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## The Use of Foreign Psychodiagnostic Inventories in Differing Methodological Contexts

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### THE PROBLEM OF INTERPRETING ASSESSMENT TECHNIQUES IN METHODOLOGICALLY DIFFERENT APPROACHES

The assessment of individual characteristics is based on different methods (e.g., observation, interview, individual experiment). Normative psychodiagnostic measures remain leading instruments in quick diagnostics. Both the ability and personality characteristics assessments operationalized in inventories necessarily take culture specificity and corresponding bias into account. Although this issue has been frequently addressed by psychologists, a related one has not been. The “blind spot” appears to be the possibility of theoretical reinterpretation of the inventories’ basis when these inventories are used in theoretical frameworks and scientific traditions that differ from the original ones.

The use of psychodiagnostic inventories is important in the context of revealing personality factors that may influence the regulation of cognitive activity. The interpretation of the paths (or mechanisms) of the measured personality characteristics’ influence on cognitive activity depends on the specificity of both the understanding of this activity and personality inventories.

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The present social situation in Russia is in a stage of reorganization and transformation. The communication and experience exchange between Russian and foreign psychologists seem to be one-way with many inventories being successfully adapted to be used with Russian samples. At the same time, the development of theories and approaches presented in Russian psychology (e.g., that resulted in the idea of dynamic testing, see Sternberg & Grigorenko, 2002) have not yet received reciprocal feedback or evaluation. Theories that refer to personality in the regulation of thinking are being developed both in Russia (i.e., Tikhomirov's [1984] sense theory of thinking) and abroad (i.e., Dweck's [1999] social-cognitive theory).

There are two separate lines of discussion concerning the use of inventories that became popular and commonly accepted in different countries that have their own original theoretical frameworks. These frameworks suggest a diverse interpretational basis for both ability and personality domains.

The first and the simpler case is when psychologists accept the theoretical basis underlying the newly adapted instrument. Popular cognitive abilities assessment batteries, implicit theories questionnaires, Wason's decision-making task, as well as Aysenck's model and corresponding measures, are considered to be examples of this approach. This approach also suggests that adaptation is limited by the development of new and culture-specific norms. Cultural differences between samples are also usually discussed and explained.

However, the situation becomes more complicated when the assessment of a specific trait in another country requires a specialist to use principally diverse psychological concepts. For example, diagnostics of motivation with Edwards's (1959) EPPS (Edwards Personal Preference Schedule) questionnaire, which is based on H. Murray's theory, do not fit the framework of Leontiev's (1978) activity theory, which is widely accepted in Russia (Kornilova, 1997). One of the possible solutions here is to substantiate and perform a review of the empirical indices' content. This review can be based on hypothetical constructs that differ from the initial ones. However, there are cases (and methods) when this approach is not applicable.

Both of these approaches are used in Russia where the development of its own instruments has been halted for a long period of time. There were a few major reasons for the temporary halt of the development of psychodiagnostics in Russia in the 20th century. The first one was the Resolution of Central Committee VKP (b) 1936 "On Pedological

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Distortions in the System of Narkompros” (Postanovlenie CK VKP(b) ot 4 ijulya 1936 g, 1974). This act has, in fact, forbidden the development of standardized tests as diagnostics as well as the use of instruments based on foreign theories. However, in the 1990s Russian psychology generally recovered from this temporary stop and foreign psychodiagnostic inventories have become widely used in studies, two of which will be presented in this chapter in the framework of the two approaches that we proposed earlier. The first study has allowed us to use the original interpretation of the implicit theories concept in Dweck’s theory and, at the same time, to broaden the understanding of implicit theories based on Russian studies of goal orientations and goal formation. In the second study of deep motivation, we have reinterpreted motivational indices derived from the use of foreign questionnaires. Both the study of motivation and the study of goal orientations have been based on Leontiev’s theory of activity.

The development of the concept of personality as an activity subject is based on Marx’s methodology. Leontiev’s theory is based on the same methodology. He introduced a specific understanding of a motive as an object of need. However, there were no instruments for diagnosing motives and their hierarchies developed in this theory. This is why empirical studies of Russian psychology face the problem of using personality measures, which are based on differing theoretical approaches. In our studies we have faced the same problem while using Edwards’s EPPS questionnaire for diagnostics of motivational profiles of students from different professional samples.

Leontiev’s book, whose title includes a reference to personality (*Activity, Consciousness, and Personality*), was published in 1978. It still remains a problem to relate the proposed methodological basis of activity mediating personality constructs to possible methods of their diagnostics. Both the level of self-consciousness and the motivation hierarchy are successfully used in theories of the personality regulation of perception, memory, thinking, and behavior. However, there is no diagnostic approach that takes the specificity of a personality concept in the activity theory framework into account. This is why psychologists accepting activity theory have to refer to methods based on differing theoretical frameworks.

Given the possible use of personality inventories that were developed in differing methodological approaches, we have conducted a number of studies on personality regulation of learning, two of which will be presented in this chapter.<sup>1</sup> Both of these studies were based on the use

of personality inventories that originated from different methodological frameworks. They demonstrate both the theoretical implications of adapted methods and their practical implications, including those for the educational psychology domain.

### **SPECIFIC LEARNING MOTIVATION AND IMPLICIT THEORIES OF INTELLIGENCE AND PERSONALITY**

Considering theories of personality regulation of thinking and studies of the role of implicit theories of learning, we have singled out the following research field—the study of the role of self-evaluations and goal orientations in academic achievements in university students. Studies of a layperson's beliefs' engagement in the self-regulation of learning represent a new approach to personality regulation of learning that views the self-appraisal construct as a mediating variable.

Self-consciousness is considered in activity theory as a leading level of the personality regulation of actions and decisions (Leontiev, 1978). At the same time, in the understanding of consciousness of learning, the presentation of goals to a subject includes a level of realization, whereas motivational regulation, as derived from deep motivation, is usually unconscious. The bases of a specific goal formation can be unconscious as well—even though the goal content is conscious. Tikhomirov (1969) has shown that the formation of operational senses at unconscious levels of a search process precedes the actual formation of a conscious goal of decision. The fact that implicit theories are present on both conscious and unconscious levels allows one to view this construct as containing the variable of personality regulation of goal formation and efforts allocation that may act as a link between self-evaluations and goal structures of learning.

In Bandura's (1997) theory, self-efficacy is included in goal-structures formation. Goals provide a basis for the self-regulation of efforts through implicit standards to which one compares relevant strategies and efforts. Students with higher levels of academic self-efficacy use more effective strategies in learning; they are more effective in the exploration of environment, self-control, and the self-regulation of efforts (Chemers, Hu, & Garcia, 2001). Moreover, evaluation of efforts spent on a task is where self-efficacy and academic self-concept overlap.

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studies of goal formation processes in thinking and personality regulation of academic achievement became significant components of activity theory development. The leading role in regulation of thinking strategies has been studied regarding goal formation processes (Tikhomirov, 1969, 1977, 1984) and ideas based on Vygotsky's (1987) notion of thought being born not from another thought, but from the motivating sphere of consciousness. On the basis of this notion, we have developed the concept of dynamic regulative systems (Kornilova & Smirnov, 2002). Different regulative systems reveal their influence on different parameters and stages of intellectual decisions. They include both conscious and unconscious levels of psychological components, which are bootstrapped by components of integral self-regulation (Kornilova, 2007).

In this dynamic systems approach, goal achievement in learning cannot be viewed outside of the self-consciousness level that is integrative in relation to other personality (and motivational) characteristics. We suggest that diagnostics of the components of self-concept most closely related to motivation that is specific to learning can be based on the use of the concept of implicit theories.

Dweck has studied the role of lay beliefs about intelligence and personality in the context of studying subjective factors of learning regulation. These beliefs (or representations) have been referred to as implicit theories (Dweck & Leggett, 1988; Furnham, 1988). Implicit theories related to one as well as to others can focus different aspects of a self-concept's regulative function in the development of internal (specific) learning motivation on themselves. Concretization of their contribution to success in learning by Russian students has called for a discussion of the degree to which a reference to assessment techniques developed in a differing theoretical context could be applied when used on the basis of other models of learning regulation.

Dweck has studied implicit theories as factors of internal determination of students' learning for 30 years (Dweck, 1999; Good & Dweck, 2006). Dweck showed that people differ in their beliefs about intelligence, which can be defined as entity theory or incremental theory. These components of self-concept influence both the goals and the learning effectiveness. Performance goal orientation or mastery goal orientation seem to be closely related to implicit theories. Later, Dweck (2006) applied her theory to the psychology of success and demonstrated the role of implicit theories as "mindsets" in many different domains (e.g., sports, business, and everyday life).

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In the study presented below, our goal was to adapt the questionnaire based on Dweck's identification of three scales reflecting implicit theories of intelligence, personality, and learning goals for Russian samples. We have added a fourth scale that measures academic self-concept. The use of this combined questionnaire has allowed us to diagnose a set of characteristics that are more or less proximal to the conscious goal regulation of students' learning. It has also made it possible to reveal the interrelations in partial systems of personality regulation, including emotional intelligence and self-estimated intelligence and to consider academic self-concept as the specific motivational predictor of academic achievements.

The practical need for such instruments' development is due to a number of reasons. The main one is that, although thorough, the analysis of the structure of learning activity in Russian psychology (e.g., Smirnov, 2001; Talyzina, 1998) has paid less attention to problems of individual differences and learning motivation influencing knowledge acquisition effectiveness and abilities to use this knowledge in job-related tasks at the university level.

Discussions of possible sources of individual differences in educational achievement usually refer to the following characteristics of a person: intelligence (the ability to acquire knowledge and skills and use them for problem solving) (e.g., Anastasi, 1996; Mackintosh, 2006; Sternberg, Grigorenko, & Bundy, 2001; Trost, 1999); metacognition (Galkina & Loarer, 1997); cognitive style (Klaus, 1987); general motivation not specific to learning activity (e.g., of achievement, dominance); specific motivation providing intense emotions when learning goals are achieved (e.g., Dweck, 1999; Good & Dweck, 2006); level and adequacy of self-esteem, self-efficacy, and self-regulation of learning (e.g., Bandura, 1997; Boekaerts, 1996).

The skills and readiness to use one's potential are one aspect of self-regulation. Individual and personality characteristics are viewed as different-level components of a student's activity in Russian psychology. Self-consciousness acts as a leading level in the activity-personality mediation of one's interaction with the world. Notions that self-consciousness structures can act as a form of self-control and motivate activity are concretized in the development of Leontiev's activity theory approach (Smirnov, 2001; Stolin, 1983). Individual's level of implicit beliefs about himself may correlate in this case with sense domain, which is

S \_\_\_ only partially conscious. Sense is understood in activity theory as a relation between a motive and a goal (which is always conscious) and can  
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regulate one's attitude toward learning. It can remain partially realized by an individual in relation to learning goals and efforts made.

The subject matter of the present study is the interrelations between specific implicit theories (representing beliefs about malleability of intelligence and personality in learning), different ability personality factors, and academic achievements.

We accept the general notion that the concept of mastery goal orientation reveals a motivational role of self-consciousness that mediates the direction of efforts made by a student, but we think that there is a missing link of self-concept components (i.e., different self-evaluations). Beliefs about one's place in the hierarchy of other students and the effectiveness and subjective value of efforts put in learning should be discussed along with the goal orientations. This allows us to take a functional role of self-concept components in goal formation and achievement into account.

One recent study (Plaks, Grant, & Dweck, 2005) shows that implicit theories as a framework are reflected in cognitive strategies in terms of less reaction time to information violating initial implicit theories. However, implicit theories act as mediators in learning by defining not only goal orientations, but learning motivation as well. We did not expect implicit theories to influence academic achievements directly.

Book and Stein (2000) discuss relations of emotional intelligence and professional career success mediated by communicative competence. In this first study we refer to the emotional intelligence measurement as described in Gardner's (1983) book, in which he includes interpersonal and intrapersonal intelligences in his concept of the multiple intelligences. Discussions about whether emotional intelligence is a trait or ability are still far from being over (Matthews, Zeidner, & Roberts, 2007; Schulze & Roberts, 2005). The idea of intellectual emotions as regulators of intellectual strategies developed in Tikhomirov's approach in Russian psychology allows us to accept the following position: Emotions are included in prognosis and decision-making processes and they execute the structuring function of decision-making strategies. This is why, although theoretical interpretations of this construct differ, one can argue that it has a regulative role in learning. This influence may be viewed as operating at the same level of unconscious regulation of goal formation as the influence of implicit theories. We followed the general assumption about the role of emotional intelligence as a possible predictor of academic achievement. Although cognitive aspects of emotional intelligence are widely discussed (e.g., see Book & Stein, 2000) and these components may be viewed as influencing academic achievement, there have been

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no published papers on the relations between psychometric and emotional intelligence in Russian students yet.

In Great Britain, the problem of interrelations between personality and cognitive components of achievement regulation is developed through the use of such questionnaires as NEO-FFI of Big Five and Eysencks' NEO-EPQ-R (Chamorro-Premuzic & Furnham, 2006; Chamorro-Premuzic, Furnham, & Moutafy, 2004). The group of authors listed above discovered the concept of intellectual competence that suggests the existence of an individual ability to acquire and integrate knowledge across the entire lifespan. Observed individual differences in learning depend not only on psychometric intelligence as a general cognitive ability, but on personality characteristics and self-assessed intelligence as well. Authors refer to Dweck's studies in the context of viewing implicit theories as influencing the level of achievement motivation that is leading in the differentiation of the development of intellectual skills and knowledge systems. Studying interrelations of self-estimated and measured personality and ability characteristics and discussing possible causal relations among them, Chamorro-Premuzic, Furnham, and Moutafy (2004) propose an integrative model and argue that self-evaluations of personality and intelligence are included in the single regulative profile of learning. Other studies aim at revealing psychological and socioeconomic factors that influence these self-evaluations (e.g., Rammstedt & Rammsayer [2002] have shown that the level of education can have moderating effects on self-estimated intelligence).

Conscientiousness appears to be another trait that is positively related to learning motivation, but at the same time, can be negatively related to skill acquisition, which can be explained by resource allocation with emphasis on self-regulation (Colquitt, LePine, & Noe, 2000). Personality traits in contemporary studies act as covariates rather than moderators of goal direction. On the contrary, a relationship between self-evaluations and goal orientations may be moderated by goal achievement.

Studies that attempt to reveal relations between learning motivation and learning effectiveness show that implicit theories play different roles in it and the mechanism is thought to be related to goal orientations, which (in spite of differing interpretations of the sources of goal motivation) are in turn related to the influence of personality traits (Kornilova, Smirnov, Chumakova, Kornilov, & Novototskaya-Vlasova, 2008). We accept the conclusion of Payn, Youngcourt, and Beaubien (2007) that have shown in

S\_\_\_ their meta-analysis that "self-regulatory constructs and processes medi-  
E\_\_\_ ate the relationship between individual-difference variables and various  
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outcomes” (p. 130). Self-evaluations appears in the list of antecedents of goal orientations along with implicit theories, cognitive abilities and levels of motivation, personality and general self-efficacy. These antecedents influence goal orientation dimensions and the latter influence distal consequences and outcomes (learning, academic, task and job performance) through proximal ones (state learning, specific self-efficacy, state anxiety, feedback seeking, and others).

Later models are highly integrative and expand the list of individual differences that contribute to learning and training. These include not only personality traits (as of the Big Five) and specific motivations, but also anxiety, locus of control, and intellectual engagement related to skill improvement and success that influences the feeling of self-value related to self-efficacy and career planning (Colquitt, LePine, & Noe, 2000).

In our studies we relate self-regulation of learning to a proximal construct—self-concept. Indicator variables for the possible corresponding latent variable are two types of self-evaluations: academic self-concept and subjective evaluations of intelligence in interpersonal comparisons (Smirnov, Kornilova, Kornilov, & Malakhova, 2007). We propose two corresponding different assessment procedures. The present study is aimed at verifying hypotheses of a role of self-concept components along with other individual characteristics (i.e., psychometric and emotional intelligence) as predictors of academic success in university students.

### **Study 1: Self-Concept Components, Psychometric, and Emotional Intelligence Predict Academic Achievement**

Smirnov’s Russian versions of three of Dweck’s brief questionnaires (Kornilova et al., 2008) with the addition of new items measuring academic self-concept, approved on other samples, were examined anew in our study for internal validity. The questionnaire included 28 statements in its final version, producing four scales: academic self-concept (this measure represents student’s beliefs about the overall effectiveness of their learning activity and subjective value of efforts put into the learning activity, and whether a student tends to think that he or she is among successful students); implicit theories of intelligence (as of a constant or malleable construct); implicit theories of personality; and goal orientations (learning/performance goals). There were 429 college students from Moscow State University who participated in this study

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We have also developed a specific procedure called GEI (Group Estimation of Intelligence, Kornilova et al., 2008). Unlike traditional direct self-estimates of intelligence obtained through giving a numerical estimate of intelligence with reference to the normal distribution (Bennett, 1996; Furnham & Rawles, 1999) or one based on a Likert scale (Fingermann & Perlmutter, 1994; Paulus, Lysy, & Yik, 1998), the GEI procedure facilitates social comparisons within a specific reference group. We have asked 223 students from the sample described above to range themselves and their classmates by perceived “intelligence” based on the list of their class, preliminarily having written which qualities a person whom they consider to be clever should possess. A weighted mean rank of a student in a group—a variable of a peer-estimated intelligence (PEI)—is computed. A weighted rank that a student assigned to himself is used as a measure of his self-estimated intelligence (SEI).

We view self-evaluative components of a self-concept as distinct from self-efficacy. These components interact with cognitive abilities in learning and can contribute to academic success in case there is an opportunity to assess one’s engagement in an activity or to compare oneself to other people. Self-evaluation of degree of engagement in learning (as academic self-concept) and self-estimated intelligence that takes feedback regarding other students’ achievements into account are mediated by different process components. We assumed different relations between these variables and cognitive abilities, emotional intelligence, and actual academic achievement. In particular, academic self-concept should be more closely related to goal orientations and learning outcomes.

Discussions of a problem concerning psychometric intelligence predicting academic success (Deary, Smith, Strand, & Fernandes, 2007; Mackintosh, 2006; McGrew & Knopik, 1993; Trost, 1999; Ushakov, 2004) show that diagnostics of psychological factors of learning achievement is an independent problem in particular, due to the moderate relations between psychometric intelligence and achievement. There are a number of studies of social and emotional intelligence that refer to personality components in intellectual development (e.g., Lyusin & Ushakov, 2004). Considering intelligence as an extraneous variable, we have administered Amthauer’s Intelligence Structure Test (IST-70; Amthauer, 1973; Gurevich, Akimova, Kozlova, & Loginova, 1993) to all students (even those who did not participate in the GEI procedure). IST-70 is a

S\_\_\_ standardized test of cognitive abilities. The test contains abstract figural  
E\_\_\_ reasoning tasks as markers of fluid intelligence, and knowledge items  
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as markers of crystallized intelligence, which form the three subscales (Verbal, Mathematical and Spatial IQ, and the General IQ scale).

We have also used the EmIn emotional intelligence questionnaire developed by Lyusin (Lyusin & Ushakov, 2004) on the basis of his mixed model in which emotional intelligence is viewed as an interaction of both cognitive and personality characteristics in processes that are crucial to identification, expression, and manipulation of emotions.

Since nonacademic intelligence (i.e., social, practical, and emotional intelligence) may affect achievement (e.g., Klaus, 1987; Lyusin & Ushakov, 2004; Sternberg, 1999), it is possible to view interpersonal and intrapersonal indices as predictors of academic success, which was computed as students' GPA for the last three semesters.

A comparison of male and female samples has revealed higher values of academic self-concept and acceptance of the implicit theory of an enriched personality in female students. Male students were more likely to accept entity theory of personality as a stable constant and assess their engagement in a learning activity as being lower whereas female students thought that personality is a developing construct and had higher academic self-concept than men. There were no significant differences in implicit theories of intelligence and goal orientations.

The unexpected result was that humanities students appeared to have a higher mastery goal orientation than natural science students. They also had higher academic self-concept. Natural science students appeared to be more pragmatic (having performance goal orientations) and tended to not overestimate their efforts in learning (probably considering their efforts as being adequate for the tasks). From our point of view, these differences come from a higher degree of uncertainty in education in humanities programs. Natural science programs have more strict control over the achievement of learning goals. Humanities programs also have less clear criteria for mastery, which makes students formulate them and put more effort into goal formation and learning activity organization, thus acting on a higher level of self-control.

A correlational analysis has revealed one significant positive relation between psychometric intelligence and self-concept component: namely, between the scales of mathematical intelligence and academic self-concept. Thus, students with higher mathematical intelligence tended to assess their academic success as being higher.

Unlike conventional intelligence measures, emotional intelligence scales correlate with many implicit theories scales: there were significant positive moderate relations between implicit theories of intelligence and

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indices of interpersonal and intrapersonal emotional intelligence. Significant correlations were found between implicit theories of personality and variables of intuitive understanding of others' emotions, one's emotions, emotions through expression, and control over one's emotions as well as a summary index of interpersonal emotional intelligence.

Mastery goal orientation was positively related to all emotional intelligence scales and academic self-concept positively correlated with most emotional intelligence variables.

Thus, students with a higher process motivation (efforts and engagement in learning activity) and students that adopted mastery goals showed higher emotional intelligence. Dynamics and a controllable character of understanding and manipulation of emotions (both of oneself and of other people) is not coincidentally related to the specific motivation of learning supposedly measured by the two scales of implicit theories questionnaire—learning goal orientation and academic self-concept. Both of these scales appear to be significantly related to students' GPA in humanities and natural science students (e.g., Kornilova et al., 2008).

Taking interrelations of emotional intelligence and self-concept components into account, we have conducted a hierarchical linear regression analysis to evaluate possible contributions of each of these variables as predictors of academic achievement. However, the only variable significantly contributing to GPA was the academic self-concept, which explained 32% of variance in the GPA. Psychometric intelligence did not act as a significant predictor of students' achievement in our study.

Our data on predictive validity of the academic self-concept measure is comparable to some of the available data on predictive value of other personality measures. British psychologists cited above report about routine achievement measures (such as the degree of activity in seminars) predicting exam results and comparable, but negative, coefficients for Neuroticism as an independent variable (Chamorro-Premuzic & Furnham, 2003). They also report data on correlations between Conscientiousness, Openness (as factors of Big Five) and exam results (Chamorro-Premuzic & Furnham, 2006). According to our study, the implicit theory of incremental intelligence is positively related to academic self-concept, which in turn acts as a predictor of academic achievement. Implicit theories by themselves do not act as predictors per se.

The use of the academic self-concept measure allows us to argue  
 S \_\_\_ that this component of self-concept has a functional role as a predictor  
 E \_\_\_ of academic success in students. Gender differences revealed in implicit  
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theories indices suggest that women are more ready to accept the implicit theory of enriched personality and estimate their efforts in learning as being higher. The modified version of the implicit theories questionnaire has made it possible to assess goal orientations and academic self-concept as factors that differentiate beliefs of natural science and humanities students about efforts required for successful goal achievement and orientation of this goal achievement either on pragmatic results or skill and knowledge mastery. Direct self-evaluations of intelligence is positively related to academic self-concept, which also allows us to interpret the latter as self-representation of intellectual successfulness. Academic self-concept is the strongest psychological predictor of academic success in this study. Emotional intelligence is related to all four scales of the implicit theories questionnaire, thus demonstrating its inclusiveness into the genesis of specific motivation of learning and the intensity of distant mastery goals, but it cannot be considered as a predictor of academic achievements. Thus, implicit theories, academic self-concept, goal orientations, and emotional intelligence can be viewed as different components of a personality regulation of learning. We treat them as dynamic regulative systems, which represent a hierarchy of different processes of personality regulation of learning activity.

## **A CROSS-CULTURAL STUDY OF THE MOTIVATION PROFILES OF RUSSIAN AND AMERICAN STUDENTS**

Taking into account the difficulty of differentiating between social components as types of thinking and as types of personality profiles and the existence of multiple factors of cross-cultural differences, we have compared the motivation indices of Russian versus American students. Unlike most Russian studies in which a comparative analysis is conducted with reference to the norms for Americans published by other authors, the present one includes American and Russian samples simultaneously.

### **Study 2: A Comparison of the Motivational Indices of Russian Versus American Students**

We have used the short modified version of EPPS (Edwards, 1959). Our sample consisted of Moscow State University students (primarily) and Saint-Petersburg State University students. The corresponding English version has been administered to students at Yale University by Elena L.

Grigorenko (Kornilova & Grigorenko, 1995). Cross-cultural design allowed us to compare the empirical indices of the students' motivational profiles in order to test hypotheses about the dominating traits in two different cultural contexts.

The study took 1 year to conduct (September 1992–October 1993). A time of changes would be the broadest definition of the situation present at that time in Russia. That situation was a socio-political background for the personal development of students in Russian universities. “What are we?” was the question associated with the public consciousness level of another one—“What would we like to be?” The analysis of a “mean” motivational profile based on consciously made personal choices (or personal preferences, as reflected by EPPS) also allowed us to take particular qualities of self-definition into account. Statements were formulated (in most cases) in the conjunctive mood (“I would like to . . .”) or suggestions about the duration and frequency of specific situations (“I like . . .”). The contexts of past and future intersected in pairs of statements, which reflected more or less significant peculiarities of the social situation in Russia. This intersection was to actualize individual preferences. The social component was taken into account, but we have suggested that it had a heterogeneous pattern of influence on self-consciousness variables.

Other authors have included different contexts characterizing social thinking during that period. For example, Abulkhanova-Slavskaya (1990) argues that usually a “developed democratic state provides a person with what, in our country, he or she has to decide/solve by him or herself” (p. 44). The controversy of self-perceptions and the ability to take responsibility for one's actions in turning points and crucial moments of public development should not be considered as culture-determined only and, thus, characterizes value beliefs about personality and Russian mentality (in its cultural understanding).

We have compared the two student samples and specified the peculiarities of Russian and American student populations concerning the intensity of particular motivational tendencies. We have relied on the identity of the statements in both the Russian and English versions: Two experienced professional psychologists that had substantial experience with communication in American culture acted as experts (according to the requirement of the adaptation procedure). For the adaptation of the full version of EPPS, we have highlighted those statements that could not be included in the initial scales in the Russian version. For example,

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- ple, we have dropped the “tolerance to change” or “radicalism” scale. Conceptual relations postulated by the author of the questionnaire were

inapplicable to the Russian context (e.g., “the readiness to go to new restaurants” was less representative for Russian students). These culturally “inadequate” relations were excluded from the first version of the modified questionnaire to minimize the impact of the statements that differed in their connotations in the cultural contexts mentioned above.

The modified short version of the EPPS inventory consisted of the following scales: Achievement, Order, Autonomy, Intraception, Dominance, Abasement, Endurance, and Aggression.

The study included 116 Russian and 121 American students aged 19 to 29. Approximately half of the students were male and half were female.

Obtained data were analyzed with MANOVA and univariate ANOVA. The Smirnov-Kolmogorov test was used to test hypotheses concerning differences in the two samples. A multivariate analysis of variance in eight scales has revealed the main effect of cultural factor (as a complex variable).

Significant differences have been revealed for five of eight measures: American students have significantly higher values on Order, Dominance, and Aggression scales while Russian students score higher on Autonomy and Abasement scales.

Higher need for autonomy seems to be the most controversial characteristic of the Russian sample because of the fact that in real-life settings students are not economically independent yet. However, one should take into account the period of the study (1990s)—a period of transition to a more democratic lifestyle. When this notion is taken into account, this result appears to be reflecting the young generation’s aspiration for independence and autonomic choices. A higher need for autonomy should be discussed along with differing cultural stereotypes in understanding of the concept. *Individualism* of American society is sometimes oversimplified and understood in terms of the absolute autonomy of a single person. One should, however, mention the extent of an individual’s dependence on family and highly estimated sense of belonging to a specific social group (to a university or college in particular).

The Autonomy trait in the Russian sample was more related to the value of individual independence than would be expected of the real-life situation (ability to support oneself, take responsibilities, rationally organize one’s studying and free time).

American society’s urges toward rationality and orderliness are well known. Time-planning abilities, punctuality, and ability to get done what’s needed in time are highly valued and rewarded. There is a great

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emphasis on teaching these personal traits in the educational system at both the school and college levels. Learning activities in curriculum, including activities that require additional time, are also controlled. These activities in Russian humanities students are put under control almost entirely during examinations, and many students appear to be unprepared for the required level of self-regulation. Readiness to rely loosely on Russian in Russian culture is so strong that even students striving for high achievements tend to not relate the means for success (at the level of self-consciousness) to the need for a plan and thorough preparation. Russian students have the lowest scores on the Orderliness scale in the eight-scale profile. This scale represents an aspiration for rationality in activities. The psychological criteria for subjective rationality include not only logical competence, but following the social stereotypes in the organization of activity, behavior, and thinking as well. Striving for rationality has not become a stereotype in Russian occidentalism. Our data show that students are more likely to compensate for the lack of Orderliness with high Endurance in goal achievement.

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Specificity of values in Russian students is also well characterized by high scores on Intraception and Abasement scales. Conscious recognition of specific tendencies in regulation of one's behavior is crucial to a critical attitude toward oneself.

To evaluate significant difference in Abasement scores in Russian and American students, we should take into account the following peculiarity of social thinking in the Russian student sample. Particular personal preferences in answers can be explained by the existence of a moral component in what appears to be the trivial process of analytical problem solving. This is sometimes viewed as a common feature of a "Russian national character" (Znakov, 1994). We should not forget about the interrelation between Abasement and lack of self-confidence that is highly characteristic of the personality development conditions in Russian culture.

On the contrary, conditions purposefully cultivating "individualism, uniqueness, and confidence" are characteristic of Yale students. High self-esteem is being maintained to minimize the lack of personal confidence in a person's own potential. American students are not likely to agree with sentences postulating that possible failures can be attributed to one's mistakes. A feeling of personal responsibility or guilt (and especially of "being lower than others") is not characteristic of this sample as well.

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 E\_\_\_ dictable differences in Aggression scores between the two samples.  
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Unrewarded forms of aggressive behavior do not appear on the level of values related to Self in Russian students. We think that a discussion of this tendency should, in the first place, take into account cross-cultural differences in interpersonal communication norms. Corresponding statements in Edwards's EPPS are not characteristic of the Russian culture of an interpersonal relationship (e.g., fairly criticizing someone in public). In terms of the statements' content, the questionnaire was less likely to reflect those domains of an aggression's expression that took place in the interpersonal relationships of Russian students.

The results obtained in this study (as well as other data on the use of methods that deal with psychological reality in context of social interactions of person and environment) may be interpreted in terms of cross-cultural differences. Discussion suggests that particular cultural societies can be classified on an "individualism-collectivism" continuum (Ruzgis & Grigorenko, 1994). Classifications like this one have not been developed in Russian psychology yet. However, cross-cultural studies conducted demonstrate the need of psychologists to go beyond this univariate continuum. The results presented above allow us not only to reveal differences between "mean-statistic" motivational profiles of American and Russian student samples, but also to evaluate the quantitative predominant intensity of specific motivational tendencies. They also demonstrate the need to broaden the interpretational contexts that do not overlap completely in their content when applied to the same personality characteristics in differing cultural frameworks.

### **DYNAMIC REGULATIVE SYSTEMS AS SYSTEMS OF SELF-REGULATION IN THINKING AND LEARNING**

The study of self-concept components in the context of academic achievement demonstrates a combination of orientation on initial theory and inclusion of the new interpretational context as well. Thus, we have used the possibility of modification of the initial Dweck's questionnaires by combining them with the addition of a new scale—of the academic self-concept. However, this study does not speak in favor of implicit theories of personality and intelligence as significant predictors of academic achievements. The academic self-concept scale has allowed us to expand the conception of personality regulation of achievements by processes of self-evaluation (and not only by goal

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Referencing the emotional intelligence measurement in this study was necessary to take into account the idea of unity of intelligence and affect in Russian psychology (Vygotsky, 1987; Tikhomirov, 1984). This allowed us to find a mediating link between beliefs about goal regulation of learning from the point of personality factors at the levels of partially conscious self-evaluations, one of which was more oriented on activity structures, and the other one on self-evaluation in interpersonal comparisons (only the first one acted as a significant predictor of academic achievement).

An attitude toward a student as the subject of a learning activity in Russian psychology and transition to a competence approach in foreign theories of intellectual and personality development (Raven, 1984) calls for a rethinking of motivational and personality components of learning activity regulation. One possible solution lies in the development of the concept of implicit theories as specific personality presuppositions for learning activity success.

We have discussed the fact that implicit theories measures obtained through our modified version of the questionnaire are closely related to intuitive regulation represented by emotional intelligence scales. However, neither emotional intelligence nor implicit theories (except for self-appraisal of learning) act as significant predictors of academic achievements.

This allows us to suggest different roles of psychological characteristics such as implicit theories, emotional intelligence, academic self-concept, and subjective evaluations of intelligence in indivisible dynamic systems of regulation. These systems reveal personality and motivational influences on intellectual strategies and learning processes.

Revealed interrelations of implicit theories and emotional intelligence indices represent the importance of laypersons' beliefs about whether intelligence and personality can be developed in learning reflected in implicit theories scales and about the efforts put in learning for the achievement of different kinds of goals. However, these subjective categorizations do not directly affect learning activity effectiveness as represented in GPA (which, of course, is not and should not be treated as the only indicator of academic performance).

According to these results, we have suggested the existence of dynamic regulative systems. In these systems, influences of differently measured personality characteristics on a learning activity are being hierarchically and dynamically structured. From the point of the development of the concept of the personality regulation of thinking that is reflected in the

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hypothesis about the formation of dynamic regulative systems, use of foreign methods can be viewed as a way of rapprochement of different theoretical approaches.

The idea of functional structuring of the sense and cognitive components of thinking processes in comprehensive (unfolded) strategies in learning can be viewed as a substantial step toward a new understanding of the application of assessment techniques in psychological studies. Psychodiagnostic instruments can be aimed not only at the assessment as a result, but at assessment as a method of hypotheses verification that supposedly connects assessed characteristics (intelligence, personality) in new formations that have cognitive and personality components and that function in actual genesis.

The scientific goal of this approach is reflected in the verification of assumptions about processes that mediate cognitive-personality interactions and thus functionally construct dynamic regulative systems with hierarchies of psychological regulators of different types and levels.

First, components of these hypothetical and partially influencing (i.e., influencing separate goal formation stages) regulative systems are those motivational formations that represent actualization of deep types of motivation (measured by personality questionnaires, such as Edwards's EPPS). Second, they reflect components of a metacontrol level measured by variables of conscious self-regulation, less conscious self-evaluations, and implicit beliefs about intelligence and its malleability in learning.

The second study presented in this chapter suggests that, when discussing assessment techniques in the context of the measurement of specific motives or motivation type problems, consideration of specific psychological variables corresponding to these constructs or of their genesis does not determine assumptions about their functional role. One can reveal interrelations between variables even though there may be several different interpretations of these variables. In that sense, the functional role of variables is relatively independent of what underlines them whereas theoretical models are highly dependent on the way the variables (and, therefore, constructs) are understood.

A comparison of the Russian and American university students' samples in the second study allows us to reveal both commonalities and distinctions in their motivational profile. Interpretation of these commonalities and distinctions is based on an analysis of real forms of activity in learning that determine which types of motivation will be leading in the motivational profiles. However, this leaves room for

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additional different interpretations of motivational indices obtained through the use of the EPPS questionnaire. We suggest that possible reinterpretation of motivation indices (i.e., in Leontiev's activity theory or in Murray's theory) speaks in favor of these cross-cultural studies being open to comparing different psychological theories. This point of view would grant prospects for a rapprochement of theories of personality and motivational regulation that were initially developed on different methodological grounds.

Thus, the use of foreign experience in the development and use of assessment techniques and inventories contributes to the development of the original Russian theoretical concept of sense regulation of thinking. Studies presented in this chapter show the possibilities of mutual enrichment of scientific approaches in the contemporary context of globalization.

## AUTHOR NOTE

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## NOTE

1. Please note that this chapter only provides a brief outline of the obtained patterns of results. For more details please refer to Kornilov, Kornilova, and Chumakova (2009); Kornilova (1997); Kornilova and Grigorenko (1995); and Kornilova et al. (2008).

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[AuQ1] “Readiness to rely loosely on Russian” Does this perhaps convey your meaning here?