

I think that consciousness, in the sense of deep consciousness as a pre-physical substrate, analogous to the implicate order, could be giving rise to space-time with its constituent corporeality. Intentions within one's experiential stream, as aspects of the deeper consciousness, perhaps actualized as a coherent subatomic system through Fröhlich's Bose-Einstein-like condensation, could affect physical reality by directing the collapse of the state vector at synapses, thereby modulating the electrochemical activity of neurons. In this way, some of the ideas of the theorists presented here could be integrated. It would be worth pursuing this line of investigation to determine eventually the goodness of fit of the resultant theories with observational data.

References

- Adler, S. L. (2003). Why decoherence has not solved the measurement problem: A response to P. W. Anderson. *Studies in History and Philosophy of Modern Physics*, 34, 135-142.
- Aerts, D., & Aerts, S. (2005). Towards a general operational and realistic framework for quantum mechanics and relativity theory. In A. Elitzur, S. Dolev, & N. Kolenda, (Eds.) *Quo vadis quantum mechanics?* (pp. 153-207). Berlin: Springer.
- Annett, J. F. (2004). *Superconductivity, superfluids and condensates*. Oxford: Oxford University Press.
- Barušs, I. (1986). Quantum mechanics and human consciousness. *Physics in Canada*, 42(1), 3-5.
- Barušs, I. (1990a). *The personal nature of notions of consciousness: A theoretical and empirical examination of the role of the personal in the understanding of consciousness*. Lanham, Maryland: University Press of America.
- Barušs, I. (1990b). [Review of *Consciousness* by W. Lycan]. *Imagination, Cognition and Personality*, 9(2), 179-182.
- Barušs, I. (1992). [Review of *A cognitive theory of consciousness* by B. Baars]. *Imagination, Cognition and Personality*, 11(3), 303-307.
- Barušs, I. (1995). [Review of *The psychology of consciousness* by G. W. Farthing]. *Imagination, Cognition and Personality*, 14(4), 353-355.
- Barušs, I. (1998). [Review of *Consciousness reconsidered* by O. Flanagan]. *Imagination, Cognition and Personality*, 18(2), 167-170.
- Barwise, J. (1986). Information and circumstance. *Notre Dame Journal of Formal Logic*, 27(3), 324-338.
- Bohm, D. (1983). *Wholeness and the implicate order*. London: Ark. (Original work published 1980)
- Bohm, D., & Hiley, B. J. (1993). *The undivided universe: An ontological interpretation of quantum theory*. London: Routledge.
- Churchland, P. S. (1980). A perspective on mind-brain research. *The Journal of Philosophy*, 77(4), 185-207.
- Daintith, J. (Ed.). (2005). *A dictionary of physics* (5th ed.). Oxford: Oxford University Press.
- Factor, D. (Ed.). (1985). *Unfolding meaning: A weekend of dialogue with David Bohm*. Mickleton, UK: Foundation House.

- Fodor, J. (2000). *The mind doesn't work that way: The scope and limits of computational psychology*. Cambridge, MA: MIT Press.
- Goswami, A. (with Reed, R. E. & Goswami, M.). (1993). *The self-aware universe: How consciousness creates the material world*. New York: Jeremy P. Tarcher / Putnam.
- Goswami, A. (2003). *Quantum mechanics* (2nd ed). Long Grove, IL: Waveland. (Original work published 1997)
- Jibu, M., & Yasue, K. (2004). Quantum brain dynamics and quantum field theory. In G. G. Globus, K. H. Pribram, & G. Vitiello, (Eds.), *Brain and being: At the boundary between science, philosophy, language and arts* (pp. 267-290). Amsterdam: John Benjamins.
- Marshall, I. N. (1989). Consciousness and Bose-Einstein condensates. *New Ideas in Psychology*, 7(1), 73-83.
- Merrell-Wolff, F. (1995). *Transformations in consciousness: The metaphysics and epistemology*. Albany, NY: State University of New York Press.
- Polkinghorne, J. (2002). *Quantum theory: A very short introduction*. Oxford: Oxford University Press.
- Pylyshyn, Z. W. (1986). *Computation and cognition: Toward a foundation for cognitive science*. Cambridge, MA: MIT Press.
- Schwartz, J. M. (2005). Mental health, spiritual information, and the power of the mind to shape the brain. In C. L. Harper, Jr. (Ed.), *Spiritual information: 100 perspectives on science and religion* (pp. 389-394). Philadelphia: Templeton Foundation Press.
- Schwartz, J. M., & Begley, S. (2002). *The mind and the brain: Neuroplasticity and the power of mental force*. New York: ReganBooks.
- Schwartz, J. M., Stapp, H. P., & Beauregard, M. (2005). Quantum physics in neuroscience and psychology: A neurophysical model of mind-brain interaction. *Philosophical Transactions of the Royal Society B*, 360(1458), 1309-1327.
- Sudbery, A. (1986). *Quantum mechanics and the particles of nature: An outline for mathematicians*. Cambridge, UK: Cambridge University Press.
- Takahashi, Y., & Jibu, M. (2004). Brain and quantum field theory. In G. G. Globus, K. H. Pribram, & G. Vitiello, (Eds.), *Brain and being: At the boundary between science, philosophy, language and arts* (pp. 291-313). Amsterdam: John Benjamins.
- Walker, E.H. (1970). The nature of consciousness. *Mathematical Biosciences* 7, 131-178.
- Walker, E.H. (1977). Quantum mechanical tunneling in synaptic and ephaptic transmission. *International Journal of Quantum Chemistry*, 11, 103-127.
- Walker, E.H. (2000). *The physics of consciousness: Quantum minds and the meaning of life*. Cambridge, MA: Perseus.
- Wigner, E. (1972). The place of consciousness in modern physics. In C. Muses & A. M. Young (Eds.), *Consciousness and reality: The human pivot point* (pp. 132-141). NY: Outerbridge & Lazard.
- Wren-Lewis, J. (1988). The darkness of God: A personal report on consciousness transformation through an encounter with death. *Journal of Humanistic Psychology*, 28(2), 105-122.
- Wren-Lewis, J. (1994). Aftereffects of near-death experiences: A survival mechanism hypothesis. *Journal of Transpersonal Psychology*, 26(2), 107-115.

PRESENTATIONS OF EMPIRICAL AND THEORETICAL STUDIES

Student motivation for choice of study program, psychological well-being, perceived social support and needs at the start of university studies

Sarmīte Voitkāne, Solveiga Miežīte, Malgožata Rasčevska, & Mārtiņš Vanags
University of Latvia

The purpose of this study was to design an instrument to identify student motivations for their choice of study program and to assess the impact of various motivational factors on the risk and resiliency factors for student adjustment to the university transition. Data were collected from 313 students with a mean age of 19 who studied in different faculties of University of Latvia, and a subsample of 125 students from the Faculty of Education and Psychology. Four instruments were included in the study: Motivation for Study Program Choice rating scale – MSPC (Vanags & Voitkāne, 2005), Ryff Scales of Psychological Well-Being (Ryff, 1989), Multidimensional Scale of Perceived Social Support (MSPSS, Zimet et al., Kazarian & McCabe, 1991), and University of Latvia adaptation of Student Needs Survey (Galagher, et.al., 1992). A Principal Components analysis of the MSPC yielded three independent study motivation factors: Career orientation, Interest orientation, and External influences. Career orientation and Interest orientation factors significantly correlate with Purpose of Life scale of Psychological well-being), with some of the Perceived Social Support scales, but not with Student Needs. External influences is the only factor that shows significant correlations with Student Needs, specifically in the areas of Self-regulation and Study competencies. The first year students who come from different backgrounds e.g. rural vs urban areas; who live in student dormitories vs parental dwellings; who have received government funding to cover their university fees vs having to pay for their own fees significantly differ on Study Choice Motivation factors.

Keywords: First-year student adjustment, motivation, psychological well-being, perceived social support, student needs.

Representatives from university student guidance and counselling centers across Europe reported a significant increase in the number of students with severe psychological problems. Concerns and needs were identified in personal, career, and learning skills areas. (FEDORA Congress, 2006, Informal reports from the European Forum for Student Guidance discussion groups)

It also emerged from the discussions in the Student-centered counselling group that students were not always aware of their problems and were reluctant to seek professional help even from the Psychological consulting services at the universities that provided such services. They were more likely to seek guidance regarding career options, than to seek psychological consultation for personal needs. This trend is also present at the University of Latvia, where the administration of several of the faculties

does not recognize that students have problems and that they need support and programs to address psychological adjustment needs, as well as social and study related problems even though such needs clearly exist (Voitkāne & Mieziņa, 2001). Hence it is important to survey student needs at the start of university studies to identify potential risk factors and plan for appropriate interventions.

According to the 2002 survey of the Career Orientation Center in Riga (<http://www.karjerascentrs.lv>), 56 % of high school graduates express the wish to continue their studies. Of these, 34% plan to enroll in a university. Of those who had chosen their field of studies, 71 % expressed the desire for additional information about the institution and program of their choice. Hence student guidance regarding choice of study programs is a high priority in preparation for university entrance. However, it is also clear from first year university student responses on the Gallagher Survey of Student Needs at the University of Latvia that students experience difficulties in areas related to study competencies, social relationships, self-confidence, self-regulation, somatic complaints and above all, anxieties regarding future career opportunities, and the choice of relevant study programs (Voitkāne & Mieziņa, 2001).

Previous research with first year students in the first term of their studies at the University of Latvia indicates that nearly half of the respondents wanted help to deal with career uncertainty (48%) and anxiety over finding a job (45%). Furthermore, a large proportion of students reported problems and would have liked to receive help in the following areas: social problems – including discomfort in social situations, loneliness, shyness (30%), fears related to examinations, public speaking, and underachievement (Voitkāne & Mieziņa, 2001). Similar findings were reported for Lithuanian students at Vilnius University (Balaisis, 2001; Balaisis, Dragūns & Mieziņa, 2004).

Transition to university life represents a psychological adjustment to a new life situation. Life changes include issues such as role change, social connectedness, and academic competence in the new learning context (Halamandaris & Power, 1997). Like other life transitions, the initial adjustment to university depends on a range of personal and environmental factors. A number of studies show that the early weeks of this transition can be critical to long-term university adjustment (Pratt, Bowers, et.al. 2000).

At the beginning of their studies, young people may experience feelings of inadequacy and lack of self-efficacy about their work. Feelings of self-efficacy imply confidence in one's ability to organize and conduct efforts towards achieving success and reaching one's intended goals (Chemers, Li-Tze Hu, & Garcia, 2001; Boulter, 2000; Kling, Ryff, & Essex, 1997; Hall, 2003; Panori & Wong, 1995). Among other factors student attitudes about going to university, values, sense of purpose and sense of independence have a direct influence on adjustment and academic achievement (Boulter, 2000).

The level of role adjustment is related to a sense of connectedness and belonging to the higher education environment and support for problem-solving is an important determinant for coping with stress at the beginning of studies in university. Social support also buffers the effect of life stress in depression (Holahan & Moos, 1981; Moos, 1991).

To pursue academic studies successfully, it is important for students to have specific goals and to be motivated to work toward their attainment. Clear study goals tend

to have an energizing function and generate positive emotions. Internal motivation to achieve goals ensures a more thorough cognitive involvement and supports the learning process based on intrinsic interest, curiosity, and quest for information. External goals, on the other hand are linked to restriction of the learning process by the need to meet requirements, the use of superficial cognitive strategies, and limited effort towards goal achievement (Schapiro & Livingston, 2000).

Investigations by Robbins, Lese, and Herrick (1993) demonstrate that young people with a strong sense of goals adapt more easily and faster and develop feelings of belonging to the new environment. Individuals with vaguely defined goals, on the other hand, are more self-centered and experience more anxiety and doubt. An individual's subjective evaluation of the degree to which his or her most important needs, goals, and wishes have been fulfilled in valued areas of life determines their psychological well-being and degree of satisfaction or dissatisfaction with life (Frisch, 2000; Voitkane, 2004).

According to Ryff, one's psychological sense of well-being, depends on various psychosocial adjustment factors, tends to be relatively consistent over time and can be viewed as a dispositional characteristic of individuals (Ryff & Singer, 1996; Ryff, 1989). The key dimensions of Ryff's synthetical model of psychological well-being are based on integrated elements derived from the theories of Maslow, Rogers, Allport, Jahoda, and Erikson. Psychological well-being includes six dimensions: positive relations with others, environmental mastery, autonomy, self-acceptance, purpose in life and personal growth. Positive well-being implies that the individual has a sense of purpose and meaning in life, and is open to continued growth and development.

Positive social relationships are important for students' well-being. Both the ability to perceive and utilize social support plays a role in coping with stress (Halaman-daris & Power, 1997; Stroebe & Stroebe, 1996). Social support includes social integration, as well as actual and perceived availability of supporting resources. Social support networks can be an important source of information and can be instrumental in obtaining financial support, as well as providing a sense of belonging (Cohen & Wills, 1985; Schwarzer & Leppin, 1991). Students who quickly adapt to the new social environment adjust better to academic demands and maintain their physical and psychological well-being (Dwyer & Cummings, 2001; Tomlinson-Clarke, 1998). Individuals who lack close ties with significant others, family, and friends, are more vulnerable to the harmful impact of stress (Rook, 1987; Kazarin & McCabe, 1991; Voitkane, 2003).

Findings from previous studies at the University of Latvia indicate that goal directedness is related to successful adjustment to university studies and greater life satisfaction (Voitkane, 2004). Goal directedness can be applied to a variety of life goals including focussed career goals. A well thought out study plan is an important first step in successful career preparation. Thus an investigation of students' motivation for selecting a particular study program may help to gain insight into the students' preparedness and ability to plan for future goals, as well as a sign of their investment and potential for commitment to follow through with a chosen course of studies.

Based on the previous discussion of personal resources and risk factors involved in the transition to university life, one can hypothesize that students' motivation for

their choice of study program could be a useful predictor for first-year student adjustment to the program demands of their specialization. It would also likely impact on the students' ability to adapt to the challenges of a new social environment, and on their sense of psychological well-being. Thus well grounded motivation for study choice could also be viewed more globally as a predictor of adjustment in making a successful transition to university.

Purpose of the Study

The present study was designed to identify the reasons which motivated students to select their area of specialization and to assess the impact of motivation for their choice of study program on the problems and needs for support that they experience upon entering university, as well as on their sense of psychological well-being. Perceived social support from family, friends, and significant others and financial support for university studies are additional factors that would play an important role in alleviating student needs during the initial adjustment period.

The aims of this study were: First, to identify the factors underlying the students' responses regarding their motives for study program choice. Second, to investigate the relationship between types of study motives and students' self-reported needs for support, as well as aspects of psychological well-being, perceived social support by family, friends and significant others, and demographic factors.

Research questions:

1. What is the underlying factor structure of the Motivation for Study Program-Choice rating scale?
2. Is there a relationship between the factors underlying the students' responses to the Motivation for Study Program Choice and measures of Psychological Well-Being, Perceived Social Support, and Student Needs reported by first-year students at the beginning of their university studies.
3. Do students with high and low scores on the Motivation for Study Program Choice factors differ on measures of Psychological Well-Being, Perceived Social Support and Student Needs?
4. Do students who come from different backgrounds, for example, rural vs urban areas; who live in student dormitories vs parental dwellings; who have received government funding to cover their university fees vs having to pay for their own fees, differ in their Study Choice Motivation?

Method

Participants

The study included two samples: 313 first-year students from several faculties of the University of Latvia and a subsample of 125 students from the Faculty of Education and Psychology at the University of Latvia (with a mean age of 19 years). Because of the skewed gender distribution in the Faculty of Education and Psychology, as well as in the obtained sample, only female students were included in the predictive analyses.

Instruments

Motivation for Study Program Choice rating scale – MSPC (Vanags & Voitkāne, 2005). MSPC consisted of 13 statements selected from motives offered by 345 year university students on an open-ended questionnaire about reasons for choosing their particular field of study. A list of 13 items was selected by the authors on the basis of a content analysis of the responses obtained on the open-ended questionnaire. The list of 13 items was included in the Motivation for Study Program Choice (MSPC) rating scale. Students from several faculties (N=313) assessed each of the 13 statements of the MSPC on a 5 point Likert scale with the rating of 1 indicating total disagreement and 5 indicating full agreement with the given statement.

University of Latvia Student Adaptation of the Ryff Scales of Psychological Well-Being (Ryff, 1989). An adaptation of the Ryff Scales of Psychological Well-Being (Voitkāne, Mieziņa, & Vanags, 2005) was carried out on the basis of data collected at the University of Latvia. A factor analysis of the responses obtained on samples from previous studies of first year students on the original six Ryff Scales yielded four independent factors for the Latvian University Student version of Ryff's Scales of Psychological Well-Being: These factors corresponded most closely to Ryff's Positive relations with others, Environmental mastery, Purpose in life, and Autonomy. The Student Psychological Well-Being Scales used in this study consist of 16 items, 4 items for each factor.

University of Latvia Adaptation of the Student Needs Survey (Galagher, et.al., 1992). The original Galagher Survey of Student Needs includes 42 items. On the basis of findings in the previous studies on first-year student adaptation at the University of Latvia the 20 most typical concerns reported by students at the beginning of their studies were identified and included in the Survey of Needs used in the present study. A rotated component matrix analysis yielded the following five factors, with 4 items for each factor. The factors were labelled according to the needs associated with Self-regulation; Study competencies; Self-confidence issues; Interpersonal communication problems and Somatic concerns ((Voitkāne, Mieziņa, & Vanags, 2005). The 20 item version of the survey was used in the present study.

Multidimensional Scale of Perceived Social Support (MSPSS, Zimet et al., 1988; Kazarian & McCabe, 1991). The Multidimensional Scale of Perceived Social Support is a 12-item self-report measure of subjectively assessed social support. Respondents use a seven-point Likert-type scale ranging from „very strongly disagree” to „very strongly agree” in responding to the items. The MSPSS was designed to measure the perceived adequacy of support from three sources: family, friends and significant other. Cronbach alphas are .90 for family; .92 for friends; .89 for significant others; and .88 for the MSPSS total score.

Procedure

During the first two weeks of September, 2005, Faculty of Education and Psychology students (from subsample n= 125) filled out anonymously the entire self-report questionnaire packet in their lecture halls. Students from other faculties filled out only the Motivation for Study Program Choice rating scale during September and October in 2006.

Results

Research Question # 1.: *What is the underlying factor structure of the Motivation for Study Program Choice rating scale?*

A Principal components matrix analysis was carried out on the Motivation for Study Program Choice rating scale responses of 313 female students from different faculties at the University of Latvia. The best solution obtained from the varimax rotations of the principal components matrix analyses of the students' responses on the MSPC yielded three independent components that will be referred to as *Study Motivation factors* (see Table 1). The first component C1 is a *Career orientation factor* which focusses on career advancement, salary, job market and prestige of the chosen field. The second component C2 is an *Interest oriented factor* which emphasizes the interest value of the chosen field; the possibility to influence societal processes; and the opportunity to help people. The third component C3 is an *External influences factor* which includes a variety of sources of influence such as family, teachers, peers and potential government funding of the studies. *Career orientation* (C1) was the strongest component which accounts for 24% of the total variance. The three components together explain 58% of the total variance for the 11 items included in the final rotation.

Table 1. Component matrix of Students' Motivations for Study Program Choice

Items	Component (N=313)		
	C1	C2	C3
1. I was influenced by career advancement opportunities	.85	.04	-.02
2. I was influenced by salary expectations	.83	-.06	.12
3. I was attracted by the job market in this field	.80	.16	.04
4. I was motivated by the social prestige of my future career	.76	.09	.15
5. I anticipated being able to help people in this specialization	-.05	.89	.03
6. I anticipated being able to influence societal processes	.14	.79	.14
7. I have a serious interest in this field of studies	.12	.69	-.27
8. I hoped to receive government funding for my studies	.01	-.13	.68
9. My choice of study program was influenced by my teachers	.02	.09	.64
10. My choice of study program was influenced by my friends	.10	.13	.60
11. My choice of program was influenced by my parents	.11	-.16	.58
Eigenvalues	2,68	1,99	1,72
% of Variance	24,35	18,10	15,61

The Cronbach alphas for the 3 factors were: $\alpha = .74$ for the first factor; $\alpha = .69$ for the second factor; and $\alpha = .46$ for the third factor respectively (see Table2). The Cronbach's alphas for the first two factors, *Career orientation* and *Interest orientation* indicate a sufficiently high internal reliability despite the fact that the scales based on these factors contain only 4 and 3 items respectively. The third factor, *External influences*, understandably is much weaker ($\alpha = .46$) since it covers different sources of influences that are not clearly specified as to their meaning to the respondent. Two external influence type items: *I was attracted to this field by the possibility to obtain work abroad*; and *I anticipated a lot of free time for personal use in the education specialization*, were dropped from the original list of 13 statements to maximize the internal consistency of the three factors.

Table 2. Descriptive statistics, reliability and intercorrelation for study motivation factors

Study motivation factor	Cronbach's Alpha	M	SD	Intercorrelation	
				Career goal orientation	Interest orientation
Career orientation	.74	11.06	3.48		
Interest orientation	.69	11.30	2.70	.16	
External influences	.46	7.27	2.86	.31**	-.12

**p < .01

Research question # 2. *Is there a relationship between the factors underlying the students' responses to the Motivations for Study Program Choice rating scale and measures of Psychological Well-Being, Perceived Social Support, and Student Needs reported by first year students at the beginning of their university studies?*

The intercorrelations between the three factors yield only one significant correlation ($r = .31$, $p < .01$) between *Career orientation* and *External influences*. This correlation suggests a possible underlying extrinsic influence operating in both of these factors.

The correlation coefficients between the Study Motivation factors, and Psychological Well-Being, Perceived Social Support, and Student Needs variables show that each of the three Study Motivation Factors, has a different relationship to the other variables (see Table 3).

The more *Interest oriented* students have higher ratings on Purpose of life ($r = .46$, $p < .01$), and Autonomy ($r = .21$, $p < .05$) on Psychological well-being: and Perceived higher social support from significant others ($r = .22$, $p < .05$).

Higher Purpose of life also characterizes students with higher *Career orientation* ($r = .32$, $p < .05$). They also perceive higher social support from all sources, as well as support from family (see Table 3).

Table 3. Pearson correlation between study motivation factors and Psychological Well-Being scales, Perceived Social Support scales and Student Needs

Scale	Study motivation factors			
	Career goal orientation	Interest orientation	External influences	
Psychological well-being	Positive relations with others	.07	.04	-.05
	Environmental mastery	.06	.03	-.10
	Purpose in life	.32**	.46**	.10
Needs	Autonomy	.01	.21*	-.15
	Self-regulation	.01	-.05	.26**
	Study competencies	-.12	-.06	.28**
	Self-confidence	-.06	-.14	.15
Perceived social support	Communication	-.02	-.05	.15
	Somatic concerns	.10	.06	.11
	Family	.27**	.15	.06
	Friends	.13	.07	.09
	Significant others	.13	.22*	-.04
	Sum	.24**	.19*	.05

*p < .05

**p < .01

The *External influences* factor is the only one that shows significant correlations with Student Needs specifically in the areas of Self-regulation and Study competencies.

Research Question # 3. *Do students with high and low scores on the Motivation for Study Program Choice factors differ on measures of Psychological Well-Being, Perceived Social Support and Student Needs?*

In order to understand better the relationships between the Study motivation factors and Psychological Well-Being and Student Needs factors, comparisons were made between the extremely high and low groups (approximately top and bottom 25%) selected on Study motivation factors (see Tables 4). The results are generally similar to those obtained from the correlation analyses, namely, Purpose of Life is significantly higher among those with high as compared to those with low *Career orientation*.

The high versus low *Interest orientation* group is significantly higher in goal orientation on the Purpose of Life scale, but s not on Perceived social support.

Students high on *Career orientation*, on the other hand perceive significantly greater social support from all sources, family, friends and significant others (see Tables 4).

Students high on *External influences* are more aware of their need for support in the areas of Self-regulation and Study competencies ($p < .05$), but they do not differ from the low group on any of the Psychological well-being and Perceived social support variables (see Tables 4).

Table 4. Inferential statistics for Psychological well-being, Perceived social support, Need scales comparison of low and high scoring groups on the three Study motivation factors

Scale		Group with low scores		Group with high scores		t
		M	SD	M	SD	
Grouped by Career orientation factor						
Psychological well-being	Positive relations with others	17.36	4.72	18.79	3.38	-1.38
	Environmental mastery	18.54	2.76	18.97	2.27	-0.67
	Purpose in life	16.64	4.06	19.67	3.18	-3.26**
Needs	Autonomy	16.96	3.47	16.94	2.59	0.03
	Emotional self-regulation	8.86	4.41	8.15	3.36	0.71
	Study competencies	10.46	3.37	8.88	3.81	1.71
	Self-confidence	9.96	4.26	8.03	3.37	1.98
	Communication	7.07	3.29	6.70	2.51	0.50
Perceived social support	Somatic concerns	6.39	2.79	7.12	2.83	-1.01
	Family	2.32	7.24	7.45	5.13	-3.23**
	Friends	5.36	4.60	7.94	3.48	-2.49*
	Significant others	6.39	4.86	8.97	3.92	-2.29*
	Sum	13.29	13.82	24.36	9.25	-3.73**
Grouped by Interest orientation factor						
Psychological well-being	Positive relations with others	18.50	3.88	18.27	3.37	0.25
	Environmental mastery	18.90	2.68	18.87	2.71	0.05
	Purpose in life	15.70	3.59	20.23	2.56	-5.63**

Needs	Autonomy	16.47	3.39	17.67	2.77	-1.50
	Emotional self-regulation	8.27	3.39	7.77	3.04	0.60
	Study competencies	9.97	2.62	9.27	3.79	0.83
	Self-confidence	9.53	3.66	8.40	3.25	1.27
	Communication	6.77	3.17	6.37	2.41	0.55
Perceived social support	Somatic concerns	6.53	2.65	7.17	3.26	-0.83
	Family	5.17	6.56	7.17	5.23	-1.31
	Friends	6.27	4.78	6.67	4.19	-0.34
	Significant others	6.83	5.07	8.97	4.26	-1.76
	Sum	18.27	13.75	22.80	9.28	-1.50
Grouped by External influences factor						
Psychological well-being	Positive relations with others	18.53	4.34	17.77	4.28	0.75
	Environmental mastery	18.85	2.88	18.20	2.44	1.05
	Purpose in life	17.15	3.91	18.34	3.31	-1.42
Needs	Autonomy	17.23	3.13	16.46	2.85	1.10
	Emotional self-regulation	7.23	3.28	9.17	3.96	-2.33*
	Study competencies	8.53	3.58	10.69	3.38	-2.68*
	Self-confidence	8.55	4.27	9.77	3.53	-1.34
	Communication	6.40	2.88	7.11	2.88	-1.07
Perceived social support	Somatic concerns	6.80	3.24	7.09	2.89	-0.40
	Family	5.68	6.60	5.74	6.26	-0.05
	Friends	6.35	4.59	6.91	3.83	-0.57
	Significant others	8.43	4.60	7.63	4.70	0.74
	Sum	20.45	12.67	20.29	11.84	0.06

*p < .05

**p < .01

Research Question # 4. *Do first year students who come from different backgrounds, for example rural vs. urban areas; who live in student dormitories vs. parental dwellings; who have received government funding to cover their university fees vs. having to pay for their own fees, differ in their Study motivation factors?*

As for demographic variables (see Table 5), students receiving government stipends during their studies compared to fee paying students, have lower *Career orientation* ($p < .05$) and higher *External influence orientation* ($p < .01$). Students living in student residences have higher *Career orientation* ($p < .05$) and are also higher on *External influences* ($p < .05$). However *Interest orientation* is higher among students who come from a large city rather than a rural area ($p < .05$).

It must be noted that living in cramped student dormitories and coming from rural areas tends to be associated with poverty in Latvia. However, government stipends for studies are obtained on a competitive basis by the best students on entrance exams regardless of financial need.

Table 5. Descriptive and inferential statistics for study motivation factors comparing groups with different demographic indices

Study motivation factor	Group	n	M	SD	t
Career orientation	Funded group	46	10.24	3.37	-2.05*
	Fee paying group	79	11.54	3.47	
	City	61	10.44	3.82	-1.60
	Rural area	42	11.57	3.04	
	Dormitories	32	11.97	3.22	
	Live with family	53	10.34	3.50	
Interest orientation	Funded group	46	10.72	3.15	-1.85
	Fee paying group	79	11.63	2.35	
	City	61	11.85	2.56	2.02*
	Rural area	42	10.83	2.46	
	Dormitories	32	10.75	2.71	
	Live with family	53	11.62	2.71	
External influences	Funded group	46	8.28	3.19	3.11**
	Fee paying group	79	6.68	2.49	
	City	61	6.95	2.79	-0.99
	Rural area	42	7.55	3.28	
	Dormitories	32	8.41	3.30	
	Live with family	53	6.74	2.86	

*p < .05

**p < .01

Discussion

In relation to the first aim of the research, a Motivation for Study Program Choice (MSPC) rating scale was developed to assess student motivation for selecting their university study program. A Principal Components with varimax rotation analysis yielded three independent factors that can be used to assess individual differences among students.

Three types of Motivation for Study Program Choice are: a) *Career orientation*, a factor which focuses on career advancement, salary, job market and prestige of the chosen field; b) *Interest orientation*, a factor which emphasizes the interest value of the chosen field to the respondent; the possibility to influence societal processes; and the opportunity to help people; c) *External influences*, a factor which includes a variety of sources of influence such as family, teachers, peers and the influence of potential funding as a motivating factor in the choice of study program.

The first two factors have adequate internal consistency, whereas the third factor which represents a variety of sources of influence, has low internal consistency.

The MSPC was administered along with measures of student needs, psychological well being, perceived social support and demographic factors to a group of female students in the Faculty of Education and Psychology at the University of Latvia to explore the relationship of the three motivation factors to the risk and resiliency factors for adjusting to first year studies.

The students who obtained high scores on the *Career orientation* factor focus on extrinsic rewards and socially recognized criteria of success as reasons for their choice of study program. *Career orientation* is associated with goal orientation on the Purpose of Life factor of Psychological well-being (Ryff & Singer, 1996) and with perceived social support from family, friends and significant others. Therefore students high on *Career orientation* appear to come from a family environment that supports the student's aspirations for success. This support probably includes financial support that allows these students to pay for their own fees. These findings are consistent with the assertions of Cohen and Wills (1985) that social support networks can be instrumental in obtaining financial support, as well as providing a sense of belonging. Similarly Schwarzer and Leppin (1991) assert that having broadly based social support, as in the case of those high on *Career orientation* who report perceived social support from all sources, helps students to adapt more quickly and easily in new social settings. This kind of support is likely to evoke a sense of security and self-confidence, as well as a proactive attitude to life with expectations of success based on past experiences. Such an attitude would facilitate a more successful transition to university as suggested by Voitkāne (2003).

Students high on *Interest orientation* have the highest correlations with Purpose of Life and Autonomy scales of Psychological well-being. *Interest orientation* is associated with perceived social support from significant others, but not from family; it is also more common in students who come from larger cities rather than from rural areas. This suggests a sense of autonomy and possibly an earlier independence from family and a better developed sense of interdependence with peers that is easier to achieve in an urban environment. Thus *Interest orientation* suggests a more intrinsically oriented motivation for choice of study goals based on informed interest in the prospective field of studies, as well as a desire to help others and to influence societal processes, which are important values for a prospective educator. One can surmise then that students high on *Interest orientation* perceive themselves as active and proactive members of society who have a more stable sense of personal identity and a sense of life purpose based on evolved personal values. These characteristics point to a more mature goal orientation involving personal meaning.

Although both the career oriented, as well as the interest focused students are high on the Purpose of Life scale of Psychological well-being, suggesting a strong goal orientation, those high on *Interest orientation* are likely to adjust more readily to the challenges of the university transition, because of their more mature sense of identity and the fact that their study program choice is more likely to be grounded in well developed personal values. This is consistent with Boulter's (2000) view that a sense of purpose, personal values and sense of independence influence adjustment and academic achievement and Griffit & Graham's, (2004) views on goal pursuit I in relation to meeting needs and making meaning.

Finally the last group, high on *External influences* appears the most vulnerable in terms of university adjustment since they do not have any of the strengths of the other two groups, but they indicate a lack of competence related to academic demands and indicate a need for support regarding self-regulation. Although these students are aware

of their study related worries and poor coping skills, they not perceive social support from any source. Since they appear to lack goal direction, as well as competencies for meeting the academic and social and emotional challenges of university transition they are at greatest risk for severe university adjustment problems. Therefore, they may face failure or drop-out unless they receive support early on. Since this group admits to their needs for emotional as well as academic support, they may seek help if programs become available. This is consistent with the research findings by Robbins, Lese, & Herrick (1993) that indicate that new students with vaguely defined goals are interested in discussing their existing problems, seeking help in specifying their choices and are ready to use the opportunities provided by career orientation specialists.

In conclusion, it would benefit both the students at different development levels upon university entrance, as well as the institutions that admit them, if students who need help could be identified early and provided with the basic skills and confidence needed to facilitate their personal adjustment and academic success. The university community needs to reach out to students, and help them to understand that there are social networks and organizations within the university setting that can provide support and help.

Limitations of the Study

Since only female participants from one faculty were included in this study, the study needs to be replicated with male students and include students from several different faculties.

References

- Balaisis, M. (2002). Student Needs at Vilnius University. *New Developments in Psychology in The Baltics: Theory and Practice. IV International Baltic Psychology Conference. University of Latvia*, 66-70.
- Balaisis, M., Dragūns, J., & Miežitis, S. (2004). Students' Adjustment at Vilnius University: The Role of Self-Orientation, Locus of Control, Social Support and Demographic Variables. *Baltic Journal of Psychology*, 5 (1), 33-45
- Boulter, L. T. (2000). Self-concept as a predictor of college freshman academic adjustment. *College Student Journal*, 52, 234-245.
- Chemers, M. M., Li-tze Hu, & Garcia, B. F. (2001). Academic self-efficacy and first- year college student performance and adjustment. *Journal of Educational Psychology*, 93, 55-64.
- Cohen, S., & Wills, T. A. (1985). Stress, social support and buffering. *Psychological Bulletin*, 98, 310-357.
- Dwyer, A. L., & Cummings, A. L. (2001). Stress, self-efficacy, social support, and coping strategies in university students. *Canadian Journal of Counselling. Special Issue*, 35(3), 208-220.
- Pratt, M. W., Bowers, C., Tercian, B., Hunsberger, B., et.al.(2000). Facilitating the transition to university: Evaluation of a social support discussion intervention program. *Journal of College Student Development*, 41(4), 427-441.
- Frisch, M. B. (2000). Improving mental and physical health care through Quality of Life Therapy and assessment. In E. Diener & D. R. Rahtz (Eds.) *Advances in quality of life theory and research*, 4, 207- 241.

- Gallagher, R. P., Golin, A., & Kelleher, K. (1992 b). The personal, career and learning skills needs of college students. *Journal of College Student Development*, 33, 301-309.
- Griffit, B. A., & Graham, C. C. (2004). Meeting needs and making meaning: The pursuit of goals. *The Journal of Individual Psychology*, 60(1), 25-41
- Hall, A. S. (2003). Expanding academic and career self-efficacy: A family systems framework. *Journal of Counseling & Development*, 81, 33-39.
- Halamandaris, K. F., & Power, K. G. (1997). Individual differences, dysfunctional attitudes, and social support: A study of the psychosocial adjustment to university life of home students. *Personality and Individual Differences*, 22(1), 93-104.
- Holahan, C. J. & Moos, R. H. (1981). Social support and psychological distress longitudinal analysis. *Journal of Abnormal Psychology*, 90, 365-370.
- Kazarian, S. S., & McCabe, S. B. (1991). Dimensions of social support in the MSPSS: Factor structure, reliability, and theoretical implications. *Journal of Community Psychology*, Vol. 19, April, 150-160.
- Kling, K. C., Ryff, C. D., & Essex, M. J. (1997). Adaptive changes in the self-concept during a life transition. *Personality and Social Psychology Bulletin*, 23, 981-990.
- Moos, R. F. (1991). Connections between school, work, and family settings. In B. J. Fraser., & H. J. Walberg (Eds.) *Educational environments evaluation, antecedents and consequences*. Pergamon Press.
- Panori, S. A., & Wong, E. H. (1995). A pilot project on college students satisfaction and self concept. *Psychological Reports*, 77, 255-258.
- Robbins, S. B., Lese, K. P., & Herrick, S. M. (1993). Interactions between goal instability and social support on college freshman adjustment. *Journal of Counseling & Development*, 71, 343-348.
- Robbins, S. B., Lauver, K., Le, H., Davis, D., & Langley, R. (2004). Do psychosocial and study skills predict college outcomes? A meta-analysis. *Psychological Bulletin*, 2, 261-288.
- Rook, K. S. (1987). Social support versus companionship: Effects on life stress, loneliness, and evaluation by others. *Journal of Personality and Social Psychology*, 52, 1132-1147.
- Ryff, C. D. & Singer, B. (1996). Psychological well-being: Meaning, measurement, and implications. *Psychotherapy and Psychosomatics*, 65, 14-23
- Ryff, C. D. (1989). Happiness is everything or it is? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069- 1081.
- Schapiro, S. R. & Livingston, J. A. (2000). Dynamic self-regulation: The driving force behind academic achievement. *Innovative Higher Education*, 25, 23-35.
- Schwarzer, R., & Leppin, A. (1991). Social support and health: A theoretical and empirical overview. *Health Psychology*, 8, 99-127.
- Stroebe, W., & Stroebe, M. (1996). The social psychology of social support. In: Higgins, T. & Kruglanski, A. (Eds.) *Handbook of social psychology* (pp.597- 621). New York: Guilford Press.
- Tomlinson-Clarke, S. (1998). Dimensions of adjustment among college women. *Journal of College Student Development*, Vol. 39, No. 4, 364-372.
- Voitkāne, S., & Miezīte, S. (2001). Pirmā kursa studentu adaptācijas problēmas. *Baltic Journal of Psychology*, 2, 43-58.

- Voitkane, S. (2003). The relationship of social support, anxiety, depression, and student needs to psychological well-being in first year university students. *Baltic Journal of Psychology*, 4(2), 31-43.
- Voitkane, S. (2004). Goal directedness in relation to life satisfaction, psychological immune system and depression in first- semester university students in Latvia. *Baltic Journal of Psychology*, 5(2), 19-30.
- Zimet, G. D., Dahlem, N. W., Zimet, S., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52, 30-41.

Investigating Personality in Different Levels of Cognitive Ability

René Mõttus

University of Tartu

Studies exploring the relationship between personality and cognitive ability have suggested that the structure and/or variance of self-report personality inventories may vary according to respondents' level of cognitive ability. However, instead of true interactions between ability and personality, the “anomalies” of personality measures observed at lower ability levels may result from methodological problems. It is possible that individuals with lower mental ability have difficulty in understanding test items or in making valid personality judgments on the basis of relevant information. There is evidence for lower reliability of the personality ratings of less able respondents. These problems can affect both the structure of personality inventories and the variance of test scores. This suggests that artefacts resulting from difficulties with item comprehension or trait judgment should be considered when using personality tests with respondents with varying levels of cognitive ability or educational potential.⁴

Keywords: Personality, cognitive ability, human intelligence.

Background

There is little doubt that personality traits and cognitive ability are two fields of individual difference that have been very intensively studied. From the theoretical point of view, many studies have tried to clarify the nature of these phenomena. Overall, the efforts have surely been successful because by now a sizeable body of well-established facts about human intelligence and personality traits exists. In addition to theoretical interest, numerous studies have shown that psychometrically measured ability and personality traits are meaningful predictors of many real-life outcomes, pointing to the practical utility of these concepts.

Both personality and ability have been related to numerous other psychological phenomena. At the same time, considerable effort has been made to explore the associations between these two fields as well.

It is not surprising that the first studies to investigate personality-ability relationships appeared at nearly the same time as ability and personality were first determined psychometrically. One of the first studies was conducted as early as 1906 by Pearson who asked teachers to rate their pupils' intelligence and 'mental characters'. He found several moderate correlations between rated ability and personality characteristics. For example, rated ability was positively related to teachers' perception of their students'

⁴ *Author's note. Correspondence concerning this article should be addressed to René Mõttus, e-mail: Rene.Mottus@ut.ee*

conscientiousness. Soon afterwards a similar study was carried out by Webb (1915). However, it has later been claimed that it was the halo effect that was responsible for such significant relationships (Ackerman & Haggstead, 1997). Thus, it is evident that the first studies of the topic already marked the emergence of methodological and conceptual problems associated with investigating ability-personality interactions.

Since Pearson's and Webb's work there has been a large number of studies correlating different psychometrically measured personality constructs with people's ability scores. However, the results have been contradictory. There has been no unequivocally evident trend in the correlational patterns. In such a situation it is hardly surprising that different researchers have adopted nearly opposite positions about the associations between ability and personality traits. The missing agreement between researchers can be well illustrated by contrasting the views of two leading experts in the field of differential psychology, Cattell and Eysenck. Cattell considered intelligence to be an inseparable part of personality: "General ability is so potent and ubiquitous a source trait that our correlation studies with personality variables have produced the pattern as an invariable accompaniment to the other dimensions, even when we were not seeking it" (Cattell, 1957, pp 871–872). At the other extreme, Eysenck believed that, in general, personality dispositions were independent from cognitive ability (e.g., Eysenck, 1994).

Metaanalyses of correlational studies seem to support Eysenck's position. For example, in an early review of nearly 200 studies Lorge (1940) concluded that intelligence-personality correlation coefficients varied enormously across studies. A more recent famous metaanalysis by Ackerman and Heggstad (1997) showed that although correlations between cognitive ability and different personality constructs were frequently statistically significant, they tended to be relatively weak and irregular across studies. This was generally in accordance with what Eysenck had said: "Any study of the relationship between intelligence and personality is likely to find that ... IQ is not related in any meaningful way to personality ... With very large samples we seem to find some low correlations between personality and intelligence, but results are often contradictory and difficult to replicate ... This finding serves to underline my conclusion that simple attempts to correlate any old IQ test that comes to hand with any old personality test that happens to be available ... are doomed to failure, and are a waste of time and energy ... Simple-minded correlational studies have not yielded any worthwhile conclusions over the last 50 years or more; surely the time has come to adopt a more promising approach" (Eysenck, 1994, pp. 24–26).

More contemporary ideas

Although "such simple-minded correlational studies" still appear in professional journals from time to time (e.g., Moutafi, Furnham, & Paltiel, 2005; Moutafi, Furnham, & Crump, 2006), there are also more sophisticated ideas about possible ways personality and cognitive ability may be associated. Here I would like to concentrate on these more recent and refined theories because I think they help to illustrate some of the main problems associated with this research topic in general. As one example, Brand

and his colleagues have proposed the personality differentiation hypotheses (Brand, Egan, & Deary, 1994).

The general personality differentiation hypothesis has two more specific predictions. First, Brand and his co-authors suggested that people with higher ability levels are likely to have more differentiated personality structure, meaning that their personalities have more dimensions. In more technical terms, Brand and his colleagues proposed that in the groups of people with higher general ability different personality constructs would be less intercorrelated than in samples with lower abilities. Secondly, they hypothesized that in the groups with higher average ability individual differences in levels on personality dimensions are more pronounced. Put in another way, Brand and his colleagues predicted that in samples with higher ability personality scales have larger variance.

Both of these ideas have received some, but contradictory empirical support. A number of studies have shown that ability is to some extent related to the structure or variance of personality test scores (Austin, Deary, & Gibson, 1997; Austin, Deary, Whiteman et al., 2002; Austin, Hofer, Deary, & Eber 2000; Harris, Vernon, & Jang, 2005; Harris, Steinmayr, & Amelang, 2006). On the other hand, the effect has usually been relatively small and several studies have failed to provide any substantial support at all (De Fruyt, Aluja, García, Rolland, & Cheol, 2006; Mõttus, Allik, & Pullmann, in press). Evidently, it is not yet clear whether these hypotheses are correct or not. However, besides the importance of providing a conclusive answer to these specific questions, research on these problems has more general implications for attempts to examine the relationship between ability and personality and, even further, for studies investigating personality and several other psychological phenomena at different levels of cognitive ability.

The problem

While testing the personality differentiation hypotheses some researchers have begun to think that there may frequently be serious methodological issues involved in investigating the ability-personality relationships. More precisely, it is possible that ability-related discrepancies in personality structure or scale variance are caused by differences in data quality, instead of genuine and theoretically important group differences. This would mean that personality differentiation, either in terms of structure or variance, may be a methodological rather than a theoretical phenomenon. It is likely that respondents with low cognitive ability experience more difficulty in understanding all inventory items (Austin et al., 1997; Allik & McCrae, 2004). Making abstract judgments about one's own personality may be more difficult for less able individuals because it requires a certain level of cognitive ability (Allik, Laidra, Realo, & Pullmann, 2004). In addition, respondents with various levels of ability may also differ in response styles (e.g. 'yeah-saying tendency' or acquiescent responding; see Mõttus et al., in press) or in the way they perceive and respond to test items with respect to self-presentation strategies (e.g. self-enhancement). These problems may lead to less reliable and valid personality ratings, and in turn, bring about inconsistencies in the factor structure of personality inventories, as well as reduced variance of scores. Although this is a very simple expla-

nation for the contradictory research results, it is curious that in most of the relevant studies authors have not even discussed this possibility.

Evidence

There is some evidence speaking for this tentative explanation. Austin and her colleagues (1997) divided Scottish farmers into low- and high-ability groups and found that in all scales of the NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992) the low-ability group had poorer internal consistency indices. Similarly, Allik and his colleagues (2004) noticed that internal consistency values of the NEO-FFI scales increased as a function of age and, in parallel, as a function of children's cognitive ability. There are other studies as well showing that several personality test items may be too difficult for younger adolescents or individuals with lower ability and education (e.g. De Fruyt, Mervielde, Hoekstra, & Rolland, 2000; McCrea, Costa, Terracciano et al., 2002).

Schinka and Borum (1994) investigated the readability levels of several widely used normal personality inventories like the California Psychological Inventory (CPI), the Sixteen Personality Factor Questionnaire (16PF), the Personality Research Form (PRF), and the Revised NEO Personality Inventory (NEO-PI-R). They concluded that although the overall reading ability needed for these inventories corresponded to sixth to eighth grade, at least 10 years of successful education was necessary to understand all test items properly.

Some similar challenges

Similar problems have been encountered in other research fields as well. A relevant example is cross-cultural psychology, where corresponding data from different countries and/or cultures are compared in order to identify cultural differences or universals in psychological phenomena. For instance, cross-cultural researchers have observed that in developing countries, as compared to more westernized countries, variance of personality test scores tends to be more restricted. (McCrae, 2002). One at least partial explanation for such reduced variance is that data obtained from developing countries have lower quality (McCrae, 2002). There is evidence that this may be exactly the case (McCrae, Terracciano et al., 2005).

In some instances the use of self-report measures has limitations with patients in clinical conditions. (Widiger and Trull, 1992; Zimmerman, 1994). Clinical conditions such as depression or other acute psychiatric disorders may affect the use of self-report instruments in many ways: there may be systematic distortions (e.g. patients may tend to describe them-selves as more neurotic than they really are) or difficulties with filling out questionnaires in a consistent and valid manner (e.g. affective states influence patients' information processing capabilities). For these reasons, some authors (e.g. Zimmerman, 1994) suggest considering the use of standardized interviews for the assessment of patients in clinical conditions. However, in a recent paper Costa, Bagby, Herbst, and McCrae (2006) concluded that concerns about the use of self-report measures in clinical settings may frequently be unwarranted.

Another type of situation where varying quality of self-report data may interfere with drawing solid conclusions is the assessment of children or elderly people. For instance, it has been shown that children have problems with correctly understanding and answering negatively-worded rating-scale items (Marsh, 1986). At the same time, questionnaires typically tend to include many negatively worded items. A relevant research example where children's potential difficulties with the use of self-report scales have threatened the validity of conclusions is a recent study by Laidra, Pullmann and Allik (in press). They investigated how well children's school success at various ages was predictable from basic personality traits and general mental ability, and concluded that problems with poor reliability of personality self-ratings in some groups of children may have hampered drawing firm conclusions. In elderly people, declining cognitive abilities may also pose a threat for convenient use of self-report instruments.

Possible solutions

What can be done to overcome possible difficulties associated with using self-report scales in certain groups of people? The first and very obvious possibility is to use simple and readable instruments. It is curious that for a considerable number of researchers (and perhaps also for a proportion of practically oriented test users) proper readability of assessment instruments has not been a question of particular interest. However, the situation seems to be changing because the necessity for more readable inventories has recently been stressed by several authors. For example, the widely used NEO-PI-R (Costa & McCrae, 1992) has recently been modified for this very reason. Namely, McCrae, Costa and Martin (2005) aimed to develop a simpler measure which would be more suitable for younger adolescents and less educated individuals (the NOE-PI-3). The shortened form of the NEO-PI-R – that is the NEO-FFI (Costa & McCrae, 1992) – has also been similarly revised (McCrae & Costa, 2004). Independently from the development of the NEO-PI-3, a more readable parallel form has been developed for the Estonian version of the NEO-PI-R (Estonian Personality Item Pool; EPIP-NEO, Mõttus, Pullmann, & Allik, 2006).

Another solution to the problem of reduced data quality in certain groups is to use multiple sources of ratings. In addition to the self-reports, it is highly desirable to find one or more informants who know the target person well and ask them to complete the same rating-scale about him or her. It is then possible to aggregate the ratings of different raters. Even if the ability levels of judges tend to be related to that of their targets (which is relatively likely, as a result of shared genes, positive assortative mating, or social selection), the aggregated ratings would still be expected to be more reliable than self-ratings alone, because in composite ratings random measurement errors due to, for instance, poor item comprehension or difficulties with making reliable judgments, would tend to average out. For many real-life outcomes, it has been demonstrated that the consensus of well-informed judges is the most valid source of personality ratings (Kolar, Funder, & Colvin, 1996). In addition, using supplementary judges' ratings helps to reduce biases associated with the rater perspective (e.g. self-enhancement) and ability-related differences in response sets, such as acquiescent

responding (for relevant evidence, see Mõttus, Allik, & Pullmann, in press) or a tendency to give extreme responses.

Conclusions

To sum up, the principal message of this paper is very simple. It seems likely that people sometimes fail the task of gathering and processing self-relevant information and completing personality inventories – as well as other assessment scales – on the basis of this information. Such failures bring about a loss in the quality of data so that the validity of conclusions may be questionable. Therefore, when assessing psychological traits of individuals with lower level of ability or education, a researcher or a practical psychologist should be aware of the potential problems and take steps in order to prevent them. More precisely, the use of simple and readable personality inventories and, if possible, multiple raters for each target is recommended. However, when such preventive steps cannot be taken, the dangers should at least be acknowledged and considered when interpreting results.

Finally, it is likely that taking into account the possible effects of ability on the use of self-report personality measures would shed light on at least some of the contradictory findings on personality-intelligence associations.

References

- Ackerman, P. L., & Heggestad, E. D. (1997). Intelligence, personality, and interests: Evidence for overlapping traits. *Psychological Bulletin*, *212*, 219–245.
- Allik, J., Laidra, K., Realo, A., & Pullmann, H. (2004). Personality development from 12 to 18 years of age: Changes in mean levels and structure of traits. *European Journal of Personality*, *18*, 445–462.
- Allik, J., & McCrae, R. R. (2004). Escapable conclusions: Toomela (2003) and the universality of trait structure. *Journal of Personality and Social Psychology*, *87*, 261–265.
- Austin, E. J., Deary, I. J., & Gibson, G. J. (1997). Relationships between ability and personality: Three hypotheses tested. *Intelligence*, *25*, 49–70.
- Austin, E. J., Deary, I. J., Whiteman, M. C., Fowkes, F. G. R., Pedersen, N. L., Rabbitt, P., Bent, N., & McInnes, L. (2002). Relationships between ability and personality: Does intelligence contribute positively to personal and social adjustment? *Personality and Individual Differences*, *32*, 1391–1411.
- Austin, E. J., Hofer, S. M., Deary, I. J., & Eber, H. W. (2000). Interactions between intelligence and personality: Results from two large samples. *Personality and Individual Differences*, *29*, 405–427.
- Brand, C., Egan, V., & Deary, I. J. (1994). Intelligence, personality, and society: “Constructivist” versus “essentialist” possibilities. In D.K. Detterman (Ed.), *Current Topics in Human Intelligence*. Volume 4. (pp. 29–42). Norwood, New Jersey: Ablex.
- Cattell, R. B. (1957). *Personality and motivational structure and measurement*. New York: World.
- Costa, P. T. Jr., Bagby, R. M., Herbst, J. H. & McCrae, R. R. (2005). Personality self-reports are concurrently reliable and valid during acute depressive episodes. *Journal of Affective Disorders*, *89*, 45–55.

- Costa, P. T. Jr., & McCrae, R.R. (1992). Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEOFFI) – Professional Manual. Odessa, FL: Psychological Assessment Resources, Inc.
- De Fruyt, F., Aluja, A., García, L. F., Rolland, J.-P., & Cheol, J. S. (2006). Positive presentation management and intelligence and the personality differentiation by intelligence hypothesis in job applicants. *International Journal of Selection and Assessment*, 14, 101-112.
- De Fruyt, F., Mervielde, I., Hoekstra, H. A., & Rolland, J.-P. (2000). Assessing adolescents' personality with the NEO-PI-R. *Assessment*, 7, 329-345.
- Eysenck, H. J. (1994). Personality and intelligence: Psychometric and experimental approaches. In R. Sternberg & P. Ruzgis (Eds.), *Personality and intelligence*. (pp. 3-31). New York: Cambridge University Press.
- Harris, J. A., Steinmayr, R., & Amelang, M. (2006). Inter- and intra-individual differences in personality in two German samples of high and low intelligence. *Personality and Individual Differences*, 40, 433-440.
- Harris, J. A., Vernon, P. A., & Jang, K. L. (2005). Testing the differentiation of personality by intelligence hypothesis. *Personality and Individual Differences*, 38, 277-286.
- Kolar, D. W., Funder, D. C., & Colvin, C. R. (1996). Comparing the accuracy of personality judgements by the self and knowledgeable others. *Journal of Personality*, 64, 311-337.
- Lorge, I. (1940). Intelligence: Its nature and nurture. *The 39th Yearbook* 39, 275-281.
- Laidra, K., Pullmann, H., & Allik, J. (in press). Personality and intelligence as predictors of academic achievement: A cross-sectional study from elementary to secondary school. *Personality and Individual Differences*.
- Marsh, H. W. (1986). Negative item bias in ratings scales for preadolescent children: A cognitive-developmental phenomenon. *Developmental Psychology*, 22, 37-49.
- McCrae, R. R. (2002). NEO-PI-R data from 36 cultures: Further intercultural comparisons. In R. R., McCrae and J. Allik (Eds.). *The Five-Factor model of personality across cultures*, (pp. 105-125). New York: Kluwer Academic/Plenum Publishers.
- McCrae, R.R. & Costa, P.T. Jr. (2004). A contemplated revision of the NEO Five-Factor Inventory. *Personality and Individual Differences*, 36, 587-596.
- McCrae, R. R., Costa, P. T., Jr., Terracciano, A., Parker, W. D., Mills, C. J., De Fruyt, F., & Mervielde, I. (2002). Personality trait development from 12 to 18: Longitudinal, cross-sectional, and cross-cultural analyses. *Journal of Personality and Social Psychology*, 83, 1456-1468.
- McCrae, R. R., Costa, P. T., Jr., & Martin, T. A. (2005). The NEO-PI-3: A More Readable Revised NEO Personality Inventory. *Journal of Personality Assessment*, 84, 261-270.
- McCrae, R. R. & Terracciano, A., Members of the Personality Profiles of Cultures Project (2005). Universal features of personality traits from the observer's perspective: Data from 50 cultures. *Journal of Personality and Social Psychology*, 88, 547-561.
- Moutafi, J., Furnham, A., & Crump, J. (2006). What facets of openness and conscientiousness predict fluid intelligence score? *Learning and Individual Differences*, 16, 31-42.
- Moutafi, J., Furnham, A., & Paltiel, L. (2005). Can personality factors predict intelligence? *Personality and Individual Differences*, 38, 1021-1033.
- Möttus, R., Allik, J., & Pullmann, H. (in press). Does personality vary across ability levels? A study using self and other ratings. *Journal of Research in Personality*, DOI:10.1016/j.jrp.2006.03.007.

- Mõttus, R., Pullmann, H., & Allik, J. (2006). Towards more readable five-factor personality inventories. *European Journal of Psychological Assessment*, 22, 149-157.
- Pearson, K. (1906–1907). On the relationship of intelligence to size and shape of head, and to other physical and mental characters. *Biometrika*, 5, 105-146.
- Webb, E. (1915). Character and intelligence. *British Journal of Psychology Monograph*, 1-113. (Suppl. 3).
- Widiger, T. A. & Trull, T. J. (1992). Personality and psychopathology: An application of the five-factor model. *Journal of Personality*, 60, 363-393.
- Zimmerman, M. (1994). Diagnosing personality disorders: A review of issues and research models. *Archives of General Psychiatry*, 51, 225-245.

PROFESSIONAL EXPERIENCE IN BALTIC STATES

Pre- and Postadoption Psychological Services Available for Lithuanian Adoptive Families: Where do We Stand?

Julija Gaiduk

Lithuania Christian College

With the growing number of adoptive families in Lithuania, a question arises regarding the involvement of psychologists in the process of adoption. There is awareness in other countries, both among the mental health professionals and the general population, of the special needs of adoptive families and of their needs for well-developed systems of psychological services. Numerous services are provided for such families. The present study attempts to describe current practices in Lithuania in the area of adoption counseling. The availability and content of pre- and post-placement psychological services is discussed. An attempt is made then to compare current Lithuanian practices with those of the United States and Western Europe. Another major point of research interest is whether Lithuanian psychologists are involved in the process of adoption counseling, whether they are prepared to counsel adoptive families and concerns regarding the issue. The results of a survey distributed among Klaipeda psychologists are presented, and suggestions for further practices in adoption counseling are made.⁵

Keywords: Adoption, counseling, postadoption services.

Introduction

Six hundred thirty-four children were adopted in Lithuania by Lithuanian citizens for the period of 1997-2005 (State Child Rights Protection and Adoption Service, n.d.). The purpose of this study is to describe pre- and post-adoption psychological services available to Lithuanian adoptive families, to compare them with those of the United States and the United Kingdom, and to make suggestions for improving the services for all involved in the process of adoption.

Adoptive families are different from other types of families. The reality that an adopted child has both biological and adoptive parents creates challenges both for the child and the parents, which families formed biologically do not face (Melina, 1998). Besides the developmental issues that all children face, adoptive children have special needs and face unique issues (Kadushin, 1980; Eldridge, 1999).

Adoptive parents also have issues that need to be dealt with before they can help their children. In addition to the typical parenting issues and difficulties that biological families have to deal with, adoptive parents face issues unique to adoption (Janus,

⁵ *Author's note. Correspondence concerning this article should be addressed to Julija Gaiduk, e-mail: jgaiduk@lcc.lt*

1997). Melina (1998) portrays adoptive parents as very committed and caring, but also very concerned. They often put too high expectations upon themselves while being not confident of themselves as parents (Melina 1998).

There are several prominent theoretical perspectives on the children's adjustment to adoption. These include the Stress and Coping Model, Biologic perspectives, and the Psychoanalytic perspective. Both the Stress and Coping Model and the Psychoanalytic perspective address the issue of loss in the adoption process (Brodzinsky, 1993; Brinich, 1993). Adoptive parents need to be aware of the special needs of adopted children, of the loss that these children experience and of how to help the children go through the loss and the grieving process (Eldridge, 1999; Melina, 1998).

Adoptive parents also struggle with loss (Eldridge, 1999). It may be loss associated with infertility, miscarriage, death of a baby, or the loss associated with the fact that their adopted child differs from them and their expectations. In Daniluk's and Hurtig-Mitchell's (2003) in-depth-interview study of 39 adoptive couples, most of the couples reported mixed emotions at the arrival of the child, difficulties adjusting to the parenting role as well as having to deal with lack of social support and the negative view of adoption as a "second-best" choice. Eldridge (1999) suggests that in order to be able to effectively help their adopted children go through the grieving process and form close relationships with the adoptive parents, the parents need to work through their own loss, grief, lack of confidence, uncertainties and fears.

Raising adopted children is difficult. Adopted children are found to exhibit higher rates of externalizing behaviors, such as aggression and various forms of misbehavior, than children raised by biological parents (Fergusson, Lynskey, & Horwood, 1995). However, research shows that in spite of all the risks and challenges involved, children raised in families "psychologically well prepared for the task of rearing a non-biological child" (Bohman & Sigwardsson, 1993, p.104), have no worse long-term outcomes than non-adopted children (Bohman & Sigwardsson, 1993). Unfortunately, there are no longitudinal studies on the outcomes of adoption in Lithuania; so, only research done in other countries (primarily the US and Western Europe) is available for understanding adoption in Lithuania. Lithuanians may also benefit from using others' experience in the field of serving adoptive families.

The literature review of western research in the field of adoption points to "a growing awareness of the need for post-adoption services for all those personally affected by adoption" in Great Britain (Harris, 2004). In the United States, "postadoption services may well be one of the fastest growing sectors of children's services" (Gibbs, Barth & Houts, 2005). Programs have been implemented and their effectiveness researched (Avery, 2004; Barth, Gibbs, & Siebenaler, 2001; Harris, 2004).

Services provided for adoptive families in the UK include counseling and support for every member of the adoption triad (birthparents, adoptees, and adoptive parents) at every point of the adoption life cycle (deciding to adopt, preparation for adoption, adjustment to adoption, search for birth relatives, reunions with birth relatives). Services are provided through a variety of means: telephone counseling, routine and crisis counseling, legal consultations, help with accessing records, support groups for birth parents, adoptive parents, and adoptees, interventions for children, support in

reunions with birth parents, various educational activities for both the adoption triad members and the professionals in the field, (After Adoption, n.d.). Services available in the US include individual and family counseling for adoptive parents, birth parents, and adoptees, crisis intervention, parent education, educational help for the adoptees, respite and after-school programs for the adoptees, support groups for parents, children, and birth parents, educational activities for parents and professionals, counseling and mediation through the reunion process for all the members of the adoption triad (Avery, 2004; Barth, Gibbs, & Siebenaler, 2001; Gibbs, Barth, & Houts, 2005; Valley, Bass, & Speirs, 1999).

Method

A survey was handed out to Klaipeda psychologists (N=30). Contacts with the psychologists were made through the organizations that are related to Child Protective Services (Childrens' Crisis Center, Pedagogical Psychological Service), personal contacts, schools, Klaipeda Psychiatric Hospital, Klaipeda Mental Health Center, and private medical clinics. The survey aimed at discovering whether adoptive families seek or get referred to psychological services, what problems they bring into counseling, as well as what the psychologists' knowledge base and concerns are regarding the issues of adoptive families.

In-depth semi-structured interviews were conducted with those psychologists who currently specialize in serving adoptive families. Such psychologists were only found in Vilnius.

A search for information on available adoption services in Lithuania, the US and the UK utilized a literature review, in-person, telephone, and e-mail interviews. The websites of agencies providing adoption and foster care services in Lithuania were analyzed and structured interviews were conducted with the representatives of the organizations.

Results

Services available to Lithuanian adoptive families

It became apparent during the course of the study that there are required pre-adoption services for Lithuanian citizens adopting in Lithuania. In order to adopt every family is supposed to go through a 16-hour training, which is mostly conducted by psychologists. There are also individual counseling sessions available (G. Aureliene, personal communication, May 24, 2006). The process of preparation for adoption also requires communication with a social worker. Whether counseling happens in this process depends on whether a social worker is motivated to counsel in addition to arranging the paper work (N. Sindaraviciene, personal communication, June 5, 2006). An organization in Kaunas (second-largest population city of Lithuania) supplements the above procedures with a psychologist's evaluation of the potential adoptive family and eight group sessions which explore such topics as adoption motivation, attach-

ment, child development and potential psychological problems, openness in adoption, talking to children about adoption, and anxieties and fears of future adoptive parents (Pastoge, n.d.)

When the Child Rights Protection Service (CRPS) workers get asked whether adoptive families need psychological services after adoption, they say, "no". "It's not necessary to disturb people. They do not like it. If they need help, they seek contacts with the psychologists individually". (G. Aureliene, personal communication, May 24, 2006). The interview with the CRPS service director in Klaipeda revealed that some adoptive families continue to communicate with the CRPS after adoption. They contact CRPS and ask for referrals to psychologists (the latter happens at a rate of about 2-3 families per year). People ask for psychological help most often when they adopt older children who have adaptation problems (G. Aureliene, personal communication, May 24, 2006).

Thus, when adoptive families are in need of psychological help or any other type of support, they are supposed to look on their own. This was confirmed during the interviews with the adoption specialists in Vilnius. (S.J. Savickaite, personal communication, June 1, 2006; N. Sindaraviciene, personal communication, June 5, 2006). An adoption specialist, S.J. Savickaite (personal communication, June 1, 2006) noted the presence of negative attitude towards the psychological services among adoptive families. She also commented that the services are not seen by her clients as necessary and approachable for the lack of adoption specialists. Another psychologist specializing in serving adoptive families, N. Sindaraviciene (personal communication, June 5) stated that about 50% of those receiving pre-adoption training still keep to themselves and do not seek help after adoption. Some even try to keep the fact of the adoption secret.

In addition to individual and family counseling, an attempt is made by an organization in Kaunas to create social support systems for adoptive parents (Pastoge, n.d.). Summer camps with psychoeducational sessions are organized for adoptive families and support groups are in the planning stage.

Survey results

Of all psychologists surveyed 53.3% reported that they have never counseled clients for adoption-related problems. The total number of people counseled for adoption-related problems by the remaining psychologists was 64 ($M=4.57$, $SD=7.43$). The psychologists were asked to list all cases within the period of their practice as well as the length of their practice. The length of practice ranged from 1 to 28 years ($M=8.56$, $SD=7.166$). There was no significant relationship between the number of years of practice and the number of clients served for adoption-related problems ($r_s = .28$).

Of the psychologists surveyed 42.8% reported counseling both parents, 42.8% reported counseling mothers only. Another 28.6% reported counseling adoptees (14.3%) and adult adoptees (14.3%).

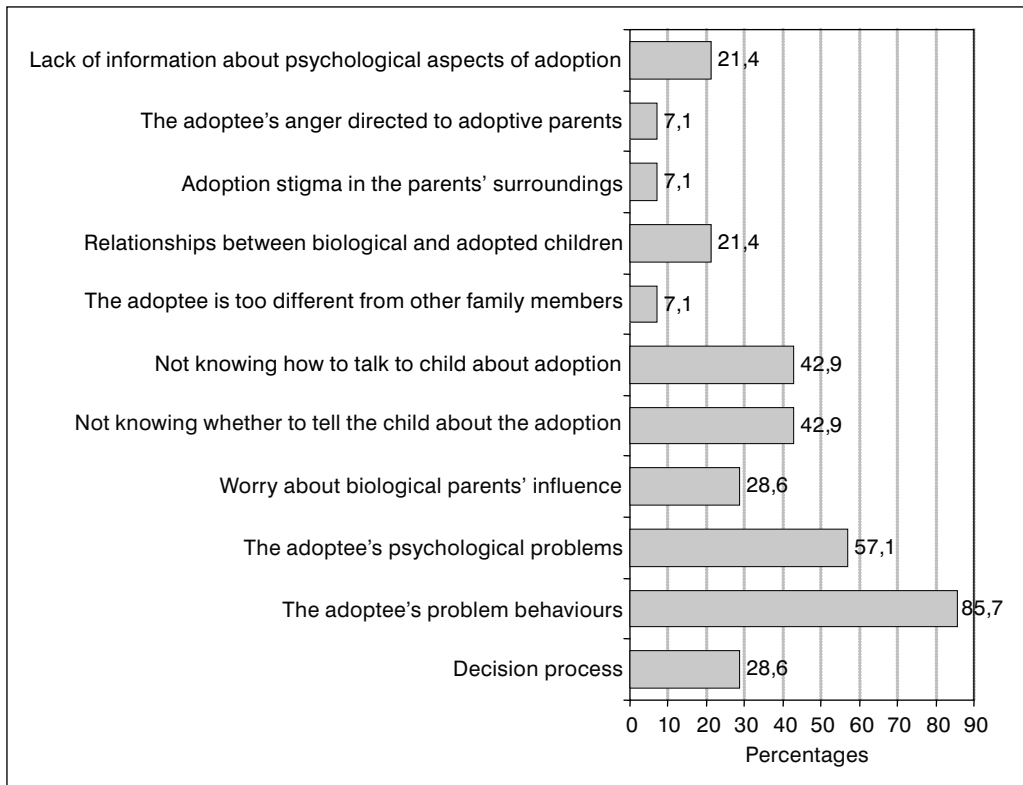


Figure 1. Reported problem areas

Reported adoption-related problem areas discussed with the psychologists are summarized in Figure 1. The most frequently mentioned problem area was the adoptee's problematic behaviors (85.7%) followed by the adoptee's psychological problems (57.1%). Not knowing whether to tell the child about adoption and how to talk to the child about adoption were also quite frequent problem areas (42.9%). Other topics discussed with the psychologists included the decision process before adoption, worrying about the biological parents' influence on the adoptee, relationships between biological and adopted children, lack of information about the psychological aspects of adoption, adoption stigma in the adoptive parents' surrounding, great differences between the adoptee and the other family members, and the adoptee's anger directed at the adoptive parents.

The survey found that for the majority of the psychologists (70.4%) their major source of information on adoption-related issues is reading books and articles on the topic. Other cited sources of information were courses and seminars (18.5%), university courses on adoption (18.5%), and general psychologist education (18.5%). Further details are presented in Table 1.

When asked about whether there is lack of information on adoption-related issues, 40% of those who have never had contact with adoptive families and 76.9% of those who have counseled adoptive family members agree that they lack information on this topic. Consequently, 60% of those with no contact with adoptive families and

only 23.1% of those who have had experience with adoptive families claim no perceived lack of information on the issue.

Table 1. Sources of information about the psychological aspects of adoption

Source of information about the psychological aspects of adoption	Number of responses
Reading books and articles	19
University classes adoption	5
General psychological education	5
Seminars	4
Media	2
I do not have any information	2
Courses	1
Own research	1
I have not looked for information	1
Informal communication with other	1
Common knowledge	1
Collaboration with agencies involved	1

When asked to list the areas where they would like more information, the following were most commonly cited areas:

- Legal aspects of adoption.
- Counseling the adoptive triad members.
- Psychological aspects of adoption.
- Adoption-related psychological and behavioral problems.

Other cited areas were:

- Preparing the triad members for counselling.
- Attachment-promoting factors.
- Supervision, consultations.
- Information on seminars on psychological aspects of adoption.

When asked what difficulties they had faced counselling adoptive families, the surveyed psychologists identified the following:

- Lack of pre-adoption and post-adoption services for adoptive families.
- Lack of knowledge about child development on behalf of the adoptive parents.
- Adoptive parents' psychological problems affecting children's adjustment.
- Absence of a uniform adoption system where all agencies providing services would work in collaboration.
- Lack of knowledge and experience in the area.
- Anonymity and secrecy of the adoption process.
- Adoptive parents' fears and lack of knowledge about how to talk about adoption.

Conclusions

It is evident from the study that much needs to be done to improve pre- and post-adoption services in Lithuania. Only limited pre-adoption services exist, and virtually nothing is available after adoption. Even with the required pre-adoption training and support, many adoptive parents seem to lack information on both legal and psychological issues involved in adoption (N. Sindaraviciene, personal communication; June 5, 2006, S.J. Savickaite, personal communication, June 1, 2006, adoptive families forum members, personal communication, May 2006). As for post-adoption services, much needs to be learned and implemented in order to match the practices in the UK and the US.

Barth, Gibbs, & Siebenaler (2001) note the four types of services that adoptive families need:

- Educational and informational services – classes, seminars, information on the child's history and legal issues, etc.
- Clinical services – therapy, counseling, respite care.
- Material services – various types of financial support.
- Support networks – support groups and more experienced in adoption mentors.

Knowledgable and skilled Lithuanian psychologists can be helpful in these areas to help adoptive families with the challenges they face.

They can get more involved in educational activities during the preparation for adoption period. N.Sindaraviciene (personal communication, June 5, 2006) suggests that preparation classes be distributed over a longer period of time with breaks in between sessions for reflection and generation of questions. More topical psychoeducational groups could be organized where the psychologists could share their knowledge of the various adoption-related problems and ways of resolution with the parents. S.J. Savickaite (personal communication, June 1, 2006) also suggests educating the general public about adoption-related issues and the need to seek help from a professional in case of problems. Educational campaigns could be organized to combat both adoption stigma and the stigma about seeking mental health services.

Clinical services like therapy and counseling are psychologists' direct responsibility, and steps should be taken to bring the services into adoptive families. If the stigma of mental health and adoption are diminished, people will become more open to talk about adoption as well as use mental health services. Both adoption specialists interviewed agree that adoptive families need a professional to not only be available but also check-in with the families regularly for at least a minimal period after adoption (N. Sindaraviciene, personal communication; June 5, 2006, S.J. Savickaite, personal communication, June 1, 2006). Lithuanian psychologist may need to take a more aggressive approach to making their services available and acceptable to families in need of the services. Support networks can also be organized by psychologists. This will utilize their training and expertise in group work.

The birth relatives search process might soon become an area where counseling services will be needed. All the members of the adoption triad (the adoptees, adoptive parents, and birth parents) will likely need help in the process of reunion (Janus, 1997, Valley, Bass, & Speirs, 1997).

It is evident from the study that there are areas where Lithuanian psychologists lack expertise regarding adoption issues. Seminars and workshops should be developed to educate the psychologists on legal, social, and psychological aspects of adoption. There is also a need for supervision and consultation system for those working in the field. One of the suggestions coming from an adoption specialist is creating a specialization in adoption for psychologists (S.J. Savickaite, personal communication, June 1, 2006) with the specialist possessing the knowledge of psychological, social, and legal aspects of adoption. Yet another suggestion is creating organizations with teams of psychologists specializing in adoption where members of the adoption triad could be referred to (N. Sindaraviciene, personal communication; June 5, 2006).

Finally, there should be more research conducted in the area of adoption and services provided for adoptive families. The following topics are worthy of researchers' attention:

- The effectiveness of services provided.
- Effective methods of preparing adoptive families for adoption.
- Long-term effects of adoption on adult functioning.
- Adoption stigma in the Lithuanian society and ways to combat it.
- The effects of secrecy around adoption on adoptees' adjustment later in life.

References

- After Adoption (n.d.). *Adoption Services*. Retrieved June 7, 2006 from <http://www.afteradoption.org.uk/page.asp?section=0001000100070004>.
- Avery, R. J. (2004). *Strengthening and Preserving Adoptive Families: A Study of TANF-Funded Post Adoption Services in New York State*. Retrieved April 13, 2006, from New York State Citizens' Coalition for Children, INC. Website: <http://www.nysccc.org/>.
- Barth, R. P., Gibbs, D. A., & Siebenaler, K. (2001). *Assessing the Field of Post-Adoption Service: Family Needs, Program Models, and Evaluation Issues*. Literature Review. Chapel Hill and Research Triangle Park: University of North Carolina School of Social Work, Jordan Institute for Families, and Research Triangle Institute. Retrieved April 13, 2006 from <http://aspe.hhs.gov/hsp/PASS/lit-rev-01.htm>.
- Bohman, M., & Sigvardsson, S. (1993). Outcome in adoption: Lessons from longitudinal studies. In D. M. Brodzinsky & M. D. Schechter (Eds.), *The psychology of adoption* (pp. 93-106). New York: Oxford University Press.
- Brinich, P. M. (1993). Adoption from the inside out: A psychoanalytic perspective. In D. Brodzinsky, D. M. (1993). A stress and coping model of adoption adjustment. In D. M. Brodzinsky & M. D. Schechter (Eds.), *The psychology of adoption* (pp. 3-24). New York: Oxford University Press.

- Eldridge, S. (1999). *Twenty things adopted kids wish their adoptive parents knew*. New York: Random House, Inc.
- Fergusson, D. M., Lynskey, M., & Horwood, L.J. (1995). The adolescent outcomes of adoption: A 16-year longitudinal study. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, 36 (4), 597-615. Abstract retrieved May 25, 2006, from Academic Search Premier database.
- Gibbs, D., Barth, R.P., & Houts, R. (2005). Family characteristics and dynamics among families receiving postadoption services. *Families in Society*, 86 (4), 520-532. Retrieved May 15, 2006 from ProQuest Social Science Journals database.
- Harris, P. (2004). User views and experiences of post-adoption services: A study of a regional post-adoption agency. *Adoption and Fostering Journal*, 28 (2), 50-60. Abstract retrieved May 25, 2006, from IngentaConnect database.
- Janus, N. G. (1997). Adoption counseling as a professional specialty area for counselors. *Journal of Counseling and Development*, 75 (4), 266-274. Retrieved May 15, 2006 from ProQuest Social Science Journals database.
- Kadushin, A. (1980). *Child welfare services* (93rd ed.). New York: Macmillan.
- Melina, L. (1998). *Raising adopted children*. New York: Harper Perennial.
- Pastoge (n.d.) *Jei apsisprendėte tapti itėviais*. [If you have decided to become adoptive parents]. Retrieved May 23, 2006 from http://www.pastoge.lt/tapti_iteviais
- State Child Rights Protection and Adoption Service under the Ministry of Social Security and Labor (n.d.). *Statistika*. Retrieved April 13, 2006 from <http://www.ivaikinimas.lt/index.php?p=0&l=LT&n=4>.
- Valley, S., Bass, B., & Speirs, C. (1999). A professionally led adoption triad group: An evolving approach to search and reunion. *Child Welfare*, 78 (3), 363-379. Retrieved May 15, 2006 from ProQuest Social Science Journals database.

Notes on Authors

Imants Barušs

is a Professor of Psychology at King's University College at The University of Western Ontario where he has been teaching undergraduate courses in consciousness for the past 20 years. He has written four academic books, including "Authentic Knowing" and "Alterations of Consciousness," and over 20 papers, mostly about fundamental issues concerning the nature of consciousness. In addition he has given over 50 presentations throughout North America and Europe. He is a member of several professional organizations including the New York Academy of Sciences and has served on the steering committee of the Association for the Advancement of Baltic Psychology. His current research is focussed on quantum theories of consciousness.

Arthur Cropley

was born in Australia in 1935. After seven years as a school teacher he obtained his PhD in educational psychology at the University of Alberta (Canada). He is now emeritus professor of psychology of the University of Hamburg (Germany). He is the author of 23 books on creativity, lifelong learning, adaptation of immigrants and research methodology, and these have been translated into a dozen languages.

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.

Julija Gaiduk

MA in Counseling from Regent University, Virginia Beach, Virginia, USA. Currently teaches Introduction to Psychology, Marriage and Family, Parenting, and Organizational Psychology in the Social Sciences Department at Lithuania Christian College in Klaipeda, Lithuania. Areas of research interest include: adoption, family studies, organizational research.

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.

René Mõttus

is a doctoral student (psychology) at University of Tartu. He is also a member of the Perception and Personality Research Group of the Estonian Centre of Behavioural and Health Sciences (ECBHS). His research focuses on personality traits, with two independent emphases: their culture-level correlates and their relationship with intelligence.

Malgożata Raščevska

Ph.D., professor at the Department of Psychology, University of Latvia. From 1990–1993 was head of the School Psychology Centre at the University of Latvia and gave consultations to students, their parents, and teachers. More than for 10 years she has been teaching at the University of Latvia giving courses in cognitive psychology, theory of intelligence, research methodology and has published several books in this area, as well as several articles on intelligence.

Mārtiņš Vanags

is student in Master of Psychology program.

Sarmīte Voitkāne

Master of Psychology, lecturer at the Department of Psychology, University of Latvia. Studied psychology education at the Moscow State University specializing in clinical psychology. Worked for many years in neuropsychological diagnostics, rehabilitation as well as children's and adult mental health area. Participated in the Canadian/Latvian Joint Project on the health promotion in Latvian schools. Interests are connected with psychodiagnostics, mental health questions – prevention and assistance, and neuropsychology.

Notes for authors

The “Baltic Journal of Psychology” is published by the Department of Psychology, Faculty of Education and Psychology, University of Latvia. The journal publishes original papers on current issues in psychology as well as empirical, theoretical, and practical articles on broad aspects of psychology. It will appear two times a year.

Information for authors on submitting manuscripts:

Contributions, written in English, should follow the general style described in the Publication Manual of the American Psychological Association (5th ed. 2002).

Manuscripts should not exceed 8000 words, should be typed on (21 x 29.7cm) white bond paper, double-spaced, with font size 12, and with margins of at least 2.54 cm on all four sides. Acceptable typefaces are Times Roman or Courier. Three copies of each manuscript including electronic version on disk should be submitted. Disks can be of any standard size, IBM compatible, written in Word for Windows. Manuscripts will not be returned to authors.

Title page for the manuscript should show the title of the article, the name (s) and affiliation (s) of the authors, running head and, at the bottom of the page, the name and address of the person (including postal code and electronic mail address) to whom proofs and reprint requests should be sent.

An abstract of up to 150 words should follow the title page on a separate page. A list of 3 – 10 key words should be provided directly below the abstract.

Each table should be numbered and referred to by number in the text. Each table should be typed on a separate page and have a descriptive title.

Each illustration (diagram, chart, photograph, and drawing) should be numbered and referred to by number in the text. Each table should be typed on a separate page and have a descriptive title.

References are given at the end of the text. All references cited in the text must appear in the reference list in APA format.

Authors should submit a brief biographical statement (8 - 10 lines) for inclusion in the section “Notes on Authors”.

There is no payment for published papers. The authors will receive 3 reprints, free of charge.