



**Psychology Laboratory
Review 2008-2011.**

**Сборник Трудов
Психологической
Лаборатории 2008-2011.**

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We are looking forward to receiving your feedback on the current issue of the Review of Psychological Laboratory. It is our intention to start publishing Review of Psychological Laboratory as an annual periodical. For you comments and ideas please contact psyc@mail.auca.kg or elena.kosterina@gmail.com

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Foreword from the editor

“In any kind of book foreword is the first and the last thing at the same time”. This was the attitude of M.J. Lermontov, famous Russian poet. What he meant probably was that the purpose of the foreword, in addition to giving the overview of the book, has to describe the perspective of the future work in the direction taken in the book. Let us follow the recommendations of the classic.

Psychological Laboratory of American University Central Asia studies psychological aspects of the influence of the civilization and society on the individual and group. The current objectives of research are: communication (from phenomenological and empirical approaches), symbols as the connective tissue of contemporary society, understanding as the subject of psychological analysis, gender characteristics of contemporary society – their peculiarities and change, and in connection to this area – psychology of expecting women: anxiety, depression, and historically developed ritual. I have enumerated significant topics which have been published to particular extent, and I have skipped those in the process of development. In the sphere of applied psychology, the topics include function of money as a universal semiotic mechanism, trading as a specific form of communication, social-psychological role of mass media, PR and advertising, rumors and the mechanisms of their spreading, conflicts and terror acts from the point of view of their consequences (See Table 1.) Those involved in the work of the Psychological Laboratory are faculty members of Psychology Department and many other Departments of AUCA, National Academy of Science of Kyrgyz Republic, Kyrgyz Russian Slavic University and Moscow State University.

The variety of topics is evidently due to effective collaboration of AUCA students and with students of other universities and collaboration of professionals of AUCA with specialists of USA, Russian Federation and Europe.

I cannot help but refer here to the recent (01.28.2011) letter of Professor, Doctor of Biological Sciences, Head of Laboratory of Department of Public Policy, D.N. Kavtaradze, which reads: “I am looking forward to the publication of the review of works of Psychology Laboratory of AUCA. Looking back at the history of development of Psychological Laboratory, I can see the strata of achievements, and firsts of all, development of interdisciplinary scientific thought. This holistic worldview was the basis of further foundation of universities, and the science itself has always been universal. I perceive myself as a part-time member of Laboratory. I will be happy to participate further in the projects of Laboratory, such as ‘Ecopolis’ and ‘Imitation games – learning of the sense’ ”.

The main part of the research done since the beginning of XXI century is published or is going to be published by the authors. But there is always this “strata” of complete works (borrowing the term from Kavtaradze), usually student works, that require publication due to their extraordinarily and scientific value. Some of the most interesting of those comprise the present Review, which I hope, will be of interest of professionally-oriented reader.

One of the goals of Laboratory has been to reinforce interdisciplinary collaboration inside the AUCA and beyond it. Example of effective steps in this direction could be the facts that the work of Babaeva, B. on mathematical methods in semantic analysis of texts is important authentic part of this Review, the work on psychological model of function of money was accepted for the plenary session of the Congress of Applied Psychology in Athens, our Laboratory has been involved into the scientific work of Sankt-Petersburg and Arkhangelsk scientists, etc.

We obviously plan to continue publication of the works of the laboratory on a regular basis in the form of a periodical. This plan would depend on the feedback of those who has been reading this foreword and will read the scientific works of this Review.

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Предисловие редактора

«Во всякой книге предисловие есть первая и вместе с тем последняя вещь» писал М.Ю. Лермонтов. Он имел в виду, что вместе с общим очерком содержания предисловие может (и должно) освещать перспективы дальнейшей работы в заданном книгой направлении. Поступим в соответствии с рекомендацией классика.

Психологическая лаборатория Американского Университета в Центральной Азии занята исследованием психологических проблем связанных с влиянием цивилизации на психологию индивида и групп; исследуются, в частности, общение (в феноменологическом и эмпирическом аспектах), знаки как соединительная ткань современного общества, понимание как предмет психологического анализа, гендерные характеристики современного общества – их специфика и изменение и, в непосредственной связи с этой проблематикой, психология беременности: тревожность, депрессия и исторически сложившийся ритуал. Здесь названы теоретически значимые темы, по которым уже имеется ряд публикаций и опущены те, которые находятся в процессе разработки. В прикладном плане эти темы связаны с функцией денег как универсального семиотического средства, торговлей как специфической формой общения, социально-психологической ролью массовых коммуникаций, связей с общественностью и рекламы, слухами и механизмами их распространения, катастрофическими и террористическими ситуациями в свете их психологических последствий. (см. табл.1). В работе лаборатории принимают активное участие сотрудники кафедры психологии, и ряда других отделений АУЦА, Национальная Академия наук КР, Кыргызско-Российский Славянский Университет и Московский Государственный Университет (МГУ).

Широкое разнообразие тем объясняется, в частности, весьма продуктивным участием студентов АУЦА и других университетов и творческим взаимодействием с видными специалистами США и Российской Федерации, продолжающимся уже на протяжении многих лет.

Не могу в этой связи не сослаться на недавнее (28.01.2011) письмо доктора биологических наук, заведующего лабораторией факультета государственного управления, лауреата премии Президента Российской Федерации Д.Н. Кавтарадзе, который пишет: «С огромным интересом ожидаю появления сборника работ Вашей лаборатории. Оглядываясь назад, отчетливо вижу пласт свершений и, прежде всего, развития научной мысли как междисциплинарной модальности. С этого целостного восприятия мира начинались университеты, да и сама наука была всеобъемлющей по наличным возможностям. По существу, считаю себя внештатным сотрудником структур, которыми Вы руководили и руководите. Буду рад дальнейшему продолжению наших проектов «Экополис», «Имитационные игры – смысловое обучение» и др.

Значительная часть проводимых с начала XXI в. исследований опубликована или готовится к печати. Но постепенно возник и «Пласт» (если воспользоваться

речевым оборотом Д.Н. Кавтарадзе) завершенных работ, вполне заслуживающих публикации по актуальности своей и по научному значению. Некоторые особенно интересные из них и составляют данный сборник, который, надеюсь, заинтересует профессионально ориентированного читателя.

Наша задача состояла, при этом и в укреплении междисциплинарного сотрудничества в стенах АУЦА и за его пределами. Так, математические методы анализа понимания текстов, разработанные психологами АУЦА представлены в сборнике работой туркменской выпускницы университета, работа о психологической модели функционирования денег была в свое время рекомендована к участию в пленарном заседании Конгресса по прикладной психологии в Афинах, исследования Санкт-Петербургских и Архангельских ученых проводились в сотрудничестве с нашей лабораторией и т.п. Естественно, что мы рассчитываем продолжить издания наших работ, придав их публикации периодический характер. Но это в значительной степени зависит от того, кто сейчас прочел это предисловие и, будем надеяться, прочитает и опубликованные в сборнике труды.

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Abstracts

Guilt feeling as a display of role conflict of working mothers Asel Myrzabekova, 2008

In the present study it was hypothesized that working mothers are more likely to develop guilt feeling, depression and anxiety in comparison to housewives having children, the likelihood of development of guilt feeling depends on the age of working mother's children and on amount of time she spends at work. It was proposed that working mothers are more masculine in terms of Bem Sex Role Inventory in comparison to housewives. Subjects of the study were 25 working women and 25 housewives, all married or cohabiting, with children. Their level of guilt feeling, level of depression, level of anxiety and sex role orientation were measured by the methodology BSRI of Sandra Bem, "Completing Sentences" of Sacks & Levi, Self-made questionnaire, "Hospital anxiety and depression scale" of Zigmond & Snaith, "Test of emotions" by Bassa and Darki, "Podverjeny li vy chuvstvu viny" ("Do you develop guilt feeling easily?") of Christophe Andre. It was found that the more time working mothers spend at work and the younger their children are, the more likely they are to develop guilt feeling. Also it was proved that housewives from age 21 to 30 years old did not feel that they fulfill their role expectations and experienced role conflict.

Negotiation behavior: Effects of gender stereotype threat Alena Guseva, 2010

The current study aims to contribute to the existing body of research in the areas of psychology of negotiations, gender, and stereotype. It investigates impact of gender stereotype threat and stereotype lift effect on the negotiation strategy preferences. It was hypothesized that under stereotype threat females and males would prefer compromising and avoiding negotiation strategies. Stereotype lift effect was expected to increase choice of competitive or collaborative negotiation strategies by males and females. Results of the study indicate that females are less likely to choose competitive negotiation strategy when stereotype threat is activated. The rest of the hypotheses were not supported by the study.

Desirability to buy and customer's perception of salesperson Anastasiia Pegai, 2009

The study examines the factors which can influence the perception of customers concerning the effectiveness of a salesperson. Participants of the research were sixty female students from American University of Central Asia. Examining the perception of potential customers there were measured two variables: attractiveness of a salesperson and similarity with a salesperson. In order to determine the correlation between self-esteem and effectiveness participants also had to fill out a questionnaire. Results demonstrated that customers were more willing to buy from those whom they found attractive and similar, where attractiveness factor influenced more than similarity factor. Self-esteem level of consumers did not influence the choice of customers.

Attitude towards money as a psychological phenomenon Aron A. Brudny, Irina Ten, 2009

While studying individual perception of money as universal payment mechanism, authors have provided the following formula 3:3:3, which includes three levels of perception of money. At the first level there are three optional perceptions: 1)receiving, 2)saving and 3)spending. Every of these components at the second level is represented as fixation at 1)oral

stage, 2) anal stage and 3) genital (phallic) stage. At the third level the introduced components are perceived as 1) aggression, 2) reactive anxiety and 3) development of activity of emotional intelligence.

Qualitative methodology and the psychology of participation in religious fundamentalism

Elena Kim, 2010

This paper offers a description of the qualitative methodology used to examine the effects of women's involvement in a religious fundamentalist project on their lives. It is based on a case study of Hizb Ut-Tahrir, an Islamist movement that has developed in Kyrgyzstan. A detailed account of the research tools including in-depth interviews, within the traditions of qualitative methodology, which have been conducted with seven female and two male members of Hizb Ut-Tahrir is provided. The paper shortly embraces the results of this research which show that women are empowered by participating in the group and gain such benefits as identity formation and improved spiritual, social, psychological, economic and political aspects of their lives.

Testing of understanding

Aron A. Brudnyi, 2011

Methods of studying understanding are developed in Psychological Laboratory of AUCA on the basis of worldwide academic tradition and Eastern historical tradition. B. Brecht perceived Zao-Zuan as an important method to link level of understanding with orientation of personality development. To this tradition is linked an attempt to develop the content of the text in accordance with its title, which can be explained as the link between understanding, acting imagination (according to C.G. Jung) and memory.

Gender measuring: Philosophical account on quantitative methodology in constructing the concept of gender

Elena Kosterina, 2010

By means of using interview as the main method, several conclusions we drawn from interview analysis that demonstrate that using quantitative method of measuring by means of administering gender inventories in psychology can make respondents feel ambivalent about their gender identity, make them wish to modify something about themselves to conform to the assessment given to them by the inventory, to experience cognitive dissonance and distress, as well as to partially reconstruct representation of their identity immediately during procedure of testing through demonstrating ideal instead of real self. Interviewing as well helped to take some conclusions further to discuss the concept of gender norm in psychology and the influence that psychological science has on the construction of concept of gender in society and construction of gendered identities in individuals.

Human being – fundamental psychological features

Dmitry Kavtaradze, 2010

The article of professor D.Kavtaradze is a successful attempt to collect and systematize aphorism-like elaborated general rules in psychology of individuals, groups and populations, formulated during a long period of development of psychology. It is likely that further development of this collection of theses will have an impact on development of other procedures of academic process. This article is of special importance for current students of contemporary psychology.

Perception of images of artificially constructed perfectly symmetrical faces by patients with schizophrenia and healthy people

Eleonora Turdubaeva, 2008

The present study investigates whether patients suffering from schizophrenia perceive differently symmetrical faces than healthy people. Participants were shown perfectly symmetrical faces constructed on the computer and had to evaluate them on scale, which represented semantic differential. The results showed that patients with schizophrenia perceive symmetrical faces differently than healthy people. Patients with schizophrenia evaluated faces constructed from left sides differently than faces constructed from right sides; while healthy people didn't see significant differences between left and right-sided faces. According to the results normal people perceive two symmetrical faces as one face divided in two parts. Patients with schizophrenia perceive two pictures as two different people or as one person with different appearances. These findings supported "split brain" theory in schizophrenia and concept of "modular mind".

Fractal geometry in psychiatry: Ways of application
Elena S. Molchanova and Patrick Marius Koga, 2009

The authors indicate the risk of development of "pseudoscience" in the situation when scholars try to transpose fashionable theories into altogether different conceptual domains. While the authors describe the possibility and the usefulness of applying principles of fractal geometry to solving psychiatric problems, they are keenly aware of psychiatry's vulnerable border between its legitimate search for universality and the risk to land in pseudoscience.

Ethnocultural peculiarities of weight perception: Comparative study of overweight women in Kyrgyz Republic and USA
Kseniya Tsoi, 2008

The purpose of this research was to explore the difference of self-weight perception of overweight women in Kyrgyzstan and in USA due to the ethnocultural peculiarities of each. There were three standardized measuring instruments used: Stunkard's Silhouettes, Coopersmith Self-Esteem Questionnaire and Hospital Anxiety and Depression Scale. Results of the study suggested that there might be a stronger functioning of Ego-Defense mechanisms, especially such as denial and intellectualization, in the sample of Kyrgyz overweight women, due to such factors as social pressure of fitting the societal norms of thinness or some other factors that need more clarification. Concerning self-esteem, the following study didn't find direct correlation between BMI and self-esteem, meaning that even being considered overweight according BMI in the category of overweight, an individual still might have a decently high self-esteem. However, a negative correlation was found between discrepancy number (gap) between actual and desired body weights and level of self-esteem.

Ethnocultural features of anxiety and depression in expecting women in Kyrgyz and Russian ethnicities
Kanykei Latipova, 2008

Ethnocultural peculiarities of anxiety and depression of expecting women in Kyrgyzstan, Kyrgyz folk and Russian, were investigated. The present study is comprised of two parts of research: psychological and anthropopsychological. The psychological part studied the features of anxiety, depression, and alexithymia, whereas, the anthropopsychological part studied traditional rituals related to the expecting period. It was found that the rural expecting women demonstrated higher levels of depression, anxiety, and alexithymia, though there were not found any significant differences between Russian and Kyrgyz respondents. The cognitive dissonance that occurs within the rural culture may provoke affective disturbances in future mothers. Since the traditional Kyrgyz rituals can play the role of archaic behavior, they seem to be a crucial part of the psychological preparation for delivery in the rural regions of Kyrgyzstan. Further research in this area is both desirable and required.

South-Kyrgyz crisis: Narcissism of small differences and defense mechanisms of social system

Elena S. Molchanova, 2010

In the present article, the author analyses historical, psychological and social premises of June conflict in the South of Kyrgyzstan, which is perceived as the result of exhaustion of previously excessively tense ego-defense mechanisms, which were securing the stability in the region before.

Software development for statistical analysis of semantically consistent text synthesis results

Bahar Babayeva, 2008

Person's ability to synthesize semantically consistent texts is a significant variable in diagnosing mental disorders. It is established that people with mental disorders synthesize texts differently from those in healthy mental condition. This paper depicts a research on the synthesis of the semantically consistent texts and as a result of the research a software product that will let diagnosing possible appearances of mental disorders. 100 random members of AUCA community were tested during research. They were given 10 short poems cut in blocks and were asked to assemble a text with a meaning. They were informed that the goal is not to assemble the original poem, but to assemble a text that is semantically consistent. A way to distinguish semantically consistent text was searched. Since it is established that people with mental disorders assemble the texts cut in blocks (sentences, for example) differently from those in healthy mental condition it is clear that if it was possible to determine the distinct assembly of text blocks it would be possible to diagnose people with mental disorders. As a result of research a software product was developed that allows a person to rearrange randomized poem lines, and then defines how his rearrangement differs from the other people results. In other words, the program diagnoses possible symptoms of mental disorders. Mental disorder is diagnosed based on the deviation of person's result from the majority of similar rearrangements.

Comparative analysis of dream content of artists and office-workers

Rosa Seidibalieva, 2007

Dreams always attract people by being vague, interesting, strange, and inspiring. This research attempts to look at dreams in the light of quantitative analysis. The goal of the research is to analyze artists' dreams using quantitative method and compare these results with the results of the control group. The method used consists of several steps. First, dream reports were collected using dream questionnaire. Second, the results were coded. Here colors, emotions are coded in categories. Three categories are taken as features of complex dream: activities, transfers, and results. The third step is the statistical analysis of dreams. Quantitative method gives certain advantages compared to the qualitative one in regard to the fact that contexts of dreams can be written in different languages, as in the case of the present research: in Russian, in Kyrgyz, in English. Nevertheless, the language of description of dreams doesn't influence the analysis of dreams anyhow, since all data are received in numbers. This study reveals that artists have more complex, vivid, detailed dreams, and their dreams are more emotionally intensive, in comparison to the dreams of office-workers. It is the first time such a study has been conducted in Kyrgyzstan.

Аннотации

Чувство вины как выражение ролевого конфликта у работающих матерей Асель Мырзабекова, 2008

Рождение и воспитание ребенка считается практически необходимым элементом брачных отношений и способствует их укреплению. Одновременно развитие эмоционального интеллекта и специфика социальных ситуаций служит стимулом для активной профессиональной деятельности женщин. Возникающий при этом ролевой конфликт порождает чувство вины, возникающее, как показал опыт, на основе нехватки времени для полноценного и эффективного исполнения семейных и служебных обязанностей. Однако, в противовес мнению французских психоаналитиков, конфликт ролей изучаемых автором случаев оказался психологически преодолимым и чувство вины не явилось доминирующей причиной возникновения неврозов.

Стратегия переговоров: Влияние угрозы гендерного стереотипа Алена Гусева, 2010

Данное исследование вносит вклад в развивающуюся область психологии переговоров и гендерных стереотипов. В данной работе было исследовано влияние угрозы гендерного стереотипа и проявлений стереотипного поведения на выбор стратегии переговоров. В ходе исследования было предположено что и мужчины и женщины отдадут предпочтение компромиссу и избегающему поведению в качестве стратегии переговоров. Также было предположено, что эффект осознания негативного стереотипа о представителях противоположного пола будет способствовать выбору соревновательной или кооперативной стратегии переговоров. Результаты исследования показали что женщины менее склонны выбирать соревновательную стратегию переговоров когда они находятся под угрозой гендерного стереотипа.

Восприятие продавца покупателем и желание сделать покупку Анастасия Пегай, 2009

Исходным постулатом работы явилось положение G. Bachelard: «ты есть твоё желание». Среди гендерных, профессиональных и образных (внешность) признаков продавца, внешность оказалась наиболее значимым, привлекающим внимание покупателя фактором. В работе показано, что продавец существенно влияет на побуждение покупателя совершить приобретение желаемого предмета в силу того, что стремление сделать покупку кажется значительно основанным на факторы привлекательности продавца и степени желания идентифицировать себя с ним.

Отношение к деньгам как психологический феномен Арон Брудный, Ирина Тен, 2009

Исследуя отношение индивида к деньгам как универсальному средству платежа, авторы предложили формулу 3:3:3, включающую три уровня отношений к деньгам. На первом уровне представлены получение, накопление и трата. Каждый из перечисленных компонентов на втором уровне представлен соответственно как фиксация на оральной, анальной и генитальной (фаллической) стадиях. На третьем уровне – соответственно, получение денег связано с агрессивностью, накопление – с реактивной тревожностью, а трата – с ростом активности эмоционального интеллекта.

Количественный анализ и психология религиозного фундаментализма

Елена Ким, 2010

Данная работа предлагает описание качественного анализа в процессе изучения вовлеченности женщин в религиозные экстремистские движения. Работа основана на анализе феномена движения Хизб Ут-Тахрир, исламистского движения развивающегося на территории Кыргызстана. Детальное описание количественных методов исследования, включающих интервью, приведены в тексте работы. Данная статья кратко рассказывает о результатах проведенного исследования, которые показали, что женщины приобретают авторитет и социальные права посредством участия в данном движении, а также испытывают на себе такие преимущества как формирование идентичности и улучшение духовного, социального, психологического, экономического и политического аспектов жизни.

Тестирование уровня понимания

Арон Брудный, 2011

Методы исследования понимания разрабатываются в Лаборатории с учетом мирового опыта и исторической традиции, сложившейся на Востоке. Цзао-Цзуань, на который обратил в XX веке внимание В. Врект, позволяет связать глубину понимания с направленностью личности, а попытки развернуть фабулу текста в границах, заданных его заглавием, характеризуют связь понимания с активным воображением (по С.Г. Jung) и памятью.

Измерения гендерных различий: Теоретический подход к роли количественного анализа в социальном конструировании гендерных характеристик

Елена Костерина, 2010

Посредством использования интервью как основного метода исследования, некоторые определенные выводы удалось сделать о том, каково влияние применения количественных методов анализа и в частности стандартизованных тестов, на восприятия и отношение к собственной гендерной идентичности у испытуемых. Было выявлено, что в большинстве случаев применение стандартизованных опросников измеряющих гендерную роль или мужественность/женственность вызывает у испытуемых амбивалентные чувства по отношению к оценке собственной идентичности, когда эта оценка не совпадает в собственным психологическим ощущением, или заставляет пытаться модифицировать некоторые черты роли или идентичности для того чтобы соответствовать оценке, данной опросником. Результаты интервью позволили сформировать некоторые гипотезы по поводу роли психологической науки в формировании концепции гендера в обществе и гендерной идентичности у индивидов.

Человек – основные психологические закономерности

Дмитрий Кавтарадзе, 2010

Проф. Д. Кавтарадзе предпринял попытку собрать и систематизировать афористически сформулированные общие правила, установленные научными исследованиями в области психологии. Предполагается, что дальнейшая разработка этого свода правил сможет иметь значение для тестирования и других процедур учебного процесса. Данная статья в особенности предназначена для студентов психологии.

Восприятие искусственных идеально симметричных лиц пациентами с шизофренией и здоровыми людьми

Элеонора Турдубаева, 2008

Целью данного исследования являлось изучить различия между восприятием искусственно созданных абсолютно симметричных лиц пациентами с шизофренией и здоровыми людьми. Участники должны были оценить представленные им фотографии,

используя семантический дифференциал. В ходе исследования удалось доказать, что пациенты с шизофренией воспринимают симметричные лица отлично от психически здоровых людей. Пациенты с шизофренией оценили лица сконструированные из двух зеркально расположенных левых половин лица отлично от лиц, сконструированных из правой половины того же лица; здоровые люди не видели разницы между двумя лицами сконструированными из разных половин одного лица. Таким образом, здоровые люди воспринимают два симметричных лица как одно лицо разделенное на две части, тогда как пациенты с шизофренией воспринимают их как лица двух различных людей. Данные результаты поддерживают теорию «расщепленного мозга» у шизофреников и концепцию «модульного разума».

Фрактальная геометрия в психиатрии: Возможности применения
Елена Молчанова и Патрик Мариус Кога, 2009

Авторы обозначают проблему риска применения модных теорий на чужом концептуальном пространстве. Описание возможностей использования принципов фрактальной геометрии в психиатрии проводится во время процесса осознания уязвимости границы между поисками фундаментальности в науке и псевдонаучностью.

Этнокультуральные особенности восприятия массы тела: Сравнительный анализ среди полных женщин в Кыргызстане и США
Ксения Цой, 2008

В данном исследовании исследовалась разница между восприятием собственного веса у женщин с повышенным весом в Кыргызстане и США, принимая во внимание этнокультуральные особенности обеих стран. В исследовании были использованы три стандартизированных методики: Stunkard's Silhouettes, Опросник Самооценки Коперсмита и Госпитальная Шкала Тревоги и Депрессии. По данным исследования можно предположить, что у женщин с повышенным весом в Кыргызстане наблюдается более частое развитие Механизмов Психологической Защиты, таких как отрицание и рационализация, из-за наличия давления социальных норм стройности женской фигуры. Данное исследование не выявило значимой корреляции между Индексом Массы Тела и уровнем Самооценки. Однако, удалось доказать существование негативной корреляции между разрывом между реальным и желаемым весом тела и уровнем самооценки.

Этнокультуральные черты тревоги и депрессии у беременных женщин кыргызского и русского происхождения
Канькей Латипова, 2008

Этнокультуральные особенности тревоги и депрессии были изучены у беременных женщин Кыргызской и Русской национальностей. Данное исследование состоит из двух частей: психологическая составляющая была нацелена на изучение черты тревоги, депрессии и алекситимии, тогда как антропологическая составляющая имела целью изучить традиционные ритуалы у женщин, живущих в селе и в городе во время беременности. Было показано, что беременные женщины, живущие в селе демонстрируют повышенный уровень тревоги, депрессии и алекситимии, хотя не было найдено значительных различий между женщинами Кыргызской и Русской национальности. Когнитивный диссонанс испытываемый женщинами живущими в сельской местности вероятно провоцирует развитие аффективных расстройств у беременных женщин. Так как традиционные Кыргызские ритуалы играют роль древнего поведения, они возможно являются неотъемлемой частью психологической подготовки к родам в сельской местности Кыргызстана.

Хаос без порядка: События на юге Кыргызстана, броуновское движение международных организаций, Арон Абрамович Брудный и Игорь Губерман
Елена Молчанова, 2010

В статье анализируются исторические, психологические и социальные предпосылки июньского конфликта на юге Кыргызской Республики, который рассматривается как результат истощения прежде чрезмерно напряженных защитных механизмов, обеспечивающих стабильность социальной системы.

Разработка компьютерного обеспечения для статистического анализа результатов синтеза семантически значимых текстов
Бахар Бабаева, 2008

Способность человека синтезировать семантически значимые тексты является важной переменной в процессе диагноза психических расстройств. Научно доказано, что люди с психическими расстройствами составляют тексты отлично от психически здоровых людей. Данная работа представляет собой исследование принципов составления семантически валидных текстов и как результат – компьютерную программу, которая может быть использована в процессе диагностики проявлений психических расстройств. Данная работа ставит цель определить определенный набор элементов текста для диагностики конкретного психического расстройства. Случайная выборка из 100 человек была протестирована в течении исследования. Им было представлено 10 коротких стихотворений разбитых на части и предложено составить имеющий смысл текст. Респонденты были проинформированы, что целью является не составление изначального стихотворения, а составление текста, который бы имел смысл. В результате исследования была разработана компьютерная программа, которая позволяет испытуемому переставлять разрозненные блоки стихотворения и определять как это результаты отличаются от результатов других людей. Возможность поставить диагноз представляется после сравнения отклонения результатов респондента от установленной нормы.

Сравнительный анализ содержания сновидений художников и офисных работников
Роза Сейдибалиева, 2007

Сновидения всегда привлекают людей своей неопределенностью, странностью и вдохновением, которое несут. Данное исследование является попыткой изучения сновидений с точки зрения количественного анализа. Целью исследования является количественный анализ сновидений художников и сравнение его результатов с результатами анализа сновидений офисных работников. Метод исследования заключался в сборе информации с использованием опросника сновидений, кодировки результатов по категориям: действия, трансферентные реакции и результаты. Материал был собран на трех языках: русском, кыргызском и английском. Количественный статистический анализ помог нивелировать качественные различия между описанными сновидениями, зависящие от языка. Данное исследование выявило, что художники видят более сложные, яркие, детальные и эмоционально наполненные сновидения по сравнению с офисными работниками. Подобное исследование ранее не проводилось на территории Кыргызстана.

I. Applied Organizational
Psychology in Kyrgyzstan

I. Организационная Психология
в Практике Кыргызстана

Guilt Feeling as a Display of Role Conflict of Working Mothers.

By Asel Myrzabekova

Not so long ago women in traditional families were stay-at-home moms and their work was to take care about children, husband and house. They did not take part in economical, cultural and political activities. Women lived and served only for their husbands and children. Woman's main roles were to have a baby, bring him/her up, and take care till it becomes a member of society.

But the time changed and modern women because of demands of the time had to work outside their houses. Working women got new roles in the society, they became involved in new spheres of social life those they never knew. Modern women get education, go to work, get married, have babies, and perform roles of wife, mother, and worker. Getting new roles as politician, worker and so on did not mean that women forgot about their being mothers and wives. So moms' new roles and their old roles interfere with each other. It is so hard to fulfill all this things at once. The ease with which women successfully juggle, manage these multiple roles depends on both their satisfaction with their roles and how well those roles mesh. Although there are certainly challenges associated with these multiple demands, and the potential for stress associated ill effects, there are also clear benefits. Good sides of a role of worker are that a job gives women financial stability, makes women feel more connected socially and this provides them with more opportunities for support and enjoyment. Also work may go a long way toward increasing a woman's self esteem and mood (of course it depends whether a woman is happy at work). So, modern moms seek steady advancement, psychological and financial satisfaction.

Guilt feeling

The empirically known form of emotional experience that in most cases can be observed among women is guilt feeling about not giving enough care to children and husband. Women expect to give much more love and care than they give. Psychoanalysts who studied female guilt feeling connected it with Oedipian complex (Shassge-Smirjel, 2005). But they rely on case studies and as Grunbaum (1984) says there is a lack of control groups. According to the role theory we assume that female guilt feeling is an emotional product of role conflict: wife, mother and worker.

According to Bruno (1991) guilt feeling is a self-punitive suggesting that the individual has done, or is about to do, something in violation of his or her moral code. Guilt feelings are often a contributing factor to depression.

According to Freud (1917), guilt feeling arise from the critical judgments of the superego. In Freudian theory, the superego is the internalization by the individual of the parents' values. The parents' values are themselves a reflection of the parents' own religious and cultural ties. Thus, in Freudian theory, the superego is acquired, not inborn. However, it is possible to argue that some guilt feelings arise from a deeper source within the individual. It is possible to speak of existential guilt, the remorse that arises when one feels that one has not used one's time on Earth wisely. Guilt feelings are, within limits, normal. However, it is obvious that some people are too hard on themselves. They whip themselves with guilt feelings for real or imagined offenses that would seem trivial to most of us (Bruno, 1991).

Guilt feeling is an emotion that rises after a wrongdoing, which may be contrary to one's own or cultural values. Guilt is a common emotional reaction to

our defending Inner Critic, proclaiming, "You have broken a rule and you should (not), must (not), or ought (not) behave like this means, guilt implies that you did something 'wrong'."

According to May (1983) a person who denies his/her inborn capability, cannot implement it, he/she feels guilty. So guiltiness is an ontological characteristic of existence of human being. A good illustration of this issue can be a case study of a patient with obsessive-compulsive disorder.

Medard Boss observed a patient who saw some period repetitive dreams about church bell tower and the second where he approached to the restroom but the door was always closed. Finally the patient saw in his dream that he opened the door, entered and he turned out in a church. There he was up to the waist in faeces and his waist was tied up with a rope. And he was pulled up to the bell tower. The patient felt such tension that it seemed he would be torn into peaces. After that Boss spent four days near patient's bed. At fourth day psychopathic episode happened. After this episode the analysis was continued and obtained the final and successful result. Analyzing this case Boss pays attention to that fact that the patient felt that he was guilty because he did not allow to come out to inner resources and potential. This made him feel guilty. Boss says "we forget about our being; not finding strength for full of life and brilliancy person, not finding strength to become authentic individuals, little by little repasses into a state of conformal anonymity. In that case we lose our being and become unlucky persons. If you do not allow opening your potentiality you are guilty or in other words you are indebted. You are guilty of your being, of the potential and capability that were initially in you when you were born. This existential condition of being when a person is indebted of himself/herself, individual feels different kinds of guilt. The patient did not allow to open neither body nor spiritual resources of his being". Boss defines it as an aspect of "inner impulses" and "predetermination".

We mentioned only one form of ontological guiltiness that appears with denial of inborn potentiality abilities. But there are also other types of ontological guiltiness. The second type is guilt of your relatives. It appears because we perceive our relatives through prejudice. So when we face real image of our relative or nearby person we cannot understand all needs and to satisfy these needs. It happens because we are all individuals and we perceive the world with our eyes. This type of guiltiness has an existential structure, and one of the strongest sources of true humility and ability to forgive our near and dear people.

The third type is "guilt of separation" from the nature in general. It is about our estranging from the nature. This guilt of separation can be repressed but it influences us.

Ontological guiltiness has following characteristics. First, every person feels this guiltiness. All of us more or less a part perceive reality of our relatives and dear people putting them in a false color, and nobody fully realizes his/her potentialities and opportunities. Second, ontological guilt does not have connection with cultural taboos or with the cultural introjections of traditions. Origins of ontological guilt are in the self-awareness and in self perception. Ontological guilt is not about violating parental rules and prohibitions. It appears because of the fact of what can I be a person who can make own choices or refuse to make a choice. Third, ontological guilt is not a pathological or neurotic guilt. But if the ontological guilt is displaced or is not accepted in this case it can develop into neurotic feeling of guiltiness.

As May says that neurotic anxiety is a final result of natural ontological anxiety that person tried not to pay attention, then it follows that neurotic guilt feeling is a result of opposition lack to ontological guilt feeling. So if an individual can realize and embrace guilt, then this guilt cannot be considered pathological or neurotic. Fourth, ontological guilt does not lead to a symptom formation, but it seriously influences on personality. It can and must bring to reticence and to receptiveness in relationships between people and to the growth of creativity in the use of potential (May, 1983).

Role conflict

One of the issues we are looking at is how women balance their time, energy and commitments, and how this impacts on their well-being. How women prioritize their commitments to their various roles is a key component to a successful balancing act. Women have to be satisfied that they are putting their energies in the right places: a woman may have a fantastic job that she loves but if her energy and her priorities lie with her family and she feels she cannot commit enough time to her role as parent and wife, then the juggling is just not going to work for her. Our world puts incredible emphasis on paid employment and workplace success. This is a stressful challenge for many women who wish to be successful in both the business and personal arenas (Maclean & Glynn, 2006).

As it was mentioned earlier the role conflicts in the life of modern working women are caused by the improvements and developments in a structure of social life. All these changes took place because of the influence of large-scale revolution in science, industry and culture. In spite of these changes the mentality and stereotypes of people did not change. Women still should fulfill their roles of mother and wife. Woman should be responsible to their family as well as to their jobs. But this makes an impact on her negatively. In many cases women in our culture were brought up to be devoted to their family and to put job to the second place. Traditions and customs of society dictate the way women should behave. Woman is responsible for her family and at the same time for her work. And when she works she cannot lay aside responsibility of being mother and wife. She is trying to combine her roles. However this attempt to combine roles, in most cases, leads to a conflict between opposite roles, moms-wives and workers. So if a woman shows carelessness to her job in order to devote more time to her charge of matron, then she will risk to lose her job; and vice versa, if she is not able to pay enough attention to her husband and kids because of her job, she will risk losing her privileges of wife and mother. This conflict makes women suffer more than man do from these social changes.

There are three main reasons of role conflicts. First reason, it happens when social and economical changes take place in the life of individual. Second, an individual realizes that he/she fulfills one or more roles and these roles demand different approaches, and cannot be combined because of these differences. Third, it happens when an individual realizes discrepancy of his/her expectations concerning his/her roles (Al-Fares, 2006).

So it can be said that a role conflict of working woman is a result of inconsistency of expectations about how good she fulfills roles of mother and wife. Because of these expectations she feels that it is possible to fulfill all these roles' demands. But any way she is more expected to follow the idea that house work and children go first because these are the woman's main responsibilities. Because of this traditional idea many women limit their opportunities, perspectives in their carrier promotion. She cannot refuse of being mother, wife. So she refuses from self development and self-actualization. It is hard to be a modern woman, who collides with social problems and dilemmas: to be a good mother and wife or to make brilliant carrier and realize herself in social life. Researchers indicate that employed women are over-committed and find combining work and family conflictual and stressful (Cowan, 1983). They experience role conflict as a result of performing diverse social roles that demand incompatible behaviors. The main source of women's role conflict is insufficient time to perform all the tasks expected of them and meet all their obligations especially when they are married and mothers and when their paid work demands long, inflexible hours (Moore D., Gobi A., 1995).

All these researches show that working women have an emotional stress, feel of guilty, anxious because they are expected to be at home. Even nowadays society

imposes at woman an obligation to be responsible for her family. So there are still no alternative services. Society did not work out new understanding and stereotypes that could help women more actively participate in the life of society that develops and presents new obligations and demands of the time. New understanding of woman's roles, modern stereotypes about women would change views of people who are around these working moms. And these people would have more clear understanding that it is necessary things to share working-moms responsibilities, help them with home work. And what do old stereotypes and ideas? Stereotypes and prejudice do not let working woman have promotion perspectives, because if she devotes herself to work it may threaten to the stability in her family. Also it may be complicated to a woman to find high-paid and socially useful job outside the house. All these traditional beliefs make woman devote all her life to home and children. And even if she finds she has to find a person or organization to leave her kid with when she is at work. Although modern woman of our country broke through in educational sphere but still her social status is low and restricted. It must be pointed out that a glass ceiling exists indeed throughout the world. In addition men are still passive concerning family issues. It is a big obstacle that makes woman be less socially active. More equal allocation of household cares between men and women would lead to more equal participation of women in social life. Couples need to reevaluate their sex roles and integrate new notions of masculinity and femininity within the marriage.

According to Jim and Jane Carter, in their book, "*He Works, She Works*" (1995), the number one conflict faced by women in dual career families is role conflict. Actually, women are used to multiple roles. Taking on multiple responsibilities in connection with others traditionally gave us our power and our feeling of self worth. However women are so often in a situation of giving precedence to one role, either wife or mother or their career that causing great stress. It is referred to as role conflict, which results in role overload.

In contrast, married men may be given much more leniencies by society in their gender socialization to identify with work and family roles without trading one off against the other. The Carters feel that the number one conflict among male clients in dual career marriages is the lack of nurturing that they receive from their wife or significant other because their partner is not fulfilling the "feminine" part of their marriage or couples contract. There are expectations of intimacy that were supposed to continue after work and children (Baskin, 1998).

Present study

The present study is proposed to see whether:

1. Married working women experience guilt feeling (does not fulfill to their role expectations)
2. The level of guilt feeling depends on the age of working mother's children.
3. There is a positive correlation between guilt feeling and level of depression (the lower the level of guilt feeling the lower the level of depression and vice versa).
4. Women who have guilt feeling are more feminine, and women who do not experience guilt feeling are more masculine.
5. Guilt feeling depends on the amount of time that women spend at work

The main hypothesis of present study is that married working women have guile feeling because they cannot pay enough attention to their children and husbands. So, guilt feeling is a result of emotional perception of unsatisfied expectations.

It is expected that working mothers who are not competent as mother or as a worker (do not fulfill to their role expectations) experience guilt feeling. And visa versa if women successfully manage their multiple roles they perceive themselves good mothers and competent worker.

Also it is assumed that the level of guilt feeling would depend on the age of children. The younger the children the more mother tries to put her energy and her priorities lie with her family but because of her work she feels she cannot commit enough time to her role as parent. Therefore she feels guilty and stressed about her children who need her and work.

Relying to the statement of Bruno, we are expecting that the results of survey will show that there is a positive correlation between guilt feeling and level of depression (the lower the level of guilt feeling the lower the level of depression).

Also we expect that women who have guilt feeling will be more feminine, and women who do not experience guilt feeling will be more masculine. It is believed that more feminine female would more associate their roles within their families, so they would try to devote themselves to children and house. And for masculine female they would expect that their main role is career role, so they would not experience guilt feeling because their priorities and desires would lie with her work and career.

At last it is supposed that guilt feeling depends on the amount of time that women spend at work. Working married women have little time to perform all the tasks expected of them and meet all their obligations at home, because she spends much time working.

In this research we are studying a phenomenon of female guilt feeling among working mothers as related to the role theory concerning their husbands, children and work. The design of the present study is a correlational one. According one of our hypothesis working mothers have female guilt feeling because they do not fulfill to their role expectations. There are many changes in household forms, domestic law, and economic relationships. The contradictory pressures women face as a result of change, especially the problems of managing both employment and domesticity have given to this research impetus to examine the family and women's relationship to it. Women are so closely identified with the family in popular thought that reconceptualizing gender necessarily requires rethinking household and domesticity (Hess & Ferree, 1987).

So this research is aimed to answer to some questions that every woman wants to know: Is it possible to manage all roles – mother, wife, and worker? Can she be good mother and wife and be competitive worker? Won't she lose her family because of work and visa versa?

Method

Participants

A total of 50 participants were all female, they ranged in age from 21 to 56 ($m=39,9$, $SD=9,3$ employed; $m=35,3$, $SD=9,2$ unemployed) years old with children. All women were married or cohabiting, living in Bishkek. These participants were in two different groups: 25 married working women and 25 married stay-at-home women.

Materials

The participants were given six questionnaires: sex role questionnaire of Sandra Bem (1974), Completing Sentences of Sacks & Levi, Self-made questionnaire, Hospital anxiety and depression scale, Zigmund & Snaith (1983), Test of emotions, Bassa and Darki, Test "Podverjeny li vy chuvstvu viny" of Christophe Andre. All questionnaires were typed on the A4 format, white blank, Times New Roman 12 font, 1,5 space between lines.

The sex role questionnaire consisted of 60 adjectives with which participants should agree or disagree (answering Yes/No). Twenty adjectives aimed to distinguish the masculinity characters like courageous, masculine, analyzing, ambitious, and aggressive and so on. Other twenty statements consisted of femininity characteristics (feminine, affectionate, loving children, attentive and

careful to other people and so forth). And the rest of characteristics were neutral (envious, reliable, serious and so on).

The other questionnaire was Self-made questionnaire that consisted of 20 statements and four questions; one of them was open question. In total there were 24 statements and questions. It was aimed to show attitudes, perception, and guilt feelings, competence of woman as a mother and as a worker. Using four point scales ranging from strongly agree to strongly disagree, participants had to indicate their agreement with first 20 statements by placing the appropriate number in the box to the right of the statement. Questionnaire was divided into four scales: guilt feeling, role conflict, scale of family role and scale of career role.

The methodology that was used to help to explore guilt feeling was test “Podverjeny li vy chuvstvu viny” of psychoanalyst Christophe Andre. It consisted of 8 situations and three reactions for each of them. Respondents should decide which was the most appropriate for them.

The fourth methodology that was used in the research was method of projective Completing sentences test. Completing sentences consisted of 60 incomplete sentences. Completing sentences is divided into fifteen scales: scales of aim, attitude to the future, past, guilt feeling and so forth. This projective test was aimed to explore respondent’s attitude toward social, personal groups and passions.

The fifth method was Hospital anxiety and depression scale (HADS) of Zigmond A.S. and Snaith R.P. (1983). It consists of 14 statements. Participants had to indicate their agreement with each statement by marking the appropriate answer.

The last method of research was test of emotions of Bassa and Darki that consisted of 40 statements that respondent should mark whether she agrees with the statements. It also was aimed to discover the level of guilt feeling among respondents,

Demographic questions ask for age, family status, occupation status and age of children.

Procedure

In the research there was used a snowball method. There were two groups: first one was the interest group that consisted of working married or cohabiting women with children. Those who did not have families were not taken in consideration. The research was aimed to observe their guilt feeling about not giving enough care and time to their family because of their work. The other group was a control group –married or cohabiting stay at home women. Both groups went through the same procedure.

If women volunteered to participate in the research they were given the participant information and consent form to read and to give signature. If after reading the information in this form they decided to participate, the six questionnaires were offered to fill out in this order: sex role questionnaire of Sandra Bem, Self-made questionnaire, test “Podverjeny li vy chuvstvu viny” by Christophe Andre, Completing Sentences, Hospital anxiety and depression scale, and test of Bassa and Darki.

Questionnaires were given individually to each participant. The instruction for each test was provided at the top of the page. If participants were confused the instructions were additionally explained to them. All women were told that the information was confident and no one would know their names. After they finished, questionnaires were collected all participants were thanked for their participation. Also they were informed that they could contact the researcher and receive the results of the study that they participated in.

Results

The Special Package for Social Sciences was used for analyzing the results of the present study. The descriptive statistics, ANOVA, t-test were used.

The hypotheses of the research are being repeated for better understanding of the results:

1. Married working women experience guilt feeling (does not fulfill to their role expectations)
2. The level of guilt feeling depends on the age of working mother's children.
3. There is a positive correlation between guilt feeling and level of depression and level of anxiety (the lower the level of guilt feeling the lower the level of depression and anxiety and vice versa).
4. Women who have guilt feeling are more feminine, and women who do not experience guilt feeling are more masculine.
5. Guilt feeling depends on the amount of time that women spend at work

Guilt feeling

The results of three scales and one test for guilt feeling showed that there were no significant difference of guilt feeling among working women and those who were stay at home.

Self-made questionnaire

The mean difference on the test variable for employed and unemployed women and their level of guilt feeling (self made questionnaire), -,155, was obtained by subtracting the mean (9,72) for group 1 (employed women) from the mean (9,88) for group 2 (unemployed). The t test value indicates that there is no significantly great difference between mean levels of two groups.

The results of the Levene's test show that the t test for equal and unequal variances, $t(48) = -,429$, $p = ,670$.

"Podverjeny li vy chuvstvu viny" of Christophe Andre

The mean difference on the test variable for employed and unemployed women and their level of guilt feeling (Podverjeny li vy chuvstvu viny? Christopher Andre), -,348, was obtained by subtracting the mean (7,36) for group 1 (employed women) from the mean (7,71) for group 2 (unemployed). The t test value indicates that there is no significantly great difference between mean levels of two groups.

The results of the Levene's test show that the t test for equal and unequal variances, $t(48) = -,186$, $p = ,854$.

Completing Sentences of Sacks & Levi

The mean difference on the test variable for employed and unemployed women and their level of guilt feeling (Sacks & Levi), 0,760, was obtained by subtracting the mean (-1,96) for group 1 (employed women) from the mean (-2,54) for group 2 (unemployed). The t test value indicates that there is no significantly great difference between mean levels of two groups.

The results of the Levene's test show that the t test for equal and unequal variances, $t(48) = 1,448$, $p = ,066$.

Test of emotions, Bassa and Darki

The mean difference on the test variable for employed and unemployed women and their level of guilt feeling (Sacks & Levi), -,280, was obtained by subtracting the mean (2,28) for group 1 (employed women) from the mean (2,50) for group 2 (unemployed). The t test value indicates that there is no significantly great difference between mean levels of two groups.

The results of the Levene's test show that the t test for equal and unequal variances, $t(48) = -,547$, $p = -,480$.

Age and guilt feeling (Bassa and Darki)

Participants of the study were divided into four age groups: group from 21 to 30, Group 31-40, Group 41-50, Group 51-up. The results showed that there was difference of guilt feeling between employed women in two age groups – from 31 to 40 and from 41 to 50.

The mean difference on the test variable for employed and unemployed women and their level of guilt feeling (self made questionnaire), -1,533, was obtained by subtracting the mean (1,17) for age group 1 (from 31 to 40) from the mean (2,70) for age group 2 (from 41 to 50). The t test value indicates that there is significantly great difference between mean levels of two groups. The higher the mean value is, the higher the level of guilt feeling.

The results of the Levene's test show that the t test for equal and unequal variances, $t(14) = -3,373$, $p = ,005$.

So, in general the employed women who are in the age group from 41 to 50 have higher guilt feeling level than employed women in the age group from 31 to 40. The finding of the research showed that guilt feeling depends in age. The older employed woman the more she feels guilty fro being not able to give enough care and time to her family. That is why the first hypothesis was partially confirmed, employed women do have guilt feeling but it depends how old they are.

Guilt feeling (Self-made questionnaire; test of Bassa Darki) and the age of the child

The mean difference on the test variable for employed women and their level of guilt feeling (self-made), -2,538, was obtained by subtracting the mean (8,46) for group 1 (where the age of the youngest child is 0-6 years old) from the mean (11,00) for group 2 (mothers whose youngest child is 7 years old and up). The t test value indicates that the mean level of guilt feeling for women whose children are older (7 and up) is significantly greater than the mean for women who have children younger 6 years old.

The results of the Levene's test show that the t test unequal variances, $t(22,568) = -2,332$, $p = ,029$.

The same supportive results showed test of Bassa and Darki. The mean difference on the test variable for employed women and their level of guilt feeling, -1,301, was obtained by subtracting the mean (1,62) for group 1 (where the age of the youngest child is 0-6 years old) from the mean (2,20) for group 2 (mothers whose youngest child is 7 years old and up). The t test value indicates that the mean level of guilt feeling for women whose children are older (7 and up) is significantly greater than the mean for women who have children younger 6 years old.

The results of the Levene's test show that the t test equal variances, $t(23) = -2,406$, $p = ,025$.

Guilt feeling of working mothers depends on the age of child, the older the child the more working mother have guilt feeling. So relying on the results of two scales for guilt feeling we may say that the second hypothesis was partially confirmed.

Role conflict and employment status

The mean difference on the test variable for role conflict between employed and unemployed women, 0,96, was obtained by subtracting the mean (16,88) for group 1 - employed mothers from the mean (15,88) for group 2 - unemployed one. The t test value indicates that there is no significant difference between two groups, mean level of role conflict for working women is not significantly greater than the mean of role conflict for stay at home women.

The results of the Levene's test show that the t test for equal and unequal variances, $t(48) = 1,033$, $p = ,93$.

Role conflict and age

The results where we compared age groups showed that there is a significant difference between age group from 21 to 30 and age group from 41 to 50.

The mean difference on the test variable for role conflict between two age groups from 21 to 30 and from 41 to 50 for unemployed women, 3,686, was obtained by subtracting the mean (17,40) for group 1 – from 21 to 30, from the mean (13,71) for group 2 - from 41 to 50. The t test value indicates that there is significant difference between unemployed women in two age groups; mean level of role conflict for group 1 is significantly greater than the mean of role conflict for group 2.

The results of the Levene's test show that the t test for unequal variances, $t(15) = 2,51, p = ,026$.

So we can conclude that unemployed women who are from 21 to 30 don't feel that they full fill their role expectation. They had higher level of role conflict than age group from 41 to 50.

As for employed women mean difference on the test variable for role conflict between two age groups from 21 to 30 and from 41 to 50 for employed women, -400, was obtained by subtracting the mean (15,40) for group 1 – from 21 to 30, from the mean (15,80) for group 2 - from 41 to 50. The t test value indicates that there is no significant difference between two age groups of employed women; mean level of role conflict for group 1 is not significantly greater than the mean of role conflict for group 2.

The results of the Levene's test show that the t test for equal variances, $t(13) = -,304, p = ,766$, and for unequal, $t(13) = -,304, p = ,766$.

Employed women do not have significant difference of role conflict and it does not depend on age of women.

Level of depression and employment status

Participants were no of different in level of depression ($M = 1,16, SD = ,554$ for employed; $M = 1,40, SD = ,645$ for unemployed women).

Among unemployed there are 68 % of no depression (norm) and 24% of sub clinical level of depression and 8% of clinical depression. Among employed there are 92 % of no depression and 0% of sub clinical level of depression and 8% of clinical depression. There were no women with sub clinical level of depression among employed women. There are strong associations for no depression between employed (92%) and unemployed (68%) women. The results of the Levene's test show that t test for both equal and unequal variances, $t(48) = -1,411, p = ,165$. There is no significant difference between two groups.

Level of anxiety and employment status

The results showed that there were no of different in level of anxiety ($M = 1,48, SD = ,653$ for employed; $M = 1,72, SD = ,792$ for unemployed women).

Among unemployed there are 48 % of no anxiety (norm) and 32% of sub clinical level of anxiety and 20% of clinical anxiety. Among employed there are 60 % of no anxiety and 32% of sub clinical level of anxiety and 8% of clinical anxiety. There were no women with sub clinical level of depression among employed women. There are strong associations for no anxiety between employed (60%) and unemployed (48%) women. There is a little difference between employed and unemployed women in their level of clinical anxiety, but still in is not significant.

The results of the Levene's test show that t test for both equal and unequal variances, $t(48) = -1,169, p = ,248$. There is no significant difference between two groups.

In general both working and stay at home women do not have depression and anxiety, so we can not say for sure that there is a correlation between guilt feeling and levels of depression and anxiety, our third hypothesis was not supported.

Sex role identity and occupation status

Participants were not of different sex role ($M=3,22$, $SD=,465$), 2,0% of masculine, 74% of androgynous and 24%.

Among unemployed there are 28 % of feminine and 72% of androgynous behaviors ($M=3,16$, $SD=,473$ – employed). Among employed there are 20 % of feminine and 76% of androgynous and 4% of masculine ($M=3,28$, $SD= ,458$ - unemployed). There were no masculine women among unemployed women. There are strong associations for androgyny between employed (76%) and unemployed (72%) women. The results of the Levene's test show that t test for both equal and unequal variances, $t=-,911$, $p=,367$. There is no significant difference between two groups.

Result showed that the majority of women who participated in the study were androgynous, so our fourth hypothesis was not supported.

Time spending at work and guilt feeling – Saks and Levi

The mean difference is obtained by subtracting the mean for women working 9-12 hours from the mean for women spending 5-8 hours at work, as groups 1 and 2 were defined in the box. The sign of the mean difference dictates the sign of t value. The results should be interpreted accordingly. The mean difference on the test variable guilt feeling (Saks&Levi), -1,569, was obtained by subtracting the mean (-1,23) for group 2 (women spending 5-8 hours at work) from the mean (-2,80) for group 1 (women working 9-12 hours). The t test value indicates that the mean level of guilt feeling for women working 9-12 hours group is significantly greater than the mean for women who spend 5-8 hours at work

The results of the Levene's test show that the variances are very similar and, the standard t test, $t(21)= -3,359$, $p=0,03$, and the t test unequal variances, $t(20,510)= -3,415$, $p=0,03$, identical results.

Employed women who spend at work from 9 to 12 hours per day have higher level of guilt feeling than those who spend from 5 to 8 hours. So our fifth hypothesis was supported.

Discussion

This research was aimed to examine one of the forms of emotional experience that is known as guilt feeling that can be observed among working mothers. It was expected that working women would have guilt feeling about not giving enough care and time to their children and husband because of their work. Working women expect to give much more love and care than they give and when they are not able to fulfill their role expectations. Psychoanalyst Shassge-Smirjel (2005) and other psychoanalysts studied female guilt feeling and connected it with Oedipian complex. But their studies relied on case studies. Shassge-Smirjel's work was inspiring for studying the phenomenon of guilt feeling from different not psychoanalytical view. So, a phenomenon of guilt feeling in present research was studied among working mothers as related to the role theory concerning their husbands, children and work, family and career roles. In this study the control group was included and survey showed interesting results.

The results of this research were significant. It was predicted that working women have higher guilt feeling level than those who were stay at home women. This hypothesis not supported. According to the role theory working married mothers would not have guilt feeling if they fulfilled to their role expectations. If women successfully manage their multiple roles they perceive themselves good mothers and competent worker and vice versa.

The differences between two groups were significant but in the opposite direction of the original hypothesis. It was found out that working women had higher level of guilt feeling that depended on age. The older working women are the higher level of guilt feeling they have. Therefore, we can assume that guilt feeling is a phenomenon that develops with ages. Thus, there was a difference between working

women who were from 31 to 40 and working women in the age group from 41 to 50 in the level of guilt feeling. We can suppose that the reason for this can be the fact that it becomes harder with ages to commit enough time to her role as parent and wife, to manage juggling career and mother roles (Maclean & Glynn, 2006).

Probably with ages working women start to realize that they fulfill one or more roles and these roles demand different approaches, and cannot be combined because of these differences. Or it might be that a working woman realizes discrepancy of her expectations concerning her roles (Al-Fares, 2006).

Although there was no significant difference of role conflict between working and stay at home women an interesting results that we have not expected were found. There was a significant difference between two age groups. Stay at home women from group from 21 to 30 did not feel that they full fill their role expectations. So they had higher level of role conflict than age group from 41 to 50 years old. Role conflicts in the life of modern stay at home women may be caused by the improvements and developments in a structure of social life. Women more expect and wish to work than to be depended form their husbands. They want to be self-actualized, want to have equal rights in their family, and feel that they are of worth. In these ages from 21 to 30 women are expected to make a career, to be more socially active. It is time for self actualization and development. As for women from 41-50 they are less expected to be socially active. So we can say that there is some kind of ageism. Society and individual expects more from young people than old one.

Also it was found that the level of guilt feeling depends on the age of working mother's children. The differences of guilt feeling level between mother's whose children are from 0-6 and mothers whose children 7-up years old were significant but in the opposite direction of the original hypothesis. So statistically it was proven that guilt feeling of working mothers depends on the age of child, the older the child the more working mother have guilt feeling. So relying on the results of for guilt feeling we may say that the second hypothesis was partially confirmed. It can be caused by the fact that older children may show and tell to their parents that they need more care and attention than their parents give. Also I might be related to the first finding where level of guilt feeling depended on age of a working mother. The child grows and mother gets older, and guilt feeling level arises.

The third hypothesis did not have supportive results, so it was not proven. The majority of participants did not have depression and anxiety. But still we can suppose that there is a correlation between guilt feeling and the level of depression and level of anxiety. The more women are satisfied with their roles the less their levels of depression and anxiety.

Thus the fourth hypothesis was not supported either. So the majority of women who participated in the study were androgynous. Probably these third and fourth hypotheses were not supported because the first hypothesis was proven partially. But if we take into consideration that the results that supported that working women experienced role conflict was not found. So we may suppose that working women were satisfied with their roles. Therefore we may say that the more women are satisfied with their roles the lower their levels of depression and anxiety.

As it was predicted that women who spend much time at work have higher level of guilt feeling than those who work five – eight hours per day. This hypothesis was supported. So guilt feeling depends on the amount of time that women spend at work. It can be explained with the fact that married working mothers have insufficient time to perform all the tasks expected of them and meet all their obligations when their paid work demands long, inflexible hours (Moore D., Gobi A., 1995).

Limitations and future research

The present study has a number of important limitations. It looked only citizens of Bishkek city and the sample was only 50 people. The results of the

research can be implemented only for Bishkek population because the sample is limited, therefore, the external validity might be not so high. It was difficult to find theories and researches about female guilt feeling. In most cases these theories belonged to psychoanalysts therefore they were not experimentally supported. Also in the research there was used a snowball method, the random assignment was not used. The participants were approached as familiars and familiars of familiars. So women who were not in the snow ball were not taken into consideration. Additional variables like ethnicity and nationality were not included. So some nationality and ethnicity differences were not studied.

In future research it would be interesting to take a large sample and not only from Bishkek city. It would be nice to compare the results and to see whether there are differences. Future researchers may also take as the participants of the study not only females but also males to find out if there are gender differences in guilt feeling level as such studies were not made earlier. Although the respondents were asked to fill out their age, marital status, age and number of their children, it will be also important to ask such demographic questions as nationality, the level of education, and for employed women occupational status and to see whether there is a correlation between these variables and how they can influence the level of guilt feeling and role conflict.

So, future study will try to make research more complex and interesting in order to study female guilt feeling impacts in broader issues.

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Negotiation Behavior: Effects of Gender Stereotype Threat.

By Alena Guseva

Psychology of negotiations is a relatively new branch of psychology which has become influential in the spheres of organizational behavior, business, family, conflict resolution and social interaction. The present study is conceived as a contribution to the field of psychology of negotiations as it aims to add new knowledge about how these processes are influenced by certain characteristics of the actors involved. More precisely, current research focuses on particular patterns of bargainers' behavior, i.e. the negotiations strategies chosen by the participants of the process. The paper investigates how this behavior is affected by such significant factors as gender of the negotiators under special circumstances defined as stereotype threat and stereotype lift effect activation.

Negotiation process as "the dynamic interaction between negotiators by which the two parties exchange goods or services and attempt to agree upon an exchange rate by resolving incompatible goals" (as cited by Zhenzhong Ma, 2005, p. 10) started attracting an increased research interest in the beginning of the 20th century along with development of organizational theory. Mary Parker Follett (1918) described the importance of negotiations within the context of organizational studies. She noticed existence of different and conflicting motives among groups and individuals in organizations and the need of separate decision makers to negotiate. Half of century after it, in 1965, Walton and McKersie (as cited by Kochan and Lipsky, 2003) developed their Behavioral Theory of Labor Negotiations. On the basis of the game theory, behavior decision theory, and social psychology they developed an idea of four interrelated sub-processes of negotiations: integrative bargaining, distributive bargaining, attitudinal structuring and intra-party bargaining. A more detailed description of the sub-processes defined distributive bargaining as a subprocess where one party only could gain at the other party's expense. In integrative bargaining negotiators saw themselves as having joint problem. The attitudinal structuring assumed that parties shaped each other's attitudes. Intra-organizational bargaining supposed that negotiators did not act as individual decision makers, but presented interests of groups or organizations. Strauss (as cited by Kochan and Lipsky, 2003) in 1978 described the way how social systems were constructed through interactions and negotiations. According to the Negotiated Order Theory by Strauss (as cited by Kochan and Lipsky, 2003), relations that resulted from the process of negotiations shaped future negotiations and interactions, and led to creation of institutions and social systems. With his laboratory studies Howard Raiffa (as cited by Kochan and Lipsky, 2003) paid much attention in 1982 to negotiator's cognition and behavior as well as measurable payoffs and at-the-table interaction in isolation from other interactions or social constructions within organizations. These studies were able to identify specific psychological and behavioral mechanisms underlying negotiation processes and outcomes. Terhune (as cited by Spector, 1977, p.612) discussed personality differences and the interaction of personality traits within dual-party negotiations. He empirically found that negotiations were the function of the individual personality characteristics of the two people, the history of prior relations and

expectations between the negotiators, the interaction of personality traits of negotiators, and impersonal properties of the objective and psychological environment, plus the interaction of dyad personalities under different environmental circumstances. Druckman (as cited by Spector, 1977), added negotiator's role as a moderator of negotiation process. He stated that role requirements might even mask effect of personality on bargaining process. Negotiations were also found to be interrelated with conflict-handling styles (Zhenzhong Ma, 2005). Some studies investigated the role of bargainers' social problem-solving skills for negotiation process (Leadbeater, Heller, Allen, & Aber, 1989). Hamner (1974) investigated effect of pressure to reach agreement on negotiation process and negotiators' behavior. A lot of studies connect negotiations to gender (Bartos, 1970; Rubin & Brown, 1975; Terhune, 1970; Vinacke, 1959; Rapport & Chammah, 1965; Tedeschi, Shlenker, & Bonoma, 1973).

While the above research is very useful for deepening our understanding of the psychology of negotiations, the present paper focuses more on the specific negotiation behavior, i.e. the choice of the negotiation strategy, defined as "a pre-determined approach or prepared plan of action to achieve a specific goal or objective to potentially find and make an agreement or contract in a negotiation with another party or parties" (The negotiation Experts, n.d.). A number of classifications to distinguish negotiation strategies were offered by many researchers (Hamner, 1974; Zartman, 2001; Craver, 2003; Stark, 2003; and Ma, 2005). However, due to the similarity of those typologies, this paper will use the classification proposed by Shell (as cited by Zartman, 2001). Shell (as cited by Zartman, 2001) identified five negotiation styles: Competing, Collaborating, Compromising, Accommodating, and Avoiding. Competing negotiators' goal was to win in negotiation process. They neglected the importance of relationships mostly. These negotiators tended to increase their own profits and satisfy their own needs. They strived for extreme results, began with less realistic opening positions. Their behavior was adversarial and dishonest, often threatening. They did not disclose their own information, were closed and untrusting, and tried to manipulate opponents. Collaborating bargainers "enjoy negotiations that involve solving tough problems in creative ways. Collaborators are good at using negotiations to understand the concerns and interests of the other parties" (Zartman, 2001, p.7). Negotiators of this type were characterized by intentions to maximize the profits obtained by both sides of negotiation as they began with realistic opening positions, behaved in a polite manner, were open and revealed maximum of relevant information. The main concern of Compromisers was fairness and equality for all parties involved in the negotiation. Compromising bargainers sought for the quick solution that did not satisfy both parties completely but resulted from mutual concessions. Accommodating bargainers "enjoy solving the other party's problems and preserving personal relationships. Accommodators are sensitive to the emotional states, body language, and verbal signals of the other parties" (Zartman, 2001, p.7). They easily sacrifice their own interests for the sake of other party's satisfaction. Finally, avoiding bargainers did not like to negotiate and tended to defer and dodge the confrontational aspects of negotiating.

As it was mentioned before, negotiators' behavior was influenced by numerous factors such as the individual personality characteristics, the history of prior relations and expectations between the negotiators, impersonal properties of the objective and psychological environment, role requirements (as cited by Spector, 1977), conflict-handling style (Zhenzhong Ma, 2005), social problem-solving skills (Leadbeater, Heller, Allen, & Aber, 1989), pressure to reach agreement (Hamner, 1974). So, the choice of negotiation strategy should also be determined by certain

factors. Two models were proposed by Pruitt (1983). They were the *dual concern model*, and the *feasibility model*. The dual concern model assumed that negotiators chose strategy based on concern about one's own and other party's interests. When concerned about only one's own interest people tended to choose competitive strategy. When concerned about only other party's interest they preferred accommodating or compromising strategy. When interests of none party were important for the negotiator avoiding strategy was most likely to be used. Collaborating strategy was preferable when both party's interests were important. Moreover, importance of the issue negotiated played a significant role in the choice of strategy as it moderated negotiator's concern. Higher importance of the issue increased concern about own interest. The same effect appeared when there was little space to make concessions. That was why representatives were less likely to make concessions than individuals negotiating on their own behalf. Fear of conflict decreased concern about one's own interests. According to Pruitt (1983) there were two types of concern over other party's interests, which were genuine, determined by personal attraction, shared group identity, or emotional state, and strategic, meaning dependency on the other party, or when the other had authority to use rewards and punishments. Feasibility model proposed by Pruitt (1983) assumed that strategy should contribute to achievement of the concerns. According to Pruitt collaborating strategy was feasible when it was likely that parties would find mutually satisfactory solution, their aspirations were not very ambitious, and they were creative. Competitive strategy was feasible when opponent's concern about his/her interests was low, when other party yielded easily. However, usage of competitive strategy in this case might increase resistance from the other party when it moved closer to its baseline. This resulted in decrease of feasibility of competitive strategy. Competitive strategy also stopped to be feasible when it failed to cause yielding of other party. Cost of the competitive strategy, which was possible conflict, also influenced feasibility of this approach. Avoiding strategy was feasible when other party was more sensitive to time pressure, because it increased time pressure on the other party.

While the above research focused on many important aspects related to the choice of a strategy to pursue in negotiations, the author of this research intends to discuss the role of the negotiator's gender in negotiation strategy preferences. Watson (1994) conducted research which found that gender did play an important role in negotiating behavior. He found that women reported lower self-confidence prior to negotiations and less satisfaction with own negotiation behavior. Women also believed they had been less successful compared to men. In accordance with the Situational Power Perspective (as cited by Watson, 1994), gender differences in negotiation were the artifact of different access to power. So, as men were found in higher-status position more often than women, differences in negotiations attributed to gender might in reality be resulted from power effect. Another approach, which was Gender/Power Additive Hypothesis (Watson, 1994), argued that gender and power combined additively to determine negotiation behavior and outcome. So, males were expected to enhance their situational power while females were expected to diminish it. According to this approach, men in lower power position and female in high power position were equally competitive and successful in negotiations. The most complex approach to this issue was Expectation States Theory (Watson, 1994). This perspective expected that effect of gender and power would depend on the configuration of genders within negotiation pair. According to it, only in mix-gender pairs gender activated as a status characteristic. When negotiators' situational power differed, gender interacted with power in such a way that it diminished a woman's power in the presence of a male and enhanced a man's power in the

presence of female. In same-sex pairs high power women with female opponents should be no less competitive than high power men with male opponents.

All of the above discussed studies tried to find how and why males and female differ in negotiation styles. But the role of gender is still under the question and in need for further research. Many critical observers believed that it is gender stereotyping, not the gender itself, that played a decisive role in negotiation behavior. For instance, according to the Sex-role Socialization Perspective (as cited by Watson, 1994), males and females negotiated differently because different expectations were imposed on them. While women were expected to behave in a softer way and avoid direct confrontations, men were to behave competitively. As this paper has a major emphasis on behavior impacted by stereotyping, the author will discuss this concept in more details.

Stereotypes were originally viewed from two different angles. The history of two approaches to understanding of stereotypes was rooted in the early twentieth century when Wundt in 1902 (as cited by Stangor, Macrae, and Hewstone, 1996) made a distinction between individual and collective psychology. These views were then developed by different scholars. The earliest successors of individual and collective perspectives were McDougall and Allport respectively (as cited by Stangor, et al, 1996). So, difference between individual and collective (cultural or consensual) approaches to stereotypes lied in the assumptions that either an individual or social beliefs were more important in determination of social behavior. "These theorists were concerned about whether "social reality" exists at the level of individual or at the level of the group" (Stangor, et al, 1996, p.4). Followers of individual theory (Asch, 1952; Murcus & Zajonc, 1985; Fiske & Taylor, 1991; Hamilton, et al, 1994) assumed that stereotypes were cognitive patterns and constructs. They assumed that individuals developed beliefs about characteristics of important social groups and were guided by the beliefs in perception of and interaction with members of those groups. According to them it was not necessary to consider consensual agreement (spread of stereotypical belief) when measuring stereotype (as cited by Stangor, et al, 1996). Information about social groups was represented by means of group schemas, group prototypes, and exemplars. Followers of cultural approach (Fishman, 1956; Tajfel, 1981; Farr & Moscovici, 1984; Duveen & Lloyd, 1990; Boster, 1991) considered stereotype as public view of a social group shared among individuals within the culture (as cited by Stangor, et al, 1996). These scholars assumed formation of the stereotype through indirect sources, rather than through direct contacts with stereotyped objects, as it was supposed in individual approach. So stereotypes about out-group spread through the interaction with in-group members by means of language, media, rules and norms. Taking into consideration both theories, individual and cultural, Tajfel in 1981 (as cited by Stangor, et al, 1996) made inferences about functions of stereotypes. Stereotypes helped perceiver to systemize and simplify information and to protect his/her value structure as well as it helped group to make culturally accepted inferences of the events, differentiate in-group from out-group, and justify group actions. Stereotypes were considered to help people to maintain their self-esteem at individual and collective level. Although there were few empirical evidences proving that people with low self-esteem developed stronger stereotype, it was found by Brawn, Collins, and Schmidt (as cited by Stangor, et al, 1996) that temporary threat to self-esteem evoked stronger stereotyping reactions.

This paper aims to explore stereotyping in relation to gender. Gender stereotype was found to be universal by nature and had constant structure across different age and religious groups (as cited by Amancio, 1993). Rozenkrantz, et al in 1968 and Broverman, et al in 1972 conducted studies analyzing gender stereotype

that became classical in this field. They found that people of different age, religion and levels of instruction perceived males possessing such positive traits as independence, rationality, and assertiveness, while positive poles of the traits of expressivity and affectivity associated with the feminine category (as cited by Amancio, 1993). This shows that masculine role included more positive traits than feminine. Having collected data from 25 countries and conducted an analysis Williams and Best in 1986 confirmed the existence of the same patterns of perception of masculine and feminine roles by which they evidenced national generality of the existence of gender stereotype and its structure. Parsons in 1956 noticed that females' role was defined in the frame of family context whereas males' role was more defused (as cited by Amancio, 1993). So classical studies of gender stereotype implied that masculine role was more favorable which resulted in male's higher self-esteem compared to females' (as cited by Amancio, 1993). Bem in 1974 proposed a theory disclaiming previous points of view and suggesting that androgynous but not masculine role was contributing to a higher success in various context and situations which also led to higher self-esteem associated with androgynous role. Concerning Females' self perception in the frame of stereotyped role, Tajfel found that women absorbed most positive traits of feminine stereotype into their self image. Moreover, working women also included these traits into their self-image adding however certain masculine traits which resulted in their insecure self-image (as cited by Amancio, 1993). Besides personality traits, inferences of behavior were studied in relation to gender stereotype. Deaux (as cited by Amancio, 1993) found that successful performance by men was attributed to internal whereas successful performance by women – to external factors. There was also evidence that men and women differ in holding stereotypes of females. Duehr and Bono (2009) compared present stereotyping with that 15 years ago. They found that women were more perceived today as successful and task-oriented leaders than they were seen 15 years ago. However, this change in views was significant only for females. Research showed that males still did not attribute characteristics of successful manager to women.

The concept of stereotype including gender stereotype as related to the area of the psychology of negotiations has been explored in organizational settings. Hanson, Morton, and Rothaus (2006) investigated stereotyping of employees of different levels within organizations. They found that hypothetical subordinates were evaluated more negatively than hypothetical supervisors. Other studies focusing on gender stereotypes showed evidences of the existence of gender stereotyping in the sphere of business and specifically business communication (White & White, 2006). They showed that certain professions were stereotyped according to gender characteristics. White and White found that such occupations as engineering and elementary school teaching were strongly gender stereotyped. Engineers were associated with male whereas elementary school teachers with female. They also found that accounting fell somewhere between these two extremes of stereotyped occupations in contrast to results of previous studies (as cited by White et al., 2006). Steele, James & Barnett (2002) investigated stereotyped female undergraduates. It was found that female undergraduates in a male-dominated academic areas (i.e., math, science, or engineering) felt higher levels of discrimination and stereotype threat than female students in a female-dominated academic areas (i.e., arts, education, humanities, or social science), and men in either a male- or female-dominated academic areas. As a result women in male-dominated academic areas were most likely to intend to change their major. Diekman, Goodfriend, & Goodwin (2004) suggested strong gender stereotypes existing in workplace where men were perceived to be more successful than women in male-dominated leadership

positions, among male subordinates, and in roles defined in masculine terms. Men were perceived to have structural power that was power in the spheres of government, business, and military. So men were perceived to be more competitive (focused on self-promotion and independence), whereas women were perceived to be focused on others. Moreover, they found that female leaders using authoritative style were evaluated more negatively than males. Diekmann, et. al, (2004) found that gender stereotype consisted of several aspects. Women were perceived to have less occupational, economic, political, relational, and individual power than men. There were evidences of existing stereotyping in the sphere of negotiations as well. Kray, et al, (2002) conducted a research in which participants rated 13 traits critical for negotiation success as stereotypical for males or females or none (neutral). Results showed a clear tendency in ratings to attribute certain traits as masculine and certain as feminine. Such traits as assertiveness, good problem solving, high regard for own interest, and knowledgeable were rated as masculine. Emotionality, insightfulness, good listening skills, and verbal expressiveness were rated as feminine. Finally, rationality, ability to make good judgments, sense of humor, patience, and preparedness were recognized as neutral.

Existence of gender stereotype has a strong influence on people's feelings, behavior and performance. Such an effect of stereotype was often defined in psychology as "stereotype threat". According to Steele, stereotype threat is "the concern the person feels about confirming, as self-characteristic, a negative stereotype about one's group" (as cited by Kray, et al, 2002, p.388). Steele supposed that threat produced anxiety evoking concern over confirming the stereotype, lowered expectations which resulted in reduced performance. He also believed (as cited by Schmader, Forbes, & Johns, 2008) that stereotype threat was a danger for person's self-integrity which resulted from conflict between one's concept of self, expectation for success and primed social stereotype suggesting poor performance.

While investigating stereotype threat it is important to consider mechanisms which lie under activation of stereotype threat and its effect on the negotiator's performance. Steele's (as cited by Kray, et al, 2002) theory is that mere linking stereotypic traits to performance outcomes should produce stereotype threat effect. Steele (as cited by Kray, et al, 2002) believed that the only thing that is necessary for emergence of stereotype threat was knowledge about stereotype existence and the explicit articulation that a particular task was diagnostic of ability. However Steele did not support his theory empirically. It is important to differentiate stereotype activation from category activation. Pratto and Bargh in 1991 and Stangor and Duan in 1994 found that category and stereotype priming had different effects (as cited by Lepore & Brown, 2000). According to Lepore and Brown (2000) "Automatic stereotype activation is not a consequence of categorization when stereotypic characteristics—with or without category labels—are primed directly" (p.120), but "Automatic stereotype activation is an effect of categorization when only the category is primed" (p.212). Experiment by Banaji, Hardin, and Rothman (as cited by Lepore & Brown, 2000) evidencing that primed stereotypic concept to the gender category increased attributing aggressiveness characteristic to male targets and dependency to female targets. However Gilbert and Hixon found that mere category' activation might not result in stereotype activation (as cited by Lepore & Brown, 2000). Participants in their study did not increase the amount of stereotypic completions on a word fragment task when the person presenting the stimuli in the experiment was Asian whereas they still categorized her correctly. This meant that it was still unclear how automatic stereotype activation happened (as cited by Lepore & Brown, 2000). According to Schmader (2008) "all situations of stereotype threat involved activation of three core concepts: the concept of one's ingroup, the concept of the

ability domain in question, and the self-concept” (p.338). Three links should be activated in order to experience stereotype threat. First, environment cues signaled a negative relation between person’s concept of ingroup and ability in the domain in which group was defined as deficient. Second, environment cues signaled a positive link between self-concept and concept of the group, which resulted in identification of the self in terms of group membership. And third link was a positive propositional relation between self and domain that meant it was personally important for one to do well in that domain. Only activation of all three links caused stereotype threat. Schmader and others (2008) also mentioned working memory as a mediator of stereotype threat effect in performance. According to authors stereotype threat degraded working memory efficiency that could have an effect on performance. There were evidences suggesting the role of working memory in stereotype threat effect among whites, blacks, and other stereotyped groups (Richeson and Shelton, 2003; Croizet et al., 2004; Belock, Rydell, & McConnell, 2007; Jamieson & Harkins, 2007). These studies suggested that disruptions in working memory caused by stereotype threat resulted in diminished performance in cognitive as well as social interaction tasks.

Investigating effect of stereotype threat Matina Horner (as cited by Henley, 1985) explored phenomena of fear of success exposed by women. She found that 62% of females compared to 9% of males incorporated negative imagery in stories written in response to success-related cues. Those women with fear of success performed poorer when in competition with men. Crocker and Major (as cited by Kray, et al 2002) supposed that stereotype can alter person’s sense of self-worth and the goals he/she sets. Research conducted by Watson’s (1994) found gender effect in which women showed lower self-confidence before negotiating, and less satisfaction with own negotiation behavior. Women also believed they had been less successful compared to men. Stevens, Bavetta, and Gist (as cited by Kray, et al, 2002) confirmed empirically that women in negotiations tended to set lower goals for themselves. According to Bazerman (as cited by Kray,et al 2002) higher goals in negotiation stipulated stronger persistence which in turn resulted in better performance. So, difference in goal setting also caused difference in performance between males and females. Research showed that activation of negative stereotypes could impair the performance of stigmatized individuals on a wide variety of tasks, cognitive, social and sensori-motor (as cited by Kray, et al, 2002). Spencer, Steele, Quinn (as cited by Kray, et al, 2002), for instance, investigated effect of stereotype threat on the performance in individual mathematics test. They showed failure to perform well on a math test by white men when they were told that their performance would be compared with that of Asian men (as cited by Schmader et al., 2008). It was also found by Stone in 1999 (as cited by Kray, et al, 2002) that depicting task as associated with negative stereotypes resulted in poorer performance than when the task was characterized as relevant to positive stereotype. An experiment showed that White athletes performed better on a golf task when it was described as diagnostic of sport intelligent whereas African-American athletes performed better on the same task when it was depicted as measuring natural athletic abilities. That was a result of the existing stereotype that Whites are high at sports intelligence and African-Americans are high in natural athletic ability.

One of the studies evidencing effect of gender stereotype on performance of women was conducted by Schmader (2008) while he was investigating the role of working memory in stereotype threat effect. College students were asked to perform operational task. The task was described as a measure of working memory for one part of participants and as a measure of quantitative capacity and related to math

abilities (stereotype threat) for the other. Females in stereotype condition scored lower on working memory task compared to control group or men. Another example of gender stereotype effect on female's performance was research showing that marking one's gender after (as compared with before) an advanced placement calculus test led to a 33% reduction in the gender gap in performance (as cited by Schmader et al., 2008). Study by Susan M. Campbell and Marcia L. Collaer (2009) investigated effect of stereotype threat on gender differences in performance on visuospatial abilities. They found that only under the influence of explicit and implicit stereotype significant gender differences existed. Women did not underperform men significantly when told there is no gender difference. The effect was most salient with difficult line judgments.

Stereotypes also influenced interactive negotiation task performance, as was evidenced by Kray (as cited by Kray, et al, 2002). He found that tagging negotiation as diagnostic of ability influenced males' success in negotiations in a positive way, whereas hindered females' ability to negotiate. So stereotype also influenced performance of the advantaged group. For example Spencer (as cited by Kray, Galinsky, and Thompson, 2002) found that males outperformed females in gender task only when they were told that gender differences in task performance existed. Those males also outperformed males who were told that no gender differences really existed. Kray, Galinsky, & Thompson (2002) investigated how activating positive stereotype in mixed gender negotiation compared to neutral condition effected performance of males and females. They found that men set higher goals, performed better in gender-neutral condition than in female positive condition (positive stereotype concerning women performance activated). Women, in opposite, set higher goals, and performed better in female positive condition than in gender-neutral. Indeed, psychologists discovered the effect of positive stereotype and called it stereotype lift effect. Walton and Cohen (as cited by Schmader et al., 2008) confirmed reliability of lift effect by means of meta-analysis. Positive stereotype biases self-assessment in a more favorable way. As processes that would disturb working memory are absent, individual should perform up to his/her full potential under "the protective glow of positive stereotype" (p. 349). However, Cheryan and Bodenhausen (as cited by Schmader et al., 2008) found that "choking is most likely to occur when a positive stereotype is primed for individual who lacks confidence in his or her own ability to live up to that expectation" (p.349). In this case a conflict appeared between positive links between self and domain and preexisting negative link between these constructs. This resulted in redirection of working memory for a purpose other than the task. In any case, there was still view that multiple stereotypic attributes were relevant to most social groups and focusing on the positives while ignoring the negatives appeared to be an advantageous strategy.

Researchers discovered that informing women about stereotype threat was a useful method of improving their performance in testing. In a study by Johns, men and women completed difficult math problems described as either a problem-solving test, or a math test. Johns and his researchers created a third group to complete the problems, but informed the participants that stereotype threat could affect women's performance on the test. They discovered that women performed worse than men on the test when not informed about stereotype threat, but didn't differ when aware of the threat existence.

Thus, the current research intends to investigate the relationships between gender, stereotype threat and the preference for a particular negotiation strategy. The author anticipates that under stereotype threat female and male participants prefer compromising and avoiding negotiation strategies as they should perceive themselves in a lower position compared to opponent of opposite gender, set lower

goals and therefore be less persistent. This may also happen because they should feel insecure, be less confident in their abilities and therefore their normal performance should be hindered. It is expected that under stereotype lift effect female and male participants prefer competitive or collaborative negotiation strategies. This could be explained by opportunity to perform up to the full potential and more favorable way of the self-assessment. Some males and females may feel confidence in their success and ability to find solution satisfying both parties, therefore are expected to choose collaborative strategy. Others under the condition of stereotype lift effect may feel confidence in their victory over the opponent, therefore are expected to prefer competitive negotiation strategy.

Method

Participants

One hundred participants aged 18-45 take part in this study. Given study discriminates according to gender characteristic. 50% of participants are males 50% are females. Participants are chosen using convenient sampling. Respondents include students, employees of several Kyrgyz companies, and unemployed. The average age of the female participants is 23.59 with a standard deviation of 8.46, whereas the average age of the male participants is 20.94 with a standard deviation of 3.65.

Materials

Methodological design of the study is questionnaire. The questionnaire consist of 3-4 pages on A4 format paper, black letters on white background, font name: Verdana, font size: 11-12. The questionnaire starts with the paragraph informing participant about character of the study, voluntariness of the participation, confidentiality and anonymity of the information presented by the participant, and absence of any risks: physical, psychological, or social. It also presents phone number of the researcher in case any questions appear in the absence of the researcher. Following section of the questionnaire consists of two parts. In the first part participants are presented with an article to read. One third of questionnaires contains pseudo article informing readers about restrains women meet in achieving success in business. Other part of participants is presented with the pseudo article which talks about advantages of women in business and their progressive success. The third, control, group of participants is not presented with any article, the section is missing in the questionnaire. The pseudo articles are written by the author and are based on popular believes and antiscientific materials taken from the internet. The materials in the article are presented as having scientific basis and providing empirical facts; the pseudo author and name of the journal are given. The second part of the questionnaire presents respondents with business case, describing situation in which participant in the role of trade manager of a company is going to negotiate with representative of another company on the terms of cooperation. The case is accompanied with the questionnaire consisting of 10 questions about their behavior in anticipated negotiations. The questionnaire is developed by the author to assess preferences of behaviors related to five negotiation strategies. The questionnaire is based on Thomas-Killman conflict style measure which corresponds to the Shell's (as cited by Zartman, 2001) classification of negotiation strategies. Questions are adopted to reflect single choice of the strategy

in current situation rather than reflect typical behavioral patterns, as Thomas-Killman conflict style questionnaire does. Each question corresponds to the behavioral characteristics of one of the negotiation strategy and asks respondent whether he or she would behave this way or not. Every strategy is assessed with two questions. So each respondent gets score for each of the strategy that varies from 0 to 2.

Procedures

The researcher randomly administers three versions of the questionnaire. Participants of the study are asked to spend 10 minutes to fill in the questionnaire. After questionnaires are completed the researcher does debriefing and informs each participant about the purpose of the study and fake nature of the articles.

Results

Analysis of frequencies tables is used in order to examine the most and least used negotiation strategies by the respondents. The analysis shows that the most frequently used negotiation strategy among participants is compromising (sum score equals 192, Mean = 1.88), whereas the list frequent strategy is competitive (sum score = 77 mean = .75).

Crosstabs are performed and Cramer's V is calculated to see general differences between male and female groups. The results indicate that there is statistically significant difference, $r = .21$, $p < .05$ between males and females in compromising strategy score. Males and females, however, do not significantly differ in scores for other strategies.

Independent sample T-test

Independent sample T-test is conducted to examine any differences in the usage of negotiation strategies in different stereotype conditions. Results indicate that the mean competitive strategy score among female participants in the control condition (no stereotype activation) is .94 (SD = .24), while the mean competitive strategy score among female participants under stereotype threat (negative stereotype activated) is .59 (SD = .51). An Independent sample T-test indicates that the difference between these two means is significant $t(32) = 2.59$, $p < .05$. This results evidence that female' competitive strategy score is ,35 less when negative stereotype is activated than when no stereotype is activated. An Independent sample T-test does not show significant difference between means of any other strategy scores among women participants in different stereotype conditions. No significant difference in negotiation strategies scores is found for male participants in different stereotype conditions.

As the dependent variable of the study is represented by ranked ordinal data, an Independent sample T-test may be invalid to determine the relationships as it assumes the distribution is normal and distances between points are equal. So, a Mann-Whitney -U test is conducted to determine whether there is a difference between groups of participants on their usage of negotiation strategies under different stereotype conditions. As results indicate there is a significant difference, $z = -2.39$, $p < .05$ between control and negative stereotype groups in women's competitive strategy score. All other comparisons of the groups of female participants do not show any significant differences. No significant differences are identified for male participants.

A series of Spearman rank-order correlations are conducted in order to determine if there are any relationships between male and female participants' negotiation strategy scores and stereotype condition. A two-tailed test of significance indicates that there is a significant negative relationship $r = -.30$, $p < .05$ between stereotype condition and competitive strategy score for female group. The relationships among other strategies and stereotype conditions among women are not statistically significant. No relationships are found for male participants.

Discussion

The present study reveals that women tend to behave less competitively in the conditions when negative stereotype is activated i.e. when they are presented with the information disregarding females in negotiations. Thus, the stereotype threat has a major effect on women, whereas the lift effect does not show any significant impact among the female population. These results are consistent with the Kray's study (as cited by Kray, et al, 2002), which found that activation of stereotype hindered females' ability to negotiate. This can be explained with the fact that stereotype can alter person's sense of self-worth and the goals he/she sets (as cited by Kray, et al, 2002). Lowered sense of self-worth and setting low goals may influence the level of competitiveness of the stereotyped negotiator.

No differences are found among females in usage of avoiding, collaborating, and compromising strategies under negative stereotype and control conditions. Moreover, no lift effect is identified by the analysis. Results indicate that males do not differ significantly in strategy preferences under different stereotype conditions as well. Specifically, males do not show preferences for avoiding or compromising negotiation strategies under the condition when positive stereotype is activated regarding females, although this was expected. These findings are consistent with the mechanisms of stereotype activation theory. According to Steele (as cited by Kray, et al, 2002) what is necessary for the emergence of stereotype threat is knowledge about stereotype existence and the explicit articulation that a particular task is diagnostic of ability. This condition is not observed in the present study, i.e. although the article the participants are asked to read articulates existence of stereotyping, participants are not informed that the questions they answer are diagnostic of negotiation behavior or negotiation success. Moreover, according to Schmader (2008) "all situations of stereotype threat involve activation of three core concepts: the concept of one's ingroup, the concept of the ability domain in question, and the self-concept" (p.338). Three links should be activated in order to experience stereotype threat. First, environment cues signal a negative relation between person's concept of in-group and ability in the domain in which group is defined as deficient. Second, environment cues signal a positive link between self-concept and concept of the group, which results in identification of the self in terms of group membership. And third link is a positive propositional relation between self and domain that means it is personally important for one to do well in that domain. Only activation of all three links causes stereotype threat. In current research first two links only are activated. The article read by participants explicitly defines group (females) as deficient in the domain (negotiations). Females and males should automatically identify themselves in terms of gender group membership. However, the research fails to activate the third link. It is unknown if performance on negotiations is important for the participants or not. This can result in failure to activate stereotype threat for those participants who are indifferent to their performance in negotiations or to the task in general. So, one reason why the greater

parts of hypotheses are not confirmed with the results may be that stereotype is not activated for some part of the participants.

The research design itself can provide additional explanations to the results obtained. The questionnaire used for the study appears to have certain weaknesses. The questions are based on the Thomas-Killman conflict style measure which corresponds to the Shell's (as cited by Zartman, 2001) classification of negotiation strategies. Although all the questions are taken from the Thomas-Killman conflict style test and adopted to reflect single choice of the strategy, the structure of the questionnaire is changed. Originally, questions, representing different conflict styles were grouped by two, and a respondent had to choose one that more accurately reflected the way he usually acts. In current questionnaire all the questions are separated and the respondent has to report if he would or would not act the way each question asks. That is the reason that respondent can get high scores for all of the strategies, which cannot be real. So that can be an obstacle in achieving reliable results and thus supporting research hypothesis.

Another problem that can be connected with research design is that questionnaire does not show the way the person will behave in real life. When answering the questions people may present themselves in a more socially desirable manner and answer as they believe is consistent with norm of behavior, but this is not very illustrative of what they would really do in such situation. Another factor that can influence the results is that the age of female participants is higher and has greater standard deviation compared to males. So, female population is represented by more diverse sample regarding age, compared to that of males.

Beside analysis of the research hypotheses, some additional findings show that the most frequently used negotiation strategy is compromising, whereas the least frequently used strategy is competitive. This is true for both male and female participants. The results can be explained by culture effect. This is consistent with numerous studies investigating negotiations in relation to culture (as cited by Janosik, 1991). According to some scholars culture influences negotiation as it teaches individual certain behaviors. Researchers following this approach found that certain types of behavior were common to certain cultures (as cited by Janosik, 1991). Another view is that culture is a set of shared basic values, which can also influence negotiation behavior. In terms of values culture is seen by some as a tension between paired, opposing values, such as collectivism – individualism, spirituality – materialism etc. (as cited by Janosik, 1991). So it can be assumed that people tend to use compromising strategy more often and competitive - less often as a result of shared values related to culture.

As results indicate, a difference also exists between women's and men's negotiation strategy preferences, specifically women use compromising strategy more often. If we approach classical views on gender differences in negotiations, Situational Power Perspective (as cited by Watson, 1994) states that differences in negotiations attributed to gender are in reality resulted from power effect because difference in access to power exists. This explanation cannot be applied as women and men in this study are presented with the same situation and are assigned with the same role for negotiations that is why they are equally empowered. However, the difference may be explained with Expectation States Theory (as cited by Watson, 1994). According to it, in mix-gender pairs gender activates as a status characteristic and gender interacts with power in such a way that it diminishes a woman's power in the presence of a male and enhances a man's power in the presence of female. As all participants are presented with the situation in which they would negotiate with the person of opposite gender, it can influence their behavior and women can behave more compromising as they feel less power compared to

men, whereas male participants feel themselves empowered more, that is why compromise less. This is also consistent with the Sex-role Socialization Perspective (as cited by Watson, 1994), which states that males and females negotiate differently because different expectations are imposed on them. While women are expected to behave in a softer way and avoid direct confrontations, men are to behave competitively.

Identified weaknesses of the current study bring the conclusion that some changes should be implemented to get more adequate results. First, to improve the study the questionnaire should be composed in such a way that each question requires respondents to choose among two types of behavior representing different strategies. Composition of strategies should alternate with every question. This procedure should help to identify preferences of the respondents more clearly. Further improvement that can be made with this study is to assess negotiation strategy choice via playing negotiation process in experimental settings where real behavior should be then assessed.

Another modification of the research procedures should be directed to stereotype activation. Participants should be informed that the questions will evaluate their performance on the considered negotiations. This should also increase perceived importance of the performance for the participants. Further research may be directed to analyze which way gender stereotype may activate to have an effect on negotiator's behavior. It is unclear if stereotype could be activated as a result of just making one's gender salient or certain proved facts should be provided confirming stereotype beliefs. So, independent variable in future research could be the way stereotype is activated rather than simple fact of it activation. Further research may also take into consideration culture differences and differences related to ethnicity as moderators of stereotype effects on negotiation behavior.

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Desirability to Buy and Customers' Perception of Salesperson.

By Anastasiia Pegai

Shopping became an essential part of people's social life. It is hard to figure out how many hours we spent in shopping malls trying to find whatever we would like to buy. Living in a society people have to interact with each other. In accordance with the process of shopping an essential part of it relates to the interaction between customer and salesperson. Selling is a social situation in which two people come together for a specific purpose and, in doing so, influence each other. Here we start talking about two sides of one interaction. These two sides, customer and salesperson, both have their own interests. Customer aims to buy a product by lower price, and salesperson's interest in this situation is opposite. This is one of the main reasons of why so many studies (Holbrook and Hirschman, 1982; Chapman and Chapman, 1967; Hamilton and Rose's, 1980; Lamont and Lundstrom, 1977; Walker et al., 1977; Dixon, Spiro, and Maqbul, 2001; Michael and John, 1991) were conducted in order to understand the behavior of customer. Attractiveness factor influences people's perception in any kind of interaction whether it is an interaction between two businessmen, student and professor, child and parent, or customer and salesperson. Having a better understanding of what factors lead to particular behavior patterns, such knowledge can be used in social psychology in order to explain and understand actions of people. In case with present research such variables as similarity and attractiveness of salesperson can be those factors, which lead to particular acts, and which will be examined by the researcher.

Relying on some theories it is very important to understand what pushes people to go for shopping. As a basis of the process of shopping Solomon (2004) presents in his book two theories of why people are motivated to go for shopping. Drive theory says that people are motivated to reduce the tension, which produces unpleasant states. So, people are motivated to buy in order not to feel unpleasant tensions. Expectancy theory suggests that behavior is largely pulled by expectations of achieving desirable outcomes - positive incentive - rather than pushed from within (Solomon, 2004). Shopping is not just a process of buying something, but is a combination of many processes itself such as: going to stores allows to go out and to change the day-to-day life, shopping is one of the types of rest and entertainment, it allows to get information about all accessible goods on the market, it gives a chance to meet friends and other people, helps to feel yourself important and needed in the role of a getter for family, gives a chance to physically move, irritates feelings (sound, smell and. etc), increases the feeling of self-significance and even power, when you are consulted by a polite and attentive salesperson (Holbrook and Hirschman, 1982). All these processes are the part of our life, whether separately or in combination. Shopping is not separated from other types of communication.

Nowadays, new technologies start to increase the distance between customer and salesperson. Internet commerce starts to develop very fast. It has a number of privileges such as fast speed, comfort, privacy and etc. But still, there are several advantages of conventional shopping which Gili and Wolfinbarger (2005) describe in their article: setting, unplanned purchase, immediate pleasure which person receives after he/she buys a product, confidence in the quality of a product. The interaction process with salesperson is also described by Gili and Volfinbarger

(2005). They state that a process of communication itself can lead to an increasing of feeling of trust. Until people receive a pleasure from the process of shopping itself and from interaction with other people and salespeople in this process, researchers have to investigate this communication process in order to gain more knowledge which will help to understand people's behavior and motives. Holbrook and Hirschman (1982) state that people go for shopping because of the process itself. Customers think that they know why exactly they come to the store, when usually it is not true.

Another reason for conducting present research is to determine which attributions people apply to the attractive salespeople. Even though many people think that attractiveness influences positively, so stereotypic impressions can vary. The study of Chapman (1967) have shown that people have a tendency to rely on their prior covariation belief, stereotypes, or expectations (i.e., to be theory driven) rather than to rely solely on the objective correlation in the data (i.e., rather than to be data driven). When people are theory driven their judgments of the data will be inaccurate to the extent that their prior beliefs (e.g., that there is a strong association between race and intelligence) are inconsistent with these data; such situations might arise either because people's beliefs were erroneous to begin with or because those beliefs became outmoded as a result of changes in the environment. The perception of each person is individually different. For instance, in Hamilton and Rose (1980) study, subjects reported illusory or nonexistent correlations between occupations and traits based on their stereotypic expectations (e.g., that salesman is more talkative). Conducting present research, the question of perception is touched from the side of consumer. There are many stereotypes in the mind of each person, but there can be beliefs, expectations, and stereotypes which can be united into some categories. If attractiveness factor builds positive stereotypic expectations, then such factor can be used in order to provide important information for those who work with salespeople, and human resources. Eagly et al. (1991), for example, noticed that individuating information about physically attractive people acts to attenuate stereotypic impressions of them. The information about influence of physical attractiveness is important not only for those who work with salespeople, but also for any kind of people working in customer service. Applying such knowledge will lead a better atmosphere and mutual understanding for both sides.

Positive effect was supported by a number of studies. One of such studies was conducted by Reingen and Kernan (1993). Authors hypothesized an opinion that if persuasion targets behave according to the physical attractiveness stereotype, they should perceive attractive salespersons more favorably, treat them more cordially, and respond (both verbally and behaviorally) to their requests more readily than they do to unattractive salespersons. As a result they supported an opinion that physically attractive people were perceived as more favorable, then those who were not attractive. In accordance with to the present research the main idea is not to concentrate only on the attractiveness itself, but also to correlate it with some factors, which are peculiar to the customer. Taking this into account it should be noted that the physical attractiveness of a salesperson however, has a significant influence on selling effectiveness. Therefore, it might be one among a host of variables (Eaglyetal., 1991).

There are several studies that found some contradicting results, considering the influence of physical attractiveness. Some studies showed that attractiveness was not a determinant in the all situations. Beehr and Gilmore (1982) found out that attractiveness sometimes can be viewed as a job-relevant factor and therefore is systematically an advantage or not an advantage, depending on its job-relevance. Not in all situations we can rely on physical attractiveness as on the determinant of a success in the social relationships. Thus, it does not appear that participants' decision to hire, in the study of Beehr and Gilmore (1982), were due to generally

favorable characteristics attributed to the applicants based on applicants physical attractiveness.

In some cases physical attractiveness can even negatively influence the perception. The results of the study conducted by Baker and Churchill (1977) suggest that in trying to sell a non-romantically - oriented product to males, an unattractive female model may be more persuasive in creating eventual product purchase than an attractive model. The failure of the physically attractive model to increase cognitive acceptance of the message is surprising in light of the theoretical discussion. In terms of perception and attribution, the evidence suggests that the attractive model should have increased the credibility and thus the acceptance of the promotional message. Baker and Churchill (1977) explain such results by saying that college subjects in general are more skeptical of all advertisement claims than other groups and thus are less likely to evaluate advertisement content differentially in terms of the structure of the ad. An older or less educated population may be less defensive when put into this kind of evaluative situation. In spite of such explanations more studies should be conducted in order to understand such results. Results of the researches listed below show that stereotypical impression of attractiveness, as a good factor, can be sometimes a false impression.

Sales managers and academic researchers are continually searching for the relationships between personal characteristics and personality traits and the successful professional salesman. Lamont and Lundstrom (1977) researched the question about personal characteristics of a salesperson. As personal variables they used dominance, endurance, social recognition, ego-strength, and empathy. Several variables appear useful in predicting sales performance on a variety of criteria. In particular, such variables as endurance, empathy, and ego strength were effective in explaining managerial performance ratings. With few exceptions, performance was positively related to endurance and negatively related to empathy and ego strength. The research of Lamont and Lundstrom (1977) showed that not only appearance influenced the impact of the interaction of salesperson and customer, but also some inner aspects of personality. Some variance in sales performance is related to the environment in which the salesperson operates and thus cannot be attributed to the individual salesperson's activities. Walker et al. (1977) reviewed factors that can be related directly to salespeople and proposed that a salesperson's performance is a function of (1) his level of motivation, (2) his sales aptitude, and (3) his perception of how his or her role should be performed. These three components are central to most job performance theories in industrial psychology. Though Walker et al. (1977) developed models and hypotheses about the motivation and role of perception components; little attention was directed to the aptitude component. Since the relationship between customer and salesperson is two-sided, it would be appropriate to learn some inner characteristics of a customer, which can influence a decision making process. Though, it is important for salesperson to analyze the behavior of customer and to find out his or her intentions. One study indicates that a salesperson's performance could be improved by improving ability to select objectives for influence attempts. The significant relationship between performance and strategy formulation ability suggests that a salesperson's performance is related to ability to analyze correctly his or her impressions of the customers even if the impressions are not completely accurate. The assessment of strategy formulation was based on the assumption that the customer's evaluations could be represented by a linear compensatory model. Salespeople whose strategies were consistent with those indicated by a linear compensatory model had better sales performance than salespeople who selected strategies that were inconsistent. Thus, the linear compensatory model might be a useful tool for salespeople in developing strategies for influencing their customers (Weitz, 1978). Sales managers need to understand the type of attributions their salespeople are making and what behaviors are driven by these attributions. If specific attributions for failure lead to negative, counterproductive behaviors or positive, proactive behaviors, managers will benefit

greatly from understanding the attributional/behavioral patterns of their salespeople as well as the forces driving such attributions. In addition, if dispositional factors relate to specific attributional tendencies, this has direct implications for the salesperson selection process. (Dixon, Spiro, Maqbul, 2001)

Most of the researches which study the relationship between customer and salesperson concentrate on the understanding salesperson's behavior, personal characteristics, and etc. (Walker et al., 1977; Lamont and Lundstrom, 1977; Fine and Schumann, 1992). In the relationship between customer and salesperson it is important to analyze the perception of a customer. Since, customer is the one who makes the decision, it is good to find out what effects the decision making process. There are several ways where each person directs his or her perception (Lundgren, 1978). First, how individual perceives himself or herself? Second, how individual perceives others. Present research will concentrate its attention on the question of self-esteem correlation with a process of defining how effective salesperson is. Self-esteem is the affective or emotional aspect of self and generally refers to how we feel about or how we value ourselves (one's self-worth) (Huitt, 2004). People evaluate themselves by comparing with others. The result of the comparison can be positive or negative. This outcome depends on two factors: closeness to the person with whom we compare, and importance of the attribute in question. We avoid comparisons that make us look bad. One tactic is establishing distance between us and those who are successful. Another form of protection involves downward comparison: the comparison with others who are less fortunate or successful (Huitt, 2004). Frisby (2004) investigates whether idealized images in advertising can compel African American females to feel more attractive or more unattractive. Using the theory of social comparison, this study examines the impact of exposure to advertisements of thin, physically attractive, Caucasian and African American models on the self-evaluations of African American women exhibiting varying levels of self-reported body esteem. As expected, exposure to idealized images of Caucasian models was not related to lowered self-evaluations regardless of the level of body esteem. However, women with low levels of body esteem did report lowered self-satisfaction with body esteem when exposed to physically attractive images of African American models. Results suggest that similarity or ethnicity of the idealized image may have an impact on African American women's self-evaluations. The research conducted by Frisby (2004) generally support the hypotheses generated from the literature on social comparison. Evidence suggests that similarity may play a huge role in how African Americans are affected by idealized images. According to this research Frisby (2004) clearly showed that people evaluate an opinion of themselves by comparing themselves to others. Present research will try to investigate the question about similarity, in order to check how customers compare themselves to the salesperson they buy from. DeBruine (2004) conducted a research in order to check how people evaluate those who look similar to them. DeBruine (2004) established that the attractiveness of faces is influenced by self-resemblance. This effect could contribute to stable individual differences in perceptions of attractiveness and may explain the increase in trust towards self-resembling same-sex faces. DeBruine (2004) also found that facial resemblance is a cue of kinship to which humans respond differently in social and mating contexts. Same-sex faces elicit judgments of non- sexual positive regard, which cues of kinship should increase, while other-sex faces elicit judgments of sexual or romantic appeal to the judge, which cues of kinship should decrease.

While thinking about gender differences by using the results of DeBruine (2004) research, it's more appropriate to use the salespeople and customers of the same sex. Since, in Central Asian region, particularly in Kyrgyzstan there are more female salespeople, only women will be participants of present study.

Some researches suggest that it is crucial for customer to feel that they have everything under control, and the choice they made is their own (Hui and Bateson, 1991). It has been suggested that perceived control is a crucial determinant of the

quality of the two types of interactions (interpersonal and human environment) that constitute the service encounter. The research has proposed that human social behaviors are driven by three kinds of interpersonal needs, including control. They suggest that a feeling of control is essential to having satisfactory interactions with other people. People tend to feel and behave more positively when they perceive that there is more control in the environment. One of the hypotheses of present research is to investigate, whether self-esteem level is related to how consumers rate the attractiveness of salespersons. Relying on the research of Hui and Bateson (1991), sub hypothesis 1 is built. It states that salesperson's attractiveness and customer's level of self-esteem interact to determine the willingness to buy goods.

Culture, region, country, and even development of the country plays an important role in the conducting the type of the research, which related to self evaluation of person. It would be inappropriate to use results of the research conducted in the United States to the Central Asian region. Self-enhancing biases operate somewhat differently in different cultures (Smith and Mackie, 2007). In interdependent cultures, people are less prone to this bias, or even show a reverse bias. This difference is explained by the focus on self-worth: in independent cultures, the focus is on autonomous and separate aspects of the self. In interdependent cultures, however, the focus is on the ability to fit in harmoniously with others, and negative information about the self is used as a way to improve this ability. In both cultures, high levels of self-esteem are important, because they are a gauge that gives us information about our success and acceptance (Smith and Mackie, 2007).

People in different cultures have strikingly different construals of the self, of others, and of the interdependence. These construals can influence, and in many cases determine, the very nature of individual experience, including cognition, emotion, and motivation. Many Asian cultures have distinct conceptions of individuality that insist on the fundamental relatedness of individuals to each other. The emphasis is on attending to others, fitting in, and harmonious interdependence with them. American culture neither assumes nor values such an overt connectedness among individuals. In contrast, individuals seek to maintain their independence from others by attending to the self and by discovering and expressing their unique inner attributes. As proposed herein, these construals are even more powerful than previously imagined (Hazel, 1991).

In the present study there will be an attempt to investigate internal and external factors in desirability to purchase goods. From the customer's side of view the perception of attractiveness such as physical appearance, will be examined as an external factor. As an internal factor, self-esteem and similarity will be a determinant. Similarity of a customer and salesperson will also be examined from the perceptual view of customer. It is interesting to investigate these questions on the territory of Central Asia, because very little is known about this kind of researches. By increasing the understanding of customer-salesperson relationship, managers and administrators will be able to develop the quality of the sphere of service.

In this study it is expected that people perceive attractive salespeople as more effective in the process of selling, which is a Hypothesis 1. It is also expected that salesperson's attractiveness and customer's level of self-esteem interact to determine the willingness to buy goods, which is a Hypothesis 2. Hypothesis 3 states that attractiveness factor influences more than similarity in decision making process. Finally, the research hypothesized that willingness to buy increases with the increased perception of similarity with the salesperson by the buyer (Sub Hypothesis 1).

Method

Participants

Sixty participants were recruited from the community of American University of Central Asia. All the participants were undergraduate students from different departments and they were randomly selected. Among students who participated in the research 41,7% were of Kyrgyz nationality, 26,6%, were participants of Russian nationality, 6,7% were participants of Korean nationality, and 25% reported other national identity. The age of participants varied from 17-23 years old. The average age of sample was 22,02 with standard deviation of 1,44. All the participants were females.

Materials

Non verbal semantic differential was used in order to find out the closeness of such constructs as similarity-effectiveness, and attractiveness-effectiveness. There were used eight pictures of female salespeople (see Appendix 1), the background of which was changed with the use of Adobe Photoshop CS2 program. The background was of a light grey color on every picture to have a neutral influence on any viewer's perception. To measure self-esteem level of the participants Rosenberg's self-esteem test (see Appendix 2) was used. The validity of this instrument was checked on sample, for which the scale was developed. It consisted of 5024 High School Juniors and seniors from 10 randomly selected schools in New York State (Rosenberg, 1965). Rosenberg's scale was originally developed to measure adolescents' global feelings of self-worth or self-acceptance, and is generally considered the standard against which other measures of self-esteem are compared. It includes 10 items that are usually scored using a four-point response ranging from strongly disagree to strongly agree. The items are face valid, and the scale is short and easy and fast to administer. Extensive and acceptable reliability (internal consistency and test-retest) and validity (convergent and discriminant) information exists for the Rosenberg Self-Esteem Scale (Blascovich & Tomaka, 1991). Internal consistency: Cronbach alpha (English version) = 0.78

Procedure

Potential subjects from the total students' community were approached and asked to participate in the psychological research study. Respondents were assured of anonymity and were asked to spend several minutes in order to give his or her opinion and to complete the questionnaire personally. Interviewers were asked to remain available if respondents needed any clarification. Participants were informed that this study is going to measure a perception of potential customers. If a student agreed to participate, there were presented 8 pictures of female "salespeople". Female "salespeople" who were presented on the pictures were of different national identities. Two of them were Koreans, two were Kyrgyz, and four were Russians. The pictures which were used were not of real salespeople, but in the research participants were told that they see salespeople on the pictures. The first part of the survey can be divided into three stages. The 1st stage of the research was to determine the perception of attractiveness by customer. The procedure started from placing all 8 pictures in front of the participant. Then the researcher asked participant a question: "Which salesperson she finds the most attractive?" After the decision participant made researcher removed chosen picture, and asks the same question again. Then participant had to choose the most attractive salesperson from 7 pictures which were left. The same procedure lasted until all the pictures were ranged. 2-nd stage consisted of the same pattern of actions. All the removed

pictures were again placed in front of the participant. The only difference was in the asked question. The researcher was asking this time: "Which salesperson the participant finds most similar to her?" Similarity was considered in terms of the way participant understood this word. If participant asked what researcher meant by the word "similar", then researcher told that they should chose a salesperson by any characteristic, they find similar. After all the pictures were ranged from the most similar to the less, 3-rd stage came to the turn. That time the researcher asked participant to imagine a situation when she comes into the mall and sees 8 stores with similar clothes. Each store has its own salesperson, and these salespeople were presented on the given pictures. The researcher asked the question: "From which salesperson would you more be willing to buy a product?" After choosing one picture, which was taken away, the question was repeated to the respondent again. And the same procedure took place the same way as in the stage 1 and stage 2. After all 3 stages were completed the participants were given Rosenberg Self-Esteem Scale. To reduce potential bias, they were asked not to identify themselves anywhere in the questionnaire.

Results

The results of the research showed that the age of participants varied from 17-23 years old. The average age of sample was 22,02 with standard deviation of 1,44. In order to determine the existence of correlation and to support or reject Hypothesis 1, which states that if customer finds the salesperson attractive she is more willing to buy from this salesperson, Spearman's correlation was conducted. The analysis indicated that correlation between presented two variables existed. The correlation is shown to be significant, and is positive (Spearman's correlation = 0,492, Sig. (2-tailed) = ,006). In order to see results more clearly, pictures were analyzed separately. Pearson's correlation was used to determine the correlation of attractiveness and effectiveness factor separately. Pictures #1,2,3,5,6,7,8 have a significant results and strong positive correlation between attractiveness and effectiveness variables. Only results for picture # 4 showed not significant results. Therefore, the Hypothesis 1 was confirmed.

Hypothesis 2, which states that if customer finds salesperson as similar to herself, she is more willing to buy, was evaluated also through conducting the Spearman's correlation. Correlation between similarity factor and effectiveness (willingness to buy) is positive (Spearman's correlation = 0,460, Sig. (2-tailed) = ,006). Analysis with the use of Pearson's r of each picture separately demonstrated (see table 6) that all pictures had a significant correlation of variable. Therefore, the Hypothesis 2 was also confirmed.

To investigate any significant correlation between self-esteem and attractiveness-effectiveness index, Spearman's correlation was conducted. In order to determine whether Sub Hypothesis 1 is supported or not, the index of such variables as attractiveness and effectiveness was counted. The mean of attractiveness -effectiveness equals to 5,908. Results were found insignificant. Correlation was not found (Spearman's correlation = -,107, Sig. (2-tailed) = ,417). Therefore, Sub Hypothesis 1 was not confirmed.

The most attractive picture was picture # 4 with the mean score of 7,3. Analyzing the results of this picture, self-esteem scores were also taken to find out if there was any correlation. As shown on scatter plot, people with low self-esteem rated attractiveness over entire range but in low half of similarity.

According, and relying on the results on mean of attractiveness-effectiveness index = 5,908, and mean of similarity-effectiveness index = 6,275, Hypothesis 3, which states that attractiveness factor influences more than similarity factor was confirmed. Attractiveness shown to influence more on effectiveness than similarity, but unfortunately, the difference of the results is very small. Given two variables

almost stay on the same level. Therefore, results do not show for sure that attractiveness factor influences more than similarity factor.

Discussion

The traditional practice of emphasizing "good appearance" for salespersons makes sense. The "beautiful-is-better" stereotype is not myth; it has empirical validity. Moreover, we seem quite willing to allow this stereotype to affect our behavior as consumers as well as in other walks of life. Such behavior may not be wise and privileged on the basis of an unearned characteristic such as physical beauty is hardly democratic yet it seems to be a fact of life. It is not surprising, therefore, that companies want their salespersons to be good-looking, because this characteristic appears to make them more effective.

The findings of present study indicate that attractiveness factor influences positively on customer's perception. As previous works made by Reingen and Kernan (1993), Beehr and Gilmore(1982) in this field indicated the positive influence of attractiveness, present research supports previous results. According to Beehr and Gilmore (1982), attractiveness sometimes can be viewed as a job-relevant factor and therefore is systematically an advantage or not an advantage, depending on its job-relevance. The results of present research determined that attractiveness as a job-relevant factor for such profession as a salesperson. In culture of Central Asia physical attractiveness plays a big role as well as in the West (Reingen and Kernan, 1993), and managers, who want to gain success, should pay more attention to those whom they hire. In present research salespersons and participants were all females. Future research can be concentrated on a difference of female and male perception. Since, DeBruine (2004) found that facial resemblance is a cue of kinship to which humans respond differently in social and mating contexts, the results of present research can be explained from this point of view. Same-sex faces elicit judgments of non- sexual positive regard, which cues of kinship should increase. Female judge other females with positive regards and therefore, are more willing to buy from them.

There is a similar research found which was conducted in the United States. The results showed that more favorable selling skills are attributed to physically attractive salespersons than to their unattractive counterparts (Reinger and Kernan, 1993). The process of Reinger and Kernan's (1993) work differs from ours, but the underlying context involved seem quite similar. Present research was concentrated on Central Asian region, but the results seem to show related results to Reinger and Kernan's (1993) study. The support that was gained for attractiveness hypothesis consistent with the extant literature and suggests that theories and constructs used in developed countries may have similar meanings and behavioral implications in developing countries. Reinger and Kernan, (1993) suggested that most extant research on "physical attractiveness" (including their article) really shows, then, is the effect of facial beauty. In present research salespersons were photographed at full height, which made it one step forward in the sense of studying this field.

It was important to see the results on Central Asian region since there is different understanding of buying and selling processes. Andaleeb and Anvar (1996) conducted a research in developing country on the topic of trust of customers toward salespersons. They suggest that there are several reasons of why many theories must be checked in particular region such as developing countries, before applying them. First, customers can encounter substantial price variations for even slightly differentiated products. In fact, prices can vary not only from one store to another but also from one transaction to the next in the same store. When customers can not rely on stable prices, often because of the opportunistic inclinations of some retailers, they engage in price shopping that can involve substantial costs with regard to time, transportation costs, and verification activities. These costs can be alleviated substantially when customers can trust

salespersons (Andaleeb and Anwar, 1996). In Kyrgyzstan people can not rely on brands and find the only store to buy from, because there are not a lot of brand stores. All the stores have similar goods, what makes it harder for customer to rely on the same store over and over again. Another reason is that transaction process entails additional risks. Once a product is purchased, it may be very difficult to return, should the consumer dislike the product or find some fault with it. While recourse to legal means is available, getting the law to respond effectively often represents other challenges. Under the circumstances a salesperson could easily be manipulative and knowingly sell a faulty product. A trusted salesperson is not expected to be manipulative or opportunistic (Andaleeb and Anwar, 1996). Because of these two reasons people pay more attention to salesperson who is a middleman. In the developing countries such as Kyrgyzstan people have fewer opportunities to rely on some external factors such as brand.

It is important for international marketers to emphasize this quality among the retail sales personnel they select. Since developing countries are characterized by seller's market conditions, salespeople may not always be inclined to behave in likable ways, especially because of the large volume of customers they encounter everyday. The results suggest that when salespeople lack likable qualities, this may cause them to lose customers. Especially when alternate retail outlets become available, customers will take their business from existing establishments if they are not treated properly (Andaleeb and Anwar, 1996).

At the same time people prefer to buy from those whom they find similar to themselves. As a support of such results Middlebrook (1936) states that an increasing of similarity of persons with whom one expects to affiliate will increase affiliation.

Middlebrook (1936) met the same problem as present research did. What is similarity? Someone in the same situation? Someone with a similar personality? Someone with a social status? Someone of similar intelligence and ability? Someone of the same race (Middlebrook, 1936)? When the question about similarity was addressed to the participants, it was not clearly formulated to what particular factors similarity factor refers. It was done in order to determine what factors' participants apply in order to find similarities with other people. The results show, that most of the participants were relying on race/ethnicity factor in the first place. Since Kyrgyz nationality population prevails in Kyrgyzstan over all other nations it would appropriate to hire salesperson of Kyrgyz nationality in order to raise effectiveness.

Another theory which can explain the results of present study is a social comparison theory (Festinger, 1954). It states that people are motivated to have stable, accurate appraisals of themselves, including their abilities, opinions, and outcomes. According to the theory, although generally people prefer to evaluate themselves using objective and nonsocial standards, if such information is unavailable to them, they will compare themselves using social information, information about or from other people. Originally, the theory stated that the preferred source for social comparison is a person who is similar to the self (Gilbert, Fiske, Lindzey, 1998).

In a series of experiments investigations Schachter's (1959) was able to show that, under threatening circumstances, among many people, there is a preference to affiliate with similar others in order to compare their feelings and reactions. However, since similarity can be defined in so many ways, isolating the critical aspect of similarity has been the concern of much of the work in this area. Sub Hypothesis 1, which states that salesperson's attractiveness and customer's level of self-esteem interact to determine the willingness to buy goods, was not confirmed, because of several possible reasons. Sample, which was used in present research showed pretty high level of self-esteem. Most of the participants showed a normal/medium level of self-esteem. If sample would have bigger number of people with low and high self-esteem, the correlation could show different results.

Nevertheless, when the picture #4, which was rated as most attractive, was analyzed separately, interesting results showed up. People with low self-esteem rated attractiveness over entire range but in low half of similarity. It means that people with low self-esteem find themselves less similar to salesperson on the picture, which was found most attractive. As tables #5,6 show, participants gave to the picture # 4 such results so the effectiveness was not correlated with attractiveness, but was correlated with similarity variable. Most attractive salesperson shows not to be the most effective one. People with low self-esteem do not find themselves similar to a very attractive salesperson, therefore their willingness to buy is low. The influence of attractiveness has some borders which should be studied and taken under consideration. Griffin and Langlois (2006) conducted a study on the topic of attractiveness stereotype. They have found that unattractive women are at a disadvantage relative to either medium or attractive women. Important conclusion included information that it is more often the case that unattractiveness is "bad" than that beauty is "good." Both adults' and children's ratings of low versus medium, and medium versus high attractive females evidenced the disadvantage of unattractiveness as the principal and most consistent expression of stereotyped judgments based on facial attractiveness. Griffin and Langlois (2006) simply found that unattractiveness factor influences more than attractiveness factor. Applying such information to explain results of present research, it can be concluded that attractiveness factor should be used carefully. As Huitt (2004) stated that we avoid comparisons that make us look bad. One tactic is establishing distance between us and those who are successful. Another form of protection involves downward comparison: the comparison with others who are less fortunate or successful. Such phenomena is called Personal Relative Deprivation, which is a feeling of resentment and perception of injustice produced by a comparison between oneself and similar other (Runciman, 1966). Individuals are likely to perceive more deprivation in comparison with more advantage targets, and less in comparison with targets who are similar to them (Crosby, 1976). Simply saying the individual feels inequality with the "rival" in some aspect and his or her inferiority. Customers feel more comfortable with those salespeople whom they find on the same level of successfulness. The feeling of deprivation makes them rate the most attractive person (picture #4) as not effective. More researches should be conducted in order to determine the limits of an influence of attractiveness.

Hypothesis 3, which states that attractiveness factor, influences more than similarity factor was supported. Result did not show a big difference in the correlation score. What can be concluded from the results is that such variables as attractiveness and similarity influence effectiveness almost on the same level.

There are limitations to this study must be addressed. The results are limited due to the relatively small sample size of 60 participants in a particular territory. Moreover, since sample was assigned randomly, most of the participants were people of Kyrgyz nationality (41,7%). Since, results show that participants chose similar salesperson mostly according to her nationality, future study can take under consideration this report, and to assign a sample where the number of participants of the same nationality would be equal.

Researchers consistently are searching for the tools which can improve and higher the effectiveness of salesperson's performance. Present research was one of the many researches, and it can be improved in the future. As a result of present research and according to many verbal interviews with participant, it was found that many other factors and variables influence the choice of the best salesperson. However, attractiveness and similarity factors, while an important predictors of the effectiveness and success, cannot be the only area of investigation. It can be researched whether people prefer to buy from those whom they trust, or from those who will not look at them with high attitude. Another factor of the research, which can be improved is a validity of pictures, which were presented. Since only 8 pictures were used, the results can be improved by adding a bigger amount of

pictures. Another factor is a nationality. On the pictures "salespeople" of Korean nationality and "salespeople" of Kyrgyz nationality looked the same. In order to differentiate this factor picture can be presented separately. The numbers of different nationalities can be increased in order to raise the validity.

In the present research, only female students were participated, what gave a chance to analyze a particular group of people. Since 3 hypotheses were supported, this research can be broadened by adding another gender. It can be predisposed that in case with men, attractiveness will have only positive effect. Personal Relative Deprivation will not influence the choice of men, because they will not compare themselves with the women.

Results show that attractiveness factor is one of the main determinants of the effectiveness of a salesperson both in the developing country such as Kyrgyzstan, and in the United States, which is a developed country. Further studies should connect and find the difference between developing and developed countries. Brand reliance in developed countries can decrease the influence of attractiveness factor; therefore such question can lead to some new studies.

There are a lot of other variables that should be studied. Even though American and European researches studied a lot about this topic, Central Asian region still stays unlearned. Psychological influence can play a huge positive role in the relationship between customer and salesperson. For customer, salesperson will present better services, because of better understanding of customer's psychology. For salesperson, knowledge will make it easier to communicate with potential customer.

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Отношение к Деньгам как Психологический Феномен.

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В настоящее время заметно выросло внимание психологов ко всем формам поведения, которые в той или иной форме связаны с денежными средствами; по всей видимости, это связано с их вниманием на социальные процессы (так, например, купля-продажа прямо связана с общением) и с зависимостью их использования от личностных характеристик индивида. Работа, вкратце излагаемая ниже, привлекла внимание оргкомитета Международного конгресса по прикладной психологии и была включена в повестки дня пленарного заседания, но не была доложена по причинам, не связанным с ее содержанием.

Исходная позиция авторов базировалась на известном положении З. Фрейда о трех фазах развития либидо, оральной, анальной и генитальной, которые могут оказывать влияние на определенные особенности поведения.

Предметом нашего исследования являются поведенческие формы, выражающие отношение к деньгам. Мы предположили, что на эти формы поведения оказывает влияние, как способ получения денежных средств, так и личностные характеристики. Мы исходили из предположения, что индивиды дифференцируются по формуле 3:3: 3. А именно, основные формы поведения, это получение, сохранение и трата денег (За). Поведение может выражаться в предпочтении одной из этих форм. (Трате посвящено в частности, исследование Ж. Батая, полагающее, как нам кажется, фундаментальное значение). Соответственно, получение можно поставить в соответствии с оральная, сохранение- с анальной и трату- с генитальной фазами. По отношению к деньгам в обществе можно выделить три основные группы: одна ориентируется на получения дохода за счет предпринимательской деятельности (бизнесмены), для второй характерно регулярное получение заработной (представителями этой группы могут послужить преподаватели и сотрудники АУЦА) и третья группа не имеет собственных источников дохода или заработной платы, а находится на содержании родных и близких (в эту группу входят, например, студенты АУЦА), (Зв). И наконец, на отношение к деньгам влияют личностные характеристики: агрессия (конструктивная форма по Аммону), тревожность и уровень эмоционального интеллекта (Зс). Эти характеристики, могут быть переменными, связанными с изменениями материального положения, как правило, влияющими на поведение.

Гипотезы исследования:

1: В группах бизнесменов, сотрудников АУЦА и студентов АУЦА будут различия по средним величинам поведенческих форм выражающих отношение к деньгам (трата, сохранение и получение) и различия по личностным характеристикам (агрессия, тревожность и эмоциональный интеллект).

2: В группах бизнесменов, сотрудников АУЦА и студентов АУЦА будут различия в корреляции между поведенческими формами выражающими отношение к деньгам (трата, сохранение и получение) и личностными характеристиками (агрессия, тревожность и эмоциональный интеллект).

Метод

1. Тест поведенческих форм, выражающих отношение к деньгам
2. Тест руки
3. Тест реактивной и личностной тревожности Спилбергера- Ханина
4. Тест эмоционального интеллекта

Выборка- 92 человека, подразделяемых на 3 группы.

Главным критерием выбора групп был способ получения денежных средств.

Первая группа (бизнесмены) это 32 частных предпринимателя рынка «Дордой». Главный источник денежных средств для них- это доход за счет предпринимательской деятельности.

Вторая группа это 16 преподавателей и 14 сотрудников иного профиля АУЦА, главный источник денежных средств - заработная плата.

Третья группа это 30 студентов АУЦА, которые не имеют собственных источников дохода, а находятся на содержании у близких.

Результаты

Гипотезы исследования частично подтвердились. Так по всем группам подтвердились различия в средних величинах поведенческих форм, выражающих отношение к деньгам, и по средним величинам личностных характеристик.

По средним величинам поведенческих форм, выражающих отношение к деньгам, выяснилось, что лица, в сущности, не являющиеся состоятельными собственниками или регулярно поручающими заработную плату, а равно студенты относятся к трате денег свободнее представителей остальных групп. И, напротив, с наименьшей охотой тратят деньги бизнесмены (конечно, надо иметь в виду относительную величину трат, у бизнесменов она гораздо выше). По личностным характеристикам выявилась статистически значимая разница по агрессии и эмоциональному интеллекту. Соответственно, самый высокий уровень агрессии оказался в группе собственников, предпринимателей (бизнесмены), а самый низкий- у группы студентов. Как и следовало ожидать, самый высокий уровень эмоционального интеллекта оказался у группы преподавателей и сотрудников АУЦА. Наиболее низкий его уровень оказался у группы бизнесменов. Таким образом, выявилась известная зависимость между личностными характеристиками и способами, от которых частично зависит само получение денежных средств. Например, чтобы бизнесмен получил определенную сумму денежных средств, он должен обладать повышенной конструктивной агрессией.

Подтвердилось, что есть разница в корреляции между поведенческими формами, выражающими отношение к деньгам и с личностными характеристиками. В группе бизнесменов была обнаружена наиболее высокая корреляция между получением денег и реактивной тревожностью (0,35/значимость 0,053), а так же между сохранением денежных средств и реактивной тревожностью (0,414/ значимость 0,02).

В группе преподавателей и сотрудников АУЦА была найдена наиболее высокая корреляция между тратой денег и реактивной тревожностью (0,491/ значимость 0,006), а так же между тратой денег и личностной тревожностью (0,398/ значимость 0,029).

Тем самым, косвенно подтвердилась мысль Майкла Балинта, что, чем важнее факт для индивида, тем большую тревожность вызывает его изменение.

Полученные результаты указывают на то, что в дальнейшем исследовании большое значение будет иметь такая переменная, как реальная и относительная величина денежных трат и сохранения сумм.

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II. Contemporary Theory and
Methodology in Psychology

II. Современная Теория и
Методология в Психологии

О Тестировании Понимания.

Арон Брудный

Эти заметки касаются методов, применимых при исследовании понимания. Ранее мы уже отмечали, что, в противовес классическим методологическим постулатам, не действительность служит предпосылкой понимания.

Основополагающая философская категория – возможность. Развитие есть движение в пространстве возможностей, порождающее события и вещи. Возможность в принципе неистинна; время превращает ее либо в истину, либо в ложь. Вещь – реализованная возможность, события – реализуемая. Свойства вещи сокращают расстояние между тем, какой она *является* и что она *значит* для субъекта. Фундаментальный феномен духовного существования человека составляет понимание. Трагедия человека есть проявление и следствие непонимания роковых (объективных) сил. Процесс понимания протекает в трех когнитивных полях: *в поле 1* – фрагментарно представлен действительный мир (в смысловом восприятии субъекта), *в поле 2* – доказательные суждения, включая счетные операции, *в поле 3* – повествование о действительных и возможных событиях. Для *поля 1* определяющим является противопоставление *есть-нет*; для *поля 2*: *доказано - не доказано*; для *поля 3*: *добро- зло (должно - не должно)*. Функционированию полей понимания соответствует соотнесение фактического, логического и аксиологического в актах мышления.

Для эффективности процесса понимания играет особую роль то, что Карл-Густав Юнг называл «активным воображением», предполагая, что воображаемые образы «живут своей жизнью и что символические события происходят согласно их собственной логике, – конечно, если в их жизнь не вмешивается сознание».¹ Но как добавляет Беннет, очень часто сознательный разум все-таки вмешивается в активное воображение. На месте факта оказывается фактоид, его подобие. Нередко с фактоидами, «временными помощниками» имеет дело и второе поле понимания. Третье поле, в котором одно из важнейших мест занимают продукты активного воображения, оказывают огромное влияние на перестановку компонентов нарратива. В драматургии общеизвестны приемы, которыми с блеском пользовался Дж. Б. Пристли («Опасный поворот», «Время и семья Конвей»). В психологическом исследовании понимания перестановка элементов нарратива позволяет нам судить и о структуре текстов и об их понимании.

В теории понимания текст рассматривается как смыкающий компонент акта коммуникации. В тексте действительность отражена в доступной пониманию форме. В этом заключается его фундаментальная психологическая особенность. Анализ и обобщение экспериментальных данных, характеризующих психологические механизмы, порождающие различные варианты понимания текстов в процессе общения, показывают, что смысловая связь между компонентами текста есть форма связи между участниками акта коммуникации. Смысл выступает при этом в нескольких функциях: он скрепляет основные элементы текста, активно способствует репродукции его содержания, позволяет соотнести содержание каждого данного конкретного текста с действительностью. Тем самым смысл следует рассматривать в отношении к памяти, к реальной действительности и к конкретным языковым средствам, образующим текст.

¹ Jung C. G. Fundamental Psychological Conceptions: Seminar given in London, 1935, pp. 217, 218.

Любопытным предметом исследования понимания текстов служит заглавие, которое в свернутом виде представляет собой деиктический знак, позволяющий очертить плинф (plinthos), периметр теста. Серия заглавий

Как я это вижу...

Против ветра
Туз трэф
Лицом к стене
Стрелочник судьбы
Стучи по дереву
Бегство от демонов
Чертова кошечка
Гибель прошлого
Одна поет, другая нет
Я свою силу знаю
Волшебное зеркало
Город сокровищ
Влюбленная в ангела
Маленькое чудо
Студентка университета

(испытываемые должны были изложить, фабулу новел или сценариев) позволила выявить уровни понимания. Так, «Чертова кошечка» на 1 уровне строится на операциях с фактоидов (черной пантерой), на 2 уровне наименование подчеркивает характерологические особенности героини, на 3 уровне – это прозвище пиратки а затем- название корабля. Другие примеры также позволяют установить метафорические, (реже -метонимические) корни заглавий. Разумеется, фабулы как таковые, как мне представляется, могут коррелировать с применением ТАТ. Своеобразное место в эксперименте по исследованию направленности личности, самоотношению, пониманию себя занимают классические китайские Цзао-Цзуань. Особое внимание уделял этой форме выражение мысли Берт Брехт в его знаменитых притчах о господине Койнере. Вот пример Б.Брехта из серии «Неудобно», названный «Мудрость мудреца в его поведении»:

К господину К. Пришел некий профессор философии и изложил свои взгляды. Через некоторое время господин К. Сказал ему:

- Ты неудобно сидишь, ты неудобно говоришь, ты неудобно думаешь.

Профессор разозлился и произнес:

- Я хотел узнать что-нибудь не о себе, а о содержании того, что я сказал.

- Там нет содержания, - сказал господин К. – Говоришь ты темно, и от слов твоих не становится светлее. Видя, как ты себя держишь, я теряю интерес к твоей цели.²

Но, если отвлечься от проблем литературно-художественных, три серии Цзао-Цзуань:

«Не измерить расстояния», «Неудобно», «Хотел бы да не получается» выдерживают сравнения с текстом «колических фраз», а в аспекте интерпретации поставленных вопросом позволяют собрать материал по многим аспектам процесса, понимания

Цзао Цзуань

Не измерить расстояния

² См. Б. Брехт. Истории господина Койнера. Цюрихская редакция. М.: «Текст», с. 3.

- От любви до ревности
- От США до Мексики
- _____
- _____
- _____

Неудобно

- когда предоставили слово, а не знаешь, что сказать
- когда _____
- когда _____
- когда _____

Хотел бы, да не получается

- _____
- _____
- _____
- _____
- _____
- _____

Проходят

Alter Ego

Он (а) такой же, как и я, но с _____
но без _____

Я хотел бы изобрести

Машину (прибор) _____ способ (метод)
Для _____

Какую бы я придумал игру

- 1.
- 2.

Что и кто

434

1 (один, одна, одно)

9 636 200

2

6 млрд. 600 млн.

Благодаря пониманию текст выполняет свои главные функции в обществе. А именно: (1) текст выступает в роли транслятора, то есть передает различного рода сведения. В силу этого (2) текст способен выполнять и другую смысловую функцию – познавательную: понимая его содержание, человек в состоянии узнать нечто для себя новое и способствующее тем самым познанию окружающей действительности и внутреннего мира самого человека. Текст (3) также обладает мнемонической функцией, то есть сохраняет и транслирует во времени некоторую информацию.

«Человек не последнее слово бога, потому что бог никогда не перестает творить. Если мы не сможем осуществить его замыслы, он воспроизведет на свет существа, которые смогут».³ Эта проблема кардинальная. Возможно, все развитие техники неосознанно ориентировано на создание «существ, которые смогут». Но поныне машина- вещество, а не существо, также как цивилизация – мир вещей, а культура – мир знаков. Можно предположить, что цель – это нечто⁴, движение - все, а путь – судьба.

³ Шоу Б. Полное собрание пьес. 1971. Т. 5. С. 141.

⁴ «Человеческая жизнь состоит в преследовании всевозможных целей: высоких, низких, важных, пустых и т.д., причем применяются все степени человеческой энергии. (...) Это наводит на мысль, что надо отделять самый акт стремления от смысла и ценности цели и что сущность дела заключается в самом стремлении, а цель дело второстепенное» (Павлов И.П. Полн. собр. соч. М.; Л., 1951. Т. 3. Кн. 1. С. 307)

Человек - Основные Психофизиологические Закономерности.

Дмитрий Кавтарадзе

Человек как животное не описан.

Э.Орлова

Есть известная неловкость в отношении круга моих друзей и коллег - психологов профессоров Арона Брудного, Александра Асмолова, Бориса Братуся, проникновенных миро откровений Геннадия Симкина, психотренера Адольфа Хараша и безвременно ушедшего Виталия Панюшкина в обобщении формулировок гуманитарных законом поведения человека и популяции.

Неловкость происходит от признания важности бесед для приближения к своевольному обобщению совместных многолетних размышлений, интерпретации, как смысла, так и авторства. Благодарен А.А. Брудному и В.А. Иванникову за благожелательно-требовательные коррекции этих страниц.

Не раз случалось в углубленных беседах-проникновениях с Борисом Братусем высказывать удивление «ну, почему, вы, психологи, не овладеете лаконичной формой умозаключений и не подарите нам если не формулы (давление математического императива), то, ну хоть какие сможете, формулировки законов, назовем их гуманитарными?». Спустя ряд лет остались впечатления безрезультатности лих призывов, которые получили известное объяснение - появлением в Интернете словарей психологических законов.

Толкаемый «неизвестной силой» обязательства перед ними, мною вопрошаемыми. Осталось постараться самому выстроить и завершить ряд предложения, впрочем имеющих рабочий, часто дискуссионный и метафорический характер.

Гуманитарные метафорические ряды. Индивид.

1. Неоконченное действие закрепляется в памяти (Б.И. Зейгарник).
2. Предмет обращения человеком антропоморфизируется. превращается в субъект общения (кухонная утварь, инструменты и др.) и наделяются человеческими и личностными свойствами, чертами, обживаются и «очеловечиваются».
3. Человеком рождаются, индивидом становятся (А.Н. Леонтьев), личность отстаивают. (А. Г. Асмолов).
4. Смысл не может быть создан, а лишь обнаружен (В. Франкл).
5. Смыслы создаются автоматически без нашей воли (Г.Н. Симкин).
6. Создание смысла - переживание, последствие без действия, новый смысл; меняется мотив. (В.А. Иванников)
7. Человек человеку - инструмент (Л.Б. Филонов).
8. Сдвиг мотива на цель (А.Н. Леонтьев).

9. У бюрократа происходит смещение с цели на «откат» (AS' Асмолов).
10. Отличия и недостатки сначала, замечаются у другого человека, и лишь затем - у Себя.
11. Поиск причин негативных явлений человек начинает с внешней среды, т.е. не с себя.
12. Совесть - внутренне чувство (психо-функциональный орган) индивида соотнесения своих и общественных (популяционных) интересов.
13. Совесть - сдвиг к началу предстоящего действия. Стыд - это после, останавливает совесть (В.А. Иванников).
14. Малый риск воспринимается так, как будто его нет вообще (Иванов В.И.).
15. Закон накопления аффекта: малые раздражения способны накапливаться и проявляться в спонтанных (разовых) эмоциональных и агрессивных актах.
16. Горизонт времени имеет гендерные особенности: у женщин максимален в период 20-35 лет, у мужчин после 35 лет.
17. Сказать важнее, чем услышать.
18. Сказать то, что тревожит важнее, чем устранить причину тревоги (Г.В. Добровольский)
19. Человек в своем развитии признает ценность единичного (Г.И. Симкин).
20. Вид Homo sapiens (в процессе) отказался от инстинктивных, исторически закрепленных механизмов регуляции и табу вида и не освоил культурных механизмов - их «заместителей», [табу - деспециализированное задание образа жизни. Есть культурное табу - нельзя одевать одежду шамана. В.А. Иванников]
21. У вида есть событийная цепочка развития - этапы реализации тендерной программы. Программа разворачивается по этапам последовательно. Прерывание программы останавливает ее. Продолжение программы начинается с момента остановки ее реализации. Перескакивать через не пройденный этап собственного развития индивид не может.
22. Процессы психического становления, будучи приостановлены, продолжают с момента приостановления развития, подобно беременности кенгуру, приостанавливающейся в период бескормицы и продолжающейся после получения кормовой основы (спорно).
23. Человеческий детеныш социализируется в полном объеме только в семье и в обществе.
24. Стремление обобщить без достаточных оснований, расширить частное до общего, универсального (Б.С. Братусь).
25. Стремление к получению максимального ощущения (обладания) желаемого: отражено в поговорках типа ... и рыбку съесть... Это стремление мало поддается рациональному воздействию. А регулируется воспитанием умеренности в получении положительных ощущений.
26. В определении смысла текста доминирует контекст.
27. Социальные процедуры направляют смысл.
28. Так как процедуры становятся сущностью, то нельзя умножать процедуры без необходимости (удлинение лезвия Оккама - также процедура).
29. Общественная ценность обладания возможностями более значима, чем их использование.
30. Комплекс социальных факторов среды вызывает комплекс личностных поведенческих реакций - пример воздействия игровых ситуаций.
31. Осуждение вытесняет понимание и занимает его нишу.
32. Механизм личностной защиты приобретает рациональный облик: научные концепции формы защиты от «кого-то» и «чего-то» (З. Фрейд, А.А. Брудный)
33. Проективная защита (делегирование ?!) недостаток приписывается тому, кто против нас (З. Фрейд, А.А. Брудный)
34. Рационализация - придает разумное объяснение тому, что нам хочется, (А.А. Брудный)
35. Наука - придает интимность происходящему. (А.А. Брудный).
36. В науке роль вытеснения огромна. Ч. Дарвин написал о происхождении человека

- через половой отбор, а стали писать о значении труда (А.А. Брудный).
37. Чувство стыда - защищает от того, что нельзя и свидетельствует о преодолении препятствия, это психологическая защита от признания нарушения. (А.А. Брудный).
 38. Человек думает всем телом (А.А. Брудный).
 39. Национальные парки, заповедники - форма сублимации того, что мы нарушаем в форме абсолютного/частичного запрета. (А.А. Брудный)
 40. Потребность в визуальной информации имеет психофизиологическую природу (И. А. Бернштейн). Информация (по А. А. Брудному) - это то, чего не было. А на бессознательном уровне (Г.Н.Симкии) было. То, что было и хранится в памяти - это тезаурус (по Ю. Трейдеру). В силу психофизиологического характера эта потребность относится к типу маниакального нарастания (по Д. Медоузу), т.е. может управляется внешним воздействием. Это воздействие регулируется важным элементом культуры - этическими нормами, они ограничивают область поиска новых источников информации и их характер. Синдром «Флоренции» - люди «чумееют» от обилия предметов искусства. Имеет место гиперстимуляция. Она ограничивается самим индивидуумом при контроле силы восприятия, ее оценки как избыточности получаемой информации.
 41. Гиперстимуляция приводит к возникновению зависимости от этого типа стимула и в силу закона Вебера-Фехнера вызывает потребность в усилении воздействия. Вне культуры, несущей охранительную функцию для популяции, происходит разрушение личности и группы, в том числе в случаях встречи с новой, чужой культурой.
 42. Закон Собакарь-Брудиого-Щедровицкого: в культуре транслируются структуры, которые затем получают новое наполнение и затем, могут быть перенесены из игрового мира условностей в действительность.
 43. Физиологический механизм удовольствия у человека вне этических ограничений не знает границ, приводит к перенасыщению и разрушению. Формируются искусственные потребности в получении удовольствия. Также можно вызвать удовольствие у животных.
 44. Примитивные конструкции принимаются без критических усилий, а сложные категории не проходят через фильтр доступности восприятия.
 45. Объяснение принимается за саму правду.
 46. Сейчас нельзя сделать что-то «одно» (Б.С Братусь).
 47. Сложную задачу можно решить только для себя (Б.С Братусь).

Популяции.

48. Популяция объединена общими релизерами, ритмами для синхронизации накопления энергетических ресурсов для ее собственного развития.
49. Общество регулирует индивидуальное развитие условиями среды. Максимального развития индивид достигает как мотивацией, так и понуждением в рамках биологически predetermined онтогенезом возможностей. Подобно головастикам в луже, регулирующих рост других головастиков выделением веществ тормозящих их рост; при отдельном выращивании головастиков они развиваются успешнее. У человека - наоборот (В.А. Иванников).
50. В популяции есть культурно закрепленное разделение по хронотопам ответственности - ожидания дальнорочности от «верхов» и конкретности ответственности низов. Правильно понимать латинскую фразу *Divided impera* так: «Разделяй по хронотопам и ...властвуй».
51. Популяция создает совместный ресурс развития, архитектура которого образована этикой. («Этосфера» ГЛ. Симкина).
52. Потенциал созданный общностью интересов популяции имеет энергетическую, этическую и коммуникационную основу. Этот общественный ресурс может

пополняться новыми связями и убывать с утратой доверия, приводящего к утрате, ослаблению связей. «Не кричи - волки!» (Л.Н. Толстой) - древнейшая метафора, описывающая феномен утраты ресурса безопасности. У животных инстинкт, у людей - культура. Оба механизма имеют витальное значение. Популяционный ресурс имеет различные формы. Например:

-присоединения - мода

-таксис к себе подобным - общность бытия : со-бытие (по В.И. Слободчнкову).

-совместная вера и доверие - выборность - доступ к ресурсу популяции.

53. Этика, призванная заменить утраченные инстинкты особи в популяции - это отрицательная обратная связь в маниакальной петле усиления любых желаний (по Деннису Медоузу).
54. Потребность в занятии максимально высокого места в структуре популяции включает поиск более сильного, лидера, кумира, «звезды». Ценность места в иерархии доминирует над смыслом структуры.
55. Общественная природа человека предопределяет его стремление к нахождению в группах, общинах. Они в свою очередь имеют иерархию. Процесс (динамика) формирования иерархии видимых разумных границ не имеет и представляет собой само усиливающуюся систему, ограничивает которую - этика популяции (замена инстинкта). (У общества - иначе: иерархия особей главное оставить мощное потомство. В.А. Иванников).
56. Стратегия выстраивания структуры популяции: сначала осваивается горизонталь территории, затем вертикаль (Г.Н. Симкин).
57. Следствие положения В.И. Вернадского «Жизнь была всегда»: человеческая популяция стремится к поддержанию представительства индивидами разнородности психических функций. Ансамбль разнообразных психических функций представленных различными индивидами обеспечивает психологическое равновесие популяции.
58. Гомеостаз популяции поддерживается гетерогенностью психических доминант.
59. Действия человека - следствие всегда интерпретированной информации: танцы под слышимую «внутреннюю» мушку, ответ на вопрос, который был услышан, а не задан. (Т.е. действием управляет образ. В.А. Иванников).
60. Решение проблем объединяет людей.
61. Мы реагируем быстрее, когда мы хотим противостоять. [We do react faster when we want to oppose (E.I. Legh)].
62. Мотивация имеет нелинейный характер, гипермотивация снижает реакцию. (Закон Йоргсена-Додсена). (Увеличивается число ошибок В.А. Иванников).
63. Понимание включает три элемента: а) способность восприятия реальности и вымысла в их единстве, б) установление логической (причинно-следственной) связи, в) закрепление в смысле.
64. Блокирование информации обеспечивается фильтром понимания: что не понимается, то отрицается. Понимание может происходить либо сразу, либо после специальных усилий.
65. Чем ниже потенциал понимания, тем выше протестный потенциал личности в социальных группах. Спорно.
66. Основа объединения групп и партий - области понимания и непонимания. Непонимание - отрицание объединяет активнее, чем понимание. Есть два механизма объединения: на основе единства непонимания-неприятия - часто эффективно для сопротивления и разрушения. Второй - на основе понимания как объединяющей силы и эффективно при необходимости созидания - ПОЗИТИВНЫХ действий.
67. Число научных статей обратно пропорционально корню квадратному от их длины (А. Моль., 1973, рис. П-10).

68. Коллективная память популяции включает как (знание, представления), так и структуру отношений. Структура отношений передается практикой участия. включением в эти отношения и вне практики не сохраняется. Сорок лет отсутствия практики рабства стерли структуру отношений рабского поведения. Семьдесят лет отсутствия практики частной собственности стерли отношения в популяции в этой области (Закон Моисея).
69. Образ создается в месте соприкосновения с предметом, уточняется при действии с ним. Истинность - образ строится тактильно. Это объясняет многообразие (т.е. различие образов в обществе (Л.И. Мещеряков, В.А. Иванников).
70. Элиминированные отношения могут реставрироваться через практику популяции.
71. Сейчас у нас «пустыня бесстатусности» (А.А. Асмолов, май 2008). (Пустыня Статусности В.А. Иванников)

Это определение открывает возможность объяснения современного феномена нарастания «массового» разнообразия знаков добровольно имитирующих людьми «свое» персональное отличие от других: Т-майки, тату, пирсинги, графити-«городской татуаж» и др. Личность не определяется, зато визуальная индивидуальность есть. Это позволяет обозначить и уровень статусности по: -экстремальности первопроходцев в моде (достигается «замеченность»). - и Градиенту запаздывания в присоединении к моде. Чем неопределеннее, хаотичнее, не яснее социальная структура, тем выше социальная роль знака как псевдокомпенсации ощущаемой монотонности индивидуальностей.

III. Clinical Psychology: Research and Treatment

III. Клиническая Психология: Современные Исследования и Терапия

Perception of Images of Artificially Constructed Perfectly Symmetrical Faces by Patients with Schizophrenia, and by Healthy People.

By Eleonora Turdubaeva

The present study investigates whether the perception of perfectly symmetrical faces, constructed on the computer, by people suffering from schizophrenia will differ from the perception by control group of people. The previous studies were using the same method of constructing symmetrical faces and were aimed to find the relationship between symmetry and beauty (Knower, 1996); symmetry and health (Reis and Zaidel, 2001), and to find what meaning people ascribe to right and left sides of the human face (Karch, 2006). In other words, they studied the perception of symmetrical faces by normal people. The current study extends this field and introduces a new independent variable and examines the way of face perception by people diagnosed with schizophrenia, in contrast to preliminary studies.

Human beings possess multiple skeletal and anatomical asymmetries (Shkvarilova, 1994), including anatomically and functionally asymmetrical brain. Asymmetry is lack or absence of symmetry; dissimilarity in corresponding parts or organs on opposite sides of the body which are normally alike (Merriam, 1993). In most people the two sides of a face are not perfectly symmetrical and facial asymmetry can also be functional (Thomson, 1982). Facial asymmetry can be produced by structural abnormalities or by unilateral or asymmetrical weakness of the muscles of the face (Thomson, 1982). Structural abnormalities are due to musculoskeletal deformations, soft tissue masses, and tumors (Thomson, 1982). The weak muscles involved in the production of facial asymmetry are the: facial mimetic muscles; levator palpebrae muscles; or muscles of Müller (Thomson, 1982).

The distinction between functional and structural facial asymmetry can be made by observation. Structural facial asymmetry is diagnosed by observing a physical cause for the facial asymmetry. Functional asymmetry is diagnosed by the absence of a physical deformity. The neurogenic system involved in functional asymmetries can be determined by the area of the face involved, the degree of asymmetry at different behavioral stages (crying and quiet awake), and the presence of associated neurological and general findings. Facial asymmetry due to muscle weakness (functional) will disappear when the weak muscle is not being used. This occurs because the facial mimetic muscles, levator palpebrae muscles and the muscles of Müller are bilateral and usually have synchronous and symmetrical activity (Thomson, 1982).

Human facial asymmetry has long been a critical factor for evaluations of attractiveness and expressions in psychology. The study of facial asymmetry conducted by Mr. Smith in Dartmouth College in 1998 suggests that asymmetry of a face forms according to dominant hemispheric specialization of cognitive functions of each individual. In view of the contralateral control of the two hemifaces (below the eyes) by the two hemispheres of the brain, the two sides of the face undergo differential muscular development, thus creating facial asymmetry (Smith, 1998).

The face is an important site for the identification of others and conveys significant social information. Probably because of the importance of its role in social interaction, psychological processes involved in face perception are known to be present from birth, to be complex, and to involve large and widely distributed areas in

the brain. Faces are very complex stimuli, and being able to recognize faces is an important human capability.

According to Merriam Webster's Collegiate Dictionary (1993), symmetry is correspondence in size, shape, and relative positions of parts on opposite sides of a dividing line or axis.

Symmetrical faces in this research are artificially computer constructed faces using the left and right sides of the faces from digitized photographs. Using image processing software, one half of the facial image is duplicated, mirrored along a vertical axis and finally added to the remaining half of the original face. The resulting, perfectly symmetrical face consists either of two left or two right halves of the original face. In the result there are two absolutely different images generated from one face. As two sides of a face are not symmetrical, both faces look odd, and face generated from the left side will differ from the face generated from the right side in shape, features of the face, emotions and hairstyle. The right-right face is wide and round in shape and looks unhappy because angles of eyes and lips look down; while the left-left face's shape is elongate, narrow and looks happier because angles of eyes and lips look upward. If a person's hair is parted at one side than it doubles in symmetrical face causing a different odd hairstyle.

Facial asymmetry has been studied a lot and many researches were conducted to reveal the relationship between facial asymmetry and attractiveness (Knower, 1996) and health (Reis and Zaidel, 2001). According to evolutionary theory faces are supposed to be more attractive the more symmetrical they are. However, studies that used normal photographs and computer generated symmetrical left-left and right-right faces to investigate this question have reported the weak relationship between beauty and symmetry (Knower, 1996). Attractiveness of natural faces was compared to perfectly symmetrical faces constructed on the computer from digitized photographs, in order to assess the role of left-right symmetry in beauty assessment. Three different groups of participants viewed separate series of sequentially presented faces (natural faces, left-left, and right-right) and provided attractiveness ratings on a 5-point Likert scale. The results revealed statistically significant lower ratings for the computer constructed left-left and right-right compared to the natural faces (Knower, 1996). Reis and Zaidel in 2001 presented a study that was directed to find out which half of the face looks healthier. Two different symmetrical faces were generated from normal faces as well. The results revealed that the health judgments made by male and female participants did not differ; composites of the right hand side of female faces were judged significantly healthier than composites created from the left side of faces.

The objective of another research (Karch, 2006) was to determine if systematic differences occur in the way people ascribe meaning to right and left sides of the human face. Twenty-two faces, bilaterally symmetrical, were constructed from 11 photographs. These left- and right-constructed faces were rated 1 wk. apart by 26 raters on nine bipolar adjective scales selected for the evaluative, potency, and activity dimensions of the semantic differential. Multivariate F tests indicated that on seven of the nine bipolar scales the left- and right-sided faces received significantly different ratings. Left facial constructions were rated as healthier, stronger, harder, more active, more excitable, and in the direction of bad on the good-bad scale. Right facial constructions were rated sicklier, weaker, more feminine, softer, more passive, calmer, and in the good direction on the good-bad scale (Karch, 2006). The results of these findings show how normal healthy people perceived symmetrical faces and rated two sides of a face as being different, they rated one face is more positive while the other is more negative. Though several studies investigated the relationship between facial asymmetry and attractiveness, investigated the perception of symmetrical faces, most of them were oriented on normal people and none of these studies focused on patients with schizophrenia or any other mental disorder. The aim of the present study is to examine whether the perception of symmetrical faces by people with schizophrenia will differ from the perception of normal people.

People suffering from schizophrenia were studied a lot in order to discover any possible effects of this disorder on face perception and recognition. Study that was conducted by Toshiaki Onitsuka in 2006 “Functional and Structural Deficits in Brain Regions Subserving Face Perception in Schizophrenia” was aimed to determine whether patients with schizophrenia show less activation in neural networks related to face processing, compared with healthy subjects, and to investigate the relationships between this functional abnormality and anatomical abnormalities in the fusiform gyrus shown with magnetic resonance imaging (MRI). Twenty male chronic schizophrenia patients and 16 healthy comparison subjects underwent high-spatial-resolution MRI. Event-related potentials elicited by images of faces, cars, and hands were recorded in a separate session. The results provide evidence for deficits in the early stages of face perception in schizophrenia. The association of these deficits with smaller fusiform gyrus volume in patients with schizophrenia, relative to healthy subjects, suggests that the fusiform gyrus is the site of a defective anatomical substrate for face processing in schizophrenia (Onitsuka, 2006). Some other studies suggest possible visual-perceptual deficits associated with schizophrenia, and co-existing impairments in attention and visual-perceptual function in people with schizophrenia. For instance, Tatia Lee in 2004 examined if people with schizophrenia show visual-perceptual difficulty and whether different components of attention, namely sustained attention, selective attention, switching attention and attentional control processing, relate to the visual-perceptual function of people with schizophrenia differently. Visual-perceptual abilities were measured by the Hooper Visual Organization Test (HVOT) for visual organization ability and the Judgment of Line Orientation Test (JLOT) for spatial perception and orientation. It was observed that clinical participants performed significantly poorer in both tests. These findings confirm that patients with schizophrenia can have problems with face perception (Lee, 2004).

According to findings in the face perception literature (Rhodes, 1988), faces are perceived as “gestalts” or as wholes and not simply as a collection of isolated features such as the eyes, nose, or mouth. An expression often used to make this point is that the whole does not equal the sum of its parts. Studies reveal that faces are represented by discrete facial features and the configuration formed by these features. The configuration of a face refers to the spatial relations among internal facial features. For example, the distance between the eyes, chin contour, or interactive properties of different facial features convey configural information (Rhodes, 1988).

Several investigators argue that perceptual deficits emerge in people with schizophrenia in tasks that require gestalt, or holistic, processing. The claim is that these individuals perceive objects or scenes in a fragmented or piecemeal way. Cutting (1989) provides several accounts of how Gestalt theory is applied to symptoms of schizophrenia. In one account of delusional perception, he described a perceptual distortion in which elements in the environment appear to be “lifted out of the remainder of the context and stand out”. This attention to detail limits the ability to perceive the overall structure of patterns. Along these same lines, empirical studies indicate that schizophrenia patients have difficulty engaging top-down processes to perceptually organize or integrate visual information. It is suggested that impairments in perceptual grouping result from patients’ inability to form new representations in which discrete elements are combined into wholes (Knight, 1992). Given such deficits, it is possible that people with schizophrenia are unable to integrate features of the face to form a cohesive whole. Visual analysis may be directed at discrete facial features at the expense of perceiving the face as a whole. Several findings in the literature support this possibility. Mandal and Palchoudhury (1989) observed that schizophrenia patients were impaired in making judgments about facial expression (sadness or fear) when the entire face was presented but not when segments of a face (upper segment of eyes, cheeks, and nose) were shown. These results suggest that patients relied only on parts of a face to identify expression. In another study, Frith at 1983 used a task in which faces and non-face objects could be sorted on the basis of their component

features. They found that participants in their control group sorted faces more accurately than objects, whereas patients with schizophrenia sorted faces similarly to objects. These investigators suggested that control participants sorted faces more accurately than objects because the holistic quality of faces allowed for the integration of multiple facial features simultaneously. Schizophrenia patients did not appear to benefit from the holistic quality of faces, as evidenced by their similar sorting of faces and objects. In a third study, Grusser, Kirchhoff, and Naumann (1990) examined the effects of inverting stimuli on recognition memory for faces with emotional expressions. Schizophrenia patients were generally impaired for recognizing upright faces but were not impaired for inverted faces. Grusser proposed that the patients' recognition of inverted faces was normalized because inverting the face diminished its emotional quality and "faceness". Another interpretation is that patients were unimpaired in recognizing inverted faces because inversion of a face promotes analysis of component but not configural features. Together, these findings point to the possibility that patients with schizophrenia are impaired in using configural information to recognize faces. Based on the results of all these studies we can assume that perception of symmetrical faces by schizophrenics will differ from normal control group's results.

However, the series of experiments conducted by Barbara Schwartz in 2002 argue that patients with schizophrenia are not impaired in processing configural features in face recognition. Four experiments were aimed to investigate the specific effects of configural changes on face recognition in groups of schizophrenia patients. In Experiment 1, participants identified facial expressions in upright faces and in faces inverted from their upright orientation. Experiments 2 and 3 examined recognition memory for faces and other non-face objects presented in upright and inverted orientations. Experiment 4 explored recognition of facial identity in composite images where the top half of one face was fused to the bottom half of another face to form a new face configuration. The data from four experiments showed that schizophrenia patients were sensitive to changes in the configuration of the face. In each experiment, the pattern of face recognition for patients did not differ from that for control participants. Identifying facial expressions from inverted faces was more difficult than identifying expressions from upright faces (Experiment 1). Recognition memory for inverted faces was also poorer than recognition of upright faces. As with many previous findings, this orientation effect was greater for faces than for other objects (Experiments 2 and 3). Recognizing facial identity was disrupted in a composite image where the top half of one person's face was fused to the bottom half of another person's face compared to a condition where the face halves were separated non-composite (Experiment 4). These findings suggest that people with schizophrenia do indeed rely on configural information to recognize faces. Schizophrenia patients, like normal volunteers, had difficulty processing the spatial relations between facial features in upside-down faces. The results with the composite technique suggest that schizophrenia patients do not process parts of the face to recognize facial identity; they process the face as a whole (Schwartz, 2002).

This observation is consistent with other findings in the perceptual organization literature. According to Knight and Silverstein (1998), perceptual organization refers to the ability to "rapidly and automatically organize stimulus components into wholes" (Knight & Silverstein, 1998, p. 261). Recent findings indicate that schizophrenia patients perform normally on tasks that use Gestalt grouping principles and symmetrical patterns composed of contiguous components (Chey, 1997). These findings suggest that patients combine stimulus components with strong configural properties into wholes rather than perceiving them as individual elements. It has been proposed that perceptual organization is normal in schizophrenia patients because processing of some visual forms is carried out automatically before attention is distributed to specific features. This type of visual processing occurs with little experience, is seen early in development, and is possibly innate (Chey, 1997).

On the other hand, as it was mentioned before, two symmetrical faces look absolutely different and even express different emotions. In different experiments where was studied an ability to perceive emotions in schizophrenia reported that patients with schizophrenia have problems with recognizing emotions and that might be another argument to support the first and second hypothesis.

Impaired emotional functioning in schizophrenia is a prominent clinical feature that manifests primarily as flat affect. Studies have examined the perception, experience, and expression of emotions in schizophrenia and reported normal ratings of experience but impaired affect identification. Study that was made by Gur and Kohler in 2006 examined relation to emotion processing and neurocognitive measures and reported a prospective study of 63 patients with at least moderate severity of flat affect and 99 patients without flat affect, who were compared on functional domains, emotion processing tasks, and neurocognitive measures. Results showed that patients overall performed more poorly on emotion processing tasks, one that required identification of happy and sad emotions and one that required differentiating among intensities within these emotions. They responded inaccurately yet faster than controls for the intensity differentiation task, suggesting a decomposition of the normal relation between accuracy and speed. Flat affect ratings, compared with other negative symptoms, uniquely predicted performance on emotion processing tasks. Patients with flat affect showed greater impairment in both emotion processing tasks, with the most pronounced impairment for the intensity differentiation task. However, the 2 patient groups did not differ in the neurocognitive profile except for verbal memory. The conclusion was made that flat affect is an important clinical feature of schizophrenia that exacerbates the course of illness (Gur, 2006). The other study was focused on finding the dissociation between the emotional experience and expression in schizophrenia and found that schizophrenics experience emotion alike normal persons with some deficit of perception and usually with different expression of that perceived emotion (Chattopadhyay, 2004).

Emotion perception deficits have been extensively documented in schizophrenia and are associated with poor social functioning. An alternative categorical perception paradigm was focused on distinguishing boundaries between emotions was used to evaluate whether schizophrenia patients demonstrate atypical patterns of categorical perception and a negativity bias in the identification of ambiguous facial expressions. In the results schizophrenia patients demonstrated impaired categorical perception of facial expressions with generally less sharp categorizations of ambiguous stimuli to one emotion category or another. However, patients did not demonstrate a negativity bias in their processing of ambiguous facial expressions (Kee, 2006).

The studies of emotion perception in schizophrenia and their results make assume that patients with schizophrenia will not differentiate emotions on two symmetrical faces; therefore, they will not see any distinctions evaluating them.

Based on all these preliminary studies of face perception in schizophrenia I expect to find the following results:

Hypothesis 1: The Difference in perception of symmetrical faces by different groups will be found.

Hypothesis 2: Healthy people will demonstrate definite differences in evaluation of left-left and right-right faces, while in evaluations of patients with schizophrenia there will be no distinctions found.

Alternative hypothesis: there will be no differences found in perception of symmetrical faces in different groups.

Schizophrenia is considered to be a “split brain” disorder (Strelec, 2002), and patients with schizophrenia demonstrate signs of evident functional asymmetry of the brain hemispheres. Therefore, it can be assumed that present research will make a substantial theoretical contribution to studies of brain asymmetry in patients suffering from paranoid schizophrenia.

Method

Participants

Total of 74 respondents, 37 patients with Schizophrenia and 37 healthy people participated in the study. The sample of patients consisted from 20 males and 17 females, while in the sample of healthy people participated 19 males and 18 females. Patients met all diagnostic criteria for paranoid schizophrenia according to ICD-10. All participants ranged in age from 18 to 60. Mean age for patients with schizophrenia was 36, and mean age for control group was 23. They were ethnically diverse and different in age respondents. Control participants were non-paid volunteers who were recruited from the Bishkek area and from the American University Central Asia. All participants in Experiment read an informed consent prior to their participation in these studies.

Materials

Observational method was used to observe the respondent's behavior during participation in the research.

The materials consisted of twelve computerized images of six people who voluntarily offered their pictures for the Research. Pictures were used of people who corresponded three age groups: 18-24; 30-40; 60 and higher. Each group consisted of two people (one man and one woman). Symmetrical faces were artificially constructed on the computer from these six pictures using a Photoshop Program. For the composite faces, each face was split into left and right segment by cutting a vertical line below the eyes. Then one half of the facial image was duplicated, mirrored along a vertical axis and finally added to the remaining half of the original face. The resulting, perfectly symmetrical face consisted either of two left or two right halves of the original face. Twelve pictures with symmetrical faces were printed on matted colored paper. They were all the same standard size 5x6 cm and were printed on the white background. All pictures were numerated from 1 to 12. Odd numbers (1, 3, 5, 7, 9, 11) were used to number pictures constructed from left sided faces. While right-sided faces were numbered by even numbers (2, 4, 6, 8, 10, 12).

The questionnaire, a two-paged type booklet, consisted of seven scales of evaluation for each photograph. It had five points on each side from zero, and had seven paired opposite adjectives. It represented simple semantic differential, which included only one factor – factor of attractiveness.

Procedure

The participants one by one were shown pictures with 12 symmetrical faces by turn and asked to evaluate these faces on the seven scales. Respondents had to evaluate each picture on each scale and mark any point except 0 (which is a neutral point) on the scale in written way.

Results

The first result was product of observation of respondent's behavior during their participation in the research. There was found the difference between the behavioral reactions of patients with schizophrenia from the behavior of normal people. When symmetrical faces were shown to normal people, their reactions to pictures were uninhibited laugh and wonder because they clearly realized that these faces looked odd and that they did not exist in real life. When the same pictures were shown to patients with schizophrenia they didn't notice anything unusual in these faces and

reacted on them seriously without any laugh or doubt. They perceived symmetrical faces as real ones.

All data received was computed and analyzed in SPSS (Statistical Program for Social Sciences). To analyze results of the research several methods were used: analysis of anthropological parameters, descriptive statistics, independents-samples t-test and paired-sample test.

To demonstrate that pictures constructed only out of left-sides of the face are actually differ from the pictures constructed out of right-sides of the face the anthropological parameters of symmetrical faces were analyzed and compared. The width of the face (distance from one cheek-bone to another), the length of the face (distance from forehead to chin), the distance between pupils, the width of the forehead and the width of the chin of twenty four paired faces were measured in millimeters. Mean scores for left-sided pictures: width=64, 75; length=103, 25; distance between pupils=22, 83; width of the forehead=51, 50 and width of the chin=22, 83. Mean scores for right-sided pictures: width=67, 50; length=105, 67; distance between pupils=24, 08; width of the forehead=54, 92; and width of the chin=23, 42. The values are not significant because of the high dispersion of data but the difference in every millimeter for a face is important. So, although the difference is small we can conclude that pictures constructed out of left-sides differ from pictures constructed out of right sides and demonstrate two different faces. Also Fluctuating Asymmetry (FA) for left and right-sided pictures was counted. FA is the difference calculation between the right and left sides and summation of all scores. FA — is a measure of symmetry absence. The average value of FA equals to 10, 43 mm for right and left faces, which is the sign of a substantial face asymmetry.

Mean scores were counted for each of the seven scales of left-sided and right-sided pictures for each group. The reliability statistics shows that Cronbach's coefficients for scales is high and equals to 0.942 (). This means that all seven scales of evaluation have high internal reliability and represent single-factor semantic differential, which measures one factor – factor of attractiveness. Therefore, general mean scores for both groups for all left-sided and for all right-sided pictures were computed by means of summation mean scores for each scales and divided on seven. In group of patients with schizophrenia mean score for left-sided pictures equals to 8, 78; for right-sided pictures = 7, 21. In group of normal people mean score for left-sided pictures is 2, 05; for right-sided pictures = 1, 99.

To discover any kind of differences between evaluations of patients and control group two independent samples were compared. T and significance level was obtained for all left-sided and for al right-sided pictures. The significance level = 0,000 for left-sided pictures and significance level=0, 002 for right-sided pictures demonstrate statistically significant differences in perception of symmetrical faces by two groups (See Appendix 2).

To see what kind of difference present in evaluations of two groups T and significance level was obtained for each scale of left-sided pictures and for each scale of right-sided ones. According to the results of left-sided pictures values for first and second scales were insignificant, for other 5 scales values were significant on basis of confidence level 0, 05. That means that there are no differences between two groups in evaluation of left-sided and right-sided pictures on scales “kind-angry” and “cheerful-sad”. However, there are differences between evaluations of these groups on other 5 scales, which are “beautiful-ugly”, “strong-weak”, “young – old”, “active -passive” and “attractive – repulsive”. Patients with schizophrenia evaluated symmetrical pictures by high scores, while control group gave middle scores to the same pictures. Results for right-sided faces were the same as for left-sided. Right-sided pictures also were given higher scores by patients with schizophrenia than by control group.

To find out whether two groups see any difference in appearance of paired left-sided and right-sided pictures paired- sample test was used. It showed that in group of patients with schizophrenia left-sided pictures were perceived differently from right-sided pictures. Significant difference is demonstrated by significance level, which

equals to 0,007. In normal group of people significance level equals to 0,874, this means that no differences between evaluations of left-sided and right-sided faces were found.

Additional results: gender differences were found in group of patients with schizophrenia. Significant difference was observed in evaluation of left-sided pictures by females and males on scales 2, 4, 6. Females evaluated left-sided pictures as more cheerful, strong and active than males. The significant difference in evaluation of right-sided pictures was on scale 2. Again females evaluated them as more cheerful, while males evaluated right-sided pictures as sad. In Normal group all values were insignificant so, gender differences in evaluation were not found.

Discussion

This study appears to be the first to experimentally examine the perception of symmetrical faces by patients with schizophrenia and normal people. The major finding of this study was an essential difference that was found in perception of artificially constructed perfectly symmetrical faces by people with schizophrenia and normal people. The data obtained in the results supported the first hypothesis, which stated that the difference in perception of symmetrical faces by different groups would be found. This result was expected as we supposed that patients with schizophrenia perceive faces differently than healthy people. This can be explained by the distortion of fusiform gyrus in patients with schizophrenia, zone which is responsible for face perception. The result of such distortion is perception of face as separate parts and not as a whole. These results are relevant to findings of Toshiaki Onitsuka (2002), who found out that fusiform gyrus is distorted in patients with schizophrenia.

Also one of the important findings of the study was the difference between behavioral reactions to symmetrical faces of two groups. The reaction of normal group, which was laugh, is explained by the fact that normal people perceive faces as gestalt. Two halves of the face, which were absolutely symmetrical, constructed the face that didn't exist in reality and couldn't be perceived as a whole. That's why normal people couldn't evaluate these odd faces and gave them scores close to the point zero. While patients with schizophrenia can not perceive faces as a whole and didn't recognize that faces were unnatural. That's why patients evaluated symmetrical faces as they would evaluate real faces.

The second hypothesis stated that healthy people would demonstrate definite differences in evaluation of left-left and right-right faces, while in evaluations of patients with schizophrenia there would be no distinctions found. This hypothesis was not supported. Moreover, opposite results were received. Patients with schizophrenia demonstrated statistically significant differences in perception of left-left and right-right faces, while healthy people didn't show significant differences. In order to explain our paradoxical results we decided to use the concept of the "modular mind" (Tooby & Cosmides, 1992). This concept states that mind is a complex of differently working specialized mechanisms for solving adjustment problems. Every module of the mind can be distorted separately and the distortion can lead to various changes in perception.

Schizophrenia is considered to be a "split brain" disorder (Strelec, 2002). "Split brain" in schizophrenia means not only "splitting" between hemispheres, but also between different modules of the mind. Various modules do not work together cooperatively in a single regime, but every module functions separately. According to Strelec, the patient with schizophrenia will perceive the chimerical picture as one image because of the distortions of the several modules responsible for face perception. For example, looking at the picture consisting of one half of man's face and one half of woman's face patients will respond that they see an image of a man (or woman) but they will not see that this face consists of two different halves and can not exist in real life. According to the results normal people perceive two symmetrical faces created from one natural face as one face divided in two parts. Patients with

schizophrenia perceive two symmetrical pictures as two different people or as one really existing person with different appearances.

It can be concluded that the findings of the study supported the “split brain” theory in patients with schizophrenia and made a contribution to academic dispute about the face perception peculiarities in schizophrenia stating that possibly patients can not perceive faces as a whole.

The evaluations of patients with schizophrenia showed that face consisted of two left halves were given higher scores than faces consisted of right halves. Consequently patients with schizophrenia rated left-sided faces as more attractive, cheerful, kind, active and strong; while right-sided faces were more rated as not attractive, sad, passive, and weak. These results are related to the results of G. Karch’s (2006) research who conducted the similar experiment, which was aimed to find out whether systematic differences occur in the way people ascribe meaning to right and left sides of the human face. Karch also reported that left facial constructions were rated as healthier, stronger, harder, more active, more excitable, and in the direction of bad on the good-bad scale. Right facial constructions were rated sicklier, weaker, more feminine, softer, more passive, calmer, and in the good direction on the good-bad scale. That relevance to Karch’s results shows the reliability of present study.

Limitations of the study include several aspects. Firstly, experiment consisted of a big number of images and respondents were tired by the end of evaluation, so it could influence the validity of answers. Secondly, the experiment itself took a lot of time and was not managed to save the time because participants were asked to evaluate the images one by one and not in groups.

Future research in this area can examine additional variable such as gender and explore gender differences in face perception in schizophrenia. As in the current research’s findings there were found some gender differences in the group of patients with schizophrenia, it would be interesting to broadly explore this topic. Also another research that can be conducted related to the current one is “Ethno-cultural Differences in Perception of Symmetrical Faces”. This study can focus on ethno-cultural aspect and can be conducted in different countries to compare the results and find out whether there are any differences.

The present study presents interesting results and deductions that can be made on the basis of these results, but still there are some questions remain unanswered. For instance, such questions like: “Will patients with schizophrenia see any distinctions between constructed symmetrical faces and natural not symmetrical faces?” Another question for future research can be whether face asymmetry is dependent on brain asymmetry or anyhow related to brain asymmetry and dominant hemisphere can lead to certain type of face asymmetry. The researches on these topics can give no less interesting results than the present one and discover very interesting findings in the field of face and brain asymmetry.

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Exemplary Scale of Pictures Evaluation.

Dear participant,

Current cognitive experiment is conducted to study the face perception. You will be shown series of photographs. Each picture should be evaluated on following scale, which consists of opposite adjectives. You can mark any point except 0 (which is a

neutral point). Experiment is anonymous and participation is voluntary. Only general results will be processed.
 Thank you for participation.

Photograph #1

Kind	5	4	3	2	1	0	1	2	3	4	5	Angry
Cheerful	5	4	3	2	1	0	1	2	3	4	5	Sad
Beautiful	5	4	3	2	1	0	1	2	3	4	5	Ugly
Strong	5	4	3	2	1	0	1	2	3	4	5	Weak
Young	5	4	3	2	1	0	1	2	3	4	5	Old
Active	5	4	3	2	1	0	1	2	3	4	5	Passive
Attractive	5	4	3	2	1	0	1	2	3	4	5	Repulsive

Photograph #2

Kind	5	4	3	2	1	0	1	2	3	4	5	Angry
Cheerful	5	4	3	2	1	0	1	2	3	4	5	Sad
Beautiful	5	4	3	2	1	0	1	2	3	4	5	Ugly
Strong	5	4	3	2	1	0	1	2	3	4	5	Weak
Young	5	4	3	2	1	0	1	2	3	4	5	Old
Active	5	4	3	2	1	0	1	2	3	4	5	Passive
Attractive	5	4	3	2	1	0	1	2	3	4	5	Repulsive

Фрактальная Геометрия в Психиатрии: Псевдонаука или Новая Парадигма?

Елена Молчанова

Патрик Мариус Кога

Nomen est numen

Назвать означает узнать (лат.)

В ироничной статье С.С. Кутателадзе «Наука, псевдонаука и лженаука» приводится поучительный пример редчайшего события, которое произошло 2 июня 1962 года в Новосибирском Академгородке. Событие, собственно, заключалось в том, что объединенный ученый совет по общественным наукам при Новосибирском государственном университете поименным голосованием осудил поведение одного из ученых. «Против» проголосовал только один человек – будущий академик и Нобелевский лауреат Леонид Витальевич Канторович (родной брат Николая Витальевича Канторовича, чье имя известно всем психиатрам Кыргызстана). Заступился он за самого себя, а основанием для созыва «дисциплинарной» сессии ученого совета явился срыв защиты докторской диссертации, которую Леонид Витальевич считал псевдонаучной.

Приведенный Кутателадзе пример имеет непосредственное отношение к обсуждаемой здесь теме: модные теории, к которым, безусловно, относятся фрактальная геометрия и нелинейная динамика, имеют серьезный риск быть обвиненными в псевдонаучности (1). Риск увеличивается в тех случаях, когда методы, апробированные и признанные валидными в одной сфере знаний, применяются для создания объяснительных моделей, лежащих в совершенно иной системе координат. Рационализации на тему того, что «новое обычно создается на стыке нескольких дисциплин», обладают определенным успокаивающим эффектом, но только до тех пор, пока исследователь напрямую не сталкивается с проблемой собственного невежества в одной из тех отраслей, которые так оптимистично собирался «состыковать».

Объяснительные конструкции и реальность соотносятся друг с другом приблизительно так же, как категории «простого» и «сложного». Какими бы запутанными не казались теории, они создаются в процессе генерализации, исключения и искажения еще более хаотичного мира. В блестящей статье Alexander Rueger & David Sharp (1996) точно указывают на напряжение, существующее между способностью фундаментальных законов объяснять что-то и отражать многообразие всего того, что, собственно, они объясняют. Чем фундаментальнее теоретическая конструкция, тем лучше она способна объяснить реальность, но, одновременно с этим, тем более искаженно репрезентирует конкретное событие, природный объект, процесс, расстройство.

В психиатрии пропасть между описанием и объяснением пока непреодолима по той простой причине, что фундаментальных основ непредсказуемого порой душевного функционирования, с которыми были бы согласны хотя бы большинство теоретиков, пока не найдено, а многочисленные теоретические концепции не являются универсальными. Международные классификационные системы современной психиатрии созданы по «называющему» принципу, и, с точки зрения «чистой» науки, даже не обладают

необходимыми и достаточными критериями, чтобы претендовать на звание системообразующих конструкций. Самое забавное в существующем «классификационном» положении вещей заключается в том, что использование только описательных моделей противоречит естественному для человеческого разума стремлению «проникнуть в суть» и ограничивает процесс познания этапом определения состояния нужным термином, определяющим в дальнейшем алгоритм поведения врача с конкретным пациентом. Трудности введения МКБ-10 на территории стран постсоветского пространства объяснялись, на наш взгляд, не только и не столько понятным сопротивлением по отношению ко всему новому, но и выраженной «антифундаментальностью» данной классификационной системы. Независимо от того, насколько валидными были объяснения, предлагаемые прежним, нозологическим подходом классической немецкой психиатрической школы, они хотя бы были. Понятное деление на «неврозы» и «психозы», магия кругов Снежневского, растолковывающая динамику перехода одного синдрома в другой, концепция «пограничной» патологии – все это вызывало вполне естественную ностальгию и стремление вернуться к потерянной универсальности. Что касается биологической психиатрии, безусловно, обладающей мощными описательными и доказательными ресурсами, то она пока не демонстрирует достаточной объяснительной силы для того, чтобы претендовать на универсальный статус.

С точки зрения элементарного здравого смысла, возможность практического применения положений какой-либо концепции является гораздо более ценной по сравнению с поисками иллюзорной фундаментальности. Каким бы странным это ни казалось, но медицина как отрасль знаний стала развиваться не под давлением научных теорий, а как совокупность профессиональных методов облегчения страданий. Раздел «этиология» половины расстройств, включенных в перечень ГARRИСОНа (Harrison's Principles of Internal Medicine), содержит только одно слово: «неизвестна». Как ни прискорбно в этом признаваться, мы действительно не знаем точных причин шизофрении, рассеянного склероза, системной красной волчанки и многих других заболеваний, но наше незнание не дает нам право на бездействие – в любом случае мы можем сделать хотя бы что-то, чтобы уменьшить дистресс.

Рискнем заявить, что открытие в области психиатрии законов, сравнимых по фундаментальности с физическими, вообще представляется маловероятным. Фундаментальные законы являются результатом максимальной генерализации и абстрагирования от реальности. Их привлекательность кроется в простоте, а объяснительная сила заключается в способности организации знаний наиболее элегантно и экономичным образом – при помощи создания действительно стройных классификационных систем. Методологическая проблема, вызванная диссоциацией между объяснительной силой универсальных законов и «реальностью», дополняется еще одной – рискнем назвать ее метафизической: мир является слишком сложным, чтобы его можно было проинтерпретировать с помощью простых формул. Тем не менее, притягательность простоты такова, что в настоящее время сложно найти хотя бы одну научную дисциплину, к которой не примерялись бы основные принципы фрактальной геометрии и теорий нелинейной динамики, причем во всех случаях безуспешно. Направление эпистемологического вектора в этом случае противоположно привычному (от конкретного феномена через генерализованную модель к абстрагированию высокого уровня) и предполагает тестирование моделей, разработанных на чужой концептуальной территории. Следует отметить, что термин «тестирование» употребляется нами с некоторыми допущениями: по своей сути, это своеобразная проверка теории на «объяснительную силу» в условиях игры на чужом поле с последующей оценкой эстетичности полученного результата. К сожалению, какой бы качественной ни была примеряемая объяснительная парадигма, она не дает полноценного иммунитета от псевдонаучности. Когда-то очень давно фокусник Барнум продемонстрировал, что, при сильной мотивации получить определенный

результат, он будет получен ценой бессознательно искаженного восприятия данных.

Все вышеизложенное было необходимо авторам статьи для демонстрации (1) полного осознания опасности создания псевдонаучной чепухи и (2) своего нескрываемого желания получить приемлемый результат процесса примерки элегантной и современной фрактальной модели на психиатрический остов⁵.

Метаанализ структуры гуманитарных теорий, к которым относятся и психолого-психиатрические (А. Yurevich, 2003), позволил выделить их стабильные составляющие, а именно: 1) обобщенный образ (психологической) реальности, 2) центральная категория, 3) соответствующий феномен, 4) сеть основных концепций и система, определяющая их взаимодействие, и, наконец, - 5) базовые положения. Первые три компонента вполне могут быть объединены в качестве ведущей метафоры, сравнивающей психику или с «механизмом» (теория информационных подходов), «трансформацией образов» (конструктивизм), «поведением» (бихевиоризм), «бессознательными мотивами» (психодинамика), и так далее. Как считает Terry Marks-Tarlow (2004), вышеперечисленные метафоры, оставаясь, безусловно, полезными в рамках ограниченных теоретических конструкций, исчерпали свой объяснительный потенциал. Он предлагает рассматривать психическую деятельность через «фрактальную» призму, логично аргументируя подобный подход необходимостью перехода от искусственных моделей к естественным – сложным саморазвивающимся системам. Предлагая новую метафору, Terry Marks-Tarlow (2004), собственно, говорит о необходимости смены ведущей парадигмы в психологии, предлагая в качестве центральной категории понятие «психологического фрактала».

Термин “fractal” связан с именем французского математика Бенуа Мандельброта (1970) и происходит от латинского “*frangere*” - «раскалывать». Фракталом называется сложный пространственный объект, между частями которого существует подобие. Основная характеристика самоподобной структуры - размерность, которая, одновременно, является показателем сложности. В отличие от традиционной геометрии, где размерность может принимать только целые значения, фрактальная размерность может быть выражена дробным числом. В настоящее время изучены размерности множества природных объектов и процессов. Так, размерность береговой линии Норвегии равна 1,52; речной сети США – 1,83; размерность социального макропространства, как показывают исследования А.А. Давыдова (2000), заключена в интервале 1,237 – 2,236 и в среднем равна 1,618, что соответствует известному в науке и искусстве «золотому сечению».

Фрактальная геометрия демонстрирует один из фундаментальных принципов жизнедеятельности природных объектов: небольшое количество параметров, взаимодействие между которыми определяется сравнительно простыми математическими уравнениями (классическое подмножество Мандельброта: $X \leftarrow X^2 + c$), лежит в основе существования чрезвычайно сложных систем. Из предыдущей посылки следует притягательный вывод, а именно: за сложностью и непредсказуемостью психических процессов и феноменов может скрываться небольшое число простых законов. Будучи сформулированными, эти законы вполне могут стать универсальными по параметрам простоты и объяснительной силы. Добавим, что многочисленные исследования в самых различных сферах знаний с неизменным постоянством демонстрируют, что в обществе, природе и, рискнем продолжить ряд, психической динамике действуют похожие принципы. Наши исследования показывают, что использование положений фрактальной геометрии может быть полезно для решения широкого спектра практических задач. Одной из них является создание пространственной

⁵ Текст данного абзаца вызвал у одного из авторов ассоциации с завещанием, первая фраза которого могла бы звучать так: «Будучи в здравом уме, твердой памяти и полностью осознавая то, что я собираюсь совершить, я все-таки это делаю».

структурной модели классификации психических расстройств (Р. М. Коба, 2007), демонстрирующей возможные направления трансформации психической патологии и векторы наиболее вероятных прогнозов. Другой - изучение динамики соотношения напряженности противоположно направленных механизмов психологической защиты в норме и патологии (Е. Молчанова, 2006). И, хотя подробное изложение результатов исследований выходит за рамки данной работы, отметим, что как решение первой, так и второй задачи, было бы невозможно без привлечения как теоретических, так и методологических подходов этого сравнительно нового раздела математики.

Фрактальная геометрия не является ни новейшей, ни завершающей парадигмой для медицины вообще и психиатрии в частности. Предлагать ее в качестве таковой было бы неверно как с точки зрения истории, так и науки. Дилемма, предложенная в названии нашей работы, является, по сути своей, ложной. Проблема заключается не в определении названия (*потен*) для фрактальной геометрии, но в поиске разумной, практически применимой, валидной и, наконец, помогающей конструкции (*пиптен*).

Подводя итоги проведенных теоретических изысканий, мы не можем не обратиться к фундаментальной дилемме гносеологии. Демокрит, один из основателей атомистики, математики и геометрии, когда-то сказал, что предпочел бы найти причину хотя бы одного явления, чем стать королем Персии. Безусловно, великий философ – материалист имел в виду настоящую, истинную причину. К счастью (или, к сожалению), универсальная «первопричина» вряд ли когда-либо будет обнаружена. Если допустить такую возможность, логично подумать и о вероятности такого же неизбежного финала.

Фрактальная геометрия не сможет дать исчерпывающего объяснения всей сложности естественных процессов, также как и обозначить первопричину хотя бы одного явления, прежде всего потому, что подразумевает бесконечность возвращения к исходной форме, но она вполне способна стать незаменимой в создании четкого математического образа изучаемого процесса. Рискнем заметить, что этот вклад в практическую медицину будет более чем достаточным в том случае, если даст возможность интерпретировать и прогнозировать клиническую реальность хотя бы чуть лучше, чем мы способны это делать сейчас. Авторы предлагают читателю рассматривать принципы фрактальной геометрии не в качестве универсальной истины, но в качестве многообещающей и, безусловно, полезной, парадигмы, независимо от того, будет ли этот раздел математики обозначен как «наука» или «псевдонаука» в психиатрической системе координат. Если же в этом бессмысленном споре определений все-таки победит *потен* «псевдонаука», это явится всего лишь одним из отражений фрактального парадокса *пиптен* – раздробленности и, одновременно, единства как реальности, так и соответствующей ей системы значений.

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IV. Aspects of Ethnopsychology in Kyrgyzstan

IV. ЭТНОПСИХОЛОГИЯ В КЫРГЫЗСТАНЕ

Ethnocultural Peculiarities of Weight Perception: Comparative Study of Overweight Women in Kyrgyzstan and USA.

By Kseniya Tsoi

In the following study the focus is put on the perception of weight by women from different countries with uncommon cultures. Cultural and environmental variability is a significant deal in what people from particular culture find "attractive, beautiful, appropriate or inappropriate" (Furnham&Alibhai, 1983; Hatfield & Sprecher, 1986) Such things as "ideal" body weight or "perfect" body size simply don't exist. Since " ideal" in one culture, might be "problematic" in another one, and might be " absolutely unacceptable" in other from these both cultures as well. According to Furnham & Alibaha; and Hatfield & Sprecher physical attractiveness standards, preferred females body size are strongly influenced by current cultural norms. (Furnham&Alibhai, 1983; Hatfield & Sprecher, 1986) Interesting findings were discovered in the cross- cultural study of females body preferences by Judith Anderson and her colleagues. Anderson and her colleagues (1992) found "that female standards vary as a function of the reliability of the food supply particular to the culture and socio-economy of the group." (Anderson et al., 1992). The heavy women were considered attractive in the society with shortage in food, the preference of heavy women to slender was by a margin of 2 to 1. According to Anderson and her colleagues "that preference for overweight women has fostered the survival of our species because fat represents stored calories." Therefore, ethnic groups such as Afro Americans, Hispanics with lower socio economic status and unreliable food supply tend to value heavy women, being heavy in these cultures is a norm and is approved by the society. Whereas, in industrialized countries where there is a reliable food supply the body fat is less valued by the society. (Anderson et al, 1992) For instance in the cross-cultural study of overweight perception published in the June edition of journal Obesity, in the United States African American women are at least likely, to consider themselves as overweight, whereas White Caucasian women mostly likely consider themselves as an overweight. (Page, 2006)

On the other hand, it is also important to take into consideration a peculiar body constitution of each group in general that influences the weight perception and preferred body size as well. In the study of Body Mass Index and Body Fat of Asians and White Caucasians, by Deurenberg P, Deurenberg-Yap M, Guricci S, 2002 the "BMI was 3-4 units lower compared to Caucasians" (Deurenberg P, Deurenberg-Yap M, Guricci S,2002). In another study "Body Type Preferences" by Pamela K.Keel, Heather L. Barnett and Lauren M. Conoscenti where participants were asked to indicate their ideal and current figures it was found that "compared to Caucasians (N = 289), Asians (N = 92) reported smaller current figures."(Keel et al, 2004)

Therefore, before starting to investigate weight perception of women from different countries it is very essential to pay attention to the characteristics of the cultures themselves. To be more specific, those countries are Kyrgyzstan and The United States of America. Kyrgyzstan- is a young developing, former Soviet Union and current CIE country. Even though now has switched to a new regime of capitalism and trying to form an individualistic society, the mentality of collectivist society that exercises conformity, obedience and following a particular norms and standards that are relevant is still remains dominant. Thus, concerning weight as well there are particular norms that an individual from this society tries to fit in,

since the conformity laws are very efficient. Inability to fit in particular norms, strongly discouraged by the society on the basis of "group against an individual".

Whereas, America is a developed country that consists of individualistic society, where people encourage such values as uniqueness, independence and self-reliance. The priority is self with all its attributes (Franzoi, 1996). According to the U.S. Department of Health and Human Services, the average U.S. woman is 5' 3.7 (162 centimeters) tall and weighs 152 pounds (69 kilograms). This corresponds to a Body Mass Index of 26.3 kilograms/meters². The average American woman's weight has increased 11 pounds (7 %) in the 10 years between the gathering of statistics, while her height has remained about the same (Ezell, 2008). Today weight perhaps is the most essential health emerging problem. Overweight and obesity is a high priority on many government's agenda's (Department of Health, 1995; US Department of Health and Human Resources Service, 2002). Not only it has become a physiological health threatening one but also, it is becoming one of the serious psychological problems as well. In the study of overweight and depression by Catherin E. Ross *they found out that being an overweight has a direct effect on depression especially white race women, well—educated and high social class* (Ross, 1994).

However, not only overweight persons lately face problems of psychological character, the significant proportion of them are not engaging in weight control behaviors (Serdula et al., 1993 and Williamson et al., 1992). For instance according to the study of "Associations of Body Mass Index and Perceived Weight With Suicide Ideation and Suicide Attempts Among US High School Students" by Danice K. Eaton, PhD; Richard Lowry, MD; Nancy D. Brener, PhD; Deborah etc. being overweight among black population less traumatic since genetically their body structure itself is bigger and heavier so it is consistent with the greater acceptance of increased body size. Therefore, there is less action taking behaviors in losing weight and there is a presence of psychological comfort.

In contrast, a substantial amount of those who are underweight or of normal weight are found to be active in weight control behaviors, "some of which are indicative of eating disorder symptomology" (Serdula et al., 1993 and Williamson et al., 1992). This kind of discrepancies between actual body weight and weight control behavior is a matter of weight perception. Weight perception, or how one perceives her weight appropriateness, is strongly related with weight loss behavior, independent of actual body weight. (Crawford and Campbell, 1999, Forman et al., 1986 and Serdula et al., 1993). An individual is a social being that directly depends on society and its norms. In the study of "The Relations among Body Image, Physical Attractiveness, Body Mass in Adolescence" body weight, was also found to be an important aspect of social acceptance (Rosenblum & Lewis, 1999). Our self-perception is shaped with the help of people around us. Lately being overweight is considered to be a negative trait (Allon, 1981; Sobal 1984). In the social groups where being overweight is not a norm and a negative trait, overweight people have a low self-esteem, have negative self-image and they think that others judge them. Overweight prepubescent students considered themselves to be less socially acceptable (O'Dea, 1999, Abraham 1999). Thus there is a high level of anxiety and depression. (Ross, 1994) This research puts an emphasis on investigating ethnocultural peculiarities of overweight women's weight perception in different areas as Kyrgyzstan and USA. Definitely different weight perception leads to a corresponding action taking behavior. Most research on weight perception has focused on qualitative factors such as correlation between overweight and depression by Ross, or Relations among body image, physical attractiveness and Body mass in Adolescence by Rosenblum and Lewis. Also it is important to mention that all of the statements above primarily deal with Caucasian population of the United States of America. On the other hand, in different populations individuals perceive their weight differently (Fitzgibbon et al, 2000; Bhuiyan et al 2003). Therefore, this research has a little bit a different angle that extends the

research line and studies local cultural factors of weight perception in Kyrgyzstan and USA, tries to find out the effects of a particular weight perception on individual's life style and behavior.

It is essential to explain the relevance of investigating particularly women's weight perception. There is a significant difference in physical self perception that is encouraged from the early childhood. Little girls are taught that their body is an object, which is a factor that plays a significant role that influences others in judging the overall value of these girls. Whereas, boys are taught to consider their body as a dynamic instrument that is dedicated to accomplish tasks "but not as a static object of aesthetic beauty"(Tauber, 1979; Langois & Downs, 1980). For instance starting from the beginning by playing with "Barbie Dolls", by watching media sources that constantly show the beauty standards that are "difficult to reach" (Adams & Crossman, 1987; Silverstein et al., 1986), like the commercials of various makeup, skin creams, fat reduce creams and figure-alerting clothes that are played instantly, underline women's physical imperfections. Therefore, according to Pliner, Chaiken & Flertt, girls are more cognizant of by and influenced by society's attractiveness standards than are males. (Pliner, Chaiken & Flertt, 1990). The overwhelming focus on woman's body as a matter only of aesthetical object that is needed to be improved in order to reach an ideal beauty standard has a negative impact on women's body esteem. The dissatisfaction with own body doesn't stay the same but with time they experience a steady increase in it. Especially today, when for example in North America where all of the global media sources set unrealistic thinness as an ideal representation of a beautiful and attractive body. (Herzog et al., 1992; Thomas & James, 1988).

Another aspect that was considered during the formulation of research topic is particularly, a weight perception that according to the researcher is a dominant element of a body esteem that directly influences self-concept structure.

Role of society in weight perception. As was shortly written before the weight perception is not the same everywhere. It changes according to ethnicity, cultural and societal values, social status, race and gender of a person. Human as a social being tends to feel himself, shape his self-concept and all its aspects by the feedback of the society reflected back to us, that is represented in opinions about a particular individual, words or actions of rejection or acceptance, esteem or disrespect, liking or hate. (Cooley, 1964). The positivism or the negativism of these judgments depends on normative standards of certain characteristics in a particular social group. Since physical appearance elements such as, skin color, height, length of the legs or hands, body proportions and weight are highly visible, they play a dominant role in the evaluation process. Individuals are encouraged by others for being and matching normative standards that are acceptable in their social group. In case if there is a difference between the social norm and individuals actions and his/her being there is discouragement. Through this kind of interactions with others human beings shape their feeling about themselves. (Ross, 1994) Concerning weight, people who are over than the acceptable norm are considered to be lazy, sloppy, mean and stupid by both adults and the children. (Lerner, 1969; Lerner and Korn, 1972). It is fair to conclude that they are being severely stigmatized in the society, especially women. (Allon, 1981; Garner and Gerfmkel, 1980; Sobal and Stunkard 1989) Therefore, in the social groups where being overweight is not a norm and the majority of the people are of normal weight, people who wear extra weight tend to shape negative self-image, low self esteem, feeling that people around dislike them and that they are last of next to last in preference rating. (Maddox at el 1968, Richardson et al 1961, Richardson 1970). Festinger's (1954) social comparison theory asserts that: "(1) individuals have a drive to evaluate their opinions and abilities; (2) in the absence of objective, nonsocial criteria, individuals engage in social comparison (i.e., they compare their opinions and abilities to those of other individuals); and (3) whenever possible, social

comparisons are made with similar others." (Festinger, 1954) Those are original statements today got edited a little bit and assert that (1) "unsought comparisons may occur, and that the referent point used in the comparison process may be an individual dissimilar to oneself (Martin & Kennedy, 1993), (2) the comparison might occur on different dimensions such physical appearance and eating habits (Wheeler & Miyake, 1992). "Also it might occur in two directions: upward (when individuals compare themselves to the ones who are better off on the dimension of interest) is believed to enhance subjective well-being, whereas upward comparison (i.e., comparing oneself to someone who is better off on the dimension of interest) is believed to decrease well-being" (Maddox et al 1968, Richardson et al 1961, Richardson 1970).

And there are two kinds of targets that affectivity of comparison depends, 1) universalistic target (i.e., distant sources of influence such as mass media) 2) particularistic target (i.e., more intimate sources such as friends and family) (Irving, 1990). The universalistic target is considered to have more influence on idealistic standards of physical appearance than particularistic. There is a well known stereotype especially among western white Caucasian cultures, that to be thin, slim heaped means matching societal requirements of beauty. Thus on the media sources western celebrities who are frequently shown, drastically direct tendencies towards thinness.

According to Wheeler & Miyake, 1992 social comparison in the dimension of physical attractiveness tend to be upward meaning that females usually compare their body standards, that are represented by height, weight to the standards of the ideals in the society that further produces decrements in self-perceptions of attractiveness.(Franzoi, 1996) The social comparison occurs in any group of individuals, and concerning body esteem it is mostly upward. However it is important to mention, according to Festinger the comparison on the same dimension has much more effect than when comparison is conducted to someone dissimilar (on dimension of evaluation/or under dimension of surrounding). Thus, in the study by Katherine Trostier et al, 2007 they expected that people compare themselves to their peers and people around, but least likely to the fashion models. Cash et al, "found that participants exposed to attractive peers would rate themselves less attractive than exposed to unattractive peers and fashion modes.

Concerning weight and social comparison study there was another correlation study conducted by Carlson Jones (2001) investigated that social comparisons of body attributes such as weight and shape, and face in the same dimension are associated with body dissatisfaction()

The particular literature review guided this study to these four hypothesis. The first hypothesis suggests that 1) Overweight women in Kyrgyzstan perceive the weight of the body more exaggeratedly, than women in USA. 2) There is a correlation between BMI and the levels of depression and anxiety of women in Kyrgyzstan and women in USA. The third hypothesis is that 3) Overweight women in Kyrgyzstan have higher levels of depression and anxiety than overweight women in USA. 4) The discrepancy number between Actual and Ideal body weights will be higher among overweight women in Kyrgyzstan than among overweight women in USA. 5)Overweight women in USA posses higher self-esteem than overweight women in Kyrgyzstan.

Method

Participants.

The sample consisted of 80 participants. There were 20 overweight females from Kyrgyzstan, 20 overweight females from United States of America and 20 normal weight females from Kyrgyzstan, 20 normal weight from the United States of

America. The main criteria for defining overweight, underweight and normal weight was based on Body Mass Index. It shows how proportional is your height to your weight, and your weight to your height. It is calculated by dividing your weight in kilograms by your height in meters squared. The range of BMI from 1- 19 is considered to be underweight. The range of BMI from 19- 24.9 is a normal weight. The range from 25-29.9 is considered to be overweight. 30+ is considered to be obese.

(Appendix 1) The age of participants varies from 20-28 years. The mean for overweight in Kyrgyzstan is 73 kilograms, standard deviation was 5.12. The mean BMI was 27. The mean for underweight participants in Kyrgyzstan was 56.03 kilograms and standard deviation was 8,40.

Where mean of BMI was 20,77. The mean for overweight women in USA was 85 kilograms with standard deviation of 10. With the mean of BMI 31.5. The mean for underweight women in USA was 57,11 kg the standard deviation 1,19 was and the mean of BMI 20.73. There is a significant mean difference of BMI between overweight groups (4,37) however, we still decided to conduct the analysis, due to the difficulties of finding women of the same BMI in Kyrgyzstan. Since the participants were randomly selected by the researcher who is an American citizen the random but significant mean difference demonstrates first of all American researchers perception of overweight women and secondly, the differences in body standards, that might influence the perception of weight. However, according to BMI categorizes both of the groups belong to overweight and obese categories. The American sample of participants reported the weight, height and the weight for the participants in inches and pounds. These data was transferred into cm and kilograms. The following formulas were used. 1 foot = 12 inches; in x 2.54 = cm and lbs / 2.2 = kilograms.

Materials.

Since the research studies weight perception the core instrument was standardized Stunkards Silhouettes (1983) method. It is a standard figural stimuli that is used to establish BMI from the point of view of a participant. There are nine pictures of women's silhouettes and nine of a man, though in this research we used only women's part. The silhouettes of women gradually increase in shape from thin to obese.

In order to investigate the hypothesis that weight perception has a relationship with depression and anxiety the Hospital Anxiety and Depression Scale (HADS), Zigmond A.S. and Snaith R.P.(1983), standardized scale that consists of 14 statements , 7 of statements are measuring anxiety level, those questions are marked as "A" and 7 of them measure depression level that are marked as "D" was used. There are four responses for each interview. The score for each answer is given in the right column.

The third instrument is a Coopersmith's standardized self-esteem questionnaire. Copersmith's self- esteem questionnaire consists of 58 eight statements concerning different components of life, including own feelings, family, friends, occupation, self-efficacy and other environmental factors.

Procedure.

The research process was conducted at the United States of America and in Kyrgyzstan concurrently. In America, the questionnaires infill process was held by Romelia Rosas, 4th Year student of Psychology Department, of Loyola University, in Chicago. The participants in America were randomly selected at the campus of Loyola University in Chicago, and at the public library of Chicago. After reading and signing the information consent form, participants were given a file consisting of

three instruments. The first one is Stankurd's Silhouettes The infill time for this particular instrument is from 2-5 minutes. The second one is Coopersmith's Self Esteem questionnaire. The infill time is 10-15 minutes. And the HADS . The infill time was approximately from 10-15 minutes. The researcher was required to distribute the material, and tell the participants to follow the instructions that are written on the blanks. In Kyrgyzstan at the same time the research was conducted by Kseniya Tsoi, the fourth year student of Psychology Department of American University -Central Asia. The participants were randomly selected at American University in Central Asia, at Arabayeva Kyrgyz State University and at the private Kyrgyz bank. The Russian version of the same questionnaires was distribute to the respondents.

Results

In order to check the hypothesis whether Kyrgyz overweight women perceive the weight more exaggeratedly than American overweight women the Independent Sample T Test was applied. In the overweight groups the comparison of means has shown that starting from the first silhouette till fifth silhouette there is a significant positive mean difference. Meaning that Kyrgyz overweight women gave a higher number of kilograms for each silhouette than American over weight women. (Kyrgyz Overweight Group's Score - American Overweight Group's Score= Mean Difference) The mean differences are as following (Silhouettel=3,069; Sillhouette2 = 3,382; Silhouette3= 2,031; Silhouette 4 = 1,126; Silhouette 5= (-1.965); Silhouette6= (-4,627); Silhouette 7= (-5,595); Silhouette 8= (-7,34); Silhouette 9=(-6,463). Concerning, the normal weight groups, there mean difference was insignificant in all of the Silhouettes. According to descriptive statistics in Kyrgyz Over weight groups the starting Min weight given for the first silhouette is 30 kg and the Max weight given for the ninth silhouette is 135 kg. Whereas, in the American overweight group the starting Min weight given for the first silhouette is 27 kg, and the Max weight given for the ninth silhouette is 159 kg. Appendix. In the Kyrgyz normal weight group the starting Min weight given for the first silhouette is 32 the Max for the ninth silhouette was 136kg, and in American Normal weight group the min for the first silhouette was 30kg and the Max for the ninth was 160kg. The comparison within the countries between normal weight and overweight groups was in both countries insignificant. The Pearson's R correlation analysis was used for the second hypothesis. The correlation analysis has shown that there is a mild positive relationship between BMI and the level of depression (0, 370) at significance level of ,001. Also a significant finding of the analysis was the mild negative correlation (-0.309) between discrepancy number and self-esteem at significance level of 0.005. Meaning that the lower is a discrepancy number the higher is a self-esteem. Also the negative correlation (0,454) at significance level of (,000) between self-esteem and the level of depression was found as well. Thus, the higher is a self-esteem the lower is a depression level and visa versa. Overweight women in Kyrgyzstan have higher levels of depression and anxiety than overweight women in USA. It was found out that Kyrgyz overweight women tend to have higher level of anxiety, there is a significant mean difference (2,80), whereas the level of depression is significantly higher in American Overweight women the mean difference is 2.95, than in Kyrgyz overweight women. It was also found that there is a significant mean difference (4, 6) of level of depression, among underweight groups, where the American sample possess a higher level. Concerning the fourth hypothesis, there wasn't found any differences in discrepancy number among each group. In order to prove the fifth hypothesis that claims that overweight women in USA posses higher self- esteem than overweight women in Kyrgyzstan, Independent Sample T-test was used. It was found that there is insignificant difference of level of self-esteem among overweight women in Kyrgyzstan and USA. However analyzing the

groups within the countries, it was found that Kyrgyz Normal weight Women have a higher self-esteem than Kyrgyz overweight women, there is a significant mean difference (6,25), whereas within the American population there were no differences found.

Discussion

The first hypothesis was partially supported. There was found that Kyrgyz overweight group do tend to overestimate the weight of silhouettes 1,2,3,4, however compare to American overweight group. Kyrgyz overweight group of women do tend to underestimate silhouettes 5,6,7,8,9. Originally hypothesis suggested that Kyrgyz overweight women will exaggerate the weight of the whole silhouettes and will give much higher scores than will American group. This interesting, to our mind, results could be explained on the basis of Festinger's Social comparison theory, where the third postulate states that "(3) whenever possible, social comparisons are made with similar others." Thus the found result might be due to the fact that overweight women in Kyrgyzstan by feeling not happy with their weight in comparison to their environment tend to overestimate the silhouettes 1,2,3,4 due to the functioning of Ego-defense mechanisms, which are denial and intellectualization. Kyrgyz overweight women unconsciously tend to give the higher weight number for the thin silhouettes in order to decrease the difference between their actual weight and the silhouettes that are smaller in weight. At the same time the Kyrgyz Overweight women might unconsciously underestimate bigger silhouettes in order to reduce their fear of becoming too heavy. The given interpretation of particular results is not necessarily the only possible explanation.. Since the cognitive- schemas of American and Kyrgyz overweight women's samples might include different notions about weight categories of woman's body. We don't have the data supporting this interpretation, however they are be obtained from the results of the future researches.

The second hypothesis was partially supported as well: women with a higher BMI tend to have a higher level of depression. Although there were not found any significant correlation between BMI and anxiety level both in American and in Kyrgyz samples.

Numerous studies by "Overweight and depression", by Ross, 1994; or "Relation of body mass index to depression and weighing frequency in overweight women." by Linde,J., Jeffery,R., Finch, A Simon,G., Ludman, E., Operskalski, B., Ichikawa, L and Rohde, P (2007.)

have shown a relationship between high BMI and so called "atypical" depression among women, when depressive symptoms are evaluated as a normal personal reaction to being overweight. The depression and anxiety in this case might be reciprocal conditions. Thus, the presence of depression at a particular moment does not refute a possible revelation of anxiety in the future.

There are studies that are pointing out on the positive correlation between the level of depression and BMI, though, their mechanism of this particular correlation, according to the authors requires more investigation and clarification.(Bjerkset, O, Romundstad,P ,Evans, J and Gunnell, D, 2007)

As an additional explanation of relationship of affective features and self-weight perception, please see Appendix 11.

The third hypothesis did not obtain experimental support, moreover the results were completely contrary to the expected ones. So we have found out significantly high depression level among the American Overweight Women. The possible explanation of this findings might be concluded from the fact that there is a difference in weight categories among overweight samples from Kyrgyzstan and USA. American Overweight Women, who are according to BMI are mostly in the category of obese individuals. Since the majority of them are in the obese category, there might be a loss of hope of returning to the normal weight condition, because

of the gap of the category of being overweight that these women have to overcome, in order to become normal weight individuals. Thus, the mechanisms of self-defense might have already suppressed the anxiety level.

Additionally, in the United States according to the World's Health Organization the amount of overweight and obese individuals is growing (WHO GlobalInfoBase), and becoming common there is less fear not to match the norms. Eventually, the borders of individual's self-weight perception become much brought. Meaning, for instance, if a female according to BMI has already passed the border of normal weight category into overweight one, it is not necessarily that she will start immediately feel herself overweight. According to the study of "Body image and self-esteem: a comparison of African-American and Caucasian women" women being in the category morbidly obese, does not associate themselves with obesity. (Beth L. Molloy, Sharon D. Herzberger, 1998) Concerning the sample of American overweight group, it is possible that after passing the border of normal weight according to BMI, the "self-alarm", does not snap into action immediately, since there is no need to be anxious about the weight. Thus, no actions are taken in order to reduce the weight. Though after passing the border of being overweight into becoming obese the late self-realization of becoming obese occurs, and leads to the apathy, and loss of hope of becoming ever of normal weight. However, biological causes as a consequences of eating behaviors might be reasons of high level of depression as well. Supporting the explanation above, there was found a strong positive correlation between the BMI and the level of depression. The fourth hypothesis concerning the discrepancy number statistically wasn't supported however, lead to a very interesting results. Even though there is no significant difference of discrepancy number between the groups, there was found a strong positive correlation between discrepancy number and the level of depression, meaning that the bigger is a gap between the actual weight and the desired weight, the higher will be the level of depression. High dissociation of actual and ideal body weights makes physical self-satisfaction very difficult. Constant physical self-dissatisfaction causes a negative impact on psychological health of an individual. Especially among overweight women, in the social groups where the obesity is considered as a negative trait and is stigmatized. According to looking-glass self theories the psychological out comes of being overweight is distressing, because it is negatively viewed in our society, the negativity is transformed into self-rejection because we view ourselves as others see us. (Ross, 1994) This dissociation of actual and desired body weight causes distress, imbalance, lowers down self-esteem, increases anxiety especially, social physique anxiety, can develop depressive disorders. Since women show more criticism concerning their body weight, there is always a presenting psychological distress. However, it is not necessarily always that extra weight is direct influence on depression or anxiety disorders, sometimes depression occurs because of the other factors that provoke instability within stress regulating system. Which are further obviously reflected in metabolic changes that later on cause a significant weight gain or weight loss. It may be a high cortisol excretion that might play a role in the relationship of stress and depressive disorders. Or brain processes in response to stress and "hypothalamic-pituitary adrenal axis that later increases body mass index of a person. (An Keski-Rahkonen, Benjamin M. Neale, Cynthia M. Bulik, Kirsi H. Pietilainen, Richard J. Rose, Jaakko Kaprio, and Aila Rissanen, 2000) Apart from metabolic changes, emotional discomfort, anxiousness, lack of different emotions cause overeating, which explains the weight gain, and later on the guilt for eating a stress for being big in size and not fitting the norms. From the psychological point of view it is important to understand that we deal here with a pathological cycle. Thus, it is very essential but very difficult to find the initial point and the point where it's the most efficient to get an individual out of this cycle. On the other hand individuals without understanding their routine, correspondingly to the weight gain produce particular reactions to reduce so called distress because of extra kilograms/pounds. Some individuals engage in weight control behaviors such as dieting, and exercising. According to Dwyer, Feldman and Mayer 1970 the preferred

attaining of thinness in American Culture is dieting (Dwyer, Feldman and Mayer 1970). Though dieting itself might be more distressing than the realization of being overweight. The attempting to fit the norms of attractiveness by dieting, and the frustration of failing these attempts is more distressing than not fitting the societal norms of attractiveness (Ross, 1994). The same situation with exercising, if individuals decide to exercise for intentional weight loss, inconsistent attaining of this exercise might cause frustration and distress because of failing the exercise program and physiological stress can instead of weight decrease cases its increase. Moreover, amateur individuals who firstly start dieting or exercising can increase in weight and in level of depression and anxiety by prescribing themselves a diet or exercises that doesn't correspond to the requirements of the proper and not harming the body ones. By proper and not harming the body one, meaning gradual, and that takes into consideration personal peculiarities of an individual. Overall, the weight change is one of the diagnostic criterion of depressive disorders and no matter if it influences it directly or indirectly it should always be considered while dealing with weight perception and self-dissatisfaction of women with own body and weight. The fifth hypothesis concerning the self-esteem of overweight women wasn't supported, but brought the research to even more interesting results. It was found out that there is no correlation between the self-esteem score and the Body Mass Index, however there is a strong negative correlation between the discrepancy score and the level of self-esteem. Thus, it is possible to conclude that even though a person is overweight, or has a high BMI, he/she still might have a high level of self-esteem, however if the a person has a high BMI, and there is a conflict between the actual and desired body weights, the self-esteem lowers down. Thus, we came closer to understanding what particularly influences self-esteem. Not the extra kilograms, but the disassociation between aspects of actual self and desired self.

Conclusion

This research contributes to the field of weight perception and ethnocultural peculiarities of weight perception of women from Kyrgyzstan and USA. The main and significant finding of this research was that in Kyrgyzstan women tend to overestimate thinness and underestimate overweight possibly due to the functioning of the Ego-Defense mechanisms such as denial and intellectualization. Another interesting finding of the research was the negative correlation between self-esteem score and the discrepancy number which gave us a better understanding of how exactly self-esteem of a women is influenced by weight perception. The research in general has supported Festinger's Social comparison theory and evaluated peculiar factors that influence weight perception of women in Kyrgyzstan and USA.

During the research there were some significant limitations, such as: standardized instrument such as Stunkard silhouettes was drawn from White Caucasian women, and the implementation of it in ethnocultural research probably might contaminate the results, since people in different countries have different body constitutions. Thus, the standard mean of BMI of the silhouettes wasn't used in the research as well, since we couldn't apply and compare it to Kyrgyz sample. Also, the age of participants was limited from 20 till 30, that doesn't let us generalize the results for all women, since possibly there are age peculiarities of weight perception and correspondingly different psychological outcomes.

The second plausible limitation is a self-reported weight and height of participants, which might be subjective as well, especially in the sample of Kyrgyz overweight and underweight women where the issue of weight perception is very controversial, and some women are not comfortable of reporting their own weight. However, since the Body Mass Index was a main criteria in identifying to which group exactly an individual belongs to, and there was a range for each category, extra or less kilograms/pounds and extra or less inches or cm will not make a

significant difference. However, subjective self-reporting of weight and height might effect mean scores in general. Also as was mentioned in the methodology part, there was a difference in weight categories due to the technical problems of finding participants in Kyrgyzstan of the same weight as in America. So, that could have been one of the limitations that contaminated the results as well.

A particular research puts a main emphasis on investigating if there are differences among overweight women from Kyrgyzstan and USA in perceiving self-weight. To research the levels of depression and anxiety in order to check the social factors that shape individuals weight perception.

Though, since it is the first research studying enthocultural peculiarities of weight perception, it requires more investigation and work.

In the future research it is important to investigate other factors that influence weight perception in different countries such as year of education, marital status, amount of children etc. Also it is important to investigate not only females but also males perception of weight, since probably men are very important in shaping females view of self-weight.

Also since in this research we have found out that there are differences in weight perception among women of different countries, therefore there are different responsive reactions and action taking behaviors in order to reach desired weight. Thus, as was explained in the introduction part of the research, that many women get into pathological cycle, the character of the cycle differs in different countries. The investigation of the peculiarities of these pathological cycles in different countries is a must if the research on this issue is considered for a practical implementation while dealing with overweight people and negative psychological outcomes.

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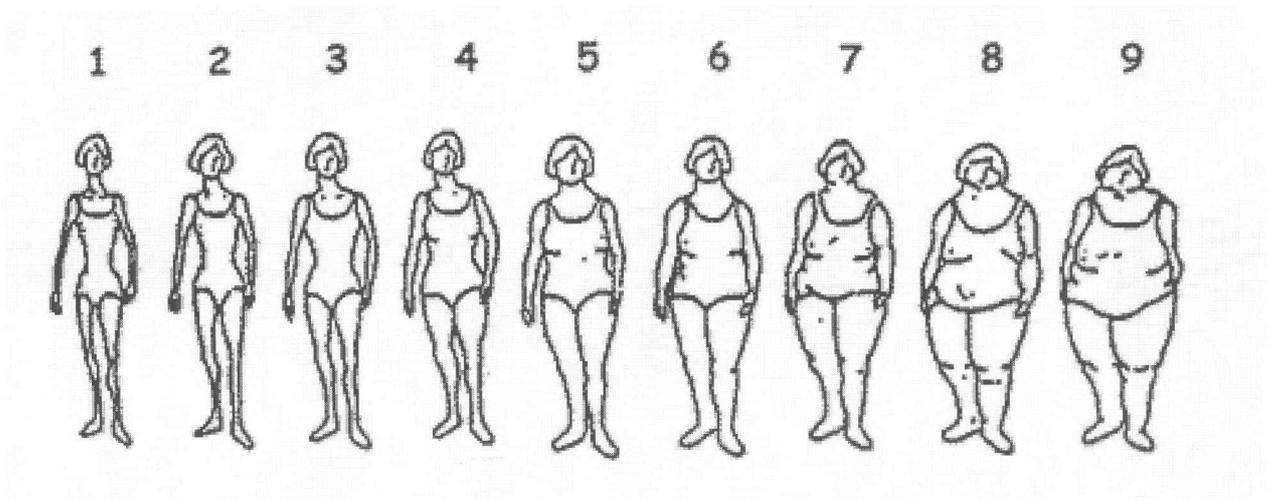
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Stunkard's Silhouettes method.

Please indicate your height _ -----, and weight_----- .

Please have a look at these nine silhouettes, under each silhouette write down the weight that according to you mostly suits the figure. Then by the letter "A" please indicate the silhouette that the most accurately represents your actual body size. By the letter "I" please indicate the silhouette of the desired body size.



Ethnocultural Features of Anxiety and Depression in
Expecting Women of Kyrgyz and Russian Ethnicities.

By Kanykei Latipova

“The history of man for nine months preceding his birth would probably be far more interesting and contain events of greater moment than all three score and ten years that follow it”– Samuel Taylor Coleridge (Levine, 1996, [online]). Indeed, formation of the fetus between periods of conception and delivery is an astonishing life process. Moreover, pregnancy is unique time because of combination of dramatic psychological, physiological, physical and social changes (Leifer, 1980).

It is known that pregnancy lasts nine calendar months, which is nearly 40 weeks divided into three phases, called trimesters, of three months each (Physical and Psychological Changes of Pregnancy, 2005). According to Santrock (2005) who studied peculiarities of each trimester found that the second trimester of pregnancy is safer for women in its physical and psychological aspects, whereas, in the first and the third trimesters pregnant women are more vulnerable. Pregnancy during the first trimester is accompanied with an adaptation of the pregnant woman’s organism to the conception and development of the fetus. Thus, the pregnant woman goes through feelings that were unusual for her before. Moreover, there is a heightened threat of a miscarriage. Similarly, during the third trimester of the pregnancy the pregnant woman may be alarmed by the issues related to the preparation of her organism to childbirth, the healthy growth of the fetus, and the possibility of premature birth.

All these factors affect the pregnant women’s self-perception of pregnancy during each trimester (Santrock, 2005). Going through natural physical and hormonal changes, expecting women encounter the lifetime risk of affective disorders, such as anxiety and depression. These constructs are examined among first-time pregnant women in the present study, which are defined as the following:

According to the Encyclopedia of Psychology (2000), anxiety is defined as an emotion described as by elevated autonomic system activity, particularly activation of the sympathetic nervous system (i.e., increased heart rate, blood pressure, respiration, and muscle tone), internal feelings of tension and cognitions that involve fear and worry. The construct to which anxiety is referred is apprehension which usually is a reaction to a concrete identifiable danger; whereas, anxiety is understood as a reaction to an unidentifiable threat or danger (Encyclopedia of Psychology, 2000). It is further noted that those who have had anxiety, demonstrate behavioral and cognitive changes (Encyclopedia of Psychology, 2000).

According to Ayers and Pickering (2005), pregnant women show both positive and negative expectations of delivery. Afterwards, they emphasize that these expectations vary depending on the birth experience. Consequently, anxiety related to expectations of women having their first child whom Ayers and Pickering (2005) called nulliparous differs from the anxiety of women having subsequent children, or multiparous. It seems intuitively obvious that *multiparous* pregnant women would have different expectations because they have prior experience of giving birth, and *nulliparous* pregnant women generally would have anxiety of giving birth for the first time. Therefore, anxiety of both first-time birth givers and second-time or third-time birth givers is different. In addition, many authors, including Mesheryakova (2000) and Zavyalova (2000), point that anxiety in pregnant women having the first baby is more likely expressed in their self-perception of pregnancy on the ground of being confronted with new changes for them and the beginning of definitive relationships between mother and child. Therefore, the current study concentrates only on women who are pregnant for their first time. In fact, anxiety during pregnancy has been less studied than depression. Many researchers have studied depression in pregnant women based on their last trimesters (Heather et al., 2004). Obstetric period, or pregnancy, - a major life event accompanied by hormonal changes, can represent a time of increased vulnerability for the onset or return of depression (Heather et al., 2004). For example, Josefsson (2001) and his colleagues in their research called

Depression during and after Pregnancy, concluded that 17 percent of women showed prevalent depressive symptoms during late pregnancy. By conducting an extensive and systematic review of 716 studies on prevalence of depression during pregnancy Heather A. Bennett et al. (2004) revealed the following results:

Table 1. Details of Studies that Determined the Prevalence of Depression by Self-Report Questionnaire, By Trimester

Trimester	Author	Country/year published	Instrument	Depressed (%)
1	Birndorf et al	United States/2002	BDI	24.6
1	Pajulo et al	Finland/2001	EPDS	5.3
2	Dayan et al	France/2002	EPDS	11.2
2	Evans et al	England/2001	EPDS	13.9
2	Gotlib et al	Canada/1989	BDI	21.4
2	Matthey et al	Australia/2000	BDI	12.1
2	Pajulo et al	Finland/2001	EPDS	8.7
2	Salamero et al	Spain/1994	BDI	15.9
2	Seguin et al	Canada/1995	BDI	2.2
2	Seguin et al	Canada/1995	BDI	29.6*
3	Bolton et al	England/1998	EPDS	29*
3	Chung et al	Hong Kong/2001	BDI	8.7
3	Da Silva et al	Brazil/1998	EPDS	37.9*
3	Evans et al	England/2001	EPDS	15.1
3	Gotlib et al	Canada/1989	BDI	25.8
3	Johanson et al	England/2000	EPDS	9.8
3	Josefsson et al	Sweden/2001	EPDS	17.4
3	McKee et al	United States/2001	BDI-II	51.4*
3	O'Heron et al	United States/1991	BDI	19.6
3	Pajulo et al	Finland/2001	EPDS	7.5
3	Verdoux et al	France/2002	EPDS	5

* Studies of women of low socioeconomic status.

It is observed in the table that many authors agree with the fact that the frequency and level of depression depend on socioeconomic status of family. The lower socioeconomic status the women have, the higher level of depression they manifest during their pregnancy. The researchers have found that pregnant women can experience depression no matter what trimester of pregnancy they are in.

In reproductive age, according to the statistics (Encyclopedia of Psychology, 2000), women are more likely to experience depressive states, which is familiar to some pregnant mothers. The present study examines manifestations of both anxiety and depression in pregnant women, because both of these emotional states are experienced by nulliparous women. Therefore, the present study investigates the further ethnocultural features of depression and anxiety expressions in first expecting women.

As mentioned previously, the expectation of first childbirth is the most anxious period, because it means the end of independent self-existence and the beginning of irrevocable mother and child relationships. Kovalenko (1998) says that pregnancy is a sharp transitional period, which often goes together with crisis experiences. The consciousness of the pregnant woman during pregnancy and interactions with her

surroundings essentially change, because she begins to adapt to her role as a mother. Additionally, many people emphasize that the family expecting a baby becomes more sensitive and less stably functioned (Eidemiller, et. al., 2006). Usually the expectation of a baby's birth is a source of psychological trauma for every family member. Childbirth is the specific event – when a woman goes into labor and delivers. It changes the family subsystems, rebuilds relationships between relatives, and etc. These family members naturally influence the psychological state of the pregnant woman. Moreover, the changes that take place in the pregnant woman's physiology and psychology define psychological atmosphere within the family and the character of interactions between its members. The influence of ethnicity and culture shapes the behavior of women during their pregnancy. Thus, depression and anxiety which are natural for them, is manifested differently depending on the expectations of one's culture. The present study shows how Kyrgyz and Russian women within both rural and urban places express feelings of depression and anxiety during their first pregnancy.

This study does not investigate either Kyrgyz or Russian cultures itself, but their influences on the behavior and cognition of first-time pregnant women in dealing with their anxiety and depression. Consequently, it will serve the aim of the current study to limit its examination of culture to the description of interpersonal relationships within Kyrgyz and Russian family systems and marriages.

Kyrgyz Family and Its Structure

According to the dominant Islamic religion, Kyrgyz families are patriarchal. "Family relations are characterized by great respect for older family members and the dominance of male heads of households" (Curtis, 1996, [online]). It is true that members of the family greatly respect older people. For example, during a meal nobody eats until the oldest one begins; younger people must not oppose parents, or older siblings, which forms respectful relationships in the family atmosphere. Therefore, in the family structure, gender and age play an important role among the Kyrgyz. The head of the family is always a man, usually the father. The main role of the man is to provide his family with food, financial support, and needs of family members, while the mother has a main role in raising and bringing up their children and taking care of the house. However, this structure is not always the norm in Kyrgyz family. Nowadays, Kyrgyz women's role does not have a significant difference from male's role.

The cultural split of labor in the Kyrgyz nomadic pastoralist families was unique among Central Asian cultures. As mentioned in many historical records, Kyrgyz women were less limited in behavior and clothing than were other Muslim women of Central Asia (Friedrich & Diamond, 1994). Quite the contrary, different kinds of labor were done by both sexes. So, women knew how to ride a horse and hunt; and men knew how to prepare food. Besides, women put up and strike the yurt (traditional Kyrgyz dwelling), care for all domestic animals, and shear sheep for wool to design and create felted rugs (*shurdak*) (Friedrich & Diamond, 1994). In most cases, Kyrgyz women used to be restricted to household chores (cooking, cleaning, hosting, and raising children) and crafting, but now have more career opportunities. So, according to the statistics that were found for the year 2000, the percentage of women in the labor force was 46 percent, 32 percent of women in Kyrgyzstan were administrators and managers, and five percent of women worked in parliament (Kyrgyzstan in statistics, 2005). Correspondingly, approximately half of women in Kyrgyzstan fill contribute to their family budget along with men. The patriarchal system dictates to the Kyrgyz family that the birth of a son is more desirable, and mostly sons inherit the family's legacy rather than daughters. Kyrgyz families are extended families. Usually sons live with parents even after they get married. Therefore, the

status of a Kyrgyz family depends on the quantity of male children in the family (Marriage and Family, 2007). The extended family is very important to the rural Kyrgyz, but for many people in urban areas the basic family unit is the nuclear family (Brook, 2002). In both rural and urban families sons and daughters are taught certain responsibilities. Sons are usually taught to be defenders of their family members, and to help the father with indoor and outdoor house responsibilities. Daughters usually learn from their parents to be the source of home and family hearth, and to help their mother to do household chores. Due to patrilocal residence that exist in Kyrgyzstan, women live at their family house until they get married; after the women are married, they move to their husbands' home. Men have a choice to stay with their parents or to move to own house after marriage; but usually the youngest son lives at the family house even if he gets married so that to take care of his parents. Consequently, Kyrgyz parents bring their children up hoping that they will take care of them in future when they get old. There is a Kyrgyz proverb that explains this custom: *Ата-Эненди сыйласан, оз уулунан жакшылык коросун* (ata enendi syilasan oz uulundan jakshylyk korosun), which means "if one respects one's parents, one will be respected by one's children." Thus, when daughters-in-law come to cohabit with their husbands' parents after the wedding, they do all house chores, and they are expected to serve despite of their pregnancy. Consequently, they often have an active lifestyle. In fact, today this kind of lifestyle and responsibilities can be observed among rural Kyrgyz women; whereas, urban Kyrgyz people have become closer to European culture and lifestyle, especially during existence of the Soviet Union.

Russian Family and Its Structure

Goehner, Duan and Yale Rishmond (no date) based on their thorough comparative research described a Russian soul as: "sensitive, revere, imaginative, inclined to tears [but not publicly], compassionate, submissive mingled with stubbornness, with patience that permits survival in what would seem to be unbearable circumstances, poetic, mystic, fatalistic, a penchant for walking the dark, introspective, prone to sudden unmotivated cruelty and mistrust of rational thought, fascinating - the list goes on." Russians preserve their integrity in a way that conforms to their inner belief in what a human being should be, with a manifest honesty and integrity seldom seen elsewhere in the world. Russians rely on a close network of family, friends, and co-workers as protection against the risks and unpredictability of daily life. Consequently, within the intimate circle of family and friends, they feel secure and relaxed, sharing and caring, warm and hospitable, and they speak their minds (Goehner et al., no date). Therefore, the present study predicts that because of the caring attitude toward members of family, the affective peculiarities during expecting period will have significant difference compare to women from pure Kyrgyz culture.

Giving to the phenomenon of pregnancy and cultural features, the student researcher has shaped the following hypotheses:

H1: Anxiety and/or depression can be revealed in first-time pregnant women of Kyrgyzstan.

H2: The differences in the level of anxiety, depression and alexithymia will be found among representatives of four groups: rural and urban Kyrgyz, rural and urban Russian expecting women.

Alexithymia is defined as having difficulties with the verbal and symbolic expression of emotion. (Ruesch, 1948).

H3: The life style changes during expecting period in four groups of participants will be different.

H4: Expecting women with comparatively high levels of anxiety and depression will practice traditional rituals as coping mechanisms.

In order to examine these study's hypotheses, the researcher uses four materials to study the question: Hospital Anxiety and Depression Scale (HADS) designed by Zigmond A.S. and Snaith R.P (1983), The Twenty Item Toronto Alexithymia Scale (TAS-20), Measurement of Pregnant Woman Attitudes, and semi-formalized interview.

Method

Participants

The study sample (N=82) comprised four groups of women expecting their first child. One group of women was rural Kyrgyz (N=22), whose pregnancy was medically managed in Nookat region, Osh oblast in a Southern part of Kyrgyzstan. The second group of women contained rural Russian (N=17), whose pregnancy was medically managed in Kara-Balta town, Chui oblast in North of Kyrgyzstan. The third group of women was urban Kyrgyz (N=22), whose pregnancies were medically managed in Bishkek, the capital of Kyrgyzstan. The fourth group of women was urban Russian (N=21), whose pregnancy was likewise medically managed in Bishkek city. The mean age of the rural Kyrgyz pregnant women was 21.73 (SD= 2.334, range = 18 - 26) years. The mean age of urban Kyrgyz expecting women was 23.59 (SD= 3.838, range = 18-30) years. The mean age of the rural Russian women was 21.00 (SD=2.236, range = 17- 25) years. The mean age of the urban Russian women was 22.90 (SD=2.278, range = 19- 27) years.

Written informed consent was obtained from each participant prior to the commencement of the study.

Materials

The present study comprises two main research approaches: anthropopsychological and psychological approaches. The anthropopsychological study was conducted by means of semi-formalized interviews in order to reveal traditional rituals related to the period of expecting a baby. The psychological part includes three research standardized valid instruments: 1) The Hospital Anxiety and Depression Scale by Zigmond and Snaith, 2) Toronto Alexithymia Scale, and 3) the Measurement of Pregnant Women's Attitude.

The Hospital Anxiety and Depression Scale by Zigmond and Snaith (HADS), has become generally used as a clinical and research instrument designed to assess the dimensions of anxiety and depression in non-psychiatric populations (Herrmann, 1997). HADS contains 14 items and includes two subscales: anxiety and depression. Each item is rated on a four-point scale, giving maximum scores of 21 for anxiety and depression. Scores of 11 or more on either subscale are considered to be a significant case of psychological morbidity, whereas scores of 8-10 represents *borderline* and 0-7 *normal*. Since the HADS has become a popular instrument in recent years in assessing levels of anxiety and depression in pregnant women (e.g. Cederholm et al., 2001), this material will help to examine the study's first and third hypotheses.

The second material that the researcher used is The Toronto Alexithymia Scale (TAS). It is the most widely used measures of alexithymia. This questionnaire has 3 factors, including difficulty identifying feelings and distinguishing them from bodily sensations, difficulty describing feelings to others, and externally oriented thinking. The TAS uses a 5-point Likert type rating scale from 1 (strongly disagree) to 5 (strongly agree). The TAS has shown adequate internal consistency, good test-retest reliability, good convergent and discriminant validity (Taylor et al, 1997). According to the TAS-26, the following scores represent the following results: 74 and above – alexithymic type; 62 and below – nonalexithymic type; and scores between 63 and 73 represent subalexithymic type.

The Measurement of Pregnant Woman Attitudes (MPWA) is conceptually based on the Myasishev's theory about psychology of attitudes that lets study pregnancy in the light of unity of organism and personality. The measurement consists of three blocks, each of which includes statements that reflect the following (Dobryakov, 2006):

- A. The attitude of the pregnant woman toward her pregnancy
- B. The attitude of the pregnant woman toward forming a “mother-child” system
- C. The attitude of the pregnant woman toward the attitudes of surrounding people to her

Each block includes five different statements regarding these attitudes. Consequently, the whole test includes 45 statements. The respondent is offered to choose one statement out of five within each part of the assertions. The current material will facilitate the second and fourth hypotheses about the attitudes of the pregnant woman toward herself and the family attitudes toward her.

The final method of this study is the semi-formalized interview, which has anthropopsychological character. It will influence the collecting data about ethnocultural rituals practiced during pregnancy in both cultures. As a basis it contains five main questions directed to learn the perception of pregnancy by the participants and their families within their cultures.

Procedure

Osh oblast

Potential study participants, rural Kyrgyz pregnant women, were selected in Nookat region outpatient clinic (Osh oblast), where they regularly came for medical check-ups. Only those Kyrgyz women who had their first pregnancy and who expressed an interest in taking participation in the study took three tests and an interview. Correspondingly, the sample was randomized. The researcher, a native Kyrgyz and Russian speaker, explained that the study was aimed to investigate women's perception of their first pregnancy and application of any traditional rituals within their culture regarding pregnancy by them. The women were assessed by Kyrgyz language translated versions of TAS-26, HADS, and MPWA. The translation of them from Russian into Kyrgyz was made by back-to-back method. All participants in the investigation were volunteers and were informed that they could withdraw from the study at any time.

Chui oblast

Potential study participants, rural Russian pregnant women, were selected in Kara-Balta town outpatient clinic (Chui oblast), where they regularly came for medical check-ups. Those Russian women who had their first pregnancy and who expressed an interest in taking part in the study took three tests and an interview. The researcher, a native Kyrgyz and Russian speaker, explained to woman that the study

was aimed to investigate women's perception of their first pregnancy and application of any traditional rituals within their culture regarding pregnancy by them. The women were assessed by Russian language versions of TAS, HADS, and MPWA. Overall the work with one pregnant woman took about 25-20 minutes. All participants in the investigation were volunteers and were informed that they could withdraw from the study at any time.

Bishkek city

Potential study participants, urban Russian and urban Kyrgyz pregnant women, were selected in Bishkek city's outpatient clinics, where they regularly came for medical check-ups. Those women who had their first pregnancy and who expressed an interest in taking part in the study took three tests and an interview. The researcher, a native Kyrgyz and Russian speaker, explained to these women that the study was aimed to investigate women's perception of their first pregnancy and the application of any traditional rituals within their culture regarding pregnancy by them. The women were assessed by the Russian language versions of TAS, HADS, and MPWA. Since Russian is one of the main modules at schools and universities, which gives opportunity to every Kyrgyz-native speaker to learn it as proficiently as their mother language, most Kyrgyz citizens speak and easily comprehend the Russian language. Therefore, urban Kyrgyz women filled out study instruments in the Russian language. In those cases when some of them preferred the Kyrgyz version, they were provided with the Kyrgyz version of the tests. Overall the work with one pregnant woman took about 25-20 minutes. All participants in the investigation were volunteers and were informed that they could withdraw from the study at any time.

Results

Both approaches of the present study, anthropopsychological and psychological, were conducted to reveal certain results.

The anthropopsychological approach that included semi-formalized interview revealed that indeed every culture has specific traditional rituals related to pregnancy period. All found traditional rituals of four groups are the followings:

Traditional rituals among rural Kyrgyz pregnant women

Things that are permissible and recommended

- In case if belly of the pregnant woman has a lower position, special elderly women tie a kerchief round her belly and lift her legs up.
- One needs to take underwear of that woman who has many sons, and wear it.
- If one of the partners eats camel-meat, pregnancy will last for 12 months.
- If the pregnant woman eats hare-meat, her baby may bear "nyshan" (visitation, e.g. cleft lip)
- If the pregnant woman eats snake-soup, she will have easy birth giving.
- If the pregnant woman takes a handkerchief of her husband during contractions, her husband might feel the same pain.
- To smoke dry branches of evergreen inside of house.
- To sacrifice sheep and give it away in order to receive benedictions.

- To turn to mullah (Muslim religious cleric) for blessing
- To exchange with “surpa” (a solid fabric used in dough lamination) of the woman, who gave birth several times.
- Pouring tea to other people by the expecting woman is undesirable.

Not TO...
(Things that are not recommended)

- step over broom (the baby may be born in wrong position)
- step over cow-rope (the baby may be entangled in the navel-string)
- sit on a male hat-dress (childbirth will be painful)
- trample on a male dress
- sew during pregnancy period (the baby may be entangled in the navel-string)
- sit on a stub (painful childbirth)

Traditional rituals among urban Kyrgyz expecting women

Things that are permissible and recommended

- To turn to spirits
- To read Koran
- To turn to the Go

Not TO...
(Things that are not recommended)

- cut and dye hair
- throw rubbish in the evening
- visit funerals

Traditional Rituals of the Rural Russian Culture:

- If the expecting woman often feels cold, she will have a daughter; if she is warm – she will have a son.
- If the expecting woman has a pointed belly, she is carrying a boy; if it is a round belly – she is carrying a girl.

- Not TO...
(Things that are not recommended)
- cut hair
 - drop crumbs
 - chew the cud, otherwise, the baby will be noisy
 - squat down
 - sit on the threshold, otherwise, pregnancy will be incomplete
 - wear shoes with heels
 - chew or eat during walking, otherwise, the baby will be insatiable
 - step over a rope (the baby might be entangled in the navel-string)
 - iron on weekends, otherwise the baby will have an iron angle on his/her forehead.

Traditional Rituals of Urban Russian Culture

- To put a knife or a male shirt under a pillow for the expecting woman.
 - drive cats
 - step over hoses
 - cut and dye hair
 - caress pets (the baby will have hair on his/her back)
- Not TO...
(Things that are not recommended)

Results of the Psychological Part

Analysis of means was made in order to define the level of anxiety, depression and alexithymia in four groups of participants (See Appendix 3, Graph 2). The levels of anxiety among representatives of ethnic groups are as following: rural Kyrgyz women = 7.95, urban Kyrgyz women = 7.09, rural Russian women = 8.35 and urban Russian women = 5.48. Correspondingly, according to the scale of Zigmond and Snaith's test, anxiety levels of both rural Kyrgyz and rural Russian populations are on a subclinical level, which is higher compared to urban population. Anxiety level in urban Kyrgyz pregnant women is closer to a subclinical level, and among Russian populations the anxiety is normal during the expecting period.

After examining the expressions of depression in four groups it was found that rural Kyrgyz women's level of depression is within the subclinical scale (9.00), whereas urban Kyrgyz (7.05) and rural Russian women (7.12) got almost similar results, which lay between normal and borderline levels. Urban Russian women scored lowest on the depression test (3.67), a result that reflects no level of depression during pregnancy.

The analysis of means of alexithymia showed the following results: rural Kyrgyz women demonstrated the highest level of alexithymia (75.18); the results of urban Russian women in alexithymia (58.38) are essentially lower than the results of urban Kyrgyz (67.5) and rural Russian women (66.18) during their pregnancy. Consequently, the rural Kyrgyz pregnant women represent alexithymic groups, urban Kyrgyz and rural Russian reflect subalexithymic type, and urban Russian pregnant women represent nonalexithymic group.

Comparison of means was made through Independent Samples T-test in order to assess the difference between the levels of anxiety, depression and alexithymia within the four groups of participants.

First, the means of anxiety, depression, and alexithymia of rural Kyrgyz and urban Kyrgyz groups were compared. Next, the statistical significances of these comparisons were studied.

HADS scores on anxiety revealed that 22 (27%) of rural Kyrgyz pregnant women, 22 (27%) urban Kyrgyz pregnant women, and 17 (21%) of rural Russian pregnant women demonstrated clinically relevant levels of anxiety in contrast to 21 (25%) urban Russian expecting women. There are no statistically significant differences regarding anxiety level between the following compared groups: 1) rural Kyrgyz and urban Kyrgyz, 2) rural Kyrgyz and rural Russian, 3) urban Kyrgyz and rural Russian, and 4) urban Kyrgyz and urban Russian pregnant women. By contrast, there are statistically significant differences in regards to level of anxiety during first pregnancy between the following compared groups: 1) rural Russian and urban Russian, 2) rural Kyrgyz and urban Russian pregnant women.

Examination of HADS scores on depression revealed that 22 (27 %) of rural Kyrgyz pregnant women, 22 (27%) urban Kyrgyz pregnant women, and 17 (21%) of rural Russian pregnant women demonstrated clinically relevant levels of anxiety in contrast to 21 (25%) urban Russian expecting women demonstrated clinically relevant levels of depression in contrast to 21 (25%) urban Russian expecting women. The highest scores on depression showed rural Kyrgyz expecting women. No statistically significant differences regarding depression level between the following compared groups: 1) rural Kyrgyz and urban Kyrgyz, 2) rural Kyrgyz and rural Russian, and 3) rural Russian and urban Kyrgyz pregnant women were observed. However, there are statistically significant differences in regards to level of depression during first pregnancy between the following compared groups: 1) rural Russian and urban Russian, 2) rural Kyrgyz and urban Russian, and 3) urban Kyrgyz and urban Russian pregnant women.

According to TAS-26, rural Kyrgyz pregnant women demonstrated alexithymic type due to their mean score, which means that they really have difficulties with expressing their feelings and emotions. Rural Russian and urban Kyrgyz pregnant women's mean of alexithymia level showed subalexithymic type. There is no alexithymia among urban Russian expecting women.

No statistically significant differences regarding alexithymia level between the urban Kyrgyz and rural Russian pregnant women were observed. On the other hand, there are statistically significant differences in regards to existence of alexithymia during first pregnancy between the following compared groups: 1) rural Kyrgyz and urban Kyrgyz, 2) rural Russian and urban Russian, 3) rural Kyrgyz and rural Russian, 4) rural Kyrgyz and urban Russian, and 5) urban Kyrgyz and urban Russian pregnant women.

Extra results for anxiety, depression, and alexithymia found by the present study are explained farther.

By splitting the participants according to only their ethnicity (Kyrgyz and Russian), the following means results are received in regards of anxiety, depression, and alexithymia levels: 44 (54%) Kyrgyz women showed borderline anxiety (7.52), and 38 (46%) Russians are within normality, but closer to borderline level of anxiety (6.76). Regarding depression, Kyrgyz women demonstrated borderline level of depression (8.02), and Russians are within no risk group (5.21). Concerning alexithymia, Kyrgyz expecting women demonstrated subalexithymic type (71.34), and Russians – nonalexithymic type (61.87), which is almost on the border of nonalexithymic and

subalexithymic types. These findings have statistically significant differences in depression and alexithymia, but not in results of study of the levels of anxiety.

A comparison of means of anxiety, depression, and alexithymia was also made according to the location of the participants (rural and urban). It is found that rural expecting women who represent 48% of the study sample demonstrated borderline anxiety (8.13) and depression (8.18), whereas, urban expecting women (52%) did not show significant anxiety (6.30) and depression (5.40). Concerning alexithymia, both groups rural (71.26) and urban pregnant women (63.05) represent subalexithymic type. There are statistically significant differences in all three variables: anxiety, depression, and alexithymia.

The levels of anxiety, depression, and alexithymia by trimesters were also examined.

The statistical analysis revealed that expecting women tend to demonstrate subclinical anxiety and depression in their first trimester. These affective features are less expressed during the second trimester, whereas, during the third trimester the levels of anxiety, depression, and alexithymia they tend to be closer to subclinical levels. These findings do not have statistically significant differences probably because of a small sample size; however they demonstrate how the possible existence of anxiety and depression varies by trimesters.

Using the MPWE the lifestyle of the expecting women was investigated. The applied descriptive statistics of lifestyles of expecting women disclosed the following results that ranged according to the following scale: 1 - Fully changed, 2 - No essential changes, but restrictions, 3 - No reason to change, 4 - Life became wonderful, 5 - Plans are ruined because of pregnancy.

Based on the received results, it is found that most rural Kyrgyz expecting women (32%) do not perceive pregnancy as a reason to essentially change their lifestyle; however, due to pregnancy they tend to put some restrictions in their life. Similar attitude toward lifestyle changes during the expecting period was demonstrated by most urban Kyrgyz (27%), urban Russian (62%), and rural Russian expecting women (35%). At the same time, according to the table, half of rural Russians tend to think that their lifestyle during pregnancy fully changes. Additionally, the statistics reveal that significant number of rural Kyrgyz pregnant women (27%) do not think that pregnancy is a reason to change their lifestyle. The significant number of urban Kyrgyz expecting women (23%) answered that their lifestyle during the expecting period fully changes, which is not totally observed among urban Russian women. The results have a statistically significant correlation.

Discussion

The current study appears to be the first to experimentally examine the levels of possible anxiety, depression, and alexithymia in pregnant women of Kyrgyzstan by their location, ethnicity, and trimester of pregnancy and also the traditional rituals related to expecting period that surmount the affective peculiarities the women encounter. The major findings of this study are: rural Kyrgyz expecting women are the most vulnerable group among the other groups, and traditional rituals applied during expecting period work as a coping mechanism to surmount the level of anxiety and depression. Since the present study comprises research on peculiarities of anxiety, depression, and alexithymia the findings will be useful for family psychotherapy, and can be applied by psychologists in their consultations with expecting women and their families. . In the present study three hypotheses were fully supported, and the second hypothesis was partially supported.

Concerning the first hypothesis, anxiety and/or depression can be revealed in the first-time pregnant women of Kyrgyzstan; the results indeed demonstrated that anxiety and/or depression can be prevalent features of the expecting period, and rural Kyrgyz pregnant women were appeared to be the most vulnerable group among the others. It can be explained as the following: the lifestyle of rural Kyrgyz women as shown above does not change during pregnancy; however, the women expect to be paid special care. Thus, there is cognitive dissonance, which provokes affective disturbances in rural pregnant women. As the result, they demonstrate higher levels of anxiety and depression. The well known information theory of emotions by Simonov also could serve as basis of support for these results.

The second hypothesis – differences in the level of anxiety, depression and alexithymia will be found among representatives of four groups: rural and urban Kyrgyz, rural and urban Russian pregnant women, was partially supported, since there were not found statistically significant differences in several groups in the framework of three constructs (anxiety, depression, alexithymia). However, among most groups there are statistically significant differences.

The third hypothesis stated that the extent of lifestyle changes in four groups will be different. The conducted cross-tabulation indeed revealed that the significant number of participants showed that their life has changed, and most of them put some restrictions due to their special somatic feature. It is also important to mention that differences were found out between the lifestyle of rural Kyrgyz, urban Russian and rural Russian, urban Kyrgyz pregnant women. The found results can be explained as the following: The lifestyle of rural Kyrgyz women does not essentially change due to the cultural features (Kyrgyz daughter-in-laws are supposed to do work despite of their pregnancy). The lifestyle of urban Russian women does not have essential changes since it is supposed that they need to be active during expecting period.

The fourth hypothesis of the study has anthropopsychological character - pregnant women with comparatively high levels of anxiety and depression will practice traditional rituals as coping mechanisms. The researcher indeed has learnt many traditional rituals related to the pregnant women in rural and urban areas of both Kyrgyz and Russian cultures. Hence, the last hypothesis was also supported. It may be explained as that anxiety leads to archaic behavior because of regression as an Ego-defense mechanism. An archaic mind needs strongly regulated behavior (Adam Seligman, Robert Weller, 2007). One of the forms of strongly regulated behavior is traditional rituals.

Based on the conducted research, the following main conclusions were made by the researcher: 1) the most vulnerable group in the framework of anxiety, depression, and alexithymia is the rural Kyrgyz first-time pregnant women; 2) Depression and anxiety are not prevalent features of pregnancy; and 3) Traditional rituals work as coping mechanisms to surmount the level of anxiety and depression.

It is important to notice that the second hypothesis was proved by the results of means, but they were insignificant. This hypothesis can be proven when the sample will be much larger. This notion is to be revised in the future research.

One of the important limitations of this study is the possibility that the HADS, an instrument to study anxiety and depression, is not applicable for pregnant population. After the data was collected and formed, the researcher found an interesting study on the instrumentality of HADS in studying anxiety and depression among pregnant women. According to the authors of the above mentioned study (G. Herrmann et al, 1997), the results obtained by the use of HADS cannot be admitted as qualitative, because the scale is not adapted for studying anxiety and depression in women during their pregnancy. Therefore, further research using a different diagnostic instrument is desirable and required.

Concerning the anthropopsychological part of the current study, another limitation can be observed. When interviewing the respondents on the rituals they imply during their pregnancy, the researcher faced the following situation: since Kyrgyzstan is a multinational country, the rituals of representatives of four groups might be mixed up with each other, or even with rituals of other nationalities. Therefore, there is no guarantee that the participants shared only with pure and authentic traditional rituals of their culture. Consequently, future research in this area should carefully look through the lines between interacting traditions and cultures in order to confidently separate a particular ritual. These limitations should be considered in further research.

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Measurement of Pregnant Women's Attitudes (Kyrgyz version)

A

I	1. Боюмда болгонумду сезгеним мага башка нерселерге салыштырганда кыйла чонураак бакыт алып келет	
	2. Боюмда бар болсо да эч кандай өзгөчө сезимим пайда болгон жок	
	3. Боюмда бар болгонумду билгенден бери кыжалаттанып жүрөмүн	
	4. Жалпысынан боюнда болуу мага жагат	
	5. Боюмда болгонум үчүн капаланамын	
II	1. Боюмда болгонум менин жашоомдун жолун толук өзгөрттү	
	2. Боюмда болгонум менин жашоомдун жолун өзгөрткөн жок, бирок кээ бир нерселерди чектеп баштадым.	

	3. Жашоомдун жолун өзгөрткөнүмө боюмда болуум себеп болгон жок	
	4. Боюмда болгонумдан кийин менин жашоом жакшыраак боло баштады	
	5. Боюмда бар болгонум себеп болуп менин көп пландарым кечигип, эми ал пландарымдын ишке ашуусун күтпөйм	
III	1. Боюмда болгонум жөнүндө жана келе жаткан төрөт күнү тууралуу эч ойлонгум да келбейт	
	2. Төрөт жөнүндө ар дайым ойлонуудамын, ошондуктак төрөттөн коркомун	
	3. Төрөт малында мен баарын тура кыламын деп ойлойм, ошондуктан төрөттөн кыжалаттанбаймын.	
	4. Төрөт жөнүндө ойлонсом, менин маанайым начарлай баштайт, анткени анын жаман аяктонуусунда шектенбейм.	
	5. Келерки төрөттү майрамдай кабыл аламын	

Б

I	1. Апанын милдеттерин кылуу колумдан келээринен шектенбейм.	
	2. Менин оюмча, жакшы апа боло албайм	
	3. Келе жаткан апалык жөнүндө ойлобоймун	
	4. Укмуштуу апа болгонума ишенемин	
	5. Мен аракеттенсем, менден жакшы апа чыгат деп ишенемин	
II	1. Ичимде алып жүргөн наристени ар дайым ырахат менен элестетемин	
	2. Ичимде алып жүргөн наристемди түшүнүп, ага сүйүнөмүн жана мен эмнени ойлосо ал баарын билет жана түшүнөт деген ойдомун	
	3. Ичимде алып жүргөн наристемдин ден-соолугу жөнүндө ойлонууп, ар дайым кыжалаттанамын, аны сезүүгө аракеттенемин.	
	4. Наристем кандай болор экени тууралуу ойлонбоймун	
	5. Ичимде алып жүргөн наристем кемчиликтүү төрөлүп калышы мүмкүн деп, көп кыжалат боломун	
III	1. Баламды кантип эмизем дегендей нерселерди ойлонбоймун	
	2. Наристемди эмизип жатканымды чон кубаныч менен элестетемин	
	3. Наристемди эмгиземин деп ойлойм	
	4. Эмизүү менен ар түрдүү ойгойлор пайда болуп каларын ойлоп, кыжалаттанамын	
	5. Наристени эмизе алаарыма көзүм жетпейт	

В

I	1. Боюмда болгонум үчүн наристемдин атасынын алдында мен ажайыптуу көрүнөмүн	
	2. Менин боюмда болгонум наристемдин атасынын мамилесин мага өзгөрткөн жок	
	3. Боюмда болгонум үчүн наристемдин атасы мага көңүлүн көбүрөөк буруп, мага жылуу катышып кылууда	
	4. Боюмда болгонум учун сулуулугум кемтилип, наристемдин атасынын мага кылган мамилеси сууктанып калды	

	5. Боюмда болгонума байланыштуу өзгөрүүлөр жубайымдын мага кылган мамилесине терс таасир кылуусунан коркомун	
II	1. Көбүнчө менин жакын адамдарым менин боюмда болгонума кубанышат, ошондуктан алардын арасында болуу мага жагат	
	2. Менин боюмда болгонумду бардыгы эле жакын адамдарым кубана беришпейт. Мага азыркы учурда өзгөчө мамиле кылынуусу керек экенин бардыгы эле адамдар түшүнө беришпейт	
	3. Менин боюмда болгонумду мага жакын адамдардын көбү жактырышпайт. Алар менен менин мамилем начарлап кеткен.	
	4. Жакын адамдарымдын боюмда болгонума кылган мамилелери мени көп деле кызыктыра бербейт.	
	5. Кээ бир мага жакын адамдар менин боюмда болгонумду жактырышпайт, бул мени кыжалаттандырат.	
III	1. Айлана чөйрөдөгү адамдар менин боюмда бар экенимди билсе, мен абдан уялып кетемин.	
	2. Айлана чөйрөдөгү адамдар менин боюмда бар экенимди билсе, өзүмдү жаман сезип кетемин.	
	3. Айлана чөйрөдөгү адамдар менин боюмда бар экенимди билсе, менде жакшы сезим пайда болот	
	4. Айлана чөйрөдөгү адамдар менин боюмда бар экенимди билсе да, алардын мага таасири тийбейт	
	5. Айлана чөйрөдөгү адамдар менин боюмда бар экенимди билсе, мен эч кабатыр болбоймун.	

The Measurement of Pregnant Woman Attitudes (Russian version)

Инструкция: Просим вас из пяти утверждений, представленных в блоках, выбрать одно, наиболее полно отражающее ваше состояние.

A

I	6. Ничто не доставляет мне такого счастья, как сознание того, что я беременна	
	7. Я не испытываю никаких особых эмоций, связанных с тем, что я беременна	
	8. С тех пор, как я узнала, что беременна, я нахожусь в нервном напряжении	
	9. В основном, мне приятно сознавать, что я беременна	
	10. Я очень расстроена тем, что беременна	
II	6. Беременность заставила меня полностью изменить образ жизни	
	7. Беременность не заставила меня существенно изменить	

	образ жизни, но я стала кое в чем себя ограничивать	
	8. Беременность я не считаю поводом для того, чтобы менять образ жизни	
	9. Беременность так изменила образ моей жизни, что она стала прекрасной	
	10. Беременность заставила меня отказаться от многих планов, теперь не суждено сбыться многим моим надеждам	
III	6. Я стараюсь вообще не думать ни о беременности, ни о предстоящих родах	
	7. Я постоянно думаю о родах, очень их боюсь	
	8. Я думаю, что во время родов все смогу сделать правильно и не испытываю особого страха перед ними	
	9. Когда я задумываюсь о предстоящих родах, настроение у меня ухудшается, так как я почти не сомневаюсь в их плохом исходе	
	10. Я думаю о родах, как о предстоящем празднике	

Б

I	6. Я сомневаюсь в том, что смогу справиться с обязанностями матери	
	7. Я считаю, что не смогу стать хорошей матерью	
	8. Я не задумываюсь о предстоящем материнстве	
	9. Я уверена, что стану прекрасной матерью	
	10. Я полагаю, что если постараюсь, то смогу стать хорошей матерью.	
II	6. Я часто с удовольствием представляю себе ребенка, которого вынашиваю, разговариваю с ним.	
	7. Я понимаю ребенка, которого вынашиваю, восхищаюсь им и считаю, что он знает и понимает все, о чем я думаю.	
	8. Я постоянно беспокоюсь о состоянии здоровья ребенка, которого вынашиваю, стараюсь его почувствовать	
	9. Я не думаю о том, каким будет ребенок, которого вынашиваю	
	10. Я часто думаю о том, что ребенок, которого вынашиваю, будет каким-нибудь неполноценным, и очень боюсь этого.	
III	6. Я не думаю о том, как буду кормить ребенка грудью	
	7. Я с восторгом представляю себе, как буду кормить ребенка грудью.	
	8. Я думаю, что буду кормить ребенка грудью.	
	9. Я беспокоюсь о том, что у меня будут проблемы с кормлением грудью.	
	10. Я почти уверена, что вряд ли смогу кормить ребенка грудью.	

В

I	6. Считаю, что беременность сделала меня еще прекрасней в глазах отца моего ребенка	
	7. Моя беременность никак не изменила отношения ко мне отца моего ребенка	
	8. Из-за беременности отец моего ребенка стал внимательнее и теплее относиться ко мне	
	9. Из-за беременности я стала некрасивой, и отец моего ребенка стал холоднее относиться ко мне	
	10. Боюсь, что изменения связанные с беременностью, могут	

	ухудшить отношение ко мне отца моего ребенка	
II	6. Большинство близких мне людей разделяют мою радость по поводу беременности, и мне хорошо с ними	
	7. Не все близкие мне люди достаточно рады тому, что я беременна, не все понимают, что я теперь нуждаюсь в особом отношении.	
	8. Большинство близких мне людей не одобряют то, что я беременна, мои отношения с ними ухудшились	
	9. Меня мало интересует отношение к моей беременности даже близких мне людей.	
	10. Некоторые близкие мне люди относятся к моей беременности неоднозначно, и это меня тревожит	
III	6. Мне всегда мучительно стыдно, когда окружающие замечают, что я «в положении»	
	7. Мне немного не по себе, когда окружающие замечают, что я «в положении»	
	8. Мне приятно, когда окружающие замечают, что я «в положении»	
	9. Мне наплевать, когда окружающие замечают, что я «в положении»	
	10. Я не испытываю особой неловкости, если окружающие замечают, что я «в положении»	

Хаос без Порядка: События на юге Кыргызстана,
Броуновское Движение Международных
Организаций, Арон Абрамович Брудный и Игорь
Губерман.

Елена Молчанова

Заметит ли Сократ, наш мудрец,
что я шучу и противоречу сам себе или
мне удастся провести и его, и прочих
слушателей?

Мелет из «Апологий Сократа»

Если русские, узбеки или турки скажут, что они – наравне с киргизами или выше их, - государство развалится <...> Наша партия не имеет националистических настроений.

Камчибек Ташиев, лидер партии «Ата – Журт»

Специалистам в области психического здоровья, пока еще оставшимся в Кыргызской Республике (КР), приходится слышать о том, что страна больна и нуждается в экстренной помощи. В переводе на профессиональный язык это означает риск дестабилизации системы (эквивалент психического расстройства) и напряжение защитных механизмов, необходимых для выживания. В условиях их перенапряжения (невротическое расстройство) или недостаточности (шизофрения) система может исчерпать свои ресурсы и погибнуть.

Расщепление и дестабилизация политической, географической, культурной, образовательной, национальной, личностной⁶ и других сфер, являются подобиями внутренне нестабильного целого. Такая ситуация очень изящно укладывается в рамки фрактальной модели Бенуа Мандельброта (B. Mandelbrot, 1977)⁷, но при этом совершенно «неэстетична» по своим последствиям, одним из которых является резня на юге Кыргызской Республики в июне 2010 года.

Ош перед апрельскими событиями: напряжение защитных механизмов.

⁶ Идея «национального характера», в том числе и «национальной терпимости» особенно громко зазвучала в местной прессе после событий в Оше (см., например, интервью М. Кайыпова, данное агентству «Кабар» 02.07.2010: kabar.kg/index.php?option=com_content&task=view&id).

⁷ Фракталом называется сложный пространственный объект, между частями которого существует подобие. Фрактальная геометрия демонстрирует один из фундаментальных принципов жизнедеятельности природных объектов: небольшое количество параметров, взаимодействие между которыми определяется сравнительно простыми математическими уравнениями, лежит в основе существования чрезвычайно сложных систем.

«Узбекский вопрос» был проблемой с момента образования советских республик в Туркестане, когда хозяйственные различия превратились в территориальные⁸, разделив «своих» и «чужих» внутри социалистических границ. Исторически сложившееся пренебрежительное отношение кочевых племен к оседлым отражается в слове «сарт». Известный исследователь среднеазиатских этносов С.Н. Абашин (2007) отмечает, что до первой переписи населения Советского Союза 1926 года, термин использовался для обозначения культурных (но не языковых) черт и образа жизни всего оседлого населения Ферганской долины, обязательно в противопоставлении кочевникам и полукочевникам – «эланы» и обозначал прежде всего самосознание, которое вполне могло сосуществовать с другими типами самосознаний. Так, кыргыз-полукочевник, который имел огород или сад, знал какое-то ремесло, уже отчасти был сартом.

В настоящее время «сарт» звучит оскорбительно и произносится в сопровождении характерных для ненормативной лексики паравербальных и невербальных признаков. Для историков и лингвистов трансформация социального термина в стигматизирующий⁹ и последующее исчезновение целой народности из официальной переписи населения 1926 года представляет несомненный интерес (Абашин 2007).

За время существования Советского Союза напряжение между узбеками и кыргызами на юге страны периодически выливалось в локальные и тщательно скрывааемые стычки¹⁰. Непосредственно перед коллапсом СССР недалековидная политика местных властей в перераспределении уже заселенных земель сыграла роль фитиля для жестокой резни в начале июня 1990 года¹¹. Двадцать лет последовавшего затем внешне мирного сосуществования могут показаться достаточно продолжительной ремиссией, хотя в отношениях между этносами отчетливо фиксировался психологический феномен, который З. Фрейд когда-то обозначил как *нарциссизм малых различий*. «Однажды, – писал Фрейд (1990, с.109), – мое внимание привлек феномен вражды и взаимных насмешек как раз между живущими по соседству и вообще близкими сообществами, например, испанцами и португальцами, северными и южными немцами, англичанами и шотландцами и т.д. Я дал этому феномену имя «*нарциссизм малых различий*», которое, впрочем, не слишком много проясняет. Он представляет собой удобное и относительно безвредное удовлетворение агрессивности, способствующее солидарности между членами сообщества. Рассеянный повсюду еврейский народ оказал тем самым достойную признания услугу культуре тех народов, среди которых поселился; к сожалению, всего средневекового избиения евреев не хватило на то, чтобы сделать эти времена более мирными и безопасными для христиан». Но, с другой стороны:

Когда идет пора
крушения структур,
в любое время
всюду при развязках
у смертного одра
империй и культур
стоят евреи
в траурных повязках¹².

⁸ Абашин С.Н. Узбеки. Рукопись предоставлена с согласия автора

⁹ «Сары-ит» - желтая собака

¹⁰ Конфликт 1968 года был успешно забыт, чему немало способствовали более масштабные события того же политически - гиперактивного года.

¹¹ Из текста публичной лекции Асанканова А, ссылка дана с разрешения автора.

¹² Игорь Губерман. Иерусалимские гарики.

«Тут что-то есть», - как говорит Арон Абрамович Брудный, когда встречается с несколькими проекциями простого, казалось бы, события, интерпретация которого только на первый взгляд не требует особых интеллектуальных усилий. Только на первый взгляд, так как «значение чего-либо состоит в том, что все его понимают. Это одновременно истинно и ложно. Понимание объекта затрудняется – если он значим, важен – вовсе не тем, что вас нужно посвятить в тайны, чтобы вы его поняли, но антитезой между пониманием объекта и тем, что желает видеть большинство. Из-за этого наиболее очевидное становится наиболее трудным для понимания. Это задача не для интеллекта, но для воли, подлежащая преодолению»¹³

Нарциссизм поддерживал и продолжает поддерживать национальное единство, несмотря на родоплеменное противостояние внутри кыргызской политической элиты. По мнению кыргызского историка, профессора Анвара Макеева (2008), постоянное соперничество между ведущими кланами за власть в стране является данностью, которую приходится признать и серьезно считаться с ней; более того, формирование государственных органов управления происходит под влиянием родоплеменных связей¹⁴. Иначе говоря, присутствие «братских» народов, в том числе и узбекского, на кыргызской территории предотвращает междоусобицы между представителями северных и южных кланов и способствует национальному единению.

Результаты многочисленных бесед и фокус-групп, проведенных в Ошской и Жалалабадской областях, выявили несколько предьявляемых причин южного конфликта. Одной из них называется различия ценностей и образа жизни узбеков и кыргызов. Так, узбеки – «более богатые, чем кыргызы, так как несправедливым путем захватили лучшие земли», их быт «скрыт от посторонних глаз», они «хитрые и лживые». Кыргызы, по словам узбеков – «дикие, горные» (данное определение в основном употребляется по отношению к жителям Алая), «воинственные», «недалновидные», «ленивые» и «грязные». Первые обвиняют вторых в том, что их не пускают во власть, вторые обвиняют первых в том, что те хитростью и обманом наживаются на доверчивых представителях титульной нации.

Спекуляции на тему «патриотизма» в Кыргызской Республике с начала 2010 года приобрели просто устрашающий характер, причем количество публикаций обратно пропорционально их качеству. Интересно, что открытые анти-узбекские высказывания появились еще до апреля 2010 года. Так, в официальной газете «Асман. КГ» в начале марта 2010 года на кыргызском языке была опубликована статья под симптоматичным названием «Бдительно жить», автор которой совершенно открыто призывает «воевать за великую кыргызскую землю», добавляя, что, на самом деле, он «против войны», но, «встав на сторону кыргыза, который дерется с представителем другой национальности (независимо от причин драки – прим. Е.М.)», можно «внести свой вклад в развитие кыргызской государственности». В конце достаточно сумбурного повествования автор извиняется «за честные и эмоциональные слова» и, в совсем уже легко узнаваемых традициях, просит «считать его патриотом». К сожалению, это не единственный пример выступления агрессивного этнонационализма под маской патриотизма. Агрессивный этнонационализм, который, по словам Д.С. Лихачева, «губит свою собственную культуру и иссушает ее», может, тем не менее, выступать в качестве мощного интеграционного механизма, объединяя «своих» в противовес «чужим». Патриотизм же, как «личная и общественная культура духа» предполагает, прежде всего, способность к самотрансценденции, «когда человек и весь народ как бы поднимаются над собой и ставят...сверхлические цели» (Лихачев 2006, с. 61).

Основные черты этнонационализмов хорошо изучены: изначальное восприятие государственности как «национальной»; описание нации в этнических

¹³ Арон Абрамович цитирует здесь Людвиг Витгенштейна.

¹⁴ Текст публичной лекции, прочитанной весной 2008 года, предоставленный с разрешения автора.

терминах, связанных с советской марксистской традицией и «теорией этноса»; особое внимание к проблемам национального языка; интерес к историческим корням и древней истории (Smith 1998; Roy 2000). Кыргызский национализм, обладая общими чертами среднеазиатских этнонационализмов, отличается своими уникальными качествами, которые неразрывно связаны с идеей национального характера, основные черты которого обобщены термином «кыргызчылык» («кыргызство»). Носителем черт национального характера и прототипом истинного кыргыза является Манас – великий полководец, под началом которого разрозненные племена воссоединились на родной земле. Манас Великодушный, помимо универсальных физических качеств героя (быстрого взросления, нечеловеческих силы и выносливости, высокого роста, львиного лба, мужественной внешности), обладает рядом весьма узнаваемых характеристик. Он вспыльчив, но отходчив, готов подраться, быстро принимает решения, импульсивен, не всегда подчиняется им же созданным законам, легок на подъем, гостеприимен и хлебосолен независимо от наличия на то средств, предан семье и родителям, нетерпим и жесток к тем, кого считает предателями, добр и щедр по отношению к друзьям. Манас обладает амбициями завоевателя, решившего пойти на Китай, любит продемонстрировать свою силу, доверчив и легко поддается на манипуляции жены – умницы Каныкей, уроженки Бухары.

Кроме того, под термином «кыргызчылык» понимается совокупность необычных способностей (что, на наш взгляд, порой маскирует ранние проявления психических расстройств), четкое следование ритуалам и строгое распределение ролей в кыргызской патриархальной семье¹⁵. Сочетание доверчивости и воинственности, импульсивности и обидчивости создает взрывоопасную смесь, которую можно поджечь одной искрой и поднять на войну даже призраком угрозы со стороны потенциального противника.

Несмотря на явные межэтнические противоречия, между узбекским бизнесом и кыргызским правлением существовал прибыльный симбиоз, разрушенный апрельской революцией 2010 года. По словам одного из членов Национальной Комиссии по расследованию причин конфликта на юге страны А. Асанканова (2010) около 90% мест в налоговой инспекции, органах самоуправления, прокуратуре и силовых структурах южных регионов занимали кыргызы, в то время как 90% ресторанного и увеселительного бизнесов принадлежали узбекам. Подобное распределение мест и утвержденные суммы финансовой поддержки официальных «крыш» позволяли безбедно существовать как первым, так и вторым, подкрепляя при этом негативное отношение друг к другу. После апрельского переворота и отсутствия реальной власти на местах, закономерно проявились криминальные претенденты на свою долю в узбекском бизнесе, придавленные прежде силовыми структурами. Выверенные годами границы оказались нарушенными, и крупные узбекские бизнесмены (их имена как зачинщиков конфликтов может назвать сейчас любой школьник Кыргызской Республики, благо эти имена многократно фигурировали в кыргызских СМИ), оказались перед реальной угрозой потери «неправедным путем накопленных средств».

Первое столкновение между узбеками и кыргызами произошло 29 апреля 2010 года¹⁶ на узбекской границе, когда каждая машина с узбекским товаром была обложена дополнительной данью в 25 тысяч сом (около 540 долларов США). Локальная драка не превратилась в массовую резню, так как, возможно, основные действующие силы тогда не были к ней подготовлены.

¹⁵ Иерархия позиций обнажается при распределении костей и мяса приготовленного барана во время тоя – семейного торжества. Каждый член семьи и гость получает кость в соответствии со своим положением. Если кость, предназначенная *келин* – невестке («кость служанки») будет (гипотетически, так как трудно представить, что это может произойти), отдана гостю, то гость справедливо обидится.

¹⁶ Из публичной лекции академика А. Асанканова, прочитанной в Американском университете в Центральной Азии 27 октября 2010 года. Цитируется с разрешения автора

Таким образом, после апреля 2010 года давнее противостояние кыргызов и узбеков в южных регионах страны было многократно усилено политической и экономической неразберихой. Прежние связи между кыргызским правлением и узбекским бизнесом были нарушены, к переделу собственности подключился криминал, влиятельные люди осознали необходимость сформировать легальные узбекские «крыши», включающие широкое представительство узбеков в местных органах власти и милиции. Разрушение и без того нестабильной системы привело к отчетливой поляризации общества – явлению, которое, согласно П.А. Сорокину (1997, с.214), выражается в объединении деструктивных сил в начале кризиса, что соответствует «негативной нравственной поляризации». Это время, когда правящая элита и подвластные ей структуры демонстрируют «гаргантюанскую глупость, грубость и садистскую разрушительность» (там же, с.215).

Оказание специализированной помощи в Оше и Жалалабаде

Трагедия на юге страны обнажила ряд серьезных проблем в сфере психического здоровья, которые не были настолько очевидными в мирное время. Стало ясно, что в стране нет целенаправленной до- и последипломной подготовки специалистов для работы в кризисных ситуациях масштаба социальных катастроф. В качестве логического следствия, нет местных структур, отвечающих за организацию срочной психолого-психиатрической помощи в условиях чрезвычайных ситуаций. У нас не было опыта работы в условиях, когда национальность психиатра могла явиться решающим фактором, затрудняющим контакт с пострадавшим мирным населением.

Помимо перечисленных и многих других проблем, в процессе оказания специализированной помощи выявилась еще одна – коммуникация между местными психиатрами и психологами с одной стороны, и специалистами международных организаций с другой оставляла и оставляет желать лучшего. Одним из наименее печальных следствий отсутствия налаженной коммуникации было дублирование усилий, включая повторение неэффективных тренингов; наиболее печальным – обесценивание друг друга, что, в конечном итоге, привело к формированию негативного отношения пострадавшего населения к помогающим специалистам. Один из наших Ошских коллег-психиатров, дал, на мой взгляд, емкое определение усилий многочисленных неправительственных международных организаций, обозначив их деятельность как «индустрию оказания психологической помощи». Термин «индустрия» употребляется здесь как синоним чего-то достаточно прибыльного и, увы, конвейерного. «Психологическая индустрия» на юге КР явилась, как нам представляется, следствием недооценки этнокультурного компонента. Нашим зарубежным коллегам порой было сложно понять и принять, что отсутствие глазного контакта не всегда является признаком невежливости, а, скорее, наоборот – во время общения с человеком старшего возраста в кыргызской и узбекской культурах рекомендуется смотреть вниз. Табуированность выражения чувств непривычна для нормального американца, но не является проявлением психического расстройства, а многократное посещение дома, где недавно похоронили близкого, – это злоупотребление гостеприимством, свидетельство культурной неграмотности психолога, но никак не пострадавших, в какой-то момент просто отказавшихся радушно распахнуть двери. Порой наилучшие намерения приводят к грубому нарушению личностных границ, что, в свою очередь, вызывает вторичную травматизацию. Наиболее опасным, на наш взгляд, является легкость, с какой нашими иностранными коллегами выносятся заключения о «психологической безграмотности» населения. Эти заключения зачастую базируются на отсутствии мотивации у пресловутого «психологически безграмотного местного населения» обращаться за помощью к специалистам в области психического здоровья. Следует отметить, что между вероятностью

обращения за помощью и тяжестью расстройств, связанных с посттравматическим стрессом, существует обратная корреляция – чем тяжелее переживания, тем менее вероятно обращение за помощью к психиатру или психотерапевту (см., напр., Тарабрина 2001)).

Ресурсы для последующего примирения: психиатры во время Ошских событий

Оптимист Питирим Сорокин был убежден в том, что вся история человеческой расы «свидетельствует, что она каким-то образом способна преодолевать многие катастрофы на протяжении своего долгого исторического существования... В сотрудничестве со всеми созидательными факторами, силы позитивной поляризации должны сделать все, чтобы предотвратить траурный финиш» (Сорокин 1997, с.231). Силы позитивной поляризации продемонстрированы здесь на примере одной отдельно взятой больницы – Ошского областного центра психического здоровья (ООЦПЗ). Благодаря своему расположению (достаточно далеко от центра города и, следовательно, от мест перестрелок), центр психического здоровья с 10 по 20 июня 2010 года был превращен в военно-полевой госпиталь, где размещались раненые перед эвакуацией в хирургический центр.

Стабилизация состояния лиц с психическими расстройствами в военное время отмечалась многими исследователями. Один из наших коллег рассказывал: *«Во время южной войны у пациентов с непрерывнотекущей шизофренией, находившихся в то время в ООЦПЗ, отмечалось явное улучшение состояния. Они становились добровольными санитарями, кормили раненых и даже помогали печь хлеб для тех, кто остался без еды и без крова»* (устное сообщение). Следует отметить, что состав пациентов, как, впрочем, и медиков ООЦПЗ, был и пока остается интернациональным: там работали и работают кыргызы, узбеки, русские. Во время «превышения необходимой обороны» психиатрическая больница, именно из-за своего интернационального контингента, превратилась не в самое безопасное место. 13 июня 2010 года около трех десятков вооруженных мужчин в масках остановились у ворот ООЦПЗ и потребовали «вывести всех представителей национального меньшинства». В случае отказа персонала ООЦПЗ выполнить требование, люди в масках угрожали поджечь центр вместе со всеми, кто там находился в это время. А.О., директор центра, вышел *«с ними поговорить»* (слова А.О.). Безоружному доктору удалось уговорить вооруженных и решительно настроенных мужчин остановить больницу в покое.

Это отнюдь не единственный пример мужества и интернационального поведения людей в Оше и Жалалабаде. Во время резни соседи-кыргызы прятали у себя узбеков, рискуя собственной жизнью, узбеки разговаривали со своей молодежью, защищая соседей-кыргызов, русские предоставляли свои квартиры для узбекских детей. Таких историй множество, и они, на наш взгляд, могут иметь значительный потенциал в последующем примирении сторон и продолжения позитивной поляризации общества после кризиса.

Еще одним мощным ресурсом для стабилизации психического состояния юга страны являются многонациональные по своему составу психотерапевтические группы. Опыт проведения подобных групп существует, и результаты пока обнадеживают; во всяком случае, они реальны, и по этому свойству – «реальности» отличаются от новорожденного парламента, который, как и все новорожденные, пока способен только на удовлетворение базовых потребностей, да и то с посторонней помощью, не понимая пока, что он (парламент) делает. Ясно одно – «социальный закон флуктуации тоталитаризма и свободы», сформулированный в свое время Сорокиным (1997, с.124), вновь демонстрирует валидность на примере нашей республики: «всякий раз, когда в определенном обществе возникает значительный кризис в форме войны или угрозы войны, большого голода, большой экономической депрессии или

опустошительной эпидемии, землетрясения или наводнения, анархии, беспорядков и революции или в виде какой-либо другой крупной критической ситуации, тогда масштабы и суровость правительственной регламентации неизменно увеличиваются, и экономика общества, политический режим, образ жизни и идеологии испытывают тоталитарную трансформацию; и чем сильнее кризис, тем значительнее эта трансформация». Рожденный во внутреннем конфликте парламент, призванный символизировать постреволюционную свободу, не в состоянии спрятать растущую потребность в сильной руке и жестком правителе, способном остановить окончательное разрушение стремительно теряющего кирпичи государственного здания. Это еще одна примета нашего расщепленного времени – лозунги о свободе на фоне бронетранспортеров, пока еще, в ноябре 2010 года, оставшихся на Ошских улицах...

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V. Mind and Unconsciousness:
New Aspects

V.Разум и Бессознательное:
Неизученные Стороны

Software Development for Statistical Analysis of
Semantically Consistent Text Synthesis Results.

1. Introduction

Since computers appeared computer science has developed enormously. Computers are introduced to different spheres of science. The computer-aided and computer-assisted prefixes appear more and more often. A computer has become an indispensable tool in such applied sciences and spheres as engineering, production, medicine, mathematics, teaching, communications, and etc. In the similar way, computers are inculcated in psychology, to be more precise, in psychotherapy to specifically contend with mental health concerns.

Great deals of computer-aided psychotherapy programs are developed. They are used for diagnosis, analysis, treatment, monitoring, and etc. However, the first stage of dealing with the mental health disorders is their diagnosis. Computer tools are increasingly often used in different clinical settings for retrieving clinical information and they are called diagnostic computer programs. Since a vast amount of materials collected and classified by physicians about mental disorders, people can be diagnosed for mental disorders using certain tests, experiments, questionnaires, and etc. to get the symptoms and by comparing the results with classified materials on mental disorders.

Person's ability to synthesize semantically consistent texts is a significant variable in diagnosing mental disorders. The problem of semantics is a general problem of practical psychology and psychotherapy. The synthesis of semantically consistent texts has a great importance to the modern psychology because solving the problem of text synthesis would give an answer to the question "what is meaning?" At this moment psychology has just an experimental answer to the question of semantics of certain texts. Such is a practical importance of the work from the psychology's point of view.

Initially the research question was how to determine whether the text is semantically consistent or not, in other words, what are the indicators of consistency. Over two hundred experiments were held during research on random people from AUCA community. Ten short poems of different difficulties were taken as sample texts. These poems were cut into blocks, one line each, and were given to people to be reassembled. They were informed that the goal is not to assemble the initial poem, but a text with a meaning. There were found some hints using which the subjects of the experiments assembled the blocks such as associations, oppositions, punctuation, rhyme, rhythm, idioms, and etc. But the full answer to the question what are the indicators of consistency were not found.

Consequently, a new way to distinguish semantically consistent text was searched and found. It is already established (A.Brudny, D.Sydykbekova) that people with mental disorders assemble the texts cut in blocks (sentences, for example) differently from those in healthy mental condition [3, 11]. It is clear that if it was possible to determine the distinct assembly of text blocks it would be possible to diagnose people with mental disorders. This senior thesis work will concentrate on the way to determine the distinct assembly of text blocks for defining probable mental disorders.

The approach used for determining the distinctive text assemblies is based on the deviation from the majority method. As a result of the text blocks testing appears the majority of arrangements called "keepers." Those results that differ from the "keepers" compose a deviation from the majority, or from the norm. This paper will depict a research on the synthesis of the semantically consistent texts and as a result of the research a software product that will let diagnosing possible appearances of mental disorders. The keepers are found by simple statistics gathering. After certain number of

tests the keepers' results will stand out by the number. If the transpositions met most often are considered a norm, then a simple filtration of less often met transpositions will solve the problem of finding deviants. For bolting out the deviant results the Voronoy Diagram method is used. For measuring deviation, the sample deviation from the keepers is used. This work consists of several parts. The first part is an analytical part. The analytical part reviews and analyzes the current stage of the problem being solved and the justification for the development necessity. Also, it researches the algorithms and the characteristics of the analogous software products. Moreover, it determines the essential characteristics and the requirements for the software product. Finally, the analytical part states the goal of the work. The second part of the work describes the design and implementation. It starts from software product architecture development. There are data structures and algorithms explained. Further the development of the user interface follows. The justification of the programming language is given in this part. And lastly, the program realization is depicted. The third documentation part includes the requirements for software and hardware, and for installation process. In addition, it includes program description, user and programmer manuals. The fourth part is testing. It will describe the testing process for program usability, testing plan and results. The conclusion lists the research results, the success of the software product usage and the recommendations for further research.

2. Analytical part

2.1 Literature review

With the rapid growth of computer technologies and their application in different spheres, it is not surprising that it touched the psychotherapy. The research about the process of synthesis of semantically consistent texts, i.e. the understanding of texts, has a great importance to psychotherapy, because it would give a chance to diagnose the mental disorders. The subject of meaning and understanding of texts was started to be examined long before, even in XVII century. Blaise Pascal stated that "as soon as already known thoughts are rearranged in the different order – one will get a totally different thought." Pascal suggests that rearrangement of thoughts, texts in this case, would be a good way to examine its understanding.

The initial theoretical position was proposed by the professor of the Harvard University Garret Birkhoff in his work *Mathematics and Psychology in Society for Industrial and Applied Mathematics Review*.

G. Birkhoff clearly stated that solely researcher's logic is not enough for researching meaning of text: there is a need for the experiment with participation of those, who choose the apprehensible sequence of words and sentences [1].

The idea itself about the fact that the psychological experiment can separate out plausible reasoning belongs to professor of Princeton University G. Polya. His book is called *Mathematics and Plausible Reasoning*, Princeton University Press, Princeton, 1954 [9].

The specific methods of experimental combinatorial analysis were developed by A. Brudny and D. Sydykbekova concerning the research of general semantics problems.

A. Brudny in his book "The science of understanding" brings detailed information about the question of understanding and vivid examples of different text perceptions [4]. His book "Psychological Hermeneutics" discusses "understanding" thoroughly. The topics of interests to this work are cognitive fields, strategies of understanding, language and machine [2].

Dinara Sydykbekova in her work "Understanding as a socio-psychological phenomenon" examines understanding as a psychological process. Sydykbekova gives definitions for understanding an object: an ascription of an object or an event to the certain category, to answer to the question why a certain event takes place, what does an event happen, and etc. She underlines the fact that the texts carry the most important element of communication, the semantics [11]. Sydykbekova brings the

results of the experimental research of understanding that uses Pascal's idea: the transposition analysis.

Sigmund Freud also mentioned the transposition analysis in his book "The Interpretation of Dreams" [5]. His interpretation was based on detail, not on the general scene. He stated that fragmentation allows ascertaining the connections between other fragments. It also determines the meaning, purpose, and the destination of the dreams.

In the 1950s, Osgood and his partners constructed two-sided scales based on semantic opposites, such as "good-bad", "light-heavy", "true-false," and etc. These scales are called "semantic differential" scales. They determined the attitudes of people towards meanings of words. Osgood discovered the "semantic space" – the three-dimensional coordinates, every axis of which measures attitudinal dimensions that people use to evaluate events and objects in their environment. These three axes, i.e. dimensions, are Evaluation, Power, and Activity, known as EPA. Osgood and his team wrote about the tity measurement of semantic meaning in the book "Measurement of Meaning" [8].

Aleksandr Mahov in his article "Probability and product" brings an interesting discussion of how probability was used in the history to get a text product. Concerning the texts and their transposition he writes about the "combinatorial potentiality" of lines in poems, and the necessity of submission to certain restricting factors such as punctuation, word sequence, and etc [7].

The semantic theory of Katz and Fodor with generative semantics is similar to the Osgood's semantic space in a way because of using bipolar oppositions of characteristics. However, instead of giving quantitative attitudinal measurements to words, it gives the tree of semantic constituents, i.e. of meanings of words [6].

Even though a great deal of research has been done on the subject of semantics and synthesis of texts there is still a huge gap in the knowledge of the subject. No one was able to answer the question "what is the meaning?".

A. Brudny has identified areas for further studies that were considered in the course of the research. He proposes that there are specific rules according to which people understand, in the case of this research study, according to which people transposition text blocks to synthesize the semantically consistent texts. To reveal these rules D. Sydykbekova's suggestion to conduct experiments with texts will be carried through.

In spite of the big gap in the knowledge of the subject, there exists a consensus about the topic. All agree on the fact that in the presence of deviation the meaning gets lost. In the mentally healthy society, the majority comprises the norm. Any behavior that deviates from the majority would be deviant. In the case of transposition of text block, the keepers' rearrangement is considered to be normal, and the rest would be considered deviant. Naturally, the tested person whose results deviate from the majority is necessarily abnormal, i.e. has a mental disorder. He might just have a language deviation. Moreover, the culture, knowledge of the topic, his health condition, etc have great influence on the test results. Nevertheless, such filtration of 'the normal majority' eases the process of diagnosis.

The methodology for my research is based on the literature reviewed. Poems are chosen to be texts for experiments. It should be connected with the easiness of perception and memorization of poems. In accordance with Sydykbekova's suggestion, the experimental texts are chosen so that they are accessible to the visual perception, i.e. they are short enough to fit the specific area [1]. Brudny's assumptions about statistical groups of blocks, the possibility of different orders in the text, and degree of freedom constrained with the necessity of rhyme, rhythm, punctuation, event sequence, time order are closely looked at [4].

The methodology for the practical part of the Senior Project is derived from the Senior Project of Leonid Kaganov. He has created the program that composes poems using a given text. For observance of rhythm he uses 'experience accumulation' method. Kaganov's program learns to accent words from the previous accented by the user

words. It makes statistics of which syllables are most often accented, and presumes that in the next cases these syllables should be accented. Naturally, the more the program is used, the more experience is accumulated.

2.2 Development necessity justification

A. A. Brudny in his book “Hermeneutics” has experimentally proved that the way people synthesize text is a significant factor for diagnosing mental disorders [2]. For practical usage of the found methodology the academician needed a software product. There are no programs that meet the requirements of Brudny’s methodology. Thus, he addressed with an order to develop a program.

In addition, even though there are various ways of diagnosing mental disorders, the proposed computer-aided approach will be distinctive and usable in the field of psychotherapy for several reasons. Firstly, it is a first time of using poems as a base text for text synthesis experiments. Secondly, there are no analogous computer programs that work with semantics. And last but not least, the solution algorithm of the program bases on the already known algorithms that successfully attain the goal only as a whole system. This system is unique and was not used previously.

2.3 Research of algorithms and discussion of analogous software

There are three basic algorithms used in this work:

- Experience accumulation
- Voronoy diagram
- Deviation from the maximum value

Firstly the experience is accumulated. Experience here is the statistics about how users rearrange text blocks. With every new experiment the experience of the program increases. The experience here is statistics of how many times a specific text block or line of the poem is placed at the specific position. Thus, if most of the users place a specific line at the specific position, it can be concluded that that position is a ‘right’ position of that line. It is because the majority is the keeper of the truth. That number of times placed at the position is a maximum value in our statistics.

Then, the Voronoy diagram used to get rid of the most distant results of the experiments. Most distant results here are those numbers of times of placing of the line, that they are too small to be considered right.

Voronoy Diagram of the finite set of points S on a plain P is such division of that plain that every region in such division composes a set of points, closer to one of the elements of set S than to any other element of that set [10].

$S \in P$;

$$S = \{x_i\}_0^n, n \in N \quad \{2.1\}$$

$$V(x_k) = \{p_j \mid \text{dist}(p_j, x_k) < \text{dist}(p_j, x_i)_{i \neq k}, p_j \in P\}$$

Lastly the deviation of the results from the maximum value is calculated. The second and third steps are repeated until the deviation is small enough, that is less than N .

The above are the algorithms used for program realization. As it was said before, no analogous software product was found during research. And the proposed solution is a new approach.

2.4 Requirements development to the software product

The developed software product should have following characteristics:

- Usage simplicity for psychologists

The psychologists without special computer skills should be able to easily use the program. Using the program implies working with the subjects of the experiment and experiments results.

- Usage simplicity for subjects of the experiments

When subjects of the experiments are tested they should be able to easily understand and accomplish the assignment.

- Usability of the software product

The software product, based on the A. A. Brudny theory that people with mental disorders synthesize semantically consistent texts distinctly from healthy people, should diagnose people who potentially have mental disorders.

2.5 Goal statement

People with mental disorders arrange texts differently from those in healthy mental condition. As the result of the certain number of experiments in the healthy society it becomes possible to draw out the keepers of the norm. Consequently, those who deviate from the majority potentially have mental disorders.

It is required to develop a software product that will allow:

- Testing the subjects of the experiment

That is to let the subjects to synthesize texts. The synthesis is done by rearranging text blocks. Text blocks here are lines of poems.

- Saving the results of the synthesis

That is to save information about every experiment held.

- Collecting data on the results of the experiments

That is to save cumulative information on the experiments as statistics. There should be two types of statistics: general cumulative and gender cumulative. Gender cumulative statistics are ordered because of the interesting fact that the results of the male and female text syntheses differ. This fact could be further investigated using this program.

- Generating of experiments results report

The reports about general cumulative statistics, gender cumulative and person results should be demonstrated in the reports.

- Diagnosing the user results for possible deviation

That is based on the information collected to specify whether the user result deviates from the majority/norm.

3 Project development and implementation

3.1 Software architecture designing

For the purpose of the separating the user part from the examiner part it was decided to have two separate applications:

- Tester
- Reporter

Tester application will let the user to rearrange the poem and save his results. In addition, statistics collection will be done in this application.

Reporter application will let the examiner to view reports on the test results.

The objects diagrams for two applications are as following:

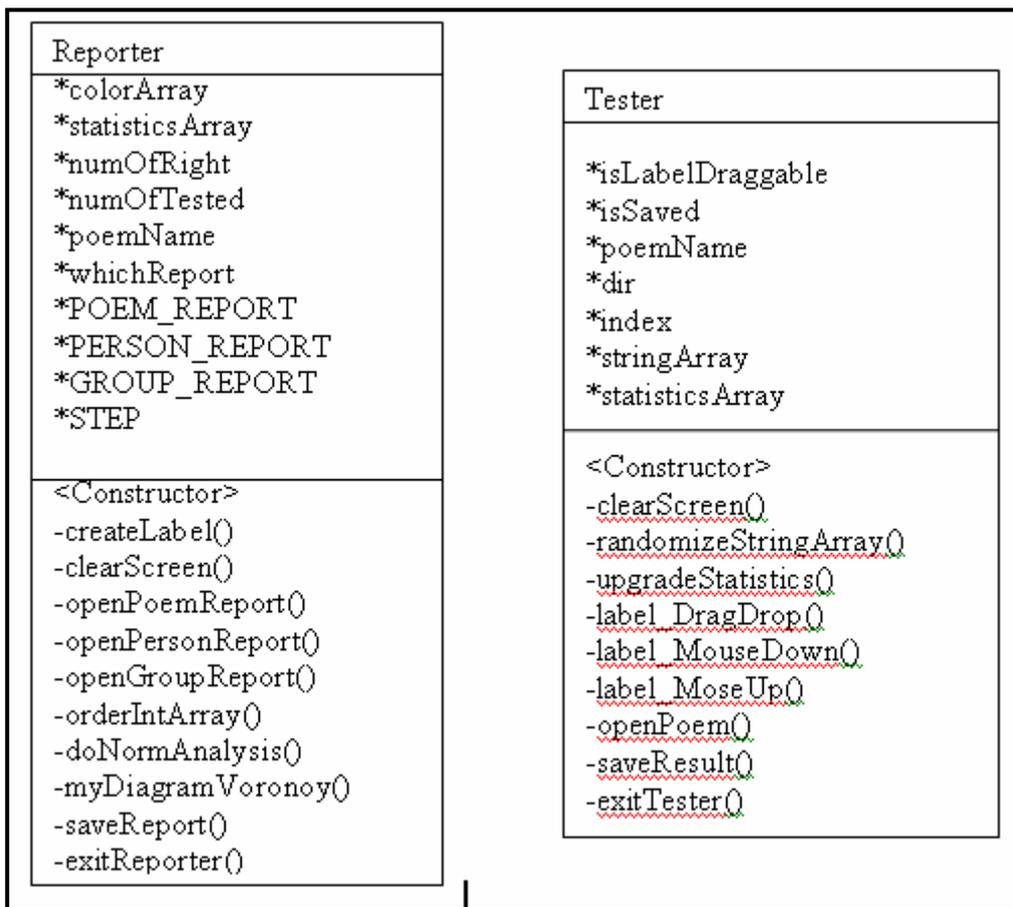


Figure 3.1 Object diagrams

3.2 Data structure designing

Directory structure:

--Senior project program

- Tester.exe
- Reporter.exe
- Poems
 - Poem1.txt
 - Poem2.txt
 - Etc.
- Results
 - PoemName_UserName_Age_Gender.txt
 - PoemName_UserName_Age_Gender.txt
 - Etc.
- Statistics
 - Poem Statistics
 - ✓ PoemName_statistics.txt
 - ✓ PoemName_statistics.txt
 - ✓ Etc.
 - Gender Statistics
 - ✓ Male_PoemName_statistics.txt
 - ✓ Female_PoemName_statistics.txt
- Reports
 - Poem Reports
 - ✓ PoemName_report.txt
 - ✓ PoemName_report.txt
 - ✓ Etc.
 - Gender Reports

- ✓ Male_PoemName_report.txt
- ✓ Female_PoemName_report.txt
- Person Reports
 - ✓ UserName_PoemName_report.txt
 - ✓ UserName_PoemName_report.txt
 - ✓ Etc.

Poems will be entered to the “Senior project program\Poems” folder using simple notepad program with the extension .txt (here and later only .txt extension is used). Single person results will be automatically saved to the “Senior project program\Results” folder when save menu is pressed after the end of the experiment. The name for the results file is generated automatically according to the PoemName_UserName_Age_Gender.txt structure.

Statistics will be automatically collected by the program. Every time the save menu item is pressed after the experiment statistics will be updated or created if statistics are made for the first time. As it is shown in the directory structure, there are different types of statistics. It is needed for different kinds of reports. The names of the output files are generated automatically according to the type of the statistics, poem, etc.

There are single poem reports. They are named in the PoemName_statistics.txt pattern. They are intended for keeping the information about which lines of the poem were placed at which lines how many times.

There are gender reports. They are named in the Male(Female)_PoemName_statistics.txt. Their intention is similar to the single person report. The only difference is that the statistics are filtered by gender.

Reports are built by the reporter application. They are built using the collected statistics. Therefore there are poem reports, user reports, gender reports and age reports.

Poem reports demonstrate the initial order of lines/blocks in the poem and the statistics showing how the users placed these blocks.

User reports demonstrate the initial order of lines, the order the user placed them, and the statistics.

Gender reports demonstrate the same statistics, but filtered by gender.

3.3 Algorithm designing

In the issue of the research made it was decided that the rules for determining weather the rearranged by the user poem semantically consistent or not will be the results of the previous tests. In other words, experience accumulation will be used.

The algorithm of the experience accumulation will be straight-forward. Experience is accumulated from the experiments on users. Every time the result is saved, the data concerning this poem, user, gender and age will be updated, in this case, the number of times of the specific line at this specific position by this specific gender, etc. will be increased. It means that the experience of the program increases and the statistics update. Statistics are two-dimensional arrays where columns are positions of the rearranged lines, and rows are number of times placed at the position.

So when a report is built it we may compare user results with the other results statistics. It means that the difference between the user results and other users' results can be observed. Consequently, diagnosis of deviations becomes possible.

For example, a single person report demonstrates the initial order of the poem, the order in which the user has placed it and the statistics of how other users placed them. So we can observe weather that user placed the blocks as a majority. If he is a minority, then it might be a reason for further examination, because his results deviate from the majority.

Thus in the simplified activity diagram the workflow of the program look as following:

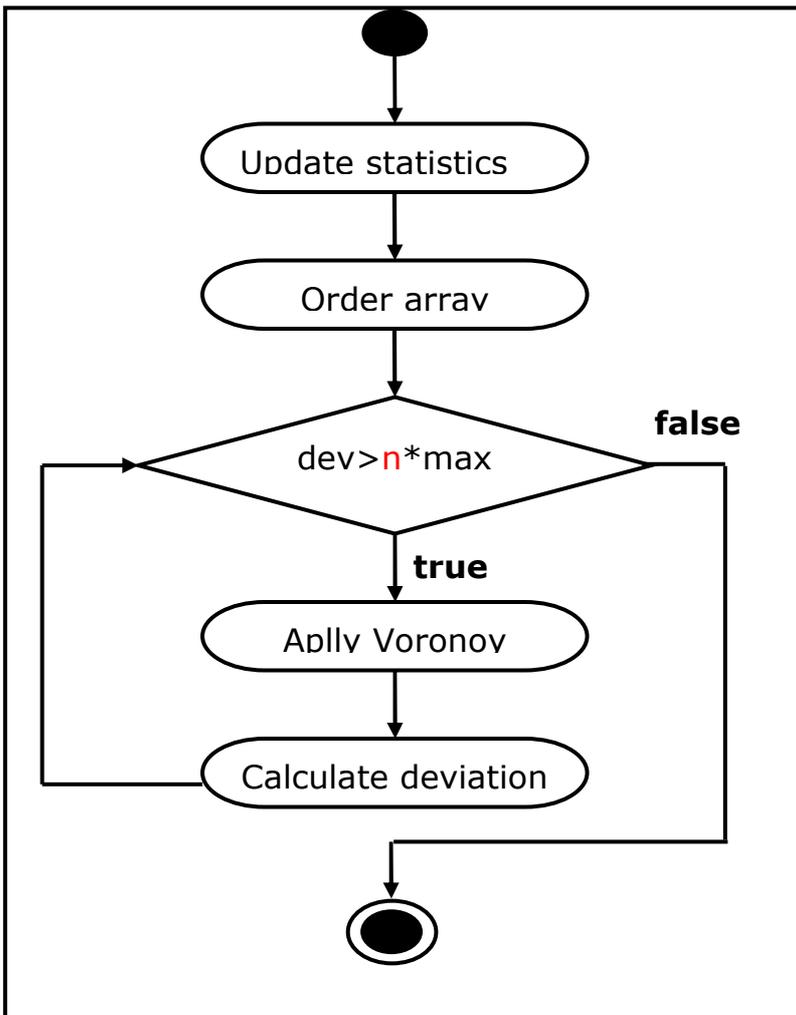


Figure 3.2 Core Activity diagram

The number n here is taken as 20% from the maximum value. According to Brudny's experiments results the percentage of semantically significant results of prose synthesis is less than 20% of all the experiments [2].

The work resolves into the image recognition problem. As the image recognition algorithm Voronoy diagram is being used. Voronoy Diagram can be applied to filter out the farthest points if projected onto an interval. That is actually the Nearest Neighbor Search problem. If for the finite set of points S on a plain P Voronoy Diagram looks as following:

$$S \in P;$$

$$S = \{x_i\}_0^n, n \in N \quad \{3.1\}$$

$$V(x_k) = \{p_j \mid \text{dist}(p_j, x_k) < \text{dist}(p_j, x_i)_{i \neq k}, p_j \in P\}$$

If S will consist of two points: minimum and maximum values and P will have all the points of the interval, then the Voronoy Diagram projected onto an interval will look as following:

$$V(\text{max Value}) = \{p_j \mid \text{dist}(p_j, \text{max Value}) < \text{dist}(p_j, \text{min Value}), p_j \in P\} \quad \{3.2\}$$

As a result have of the results are filtered out after Voronoy Diagram appliance.

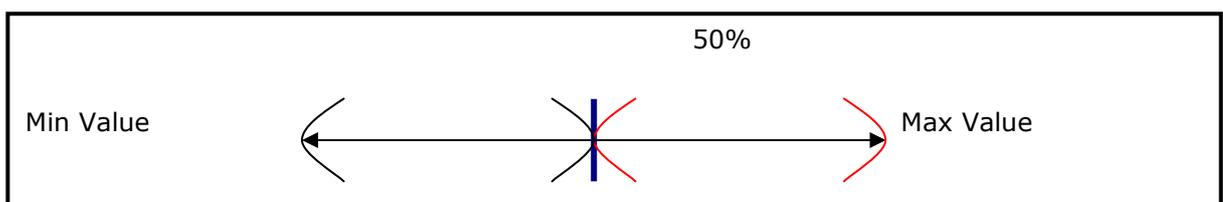


Figure 3.3 An illustration of the Voronoy Diagram projection onto an interval
 The second algorithm used is maximum-square estimate. The goal of the algorithm usage is to calculate deviation from the maximum value. The deviation is calculated by averaging the squared distances of possible values from the maximum value.

$$dev = \sqrt{\frac{1}{n} \sum_{i=1}^n (x_i - X)^2}, X = \max(x_i) \quad \{3.3\}$$

By continuing looping the Voronoy Diagram until the deviation from the maximum value is small enough we get such results that can be considered right.

3.4 Designing of the user interface

Tester program

Firstly a user fills in the personal information – name, last name, age and gender. Then in accordance with the Tester program’s goal it lets the user open an initially entered poem.



Figure 3.4 Tester program interface and menu

The lines of the poem are preliminary rearranged in the random order and printed onto a screen. The user rearranges the lines by simply dragging and dropping the lines. After the transposition is done the user saves the results.

Figure 3.5 Demonstration of the poem lines randomization

Reporter program

The reporter program lets the user open three types of reports – poem report, person report and group report – and save the report.





Figure 3.6 Demonstration of the Reporter program interface and menu

The poem report demonstrates the number of total tested users, poem in its initial order and the results of the experiments in an array view. For example, the following poem report shows that the title of the poem which initial position was 0 was placed at the 0 position 17 times out of 17. That is an easy case since the title is written with upper case letters. If to look at the 1st line which initial position is 1 was placed 8 times at the 1st, 4 times at the 2nd and 5 times at the 3rd position. Naturally, the diagonal of our statistics is composed of the original positions of lines. We can observe that in this case the keepers are situated on the diagonal, which means that most of the users placed the lines in the original order.

Figure 3.7 Poem report example

Reporter
Report Help

Total # of tested: 17

	0	1	2	3	4	Positions
0 ИСКАЛОЧКА	17	0	0	0	0	
1 Если где-то нет кого-то,	0	8	4	5	0	
2 Значит, кто-то где-то есть.	0	4	7	1	5	
3 Только где же этот кто-то	0	2	2	9	4	
4 И куда он мог залезть?	0	3	4	2	8	

Reporter		Total # of tested: 9	
Report	Help	Babayeva_Bahar	Positions
Original			0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8
0	ЛЕС	0	8 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0
1	В том лесу белесоватые стволы	1	0 3 0 0 0 1 0 0 0 0 1 0 1 0 1 2 0 0 0 0
2	Выступали неожиданно из мглы.	2	0 1 2 1 0 0 2 0 0 1 0 0 0 0 0 0 0 0 1 1
3	Из земли за корнем корень выходил,	3	0 1 1 2 0 1 2 0 0 1 0 0 0 0 0 0 0 0 1 0
4	Точно руки обитателей могил.	4	0 1 1 0 2 2 1 0 0 0 0 0 0 0 0 0 0 0 0 2
5	Под покровом ярко-огненной листвы	6	0 1 1 1 0 0 1 0 0 1 2 1 1 0 0 0 0 0 0 0
6	Великаны жили, карлики и львы,	5	0 0 1 0 2 3 0 1 0 0 1 1 0 0 0 0 0 0 0 0
7	И следы в песке выдали рыбаки	7	0 0 1 0 0 0 1 2 0 0 0 1 1 1 0 1 1 0 0 0
8	Шестипалой человеческой руки.	8	0 0 0 2 1 1 0 0 2 0 0 0 1 0 0 0 1 0 1 0
9	Только раз отсюда в вечер грозовой.	9	0 0 1 0 2 0 0 0 1 2 0 0 0 1 0 0 1 1 0 0
10	Вышла женщина с кошачьей головой,	10	0 0 0 1 0 0 1 1 1 0 2 0 0 0 1 1 0 0 1 0
11	Но в короне из литого серебра,	11	0 1 0 0 0 0 0 0 2 1 1 0 2 0 0 0 0 1 1 0
12	И вздыхала и стонала до утра,	14	0 1 0 0 0 0 0 0 2 1 1 1 1 0 1 0 0 0 1 0
13	И скончалась тихой смертью на заре,	12	1 0 0 0 0 0 0 0 1 1 1 0 1 1 0 2 0 0 1 0
14	Перед тем как дал причастье ей юре.	13	0 0 0 0 0 0 0 0 0 0 0 1 1 0 1 2 0 3 1 0
15	Я придумал это, глядя на твои	15	0 0 1 0 0 0 0 0 0 1 1 0 0 2 1 0 2 0 1 0
16	Косы - кольца огневещей змеи,	16	0 0 0 1 0 0 0 0 0 0 0 0 1 1 1 1 1 2 0 1
17	На твои зеленоватые глаза,	17	0 0 0 1 1 1 0 2 0 0 0 0 0 0 2 0 0 0 2 0
18	Как персидская больная бирюза.	18	0 0 0 0 1 0 1 1 1 0 0 0 0 0 1 3 0 0 0 2
	Right answers:	14/19	
	Wrong answers:	5/19	

Figure 3.8 Demonstration of the sample person report

The person report differs from the poem report in a way that it provides the comparison between the user results with the statistics, in other words, with all the other results. The statistics processed with the solution algorithm. The positions that are considered normal/right are shown in the green colour. In the similar way the user positions that are right shown in green colour and the wrong answers in red colour. The total number of right and wrong answers is also given in this report.

The group reports are the same with poem reports. The only difference is that in group reports the statistics are filtered by gender.

3.5 Programming language selection and justification

The fact that it should be a high level programming language is obvious since the user application is being designed. Any high level programming language with a good application development environment will suit. One of the most widely used programming environments nowadays is Visual Studio. The senior project is carried out using the C# language because of author's the personal preference.

4 Documentation

4.1 Software, hardware and installation requirements

4.1.1 Software requirements

The only software requirement is any version of .NET Framework installed on the computer to run applications.

Operating system – all Windows operation systems released after Windows 95

4.1.2 Hardware requirements

There are no hardware requirements since the applications do not demand significant hard disk space, RAM, and etc.

4.1.3 Installation requirements

Since the applications are executable files, there is no need to install the program. As long as .NET Framework is installed on the computer, the programs can be run by just double clicking.

4.2 Program description

This is a program for diagnosing people who potentially have mental disorders based on the person's ability to synthesize semantically consistent texts. Texts here are poems cut in blocks of lines. The idea of the diagnosing process lie in the fact that people with mental disorders assemble text blocks differently from those in healthy mental condition. By selecting those assemblies that differ from the majority of similar results it is possible to find those people who potentially have mental disorders.

The program consists of two applications: Tester and Reporter.

Tester application lets the users to rearrange the randomized text and save the results. In addition Tester application gathers statistics about the user results.

The Reporter application lets viewing the test results according to a poem, group (male or female), or separately on one user. The Reporter application analyzes the statistics and distinguishes the normal rearrangements.

4.3 Programmer manual

4.3.1 Problem Statement

The problem of this project is to develop a software product that will allow:

- Testing the subjects of the experiment

That is to let the subjects to synthesize texts. The synthesis is done by rearranging text blocks. Text blocks here are lines of poems.

- Saving the results of the synthesis

That is to save information about every experiment held.

- Collecting data on the results of the experiments

That is to save cumulative information on the experiments as statistics. There should two types of statistics: general cumulative and gender cumulative. Gender cumulative statistics are ordered because of the interesting fact that the results of the male and female text syntheses differ. This fact could be further investigated using this program.

- Generating of experiments results report

The reports about general cumulative statistics, gender cumulative and person results should be demonstrated in the reports.

- Diagnosing the user results for possible deviation

That is based on the information collected to specify whether the user result deviates from the majority/norm.

4.3.2 Overall Plan

The project will consist of two classes: Tester class and Reporter class. They will be separate applications. Tester application will let the user to rearrange the poem and save his results. In addition, statistics collection will be done in this application.

Reporter application will let the examiner to view reports on the test results.

4.3.3 Design documentation

List of classes:

- Tester class

Description: It derives a priori saved poem from the poems folder. Randomly rearranges the lines of the poem and prints them onto the screen. Lets the user transposition the lines and enter the personal information (first name, last name, age, and gender) and saves the results of the user transposition. Saving is done automatically when the save menu item is pressed.

- Reporter class

Description: It provides three types of reports: poem report, person report and group report. In poem report the original poem and the general cumulative results of the blocks transposition are shown. In the group report the original poem and the gender filtered results are shown. And the person report demonstrates the original poem, the order the user has placed the lines, the cumulative results, specifications of the right answers, and the count of the right and wrong answers a user has got. After the report is printed out it can be saved to a file. Saving the report is done automatically when the save menu item is pressed.

1) Design documentation for Tester class

Method	Parameters	Return	Responsibility
Tester <Constructor>	Never has	Never has	Initializes the form component. Assigns initial values to global variables
createLabel	String text, int x, int y, Color c	Label	Creates a label with the given characteristics and events, adds it to the panel on the form, returns the label
clearScreen	None	void	Clears the contents of the panel
upgradeStatistics	None	void	Upgrades the cumulative and gender statistics
openPoem	object sender, EventArgs e	void	Opens a preliminary saved poem, randomizes the lines, and prints them onto a form
saveResults	object sender, EventArgs e	void	Saves the results of the user transposition
randomizeLines	None	void	Randomizes the lines of the poem
label_MouseDown	object sender, MouseEventArgs e	void	When the user presses the mouse button on a label, sets that label draggable and changes the color of the label to demonstrate it is being dragged
label_MouseUp	object sender, MouseEventArgs e	void	Sets back label's color and not draggable mode. Shifts the other labels to free a space for the label. Moves the label to a new dragged position.
exitTester	object sender, EventArgs e	void	Exits the application making sure the results are saved

Table 4.1 Tester class methods

2) Design documentation for Reporter class

Method	Parameters	Return	Responsibility
Tester <Constructor>	Never has	Never has	Initializes the form component. Assigns initial values to global variables
createLabel	String text, int x, int y, Color c	Label	Creates a label with the given characteristics and events, adds it to the panel on the form, returns the label
clearScreen	None	void	Clears the contents of the panel
openPoemReport	object sender, EventArgs e	void	Prints the poem, and poem statistics onto a form
openPersonReport	object sender, EventArgs e	void	Prints the poem, person results, poem statistics, shows the normal answers, calculates the number of right and wrong answers
openGroupReport	object sender, EventArgs e	void	Prints the poem and poem statistics filtered by gender
doNormAnalysis	None	void	Does the norm analysis for the person report by calling the myDiagramVoronoy method to get rid of farthest values from the maximum value until deviation from the maximum is less than 20%
calculateDeviation	int startInd, int[] arr	int	For the numbers in the array arr starting from the startInd position calculates deviation from the maximum value – last number in the arr
myDiagramVoronoy	int startInd, int[] arr	int	Filters out the farthest values
orderIntArray	int[] arr	int	Orders int array for algorithm usage
saveReport	object sender, EventArgs e	void	Calls a method for saving the current type of report
savePoemReport	None	void	Saves the poem report
savePersonReport	None	void	Saves the person report
saveGroupReport	None	void	Saves the group report
exitReporter	object sender, EventArgs e	void	Exits the application making sure the report is saved

Table 4.2 Reporter class methods

4.3.4 Object Diagrams

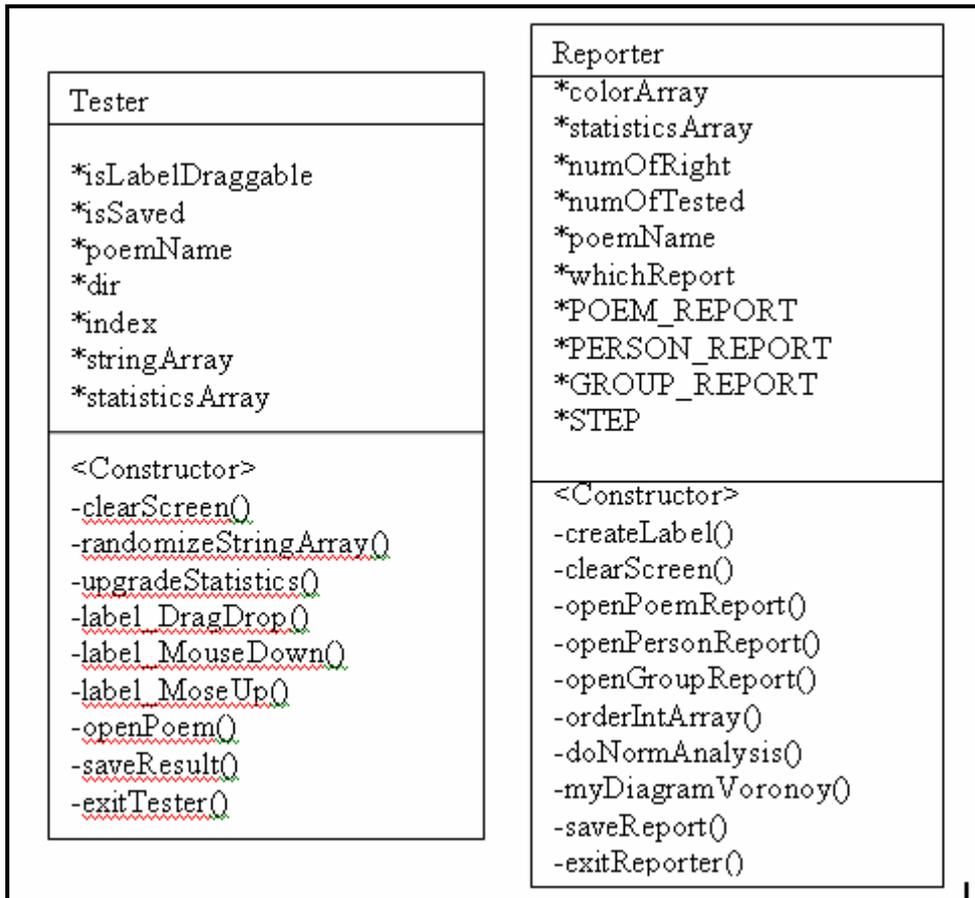


Figure 4.1 Object diagrams for Tester and Reporter classes

4.3.5 Program improvement recommendations

The defined program fulfills the requirements of the customer. The results of the test given in the reports are understandable for professionals in the sphere of psychology. Nevertheless the reports presentation could be improved by adding graphical representations of the statistics. For example, the movements for every line of the poem could be shown with graphics in more detail.

4.4 User manual

Tester 1.0

Reporter 1.0

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The system of Tester and Reporter programs is developed for diagnosing people who potentially have mental disorders. Texts used for experiments are short poems so that they can fit into the screen for easier perception.

Diagnosing is based on the ability of the person to synthesize semantically consistent texts. To be more precise, the results of the person's text synthesis are compared with the results of other people. With every new experiment held statistics about the text transposition results increase. Then the specific person's result can be compared with general statistics.

To test a person:

1. Open the Tester program by double clicking it.
 2. Firstly you need to fill in the personal information – name, last name, age and gender.
 3. Then in the menu File select the Open menu item.
 4. Select a poem for the experiment from the Poems folder in the current directory and press open. You will see the poem in a randomized order on your application screen.
 5. Rearrange the lines by dragging and dropping the lines so that to you the text has a meaning. When you place a mouse cursor above the line you want to move and press the mouse button, the line becomes blue. It means now holding the mouse button pressed you can move the line. It is called dragging.
- NOTE that your goal is not to build the original poem, but to get a semantically consistent text, i.e. a meaningful text. But, of course, rhyme and rhyme will be helpful for finding sequential lines.
6. When you are done with rearranging the lines press the Save menu item from the File menu for saving the result.
 7. To exit press Exit menu item in the File menu.

To check the results:

NOTE: the Reporter program is effective only if enough experiments are held because analysis of the result is made by comparing one result with the rest of the results. It is called experience accumulation. The more experiments are taken, the more effective the Reporter program becomes.

1. Open the Reporter program by double clicking it.
2. If you want to view:
 - 2.1. Poem Report
 - 2.1.1. Select Open Poem Report menu item from the File menu.
 - 2.1.2. In the dialog opened select a poem for which you want to see the report from the Poems folder in the current directory. Press open button in the dialog window.
 - 2.1.3. You should be able to see the original poem and the statistics about how many times every line was placed in the every possible position.
 - 2.1.4. To save this report select Save Report menu item from the File menu.
 - 2.1.5. To exit press Exit menu item in the File menu.
 - 2.2. Person Report
 - 2.2.1. Select Open Person Report menu item from the File menu
 - 2.2.2. In the dialog opened select the result (poem name and person name) from the Results folder. Press open button on the dialog window.
 - 2.2.3. You should be able to see the original poem, the order in which the selected user placed the lines, and the general statistics. The general statistics numbers are of two colors: black and green. The green color indicates the right results. The person's results are of two colors: green and red. Green meaning right and red wrong positions. Also there is a count of right and wrong answers of the user.
 - 2.2.4. To save this report select Save Report menu item from the File menu.
 - 2.2.5. To exit press Exit menu item in the File menu.
 - 2.3. Group Report
 - 2.3.1. Select Open Group Report menu item from the File menu.
 - 2.3.2. In the dialog opened open Statistics folder. Then open the folder of the group: Male or Female. Then select a poem for which you want to view the group result. Press open button on the dialog window.
 - 2.3.3. You should be able to view the original poem and the statistics for the chosen group.
 - 2.3.4. To save this report select Save Report menu item from the File menu.
 - 2.3.5. To exit press Exit menu item in the File menu.

A little about the results analysis:

Look at the poem report for the simple poem. The diagonal of the statistics as shown on the picture below represents the original positions of the lines. In the given example most of the users placed the lines the same as in the original poem.

	0	1	2	3	4	Positions
0 ИСКАЛОЧКА	17	0	0	0	0	
1 Если где-то нет кого-то,	0	8	4	5	0	
2 Значит, кто-то где-то есть.	0	4	7	1	5	
3 Только где же этот кто-то	0	2	2	9	4	
4 И куда он мог залезть?	0	3	4	2	8	

Figure 4.2 Poem report analysis

However, it is not the general case; neither is it a right case. If you take a look at the next picture you will see that in some lines the “right” answers coincide with the original poem. The right answer is considered not the exact copy of the original, but the one that the majority of the users specify.

Original	Total # of tested: 9	Babayeva_Bahar	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Position			
0 ЛЕС	0		8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
1 В том лесу белесоватые стволы	1		0	3	0	0	0	1	0	0	0	0	1	0	1	0	1	2	0	0	0	0			
2 Выступали неожиданно из мглы.	2		0	1	2	1	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	1	1		
3 Из земли за корнем корень выходил,	3		0	1	1	2	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	1	0		
4 Точно руки обитателей могил.	4		0	1	1	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
5 Под покровом ярко-огненной листвы	6		0	1	1	1	0	0	1	0	0	1	2	1	1	0	0	0	0	0	0	0	0		
6 Великаны жили, карлики и львы,	5		0	0	1	0	2	3	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0		
7 И следы в песке выдали рыбаки	7		0	0	1	0	0	0	1	2	0	0	0	1	1	1	0	1	1	0	0	0	0		
8 Шестипалой человеческой руки.	8		0	0	0	2	1	1	0	0	2	0	0	0	1	0	0	0	1	0	1	0	1		
9 Только раз отсюда в вечер грозовой	9		0	0	1	0	2	0	0	0	1	2	0	0	0	1	0	0	1	1	0	1	1		
10 Вышла женщина с кошачьей головой,	10		0	0	0	1	0	0	1	1	1	0	2	0	0	0	1	1	0	0	1	0	1		
11 Но в короне из литого серебра,	11		0	1	0	0	0	0	0	2	1	1	0	2	0	0	0	0	1	1	0	0	1		
12 И вздыхала и стонала до утра,	14		0	1	0	0	0	0	0	0	2	1	1	1	1	0	1	0	0	1	0	0	1		
13 И скончалась тихой смертью на заре,	12		1	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	2	0	0	1	0		
14 Перед тем как дал причастье ей юре.	13		0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	2	0	3	1	0		
15 Я придумал это, глядя на твои	15		0	0	1	0	0	0	0	0	0	1	1	0	0	2	1	0	2	0	1	0	1	0	
16 Косы - кольца огневещей змен,	16		0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	2	0	1	0	1	
17 На твои зеленоватые глаза,	17		0	0	0	1	1	1	0	2	0	0	0	0	0	0	2	0	0	0	2	0	0	2	0
18 Как персидская больная бирюза.	18		0	0	0	0	1	0	1	1	0	0	0	0	0	1	3	0	0	0	0	2	0	2	

Right answers: 14/19
Wrong answers: 5/19

Figure 4.3 Person report analysis

Errors:

If the error occurs, you should not worry. They only mean that the file that you are trying to open does not exist. It might happen for example if you are trying to open a

poem report for which there are no statistics available. What does it mean? You have not taken any tests for that poem.
To deal with the error follow step by step the user manual instructions and make sure the file you trying to open exists.

Enjoy using the program!

5 Testing

5.1 Ease of use testing on the customer

The ready program was demonstrated to the customer. He had no difficulty with using both Tester and Reporter applications. The customer noted that the program meets all the expectations and is easy-to-operate. That demonstrates a 100% passing of the ease of use testing on the customer.

5.2 Ease of use testing on the users

The same notion had the users on whom sample experiments were held. All the users easily understood how to take the tests. The program passed the ease of use testing on the users as well.

5.3 Test Plan

NOTE that in all of the following tests the phrase “**Checking works**” means that a user is kindly reported about the error occurrence, and instructed about further steps to take.

5.3.1 Tester application

Name Boundaries: Latin alphabet letters
Last Name Boundaries: Latin alphabet letters
Age Boundaries: 1-100
Gender Boundaries: Male or Female

Normal Case:

Name: Alina Last Name: Gulyanova Age: 20 Gender: Female
Name: Bahadur Last Name: Hasanov Age: 25 Gender: Male

Error Checking for Name		
Input		Result
Normal Case	Alina	Successfully entered
Not entered		Checking works
Wrong input	56778, ***, ---	Checking works

Error Checking for Last Name		
Input		Result
Normal Case	Gulyanova	Successfully entered
Not entered		Checking works
Wrong input	56778, ***, ---	Checking works

Error Checking for Age		
Input		Result
Normal Case	Alina	Successfully entered
Not entered		Checking works
Wrong input	0, 56778, ***, ---	Checking works

Error Checking for Gender		
Input		Result
Normal Case	Female	Successfully entered
Not selected		Checking works

Table 5.1 Error checking for Tester class

Wrong file opened error:

A poem should be selected from the Poems folder of the program's directory. If not done so, checking works.

5.3.2 Reporter applications

The poem for the Poem Report should be selected from the Poems folder of the program's directory. If not done so, checking works.

The person and the according poem for the Person Report should be selected from the Results folder of the program's directory. If not done so, checking works.

The group and the according poem for the Group Report should be selected from the Statistics/Male (Female) folder of the program's directory. If not done so, checking works.

Conclusion

The goal of this research project was to depict a research on the synthesis of the semantically consistent texts and as a result of the research provide a software product that could diagnose people who could possibly have mental disorders. During research it was established that there are no software products that accomplish an analogous task. Therefore, the developed software product is one of a kind.

For achieving the stated goal experience accumulation, Voronoy diagram projected onto an interval and the calculation of the values deviation from the maximum value methods were used. The chosen methodology fully attains the stated goal.

Since the theory about the fact that people with mental disorders synthesize texts differently from those in healthy mental condition is experimentally proved on prose, it maybe with certainty accepted that it works for poems because of the facilitating the synthesize process factors such as rhyme and rhythm. Therefore, even though the experimental part of the project could not be fulfilled on account of absence of access to the mentally ill people, it could be assuredly stated that the software product is ready for introduction to the field of psychotherapy.

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Comparative Analysis of Dreams of Artists and Office-Workers.

By Rosa Seidibalieva

Introduction

The goal of the research is to do quantitative analysis of artists' dreams and compare the results with the results of control group.

Objectives:

- To survey 20 artists and 20 office workers
- To conduct quantitative analysis of dreams using content analysis
- To analyze results with the help of SPSS program

Hypotheses.

The author of this research, Rose Seidibalieva, thinks the same psychological construct, for example anxiety, appears in different people's dreams differently. But the essence is one. In other words, different people may have dreams, let's say nightmares, subject matter of these nightmares is the same (feeling of anxiety), but background changes from person to person. This is where the universal nature of dreams is contained that structure of dream is one, where as every person's dream has its own background and context. It can be assumed that difference in dreams between creative and non-creative people is about the manner of dreaming: more vivid images and stronger experiencing emotions and so on. It is also supposed that creative people's (here artist are in a category of creative people) connection with their unconsciousness is stronger comparatively to non-creative people's (office workers with economic education are in a category of non-creative people). Thus, hypotheses are following:

Hypothesis 1. Representatives of creative profession better recall their dreams.

Hypothesis 2. Representatives of creative profession have more complex, detailed, and vivid dreams.

Hypothesis 3. Representatives of creative profession have more emotionally intensive dreams.

General Introduction

Dreamtime, by definition, is the time of creation in the mythology of the Australian aborigines. According to a reconstruction of their story, dreams were more than just pictures during sleep. Dreams themselves, by definition, are a series of thoughts, images or emotions occurring during sleep. They are a state of mind marked by abstraction or release from reality.¹

Dreams and creativity is about the transformation of dream images into poetry, stories, dance drama, inventions and other forms of Self-expression.

Dreams prove that in our inner world we are effortless and talented creative artists – superb wordsmiths, mythmakers, fine artist and craftspeople capable of simile, metaphor, symbol, and imagery unbounded by the cognitive restrictions of waking life (Mellick, 2001).

¹ <http://whispy.com/dreams-and-creativity.htm>

Dreams use the narrative structure of the soul, a logic that dispenses with cause and effect, that exists in a timeless, spatially unbounded universe where we are allowed to do the impossible: to occupy two timeframes or places at once; to be our current age but in our childhood home; to change our sex; to be older and younger; to experience the consciousness of two people at once; to see events from different perspectives simultaneously; to be in the present as well as the future; to be both dead and alive. Wiser and more humorous than we, dreams remind us that we are subject to larger forces and influences that we tend to acknowledge on a daily basis. Many of our most profound images surface from dreams (Mellick, 2001).

Deidre Barret writes in her book “The Committee of Sleep : How Artists, Scientists, and Athletes Use Dreams for Creative Problem-Solving-- and How You Can Too” that dreams have played a role in visual arts since mankind began to represent the world. The astonishing images of the night have always inspired artists. A bird-staff and other fantastic elements, believed to represent prehistoric dreams, appear on the walls of caves in Lascaux, France. This earliest known human art, produced between 40,000 and 10,000 B.C.E, caused Pablo Picasso to exclaim, “We have invented nothing!”

Scholars know more about the strikingly similar cave art of California’s Ojai Valley, or “Valley of the Moon”. The earliest works found there date to 1000 A.D. but legends associated with them survived when missionaries arrived in the late 1700s. These rock paintings were done by the 'atishwinic—a type of shaman whose title literally means "dreamer" or "having a dream." The 'atishwinic drew fantastic animals and horned anthropomorphs set against geometric grids. We have no texts for most of the paintings and can't know exactly which ones spring from dreams. But a few were told to the missionaries as dream accounts. One of these depicts the nose of a coyote growing after he chased girls around? Begging for a kiss. A second shows a man capturing the retreating sun with a stick (Barret, 2001)

Other tribes around the world routinely use dreams as a basis for visual arts. The Chippewa of North America weave their dream images into the patterns of banners and beadworks. And the Saroa of India paint their dreams on the walls of their houses. Australian Aborigines have long depicted the events of their Dreamtime—a complex concept that includes nocturnal dreaming—with distinctive dot painting on bark (Barret, 2001).

In the Romantic era, William Blake portrayed the dreams of Queen Catherine and the biblical Jacob in his distinctive mystical style, as characters soaring through the heavens. He painted his own dream as *Young Night's Thoughts* (1818), depicting himself lying on the ground dreaming, the action of the dream painted next to him, a poem based on the same dream beneath that, and finally a straightforward account of the dream. (Barret, 2001).

The Pre-Raphaelite artist Sir Edward Burne-Jones painted romantic scenes of medieval knights and ladies dreaming about each other. Traveling to Rome by train, the artist fell asleep and dreamed so vividly of the nine muses on Mount Helicon that he felt compelled to paint them the moment he arrived at his destination. That was *The Rose Bower* (1870-90) (See the attachment) (Barret, 2001).

The movement called Surrealism was to be the liberation of artistic consciousness from historical and logical constraints. As a mode of escape, surrealists used dreams more explicitly than any school of art before. Breton invited the inner circle--Max Ernst, Salvador Dali, and Man Ray--to his apartment on rue Fontaine where they recounted dreams to one another. Breton’s Manifesto of Surrealism touted the “omnipotence of the dream” and described the new movement as the “resolution of the two states, dreaming and reality, which are so seemingly contradictory into a kind of absolute reality--a surreality.”

Many surrealists painted specific dream images, and all of them used characteristics of the dream world such as space that has no depth or extends to infinity, and juxtaposition of objects. Salvador Dali’s *Sleep*; Max Ernst’s *Dream of Two Children Frightened by a Nightingale*; Paul Nash’s *Landscape from a Dream*; Dali’s

The Dream Approaches; and Gil Bruvel's The Sleep Goes Away are all fruits of the Surrealist dream dictation.

Dali claimed that the greatest potential inspiration lay in the dream. Dali believed the elaborate nighttime dreams of REM sleep offered more versatile dream images because their content could be intentionally influenced. He outlined a characteristically eccentric program of nocturnal stimulation for doing so. The last dream of the night was targeted because it was "the one closest to waking" and the only one he believed was subject to influence. Recent studies conclude that, although other REM periods can be manipulated, the last one is indeed the easiest to work with. Sleep researchers apply a tactile stimulus to the skin, play recordings of distinctive noises, or shine colored lights on subjects' closed eyes and find these may be incorporated into dream content. To generate a pleasing artistic image, Dali suggested fragrance poured near the nose, soft music, or gentle pressure on the closed eyeball--all these stimuli provided "by one's valet." (Barret, 2001).

Surrealist painters admired the new field of psychoanalysis for its emphasis on the unconscious and dreaming. Swiss artist Peter Birkhauser was a friend of Carl Jung. He found Jung's psychology relevant to his paintings which already contained powerful dream images that Jung called "archetypes." Birkhauser's reading of psychoanalysis convinced him to rely on dreams even more. In "The World's Wound," Birkhauser depicted a recurring dream of a man with a terrible, bloodless gaping split running the length of his body. The man moves beseechingly toward the dreamer, struggling to speak, but always unable. Years later, "Having Speech," portrayed the final version of this dream. Blood flowed from the man's wound and he was finally able to talk (Barret, 2001).

Several of Birkhauser's paintings depict death. When his wife was dying of cancer, he painted "In the Night of 13 October 1942." In this dream his biographer wrote, "A miraculous being, half fish and half insect, climbed up beside Birkhauser's wife. . . From its mouth emanated a blue light. Courageously, Sibylle Birkhauser stood still; the fish approached her as if to kiss her and she became completely illuminated by the blue light."⁸ Birkhauser's last painting, completed just days before his own death, portrayed a dream in which a great glowing beast stood over him, inspiring both awe and terror (Barret, 2001).

There are several contemporary artists inspired by dreams, such as Brenda Ferrimani, Scherer and Ouporov, Alyssa Goldring, Epic Dewfall.

Brenda Ferrimani is a painter of dreams. Her dream paintings have been seen on the cover of Dreamtime and Dream Network magazines, and the Rocky Mountain Dream Journal. Her work has been featured at the International Conference on the Fantastic in the Arts and ASD's Dream Odyssey Art Exhibition in 2001. She says: "Dream images have captivated my imagination and provide an unending source of inspiration for my paintings. It is my desire to express the mystery of the psyche's inner world and the power of dreams to impact and change our lives. "

Dream Ikons is the work of two artists, Scherer and Ouporov, who utilize the inspiration of dream images to create gilded icons. "The image of the dreamer is in the center, while the surrounding, illuminated area represents the dream itself. In the tradition of medieval manuscript illumination, the center is a fixed, rational image and the borders represent the irrational side of the imagination--in this case, the unconscious realm of our amorphous dreams, desires or nightmares. Whereas in medieval painting, the gold traditionally symbolizes the union with God, in Dream Ikons it is the unconscious state of sleep. In many cultures, dreams are believed to be a direct channel to the spirit world, therefore the gold can also represent this connection."

Alyssa Goldring states, "Dreams have guided me through out my life and are often the source of my art work. Through art and writing I explore my inner world and bring its dream energy and wisdom into my everyday life. I have a "mix and match" approach to media, and use acrylics in various ways, as well as transparent and

opaque water color, monotype, charcoal, brush and ink and other drawing tools, fabric photograph and collage". (See the attachment for her painting)

Epic Dewfall blends images from his dreams with his own poetry, as in this piece called "The Dreamers ". As he says: "I get ideas for my paintings from lucid dreams. About once a month when I'm dreaming, I will realize I'm dreaming, and when I do, I then walk around in the dream looking at art on the walls. I usually find many paintings on every wall. By the time one of these lucid dreams ends, I usually have one or two good paintings memorized. I always recreate them in pastel on 12 by 18 inch paper. I've been doing this as a hobby since 1986".

Lucid dreams are those in which the dreamer realizes s/he is dreaming during the course of the dream. Consciousness allows for deliberate action. Lucid dreamers may recall plans for what to do in their dream. They carry these out even as unexpected aspects of the dream state continue to flow.

Research on dreams.

It is very difficult to do experimental studies relating to dream content and the meaning of dreams for a variety of reasons, all of which are in complete contrast with what is possible in the waking state. It is not possible to make dreams happen, and it is very difficult to influence them with presleep or concurrent stimuli, so there is no independent variable to manipulate. (Arkin & Antrobus, 1991; Foulkes, 1996).

There have been made researches on gender differences, age differences, cross-cultural researches in dreams.

Stanley Krippner conducted research on Extraordinary Dreams: A Cross-Cultural study. The purpose of this study was to identify extraordinary dreams in a sample of 1,666 dream reports, and to make gender comparisons as well. Research participants were members of dream seminars that the author conducted between 1990 and 1998 in Argentina, Brazil, Japan, Russia, Ukraine, and the United States. Only one dream report per participant was utilized, 910 dream reports from women and 756 from men. Scoring criteria were determined in advance for creative, lucid, healing, dreams within dreams, out-of-body, telepathic, mutual, clairvoyant, precognitive, past-life, initiation, and visitation dreams. In the sample of 1,666 dreams, there were 135 (8.1%) extraordinary dreams. Female dreamers reported 77 extraordinary dreams, while male dreamers reported 58; the difference was not statistically significant. Russia had the highest percentage of extraordinary dream reports (12.7%), followed by Brazil (10.9%), Argentina (9.0%), Japan (8.1%), Ukraine (5.9%), and the United States (5.7%). When chi square statistics were applied, it was found that Russian dreamers reported significantly more extraordinary dreams than dreamers in Ukraine or the United States. It was concluded that cultural factors support or suppress the incidence of extraordinary dreams, their recall, and the willingness of dreamers to share them.

Craig S. Hurovitz from University of Hartford Graduate Institute of Professional Psychology; Sarah Dunn from University of California, Santa Cruz; G. William Domhoff, University of California, Santa Cruz; Harry Fiss, University of Connecticut; made a research on dreams of blind people: The Dreams of Blind Men and Women: A Replication and Extension of Previous Findings. Drawing on a sample of 372 dreams from 15 blind adults, their research presented two separate analyses that replicate and extend findings from previous studies. The first analysis employed DreamSearch, a software program designed for use with dream narratives, to examine the appearance of the five sensory modalities. It revealed that those blind since birth or very early childhood had (1) no visual imagery and (2) a very high percentage of gustatory, olfactory, and tactual sensory references. The second analysis found that both male and female participants differed from their sighted counterparts in the same ways on several Hall and Van de Castle (1966) coding categories, including a high percentage of locomotion/transportation dreams that contained at least one dreamer-

involved misfortune. The findings on sensory references and dreamer-involved misfortunes in locomotion/transportation dreams are interpreted as evidence for the continuity between dream content and waking cognition.

D. Kuiken's, Ph.D, Department of Psychology, University of Alberta, Edmonton, Alberta; and Tore Nielsen 's, Ph.D, Dream & Nightmare Laboratory, Centre d'étude du sommeil, Hôpital Sacré-Coeur de Montréal and Département de psychiatrie, Université de Montréal, Montréal, Québec, conducted research: Individual Differences in Orienting Activity Mediate Feeling Realization in Dreams: I. Evidence from Retrospective Reports of Movement Inhibition. Existential dreams, which involve ineffectuality, sadness, and separation (Kuiken & Sikora, 1993), frequently provide shifts in feeling that sensitize dreamers to aspects of their lives they have previously ignored. To better understand that phenomenon, they examined whether individual differences in movement inhibition during the orienting response (either while awake or dreaming) would predict: (a) the enactment of dreams during awakening, (b) a lingering sense of the reality of dream events, and (c) dream-induced self-perceptual depth. Three studies using retrospective questionnaires and one using dream diaries provided consistent evidence of these relationships. Also, individual differences in movement inhibition and in the preceding dream effects were consistently associated with absorption (Tellegen, 1982), a personality dimension related to openness to experience. Finally, results from one study confirmed that dream-induced self-perceptual depth is more closely associated with the occurrence of existential dreams, than with either anxiety dreams (nightmares) or transcendent (archetypal) dreams.

University of Iowa research shows people who are creative, imaginative and prone to fantasy are more likely to have vivid dreams at night and to remember them when they wake up. David Watson, a professor of psychology in the UI College of Liberal Arts and Sciences, says the more bizarre a dream was, the more likely his subjects were to remember it. Dream recall varied widely, with a few participants remembering a dream every night and others never remembering a dream throughout the three-month study. On average, participants recalled dreams three or four days per week. He found that neither sleep quality nor length of sleep was associated with dream recall, although students who maintained inconsistent bedtime schedules tended to report slightly more sleep- and dream-related experiences. There also was a slight tendency for "evening people" to remember more of their dreams. Most significantly, Mr. Watson found individuals who are prone to absorption, imaginativeness, daydreaming and fantasizing are particularly likely to remember their dreams. "There is a fundamental continuity between how people experience the world during the day and at night," he says. "People who are prone to daydreaming and fantasy have less of a barrier between states of sleep and wakefulness and seem to more easily pass between them." This study, which appears in the May 2003 issue of the journal "Personality and Individual Differences," represents the largest and most comprehensive analysis of individual differences in dream recall to date. Mr. Watson asked 193 college students to record each morning for 14 weeks what time they woke up, what time they had gone to bed the previous night, whether they had consumed alcohol or caffeine within four hours of bedtime, and whether they remembered any dreams upon waking.

Method

There are serious obstacles to systematic studies of dream content. First, it is not possible to introduce stimuli that regularly produce predictable variability in dream content, so an experimental approach is not very useful. Second, not all subjects are willing or able to report dreams, raising questions about the representativeness of those subjects who do report dreams. Third, even high dream recallers do not report dreams every morning at home or every time they are awakened in a laboratory setting, raising questions about the representativeness of the dreams recalled by subjects. Fourth, variability in how dreams are collected may affect the

content of the reports. Finally, there are no independent checks on the accuracy of the reports provided by subjects; elements of the dream could be omitted or changed, or the entire "dream" could be a made-up story. Given these problems, it is not surprising many psychologists raise questions about the quality of the data used in studies of dream content.

In addition, and rather obviously, you can't watch dreams while they are happening, and the dreamer can't report them while they are happening, so there is no way to have any objective evidence concerning the dependent variable (i.e., the dream).

Some investigators may be concerned with whether or not dream reports are invented by subjects. Those concerns are addressed by studies comparing "real" and "made-up" reports on content dimensions or asking judges to try to distinguish the two types of narratives. Brenneis (1967:86) and Carswell, Melody, and Webb (1985), the latter using 180 dream reports and 278 artificial reports, found content differences, but Cavarello and Natale (1988-89), using 24 dream reports and 12 artificial reports, did not. As far as judges, Darbes (1952) found a group of people who had little or no experience with dream reports were able to make the distinction, but Carswell, Melody, and Webb (1985) and Cavarello and Natale (1988-89) found judges couldn't tell the two types of report apart.

While we realize it is possible that some subjects invent or purposely alter details in the dream reports they give to investigators, we believe this problem is very rare as long as subjects are anonymous and participation is voluntary. Most people simply do not feel enough personal "responsibility" for the content of their dreams to have any motivation to censor them (Foulkes, 1979:249).

The method, which has been employed in the present research project, consists of the following steps: first, the dream series are collected. Generally, dream diaries and dream questionnaires are research instruments in dream researches. Used instrument in this research to collect dreams is modified Kelly Bulkeley's, Ph.D dream questionnaire called "Sleep and Dream Interview 2003". Which consists of types of dreaming, demographics, and sleep and dream patterns. (See the attachment).

Instruction is following: "*When answering the following questions, please describe when the dream occurred, details on the characters (their ages and relations to you), the settings (whether familiar or unfamiliar), any colors in the dream, and any emotions you felt.*"

The second step is the coding of the dreams. This is done to conceal the identity of the dreamer. It is deemed necessary to preserve the anonymity of the dreamer for two reasons. Dreams often contain material of a highly personal and intimate nature. When subjects are informed that their identity will be kept secret they are more inclined to report dreams, which might otherwise be suppressed. Even with this safeguard it is not likely that all recalled dreams would be recorded.

Colors are coded in two categories: chromatic colors and achromatic colors (black, white, and gray). Emotions are coded in following categories:

- ♣ Anger. Representative of some of the terms coded under anger are: annoyed, irritated, mad, provoked, furious, enraged, belligerent, incensed, and indignant.
- ♣ Apprehension. The emotions included in this class can be considered related to fear, anxiety, guilt, and embarrassment.
- ♣ Sadness. All the words that describe an unhappy emotional state are coded in the sadness class. Some examples of terms that would be coded as sadness are: disappointed, distressed, hurt, depressed, lonely, lost, miserable, hopeless, crushed, and heartbroken
- ♣ Confusion. Some words that may indicate confusion are: surprised, astonished, amazed, awestruck, mystified, puzzled, perplexed, strange, bewildered, doubtful, conflicted, undecided, and uncertain.
- ♣ Happiness. All the words that describe a general state of pleasant feeling tone are included in this class. Some of the terms that would

be coded as happiness are: contented, pleased, relieved, amused, cheerful, glad, relaxed, gratified, gay, wonderful, elated, joyful, and exhilarated.

Three categories are taken as features of complex dream: activities, transfers, and results.

The third step is the statistical analysis of dreams using SPSS program. That is done in order to be scientific about dreams. The data was entered into SPSS in numbers. Number of details was counted for detailed dreams. Number of activities of dreams: whether by dreamer or by other characters of dream, number of transfers: place changes, people changes, number of results: when a dreamer was trying to do something in his dream and finally managed to do that, were counted as factors of complex dream.

Participants

Group of artists and group of office workers volunteered to participate in this research Group of artists consists of 11 female and 9 male, total is 20 people, mean age – 35 (SD – 13), predominantly Kyrgyz, all participants are right handed. Except artists from Bishkek, Kyrgyzstan, there are an artist from Kazakhstan, an artist from Moldova, and an artist from United States of America.

Group of office workers consists of 19 female and 1 male, total is 20, mean age – 38 (SD – 12), predominantly Kyrgyz, all participants are right handed. Member of this group are workers of Stat Komitet.

Results

Dream recalls were tested by answers for following questions:

- How often do you wake up remembering a dream? (Almost every morning, once or twice a week, once or twice a month, once every few months, almost never)

- How much of any particular dream do you think you remember?
 - A. Only a little bit
 - B. Most of the large factors, and not many details
 - C. All the stuff that happened at the end of the dream, but the beginning is usually fuzzy.
 - D. I can remember all of the details of my dream completely.
 - E. I can never remember anything about my dreams, I only have the vague feeling that I did dream.

Crosstab was used to get percentages. 42.1% of artists remembered their dreams almost every morning, and 40% of office workers did so. 21.1% of artists remembered their dreams once or twice a week, where as percentage of office workers is 40%. 21.1% of artists and 10% of office workers remembered their dreams once or twice a month. 15.8% of artists and 0% of office workers – once every few months. And almost never remembered dreams 0% of artists and 10% of office workers. (*See the Graph 1*). These differences were tested using Chi-Square Tests, and were shown to be nonsignificant, $\chi^2(4, N = 39) = 6.97, p = .137$.

16.7% of artists and 15% of office workers remembered the content of dream only a little bit. 22.2% of artists and 25% of office workers remembered most of the large factors, and not many details. 22.2% of artists and 10% of office workers remembered all the stuff that happened at the end of the dream, but the beginning was usually fuzzy. 27.8% of artists and 35% of office workers can remember all of the details of their dreams completely. And 11.1% of artists and 15% could never remember anything about their dreams; they only had the vague feeling that they did dream (*See the Graph 2*). These differences were tested using Chi-Square Tests, and were shown to be also nonsignificant, $\chi^2(4, N=38) = 1.2, p = .877$.

Thus, the data failed to support the notion that representatives of creative profession better recall their dreams.

The mean score for number of activities in artists' dreams is 10.15 (SD = 11.56; Std.Error Mean = 2.59); in office workers' dreams mean is 4.20 (SD = 3.69; Std.Error Mean = 0.83). Independent-Sample T Test analysis revealed that there was significant difference between these two groups, $t(22.83)=2.19$, $p= .039$.

The mean score for number of transfers in artists' dreams is 1.25 (SD = 2.05; Std.Error Mean = 0.46); and in office workers' mean is 0.20 (SD = 0.41; Std.Error Mean = 0.09). Independent-Sample T Test was used to test difference, and it showed significant difference, $t(20.52)=2.25$, $p= .036$.

The mean score for number of results in artists' dreams is 0.55 (SD = 1.09; Std.Error Mean = 0.25); in office workers' mean = 0.05 (SD = 0.2; Std.Error Mean = 0.05).). This difference was tested using Independent-Sample T Test, and was shown to be significant, $t(20.57)=1.99$, $p= .06$.

The assumption that representatives of creative professions have more complex dreams is supported by two categories of complex dream: number of activities and number of transfers.

The mean scores for number of details in artists' dreams is 17.60 (SD = 20.45; Std.Error Mean = 4.57); in office workers' M = 3.45 (SD = 3.83; Std.Error Mean = 0.85). This difference was tested also using Independent-Sample T Test, and was shown to be significant, $t(20.32)=3.04$, $p=.006$.

The mean score for number of chromatic colors in artists' dreams is 0.7 (SD = 0.9; Std.Error Mean = 0.2); in office workers' is 0 (SD = 0; Std.Error Mean = 0). Independent-Sample T Test was used to test difference, and it showed significant difference, $t(19)=3.19$, $p= .005$.

The mean score for number of achromatic colors in artists' dreams is 0.2 (SD = 0.5; Std.Error Mean = 0.1); in office workers' is 0.1 (SD = 0.3; Std.Error Mean = 0.06). Again Independent-Sample T Test was used to test difference, and it showed nonsignificant difference, $t(30.74)=0.74$, $p= .47$.

Hypothesis 2. "Representatives of creative profession have more complex, detailed, and vivid dreams" was supported.

The mean score for number of anger in artists' dreams is 0.25 (SD = 0.5; Std.Error Mean = 0.1); in office workers' M = 0.05 (SD = 0.2; Std.Error Mean = 0.05). This difference was tested using Independent-Sample T Test, and was shown to be nonsignificant, $t(25.1)=1.51$, $p= .14$.

Independent-Sample T Test also was used to test differences in following emotions.

The mean score for number of apprehension in artists' dreams is 0.7 (SD = 0.8; Std.Error Mean = 0.2); in office workers' M = 0.45 (SD = 0.7; Std.Error Mean = 0.2). The difference was not significant, $t(37.1)=1.06$, $p= .296$.

The mean score for number of sadness in artists' dreams is 0.25 (SD = 0.4; Std.Error Mean = 0.09); in office workers' M = 0.05 (SD = 0.2; Std.Error Mean = 0.05). Statistical significance $t(28.04)=1.8$, $p= .08$, the difference was nonsignificant.

The mean score for number of confusion in artists' dreams is 0.25 (SD = 0.6; Std.Error Mean = 0.1); in office workers' dreams M = 0 (SD = 0; Std.Error Mean = 0). The difference was shown to be non-significant, $t(19)=2.03$, $p= .056$

The mean score for number of happiness in artists' dreams is 0.6 (SD = 0.9; Std.Error Mean = 0.2); in office workers' M = 0.1 (SD = 0.3; Std.Error Mean = 0.07), $t(23.55)=2.4$, $p= .025$, which was significant.

These results show artists have more emotionally intensive dreams compare to office workers. But there are no statistical differences in feeling anger, apprehension, sadness and confusion, where as there is statistical difference in experiencing happiness.

Discussion

The present study provided consistent evidences of complex, detailed, and vivid dreams of artist. (Hypothesis 2). Most of artists' dream reports showed detailed description of dream characters and surroundings, where as just few office workers did so. Perhaps, attention to details is one of the features of creative person. Artists work with colors and it is no wonder that their dreams are vivid. It would be interesting to find out whether dreams of representatives of other creative professions, for example writers', are vivid. A dream may be called complex only when a dreamer can remember most of the parts of his/her dream or remember the whole dream in order to describe all activities, transfers and results of dream.

This research showed that artists had more emotionally intensive dreams. Artists' dreams were more emotionally intensive than office-workers dreams'. But differences for emotions such as anger, apprehension, and sadness between these two groups were not statistically significant. Probably the reason is that anger, apprehension, and sadness are common feelings in nightmares. Everybody has at least one nightmare. Whether s/he remembers his/her nightmare is another question.

Several different studies using blind coders find that negative emotions outnumber positive ones (Hall & Van de Castle, 1966; Merritt et al., 1994; Roussy et al., 2000b; Snyder, 1970; Tonay, 1990/1991), However, very different results emerge when the dreamers themselves make a global rating of each of their dream reports on a pleasant-unpleasant dimension. Such studies regularly find that the dreamers rate the emotions in their dreams as at least equally pleasant and unpleasant, and sometimes as more pleasant.

This contrast is demonstrated in one of the earliest studies using both approaches. The content analysis concluded that 64% of the explicitly expressed emotions in a sample of 1,000 home dream reports were negative or unpleasant, and that only 18% expressed happiness, but the dreamers rated their dreams as more pleasant than unpleasant by a margin of 41% to 25%, with 11% judged as mixed (Hall, 1951, p. 62). Significantly, the dreamers also said that 23% of the dreams were without feeling tone, which is not much lower than the finding of no affect in 30% and 26% of the dreams in three REM-based studies. (Fosse et al., 2001b; Foulkes et al., 1988; Strauch & Meier, 1996).

The present research (Comparative analysis of dreams of artists and office-workers) showed that artists experience happiness (positive emotions) more compare to office workers. An artist while working on her/his art experiences variety of emotions. S/he can be satisfied or not satisfied with the result. Nature, beautiful people and so on can inspire an artist. If an artist satisfied with the result of the work s/he admires the painting. Artists' emotional connections with their paintings, probably with not every painting, but with several, are very strong. Here these emotions are more positive than negative. It may be one of the reasons why artists experience more happiness in their dreams. Also another reasons can be about individual characteristics' of artists and the way they perceive the world.

This study didn't provide evidences of dream recalls. There were no any significant differences in dream recalls. Some artists with vivid, detailed, complex, emotionally intensive dreams stated that they remembered most of the large factors, and not many details, or all the stuff that happened at the end of the dream, but the beginning was usually fuzzy, and some office workers stated they could remember all of the details of their dreams completely, where as they didn't provide detailed dreams, some of them, even provide no dream. Probably, the only way to test this hypothesis was to ask participants to write dawn their dreams every morning during several months or at least several weeks, which was impossible in this research.

Advantages and Limitations

Such kind of research has been conducted for the first time in Kyrgyzstan. In this region only some psychotherapists and psychiatrists are interested in dreams

while working with clients or patients. And no research on dreams has been done. In this respect this research is unique.

In this research quantitative analysis has been conducted. It gives certain advantages in regard to the fact that contexts of dreams can be written in different languages, as in the case of this research: in Russian, in Kyrgyz, in English. Nevertheless, the language of description of dreams doesn't influence the analysis of dreams anyhow, since all data are received in numbers. Dreams reported in different languages don't have to be translated into one specific language. It is sufficient that the researcher has proficiency in these languages.

Used questionnaire in this research helps to get variety of dreams of participants. (See the context of questionnaire in the attachment). All twenty artists filled out questionnaire completely. But office workers refused to answer all questions, and the number of questions was reduced to four questions and it was taken four dreams from each artist's filled out questionnaire.

One of the limitations of the research is that women comprised majority of group of office-workers. Probably, it happens because in Kyrgyzstan office-workers are not paid well enough. And men in order to provide for their families have to work in other spheres. The presence of foreign artists in artists' group also can be limitation.

In order to get reliable results, at least 100 to 125 dreams from each group are needed. (Domhoff, 1996). This research provided only 65 dreams from each group.

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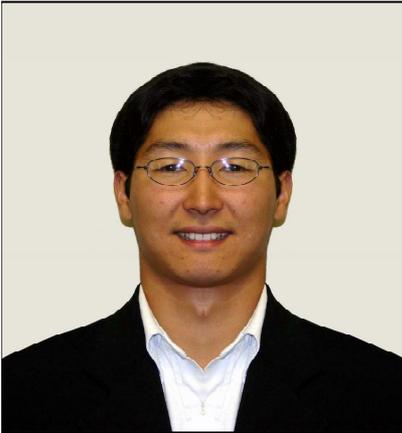
Appendix 1.

Perception of images of artificially constructed perfectly symmetrical faces by patients with schizophrenia and healthy people.

By Eleonora Turdubaeva

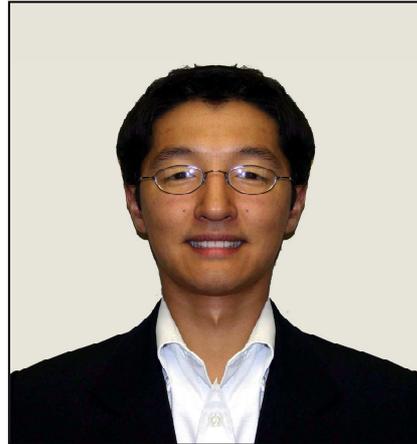
Example of symmetrical pictures used in the research (publication approved by the respondents).

#1



Left-sided.

#2



Right-sided.

#5



Left-sided.

#6



Right-sided.

Appendix 2.

Perception of images of artificially constructed perfectly symmetrical faces by patients with schizophrenia and healthy people.

By Eleonora Turdubaeva

Figure 1. General differences in evaluation of symmetrical faces by two groups.

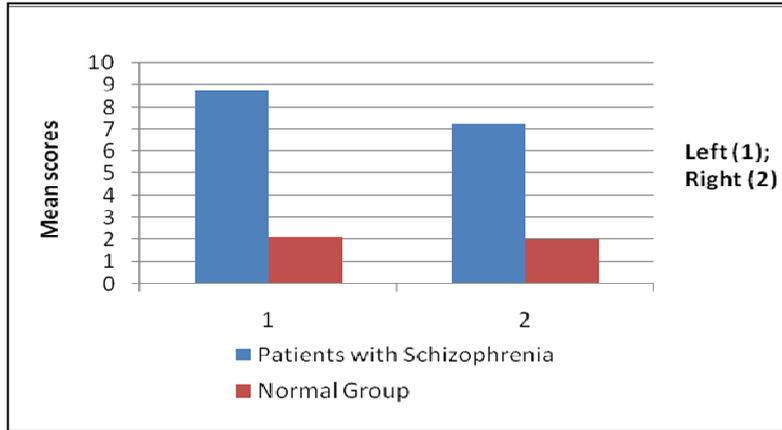


Figure 2. Evaluation of left-sided pictures by two groups.

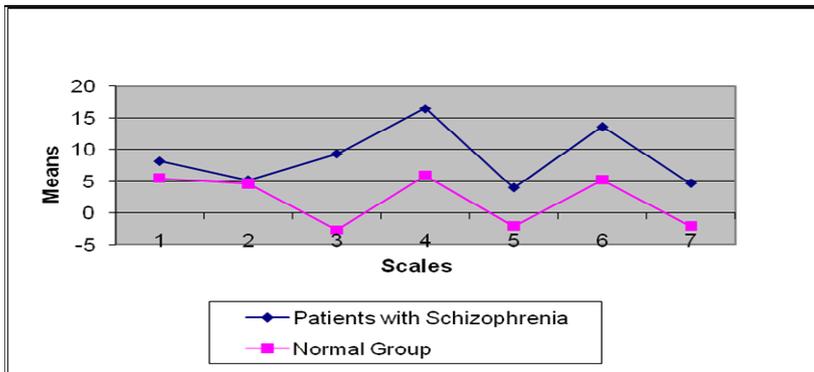
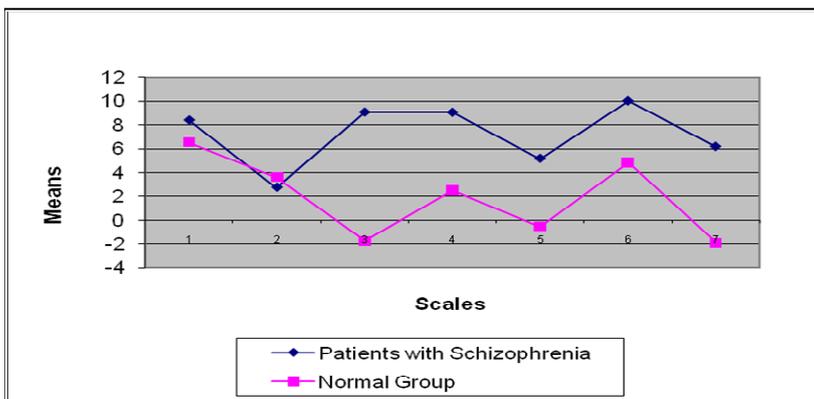


Figure 3. Evaluation of right-sided pictures by two groups.

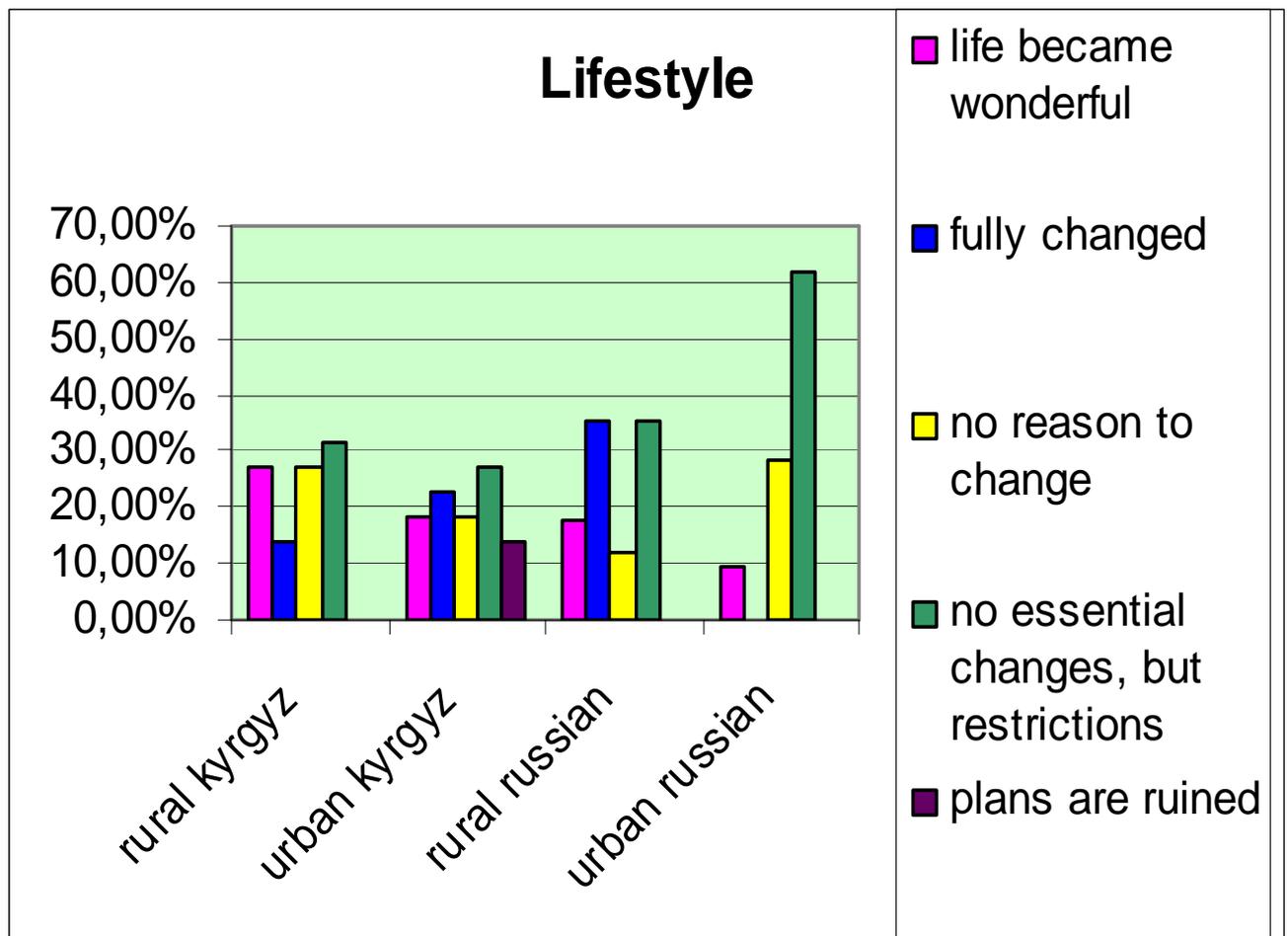


Appendix 3.

Ethnocultural features of anxiety and depression in expecting women in Kyrgyz and Russian ethnicities.

By Kanykei Latipova

Graph 1. Lifestyle of Pregnant Women



Appendix 4.

Software development for statistical analysis of semantically consistent text synthesis results.

Bahar Babayeva.

Printouts.

Tester Application Fragment Printouts

Fragment 1: Program header, packages used, global variables, and Constructor

```
/**
 * Program:          Tester
 * Author:           Bahar Babayeva
 *
 * Date Created:     01/05/2009
 * Date Revised:     28/05/2009
 *
 * Compiler:         Visual C# Compiler
 * Platform:         Microsoft .Net
 *
 * Description:
 *   Description: It derives a priori saved poem from the poems folder.
 *   Randomly rearranges the lines of the poem and prints them onto the
 *   screen. Lets the user transposition the lines and enter the personal
 *   information (first name, last name, age, and gender) and saves the
 *   results of the user transposition. Saving is done automatically
 *   when the save menu item is pressed.
 */

using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;

public partial class Tester : Form
{
    private Boolean isLabelDraggable, isSaved, firstStatistics;
    private Label[] labelArray;
    private String[] stringArray;
    private String poemName, dir, labelString;
    private int[,] statisticsArray;
    private int[] intArray;
    private int index;
    private const int STEP = 25;
    private const int s = 60;

    /**
     * Name:           Tester <Constructor>
     * Description:    Initializes the form component. Assigns initial
     *                values to global variables
     * Parameters:     Never has
     * Return:         Never has
     */
    public Tester()
    {
        InitializeComponent();
        isLabelDraggable = false;
        isSaved = true;
        firstStatistics = true;
        labelString = "";
        index = 0;
    }
}
```

Fragment 2: upgradeStatistics method

```
private void upgradeStatistics()
{
    string currentLine="";
    int indexOf=0;
    System.IO.StreamWriter streamWriter;
    /*Read or create statistics*/
    //set firstStatistics
    if (System.IO.File.Exists(dir))
        firstStatistics = false;
    else
        firstStatistics = true;
    statisticsArray = new int[index, index];
    //if statistics made for the first time
    if (firstStatistics)
    {
        //create a text file
        streamWriter = new System.IO.StreamWriter(dir);
        streamWriter.Close();

        //fill statistics array with 0's
        for (int i = 0; i < index; ++i)
            for (int j = 0; j < index; ++j)
                statisticsArray[i, j] = 0;
        firstStatistics = false;
    }
    else
    {
        System.IO.StreamReader streamReader = new System.IO.StreamReader(dir);
        for (int i = 0; i < index; ++i)
        {
            currentLine = streamReader.ReadLine();
            for (int j = 0; j < index; ++j)
            {
                indexOf = currentLine.IndexOf(' ');
                int.TryParse(currentLine.Substring(0, indexOf), out statisticsArray[i, j]);
                currentLine = currentLine.Substring(indexOf+1);
            }
        }
        streamReader.Close();
    }
    //increment line&position count
    for (int i = 0; i < index; ++i)
        statisticsArray[i, intArray[i]]++;

    /*Write statistics*/
    streamWriter = new System.IO.StreamWriter(dir);
    for (int i = 0; i < index; ++i)
    {
        for (int j = 0; j < index; ++j)
            streamWriter.Write(statisticsArray[i, j]+" ");
        streamWriter.WriteLine("");
    }
    streamWriter.Flush();
    streamWriter.Close();
}
```

Fragment3: randomizeStringArray method

```
/**
 * Name:          randomizeStringArray
 * Description:   Randomizes the lines of the poem
 * Parameters:    none
 * Return:        void
 */
private void randomizeStringArray()
{
    int randomNumber;
    int[] localIntArray = new int[index];
    string[] localStringArray = new string[index];
    Random rand = new Random();
    for (int i = 0; i < index; i++)
    {
        randomNumber = rand.Next(index-i-1);

        //randomizing the stringArray
        localStringArray[i] = stringArray[randomNumber];
        stringArray[randomNumber] = stringArray[index - i - 1];

        //randomizing the intArray
        localIntArray[i] = intArray[randomNumber];
        intArray[randomNumber] = intArray[index - i - 1];
    }
    stringArray = localStringArray;
    intArray = localIntArray;
}
}
```

Fragment 5: label1_MouseDown and label1_MouseUp methods for realizing label moving

```
/**
 * Name:          label1_MouseDown
 * Description:   When the user presses the mouse button on a label,
 *               sets that label draggable and changes the color of
 *               the label to demonstrate it is being dragged
 * Parameters:    object sender, MouseEventArgs e
 * Return:        void
 */
private void label1_MouseDown(object sender, MouseEventArgs e)
{
    isLabelDraggable = true;
    ((Label)sender).ForeColor = System.Drawing.SystemColors.Highlight;
    ((Label)sender).Font = new System.Drawing.Font("Microsoft Sans Serif",
        12F, System.Drawing.FontStyle.Bold, System.Drawing.GraphicsUnit.Point, ((byte)(204)));
}
}
```

```

/**
 * Name:          label1_MouseUp
 * Description:   Sets back label's color and not draggable mode.
 *               Shifts the other labels to free a space for the
 *               label. Moves the label to a new dragged position.
 * Parameters:   object sender, MouseEventArgs e
 * Return:      void
 */
private void label1_MouseUp(object sender, MouseEventArgs e)
{
    ((Label)sender).ForeColor = System.Drawing.SystemColors.ControlText;
    ((Label)sender).Font = new System.Drawing.Font("Microsoft Sans Serif", 12F,
        System.Drawing.FontStyle.Regular, System.Drawing.GraphicsUnit.Point, ((byte)(204)));

    if (isLabelDraggable)
    {
        Point oldPoint = ((Label)sender).Location;
        Point tempNewLocation = new Point(((Label)sender).Location.X,
            e.Y / STEP * STEP + ((Label)sender).Location.Y);
        //check if the drag location is out of bounds
        if (tempNewLocation.Y > labelArray[index - 1].Location.Y)
            ((Label)sender).Location = labelArray[index - 1].Location;
        else if (tempNewLocation.Y < labelArray[0].Location.Y)
            ((Label)sender).Location = labelArray[0].Location;
        else
            ((Label)sender).Location = tempNewLocation;

        Point newPoint = ((Label)sender).Location;
        int oldIndex = (oldPoint.Y - s) / STEP;
        int newIndex = (newPoint.Y - s) / STEP;

        Label swapLabel = labelArray[oldIndex];
        int swapInt = intArray[oldIndex];

        //shift other labels
        if (oldIndex < newIndex)
        {
            for (int i = oldIndex; i < newIndex; i++)
            {
                labelArray[i] = labelArray[i + 1];
                labelArray[i].Location = new Point(labelArray[i].Location.X,
                    labelArray[i].Location.Y - STEP);

                //shifting other ints
                intArray[i] = intArray[i + 1];
            }
            labelArray[newIndex] = swapLabel;
            intArray[newIndex] = swapInt;
        }
        else if (oldIndex > newIndex)
        {
            for (int i = oldIndex; i > newIndex; i--)
            {
                labelArray[i] = labelArray[i - 1];
                labelArray[i].Location = new Point(labelArray[i].Location.X,
                    labelArray[i].Location.Y + STEP);

                //shifting other ints
                intArray[i] = intArray[i - 1];
            }
            labelArray[newIndex] = swapLabel;
            intArray[newIndex] = swapInt;
        }
    }
    isLabelDraggable = false;
}

```

Reporter Application Fragment Printouts

Fragment 1: Program header, packages used, global variables, and Constructor

```
/**
 * Program:          Reporter
 * Author:           Bahar Babayeva
 *
 * Date Created:     01/05/2009
 * Date Revised:     28/05/2009
 *
 * Compiler:         Visual C# Compiler
 * Platform:         Microsoft .Net
 *
 * Description:
 * It provides three types of reports: poem report, person report
 * and group report. In poem report the original poem and the
 * general cumulative results of the blocks transposition are shown.
 * In the group report the original poem and the gender filtered
 * results are shown. And the person report demonstrates the original
 * poem, the order the user has placed the lines, the cumulative results,
 * specifications of the right answers, and the count of the right and
 * wrong answers a user has got. After the report is printed out it can
 * be saved to a file. Saving the report is done automatically when the
 * save menu item is pressed.
 */

using System;
using System.Globalization;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Drawing.Printing;
using System.Text;
using System.Windows.Forms;

public partial class Reporter : Form
{
    private Label[] labelArray;
    private String[] stringArray;
    private String userName;
    private string poemName;
    private int[,] statisticsArray;
    private int[,] colorArray;
    private int[] intArray;
    private int numOfRight, numOfTested;
    private int maxStatLength, maxIntLength;
    private int index;
    private int whichReport;
    private const int STEP = 25;
    private const int s = 25;
    private const int POEM_REPORT = 1,
        PERSON_REPORT = 2,
        GROUP_REPORT = 3;
    private bool isSaved, isMale;

    /**
     * Name:           Tester <Constructor>
     * Description:     Initializes the form component. Assigns initial
     *                 values to global variables
     * Parameters:     Never has
     * Return:         Never has
     */
    public Reporter()
    {
        InitializeComponent();
        isSaved = false;
        isMale = false;
        whichReport = 0;
        index = 0;
        maxIntLength = 0;
        numOfTested = 0;
        numOfRight = 0;
    }
}
```

Fragment 2: doNormAnalysis method

```
/**
 * Name: doNormAnalysis
 * Description: Does the norm analysis for the person report by calling
 *             the myDiagramVoronoy method to get rid of farthest values
 *             from the maximum value until deviation from the maximum is less than 20%
 * Parameters: none
 * Return: void
 */
private void doNormAnalysis()
{
    int[] line = new int[index];
    int[] orderedLine = new int[index];
    int tmp = -1;
    //for every line of the statisticsArray
    for (int i = 0; i < index; ++i)
    {
        for (int j = 0; j < index; ++j)
        {
            line[j] = statisticsArray[i, j];
        }
        //order line
        orderedLine = orderIntArray(line);
        line = new int[index];
        int beginning = 0;
        //set deviation big to start a loop
        int dev = 100000000;
        //while deviation is greater than 20%
        while (dev > 0.2 * orderedLine[index - 1])
        {
            tmp = beginning;
            //find a new beginning using diagramVoronoy
            beginning = diagramVoronoy(tmp, orderedLine);
            if (tmp == beginning)
                beginning++;
            dev = calculateDeviation(beginning, orderedLine);
        }
        //specify the numbers that are 'normal'
        for (int b = 0; b < index; ++b)
            if (statisticsArray[i, b] >= orderedLine[beginning])
                colorArray[i, b] = 1;
        beginning = 0;
        dev = 100000000;
    }
}
```

Fragment 3: calculateDeviation method

```
/**
 * Name: calculateDeviation
 * Description: For the numbers in the array arr starting from the
 *             startInd position calculates deviation from the
 *             maximum value - last number in the arr
 * Parameters: int i, int[] array
 * Return: int
 */
private int calculateDeviation(int i, int[] array)
{
    //if has come to an end of the array
    if (i == index - 1)
        return 0;
    else
    {
        //the maximum value is located at the end
        int max = array[index - 1];
        double dev = 0;
        for (int j = i; j < index - 1; ++j)
        {
            dev += (max - array[j]) * (max - array[j]);
        }
        dev /= array.Length - i - 1;
        dev = Math.Sqrt(dev);
        //do floor approximation
        return (int)(dev);
    }
}
```

Fragment 4: diagramVoronoy method

```
/**
 * Name:          diagramVoronoy
 * Description:    Filters out the farthest values
 * Parameters:    int i, int[] array
 * Return:        int
 */
private int diagramVoronoy(int a, int[] array)
{
    int newBeginning = 0;
    int middle = (array[a] + array[array.Length - 1]) / 2;
    for (int i = a; i < index; ++i)
    {
        //if the current value is greater than maximum
        if (middle < array[i])
        {
            //that is a new beginning
            newBeginning = i;
            return i;
        }
    }
    return -1;
}
```

Fragment 5: orderIntArray method

```
/**
 * Name:          orderIntArray
 * Description:    Orders int array for algorithm usage
 * Parameters:    int[] array
 * Return:        int[]
 */
private int[] orderIntArray(int[] array)
{
    int[] newArray = new int[index];
    int max = 0, maxInd = 0;
    for (int i = 0; i < index; ++i)
    {
        //find the max value and its index
        for (int j = 0; j < array.Length; ++j)
        {
            if (max < array[j])
            {
                max = array[j];
                maxInd = j;
            }
        }
        //place the found max to the end of newArray
        newArray[index - 1 - i] = max;
        //remove max from the array
        array[maxInd] = -1;
        max = 0;
    }
    return newArray;
}
```