

**DISSERTATION ABSTRACT**

**POSITIVE ILLUSIONS OR ILLUSORY MENTAL  
HEALTH? A THEORETICAL EXPERIMENTAL MODEL**

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## INTRODUCTION

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Contrary to traditional theories according to which a mentally healthy person has realistic perceptions, a new paradigm, still in formation, claims that positively biased perceptions are general, and that they are a condition of mental health. This tendency of ours to see ourselves and the world as if “through rose-colored spectacles” has been labeled in psychological literature as “positive illusions”. Starting from the assumption that positive illusions are a condition of mental health and well-being, Taylor and Brown (1988, page. 194) argue that they function as a shield protecting the self against threats.

Despite robust data and influential arguments supporting the positive illusion theory critics proposed that self-enhancement reflects little more than defensive denial and serves to camouflage psychological distress. At one hand it is believed they are a key element of mental health, on the other hand they are accused to reflect neurotic defenses. Whereas an abundance of studies have been devoted to the study of affective adaptation in relation to self enhancement, less is known about the cognitive aspect of self enhancer’s mental health. The *main objective* of the present paper is to investigate positive illusions relationship to mental health on the general non-clinical adult population with the objective to integrate controversial perspectives.

The Romanian and Hungarian society of Transylvania, though in the full process of democratization and assimilation of individualistic values, is – probably – still bearing the mark of a mentality which emphasized especially collectivism. The influence of past experiences has not completely faded; they have remained impregnated in our convictions and conditioning, representing in the present a solid cultural fact which cannot be ignored. Especially the older generations seem to be affected by these conditionings and beliefs. It is very probable that the population of Romania presents a mixture of individualistic and collectivistic values.

The historical, cultural, religious, and political reasons which could explain the cultural differences in cognitions on the self, be they distorted or realistic, are inexhaustible, and to discuss them is beyond the objectives of the present study. We shall try, however, to make an overview of some major values cultivated in Romania, these being the premises which led us to formulate our hypotheses. They suggest that the population may lack the motivation to manifest so much positive illusions as the typically individualistic cultures.

Since there are no data referring to the level of positive illusions in the Romanian and Hungarian population, we are not able to examine the changes that have taken place at the level of fundamental beliefs. Some of these changes, nevertheless, can be pointed out (detected) by comparing the different samples. The differences in samples will help us to understand better the construct of positive illusion and its sensibility to the changes in convictions.

In the first three studies we adapted the specific instruments used with a consideration to the cultural sensitivity of illusions. Study 4 investigates the relationship of positive illusions to mental health in the general nonclinical population. Studies 5, 6 and 7 addresses special issues regarding the relationship of illusions with defensive denial. Study 8 investigates positive illusions in the clinical depressive population. Overall results indicated that positive illusions were beneficial to health in many aspects but when they interfere with denial based on cognitive vulnerability and dysfunctional childhood self schemas they generate a series of psychological and physiological problems

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## CHAPTER 1

### TRADITIONAL VIEWS OF SELF ENHANCEMENT

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*Although the term positive illusions appeared in the literature only after 1988, the dilemma of realism versus self deception, optimism versus pessimism is a very ancient one. In the first section of chapter 1 of the my thesis I intended to make a historical / philosophical introduction of this subject and dilemma in order to surprise the construct in depth revealing it's profoundness that will be impossible to do in the frame of scientific terms. The second section of this chapter focuses on the traditional view of positive distortion on mental health.*

At the time being, the exactitude or positive distortion of social cognitions is a key-issue in defining mental health. It seems that no common agreement has been reached; on the contrary, theories seem to be contradictory in this sense. Until the 1990s the conception of mental health was dominated by traditional theories according to which a mentally healthy person's perception of him/self, of others, and of the world must be as exact and as near to reality as possible, this representing one of the most important components of psychic health. This conception was supported by prominent theoreticians such as: Jahoda (1958), Maslow (1950), Fromm (1955), Erikson (1950), Rogers (1970), Allport (1943), or Menninger (1930). According to traditional theories a person considered mentally healthy would probably be characterized as being able to perceive him/rself and his/r environment correctly, without errors and to make a clear difference between the perception of reality and his/r wishes. Jahoda (1958. page 6) formulated this in the following way: "The perception of reality is called mentally healthy when what the individual sees corresponds to what is actually there."

## CHAPTER 2

### CONTEMPORARY VIEWS OF SELF ENHANCEMENT

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#### 2.1. POSITIVE ILLUSIONS

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*In chapter 2 we define positive illusions and describe the contemporary view of mental health. In this chapter we also offer a synthesis of those findings, models, biases and errors in the social cognitive literature that led to the development of Cognitive adaptation theory.*

A series of studies show that approximately 90% of the interviewed persons consider themselves to be above the average with regard to positive characteristics and abilities, the result being quite the opposite in the case of negative traits (Brown, 1986). Study results show that, in general, people see the future "in rose-color" with regard to other people, and especially to themselves (Weinstein & Klein, 1996). Both laboratory and field studies specify the fact that people believe that they have more control over their lives' events, than it is proved by reality. Moreover, they believe that they can control their lives better than other people (Nelson & Beggan, 2004).

Taylor and Brown (1988) succeeded in synthesizing these social biases in an integrative model called the "cognitive adaptation theory", pointing out that the essence of these errors is not the functional limitation of cognitive processes, which would emphasize the deficiency of the cognitive system, as it had been believed before. According to the theory, the function of positive illusions is to protect, maintain, and enhance the self-image, which later on have an important adaptive function, as well as to preserve the integrity of mental health.

Taylor and Brown mention that instead of the term *error* or *bias* they use the wider term *illusion*. According to their definition, the term *illusion* refers to a more general and persistent error pattern, which has a certain form and direction, and which is systematically produced by the cognitive system. The authors define three types of adaptive biases: (1)

positive illusions about the self, (2) illusory optimism about the future, and (3) illusory control.

### 2.1.1. Positive illusions about the self

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*To perceive the self as a “hero” is more than a suggestive metaphor, it is an empirical reality, says Taylor (1989). Positive illusions about the self refer to the individual’s self perception and systematic conviction that s/he is above the average with respect to different characteristics and abilities.*

The data confirm this assumption, showing that we tend to emphasize the value of positive information and to lessen the negative information relevant for the self. Approximately 90% of the interviewed persons consider themselves to be above the average with regard to positive characteristics and abilities, the result being quite the opposite in the case of negative traits. Brown (1986) argues that this tendency to see ourselves above the average is a distortion of reality, because, from the point of view of statistics it is impossible for approximately “everyone” to be better than the average.

The contexts in which the positive illusions about the self occur are different and varied. Most people have a good opinion about themselves, and, naturally, they tend to present themselves favorably. When they are asked to characterize themselves briefly, they mention many positive characteristics emphasizing good qualities and talents, lessening at the same time their weaknesses.

### 2.1.2. The illusion of control

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*A third domain in which perception seems to be illusory is the perception of personal control. Illusory control refers to the individual’s biased perception according to which s/he would have control over situations which in reality are not controllable (Alloy & Clements, 1996).*

Both laboratory and field studies specify the fact that people believe that they have more control over their lives’ events, than it is proved by reality. Moreover, they believe that they can control their lives better than other people. Many theoreticians, belonging to different psychological orientations, agree that the perception of control is an integrant part of the concept of the self, and the feeling that we hold control over life, in general, contributes to our well-being and mental health. Much empirical data referring to the overestimation of control comes from investigations connected with the psychology of gambling, the casino being a perfectly equipped laboratory for testing illusory control.

In such a study the participants felt more comfortable and confident in their winning when they held the cards in their hands, or when they could draw the lottery ticket as compared to the situations when others did this in their stead (Langer, 1975). Gamblers also believe that after winning the lottery they are less likely to become extravagant, egocentric, conceited, to spend money unreasonably, or to find opportunistic friends; on the other hand they have the firm belief that they will donate more money to charity, and that they will live more happily than other winners (Nelson & Beggan, 2004). Some gamblers develop ritualistic behaviors with the aim of controlling the numbers, for example: they cast the dice softly when they wish for small numbers and more briskly when they wish for big numbers. At the same time, they are convinced that effort and concentration have an important role, so they often do not cast the dice unless everyone is quiet, or they wait for a few minutes and concentrate on the number they wish for. Such behavior has a sense when the game involves abilities and success depends on one’s personal contributions, but they do not have much sense when the result is determined by chance; however to resort to such behavior makes us believe that the situation is under control (Taylor, 1989)

The illusion of control has powerful effects on the human psyche. Several studies confirm that people are capable of supporting extremely stressful situations if they are convinced that they can control the source of distress at least in a small degree. A possible source of illusory control would be that we mistake what is happening to us for what we wish to happen (or with what we have made efforts for), and when the wished for event takes place, we conclude that it is due to the efforts made or to our abilities. In case of normal and mentally healthy individuals this bias is present only when the results of the effort are positive. For example, when we learn for an exam, we expect to get high marks, or at least to pass the exam, which has an adaptive value, since if we expected to fail, it would be useless to make efforts. Consequently, we expect to pass the exam, and after we have passed it, we attribute the success to the effort we have made and to our internal qualities (e.g. we are intelligent). Moreover, people naturally make efforts to obtain success, consequently they expect to be successful, and in this sense they attribute their successes to the efforts they have made, since the result coincides with their expectations. The illusory control, therefore, can be the result of the covariance between the effort one has made, one's expectations and the results.

### 2.1.3. Illusory optimism about the future

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Research indicates that the vast majority of people are oriented towards the present and the future (75%), less people are oriented in a greater measure towards the future (33%), and relatively less people focus only on the present (9%), or the past (1%) (Gonzales & Zimbardo, 1985) When they were asked what they thought would happen to them in the future, the interviewed participants enumerated four times more positive things than negative ones. Even if they face problems in the present, most people tend to believe that things will get better. Janoff-Bulman concludes that, in general, people feel that the present is better than the past, and the future will be even better than the present (Janoff Bulman, 1989)

Optimism, in the most general sense of the word, is defined as an expectation that in the future better things will happen. Illusory optimism, on the other hand, appears in the context of social comparisons, to be more precise, it refers to people's systematic perception and belief that in comparison with other persons, in the future they are more likely to encounter positive events than negative ones.

In a study made by Weinstein (1986) the majority (approximately 90%) of the questioned students answered that they have better chances to pass their exams, to graduate, to find a job than their colleagues, but they have smaller chances to fail in an exam, to be expelled from the university, or to be dismissed from their job. Similar results have been obtained by other research works as well, in which the subjects evaluated the probability of having part in negative events in the future, such as: "to fall victim to an accident", "to fall ill with cancer", or "to divorce after a year of marriage". The respondents said that these events are less probable in their than in other people's case. On the contrary, when they were asked to estimate the probability of having positive events (for example to win at the lottery or to have a happy marriage), approximately 90% answered that they have better chances to these positive experiences in the future than others. Illusory optimism is not the privilege of the young generation. Similar results have been obtained in the case of adults, and elderly people, illusory optimism being independent of age, sex, social class, or education (For a survey on these investigations see Vincze, 2009).

Study results show that, in general, people see the future "in rose-color" with regard to other people, and especially to themselves, as if they said: "the future seems to be excellent, especially for me". In this sense a paradox (revealed during some nationwide assessments of the living standards) appears: while people think that the country heads for an economic, educational, or political disaster, that the world is ever worse and more and more unrestrained from a moral point of view (some even affirming that "we will soon face the end of the world"), they also say that their lives will get better from a financial point of view, their children will have access to a better education, and will have a more beautiful future than they, and that they and their families will make progress, and they will become "better".

#### 2.1.4. The optimal margin of positive illusions

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*In what measure are positive illusions adaptive? When it comes to illusions it is natural to ask ourselves to what limit are illusions adaptive, and when they stop being beneficial. This section of the thesis focuses on setting some limits based on empiric evidence.*

The term the “optimal margin of positive illusions” has been suggested by Baumeister (1989) who shows that to swerve from this margin in either direction leads to adaptive difficulties. He argues that exaggerated positive illusions about the self are connected with the subjective overestimation of the probabilities of success, which may result in the individual’s assuming some projects difficult to realize, and without the adequate resources and the necessary safety measures. Exaggerated self-esteem may lead to frequent failures, which, on the long run, are threatening from the point of view of self-perception. On the other hand, the persons with a correct and realistic self-perception have fewer successful attempts which might lead to other successes and through this to the positive affective states associated to them. Baumeister concludes that health, adaptation, happiness, and optimal performance are rooted in a slight overestimation of the self.

#### 2.1.5. Depressive realism

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*This chapter focuses on the research line that was developed under the depressive realism hypothesis. The aim of this chapter was to put in evidence what happens when positive biases in auto-perception are turned off. This chapter presents as well as some criticism over the depressive realism hypothesis and supporting data.*

What does it happen when we lose our positive illusions? If mentally healthy persons have positively biased self-perception, what are those persons who have a correct self-perception? Just as mania or narcissism show us that exaggerated illusions are maladaptive, depression offers another useful reference related to the lack or the loss of positive illusions. Many of the studies which have offered us explicit or implicit data on the illusory perception of normal people compared the mentally healthy persons with individuals suffering from moderate depression or a temporary negative affective state (Taylor, 1989).

People who suffer from depression see promise and hope in nothing. They isolate themselves from relationships which have offered them before an energy source, and they withdraw from activities. A depressed individual, even if s/he continues to work, will have a worse performance than s/he is capable of. In severe depression the person becomes even unable to fulfill his/r basic tasks and to satisfy his/r basic needs.

Based on the results of these researches, the hypothesis of “depressive realism” has been developed. This theory suggests that depressed individuals evaluate themselves better, are less affected by illusory control, and estimate more correctly the incidence of some future events than the non-depressed persons (Keller, Lipkus, Rimmer, 2002). The discovery of depressive realism prompts us to reconsider our conception of depression radically, because depression in this formulation is not the cause of biased perception and cognition, but rather is associated with the lack of bias, having therefore rather a deficit, and not a surplus of bias (Taylor, 1989).



## 2.2. CREATIVE SELF DECEPTION: SOURCES OF POSITIVE ILLUSIONS

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### HEURISTICS AND BIASES

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*In this chapter we focused on identifying social and cognitive models as well as the development of research on which the Theory of cognitive adaptation was based. The aim of this chapter was to identify sources of illusions as well as the concepts that build up the presumptions of the model.*

The study of biases was outlined by cognitive psychologists Kahneman and Tversky (1973) They defined a series of *cognitive deviations*, such as *erratic decisions*, *illusory correlations*, *anchoring biases* and *short circuits* regarding information collection, they describe to be funny and invincible. The general result of these investigations has been that people rely on a limited number of heuristics that in certain conditions functions well in others they simply make mistakes (For an overview see the meta-analytic review by Shafir and LeBoeuf, (2002) 491–517.) As Tversky and Kahneman (1973) notes: “people rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations.”

In order to discover how the human mind works, cognitive psychologists have often used the “*computer*” as a metaphor, which helped in understanding certain cognitive processes. However, sometimes confusing conclusions resulted from this comparison In this perspective the human mind was interpreted as deductory compared to that of a computer which would combat the human intelligence in problems that implied logics or that required enhanced memory and attention. The most spectacular results of the deductory human reasoning probably came up following the studies that applied the *Wason selection task* (Wason’s Selection Task: WST ). The general result of these studies was that people don’t tend to make logic reasoning, they are not inclined to identify the accuracy of the hypothetical rules and they fail in estimating the probabilities defined by simple algorithms. The conclusion was that the human agents make systematic errors even in simple deductive judgments, as are those that imply the use of certain conditional statements, like „if p, then q” (Eysenck & Keane, 1997).

In parallel, the social-cognitive researches indicated that in the causal analysis from day to day life, the individual does not process the information in a normative way, according to the principles of logics and reasoning. Due to the limited resources, people more often resort to simple inference procedures, ignoring certain information based on stereotypes and generalizations. The social-cognitive perspective used different approaches of the human thinking in order to offer valid explanations for the results of the observations that made up the man inclined to errors and biases.<sup>1</sup> The most well-known amongst these, are: “*the naive scientist*”, the individual who works with “*a maximum of cognitive economy*”; „*the human as a novice*” or as that of the “*motivated tactician*”. In general, the term *error* means a mistake, a distortion caused by a rather accidental negligence, and the term *bias* is used when these errors become systematic.

Numerous errors and biases have been identified referring to social cognition and comparison, such as: the fundamental attribution error, the actor observer bias, and the self serving bias. Among the many identified biases were the: *the fundamental attribution error*; *the actor-observer effect*; *the egocentric bias*, *the hedonic bias*, *the negative/positive bias effect*; *the self-enhancement bias*; *the Barnum effect*; *the false consensus bias*; *the illusion of*

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<sup>1</sup> In the context of the social cognitive psychology, the cognitive error refers to a deviation from the hypothetically normal cognitive processes. Whilst an error is a failure, a distortion caused by an arbitrary (accidental), negligence and the term „bias” is used when the error becomes systematic. For a review of the literature see Eliot R. Smith és Diane M. Mackie: Szociálszichológia, Osiris, Budapest, 2004: 190-234

*the transparency; the lake Woebegone effect.*<sup>2</sup> A common feature of these biases is their egocentric, self-enhancing nature.

The general result of these investigations has been that people systematically tend to ignore or minimize the negative information referring to them, thus: they observe more easily the positive information which they store later and recall more easily than the negative ones; they tend to misjudge probabilities favorably to themselves; they tend to have self serving erroneous conceptions about incidents; they have the erroneous belief that positive events are due to their own behavior or disposition, and the negative ones are due to environmental factors; they perceive their own characteristics as more distinct, more nuanced, and more exceptional than the characteristics of others, which are perceived as more blurred, and more common. In social theories it is suggested that the majority of these errors and biases originate from the limitation of cognitive processes, which, however, may also have a motivational or an emotional basis, or both together (Fiske & Taylor, 2008).

*How do positive illusions about the self appear?* A series of discussions refer to the cognitive structure of the positive illusions about the self. It is assumed that the positive illusions about the self are determined by the particularities of memory and attention. Evidently, we cannot record, store, and recall other persons' interpretations, thoughts, or emotions, we can do this only for ourselves. Taking into consideration that memories are often completed by interpretations, emotions, or sensations, it is natural that self perception is more nuanced and detailed than the perception of another person. As a scholar hypersensitive to the information which support his theory, so the totalitarian egocentric ego interprets and rearranges the facts, emphasizes the favorable parts, omits the less favorable ones with the aim of maintaining a positive self-image, says Anthony Greenwald (1980). We control the present by using our interests and attributions when selecting and organizing the information, we store it in our memory so that the information should be consistent with the already existing self-image, and we use the present to build a positive image based on the experience of past events we participated in as main heroes; all these in order to construct a coherent future for ourselves.

A series of studies prove the fact that normal and mentally healthy subjects process the information faster and more thoroughly, if this is relevant and positive for the self, and more slowly, if the information is negative or irrelevant for the ego. Similarly, healthy persons recall in general more positive, than negative information on themselves, as compared to slightly depressed persons, whose memories are balanced in their valences. The majority of normal and mentally healthy persons remember with more difficulty their failures, than their successes, and they tend to evaluate their past performances more positively than how these really happened.<sup>3</sup>

It can be argued that none can believe that s/he is good, talented and competent from every point of view, and that in reality we often admit our mistakes and weaknesses. Taylor affirms that we have cognitive instruments to face this obstacle as well (Taylor, 1989., page. 5). When people acknowledge and incorporate their weaknesses or incompetence to their self-image, they usually tend to "minimize" the importance of these features, or to consider them temporary, or caused by external factors. Similarly, when people realize that in some domains they are not talented (for example in mathematics); they tend to underestimate the importance of that domain and are inclined to consider that domain a common or general one. They justify themselves by using some arguments such as: "mathematics is for geeks", or "all accountants are boring". On the other hand, the abilities or characteristics they possess are seen as exceptional and rare talents. For example, in case one has a talent for painting, this will make him/r believe that artistic talents are special and that they raise him/r above the average, in contrast with "anybody can learn to calculate or to play football". In order to obtain an authentic image, people sometimes acknowledge their errors and weaknesses;

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<sup>2</sup> For a survey on these investigations see Susan T. Fiske and Shelley E. Taylor, *Social Cognition* (New York: McGraw Hill, 2008 – 3<sup>rd</sup> ed.) (review)

<sup>3</sup> See for example Nicholas Kuiper et al., "Self Schema Processing of Depressed and Nondepressed Content: The Effects of Vulnerability to Depression", *Social Cognition* 3 (1985): 77–93, 92.

nevertheless, these errors and weaknesses are often carefully chosen having rather the function to emphasize a believable human profile, than to offer a real image.

Which are the psychological mechanisms on which illusory optimism is based? Taylor states that one of the explanations referring to illusory optimism is that the subjects' prediction regarding "what is going to happen" coincides with "what I wish to happen" or "what is desirable to happen" (Taylor, 1989. Pag, 35, 37). On the other hand, people usually expect for their performance to improve as the time passes, and this optimism increases proportionally with one's interest, motivation, and the effort made to accomplish those tasks.

Illusory optimism seems to be closely related to the positive illusions about the self and especially to the illusion of control. Most people think that they can control future events, and consequently they underestimate their personal vulnerability to accidental events. For example, a driver who believes that he is a better driver than most people and that s/he can avoid accidents due to his/r abilities will think that his/r chances to be involved in a traffic accident are smaller

### **CHAPTER 3**

#### **POSITIVE ILLUSION: CULTURAL OR UNIVERSAL?**

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##### **3.1. THE CULTURAL PERSPECTIVE OF POSITIVE ILLUSIONS**

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Cross cultural studies have challenged the idea that positive illusions are universal. For example, Markus and Kitayama, (1991) respectively Heine and Lehman (1995) affirm that positive illusions – seen as self enhancement strategies – are exclusively the product of individualistic cultural values, and in certain cultures people will be less motivated to develop positive illusions. In other words, the authors argue that the need for a positive self image is not universal; on the contrary, it is rooted in individualistic cultures. The "under motivation" for developing positive illusions has been associated especially with collectivistic cultural values.

Other studies point out that Asians do not merely lack positive illusions, but also have negative cognitive illusions, evaluating themselves more negatively than a reference person. Heine and Lehman drew the conclusion that in case of the Japanese illusory optimism does not exist, and that a tendency to negative bias called "pessimistic bias" can rather be pointed out. Research on the phenomenon of positive illusions in Western Europe show similar values to those recorded in the United States and Canada. These investigations have been made in the following Western European countries: Sweden,<sup>4</sup> Great Britain,<sup>5</sup> Austria and Germany,<sup>6</sup> and Holland.<sup>7</sup>

With their suppositions based on Markus and Kitayama theory, several researchers also connected the lack of positive distortions with Eastern-European countries (referring to the former communist countries). However, this hypothesis has not yet been explored, at least not on the general population of Romania. Markus and Kitayama proposed a theoretical frame which could integrate the differences originating from the cultural disparity in the development of the self.<sup>8</sup> According to the theory these two cultural backgrounds have significant influence on the development of the self, on emotions, cognitions, and social motivations. Conform to the theory, positive self perception is a powerful motivational factor

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<sup>4</sup> Ola Svenson, "Are We All Less Risky and More Skillful than Our Fellow Drivers?", *Acta Psychologica*, 47 (1981): 143–148, 145.

<sup>5</sup> Frank Myers and Lynn Mckenna, "Illusory Self Assessment – Can They Be Reduced?", *British Journal of Psychology* 88 (1997) : 39–50, 47.

<sup>6</sup> Jens B. Asendorpf and Fritz Ostendorf, "Is Self-enhancement Healthy? Conceptual, Psychometric, and Empirical Analysis", *Journal of Personality and Social Psychology* 74 (1998): 955–966, 960.

<sup>7</sup> Frank Van der Velde, Joop Van der Pligt, and Christa Hooyokaas, "Perceiving AIDS-related Risk. Accuracy as a Function of Differences in Actual Risk", *Health Psychology* 13 (1994): 25–33, 30.

<sup>8</sup> Markus and Kitayama, "Cultural variation...".

in the individualistic or independent cultural background, but this does not apply to the collectivistic or interdependent cultural background. In accord with the above named authors, the process of self enhancement or self aggrandizement is defined as a special sensibility to positive information relevant for the self, and, respectively, insensibility to negative information from the same category. Self enhancement is a process which emphasizes the values of the self, underlines its unity, and differentiates us from the mass.

### 3.1.1. The formation of positive illusions in the individualistic cultural background

Typically, western cultures define themselves as individualistic because of the emphasis laid on the necessities of the individual, which become a priority as compared needs of others. Usually, individuals are considered “unique” both in physical and psychological features, which differentiate them from the others. In the individualistic model independence is emphasized, this being perceived as a necessary quality of mentally healthy individuals. In this cultural background the incapacity to experience personal pleasure (anhedonia), as well as dependence are considered the symptoms of psychical in adaptation.

In this cultural background personal development is synonymous with self development and the emphasizing of individuality. The ideal person in such a culture is: independent, oriented towards personal performance and success; s/he sets his/r objectives according to his/r qualities; evaluates his/r life according to the achievement of the proposed objectives; makes independent decisions; directs his/r behavior autonomously, and is responsible for the consequences of his/r behavior. Often, the individual’s objectives are regarded as competing with the group’s objectives, or even opposed to these, and the group’s pressure is sometimes regarded as an obstacle of personal development.

In this cultural context self-realization and self-knowledge have received important roles. In many cases self-realization is considered the major objective of the individual’s life. These attitudes, convictions are strongly reflected by the institutions’ theoretical systems, by education, customs, anecdotes, proverbs, and cultural symbols, and they shape almost imperceptibly the individual’s system of convictions (In. Fulop and Neyugen, 2001).

Another important characteristic of individualistic cultures is that they emphasize the importance of autonomous decisions since they show respect for personal opinions, decisions, tastes, or preferences. People perceive (experience) their own person as one who makes decisions based on his/r individual preferences, tastes, and intentions; and the decisions thus taken serve to strengthen and outline his/r individuality, to clarify the differences between him/self and the others. Society is built to offer the individual a large variety of options when making decisions starting with the most insignificant ones such as choosing between chocolate, vanilla, strawberries, or caramel ice-cream, up to important choices. The mass-media overwhelms us with information intended to enhance our individuality through the preferences we show, and companies sell their products by means of slogans such as: “the most suitable for you”, “created especially for you”, “for your enjoyment”; “because I deserve it”. It is not accidental that these statements often represent the best key to the customer’s pocket. Besides the evident benefits, this cultural background has its dark sides as well (isolation, egoism). With a little exaggeration we may say that in these cultures we experience a cult of the self.

Therefore, when an individual is born and grows up in these cultural conditions consisting of customs, traditions, symbols, or convictions, it is no wonder that s/he becomes an autonomous personality, with clearly defined preferences, who pursues his/r individual objectives consistently, and perceives him/self as being better, and more important than the others in most cases.

### 3.1.2. The formation of positive cognitive illusions in the collectivistic cultural background

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In the countries dominated by a collectivistic cultural background the perception of the self and of others develops in a completely different context. In the collectivistic cultural background people perceive the self in the mirror of social relationships, of roles and tasks. This cultural model emphasizes the importance of belonging and being loyal to a group, the importance of the respect for others, of hierarchies; politeness and social obligations have an essential role in normal adaptation.

The centre of the individual's life is the self determined by others. This model values interpersonal relationships – be they family relationships, friendships, or work relationships –, social norms, and solidarity. The source of happiness and personal satisfaction in this cultural background is to have harmonious relationships built on mutual respect. Initiating, developing, maintaining, and improving interpersonal relationships is a priority for individuals, while self-realization and self-expression are of secondary importance. This mentality is reflected by the representative religious beliefs of this culture. In Buddhist theology the self as an isolated form of existence is regarded an illusion which must be defeated, and the main spiritual aim is the contemplation of the personal self (atman) with the collective self (Brahman) by controlling or renouncing personal wishes, emotions, and necessities.<sup>9</sup>

In this cultural background the healthy and normal individual has harmonious relationships which he profoundly cares for; s/he belongs to different social networks, which are a major factor guiding his/r behavior, either inhibiting, or facilitating it; s/he respects the social norms, fulfils his/r duties towards the group, or community s/he belongs to; s/he is open to compromise; s/he relates to his/r own objectives according to the group's necessities and objectives; s/he conforms to the group's requirements; s/he is receptive to the group's necessities and objectives; s/he subordinates his/r wishes, preferences, and objectives to the group's; in communitarian actions mutual responsibility is assumed for the consequences of behavior. Punishment is rather understood as a privation of the benefits of relationships, than a privation of rights and possessions. Children are educated in the spirit of self-reflection and sincere self-criticism, which serves the development of self-control.<sup>10</sup>

It is not accidental that this socialization process results in an adult receptive to others' necessities, emotions, and mental states, who defines his/r characteristics through the quality of his relationships, perceiving others as being equal to, or even better than him/rself.

## 3.2. THE PARANOID OPTIMIST. POSITIVE ILLUSIONS IN THE LIGHT OF EVOLUTIONARY PSYCHOLOGY

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*The purpose of the present chapter was to introduce some particular research methods on the positive illusions that have already materialized in the real world and in conclusions regarding the adjustment function of positive illusions but also the presentation of some hypotheses to be validated referring to the evolutionary origin of positive illusions.*

*Positive illusions have been explained either through the limited functions of the cognitive system either through egocentric construction of memory and attention. We argue that the function of positive illusions can be better understood by integrating them in the process responsible forming the cognitive architecture and some specific problems to which we had to find solutions all throughout our evolution.*

In this study we will follow the steps indicated in the evolutionary research (David et al., 2007). In order that a cognitive structure is evaluated as *evolutionary adjustment*, it must respect the following criteria: (1) the low probability to be the result of chance. (2) The

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<sup>9</sup> Fulop (szerk) *Kultura es pszichologia*

<sup>10</sup> *Ibid.*

cognitive structure should ensure the resolution of some adaptive issues in the evolutionary environment correlated with improved body fitness. (3) To have the features of an evolutionary design: (a) represents a feature of the species; (b) develops without conscious effort, in the absence of a prior formal instruction; (c) is used without conscious effort and without being aware of the way it works; (d) does not identify or reduce itself to the application of general structures of the standard social model to specific contents. Exploring the evolutionary origin of positive illusions is an important subject because it offers distal explanations to the existence (occurrence) of the positive illusions as cognitive structures and can thus offer a basis for different contradictory conceptions that the function of positive illusions will reintegrate. Taylor (1989) also points out in the last chapter of her book “Positive Illusions and the Healthy mind” that positive illusions might have evolutionary roots.

### 3.2.1. The cognitive system: defections or optimal adjustment?

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If we are irrational and incapable of reasonable judgments, how is it that we manage to do so effectively in resolving day to day problems? At least, much better than a computer. The most advanced form of artificial intelligence up to now has not yet managed to reach the performance of a 3 year-old in resolving issues from the natural environment with which the human agent is faced on a daily basis. The major critic to the cognitive perspective is that they tested the human intelligence by resolving some issues for which it was not created. Cosmides and Tooby<sup>11</sup> suggestively illustrate this problematic through the knife analogy: although the knife can chop woods, nobody tries to chop woods with a knife because it was not created for this purpose; it was created to operate the cataract, for example. Consequently we cannot blame the knife for chopping the wood with difficulty. Similarly, the cognitive system was not created either so that we could solve formal and abstract problems such as the Necker cube, the Hanoi tower, or the probabilities rule based on the Bayes formula, or that we could play chess.<sup>12</sup> On the other hand, we often had to solve simple problems of survival: find the food; protect ourselves from predators and enemies, but also more complex such as the social ones: conquer the chosen partner, identify social cheaters, or slight domination changes in a relationship. Real life is unpredictable, full of surprises and situations lacking information. In such a world, solving the problems based on heuristic and slow reasoning is impossible. In order to solve such complex and often lacking information problems, the individual has a fascinating performance.

Based on this judgment several studies generated by the evolutionary-ecologic theories have emerged. The general result of these studies was that the performance of the participants is improved when the artificial and the ecologic tasks of the human condition but at the same time the logic rules are respected (for example Wason’s).<sup>13 14 15</sup> Then, Cosmides et al. <sup>16</sup> changed this conclusion through a series of studies which proved that good results depend on the nature of the situation one is in, if these appeal or not to a logical thinking of the social contract type. The logics of the social contract consist in: if someone benefits of something he must have paid a price, otherwise he is a cheater and he needs to be removed.<sup>17</sup> Thus, an error system probably was the one encouraged across evolution. In what follows we will analyze

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<sup>11</sup>Leda Cosmides & John Tooby *Beyond Intuition and Instinct Blindness: Toward an Evolutionary Rigorous Cognitive Science*. *Cognition* 50, (1994):41-77.

<sup>12</sup> Cognitive tasks largely used by cognitive psychologists in the study of mind functioning

<sup>13</sup> Leda Cosmides, “The logic of social exchange: Has natural selection shaped how humans reason? Studies with the Wason selection task.” *Cognition*, 31, (1989): 187–276.

<sup>14</sup>Laurence Fiddick, Leda Cosmides and John Tooby, “No interpretation without representation: The role of domain specific representations and inferences in the Wason selection task” *Cognition*, 77, (2000):1–79.

<sup>15</sup> Patricia W. Cheng and Keith J. Holyoak, “Pragmatic versus syntactic approaches to training deductive reasoning”. *Cognitive Psychology*, 17 (1985): 391-416.

<sup>16</sup> Cosmides, “The logic of social exchange”, 274

<sup>17</sup> See Cosmides and Tooby (1996) for further elaboration of arguments suggesting that a calculus of probability should be expected in human judgment if the relevant adaptive problems recurred over human evolutionary history.



the possible distal function of positive illusions in reflexion of the above mentioned hypothesis.

### 3.2.2. Distal adaptive function of positive illusions. The paranoid Optimist

Baumeister, Finkenauer and de'Vohs (2001) underline the fact that informational errors are not only arbitrary and occasional but they stand for a robust characteristic of the cognitive system. Their meta-analytical study synthesizes hundreds of studies from different fields such as attention, memory, learning, emotions, development of children and the quality of the interpersonal relationships by demonstrating that human perception and informational processing is hypersensitive to negative information (unpleasant, destructive, painful stimuli) and this type of information is absolutely primary in detecting and processing; it has a more consistent and enduring effect on the brain and the organism than the positive information does (desirable, pleasant stimuli).

For example in the research on attention indicate that: a negative stimulus draws the attention faster and for a longer while than a positive stimulus<sup>18</sup> and the same rule is applied in the case of detecting olfactory or kinesthetic stimuli<sup>19</sup>; the cognitive performance is affected by the presence of the negative stimuli rather than the positive ones, even when the processing is unconscious<sup>20</sup>; the facial expressions that express negative emotions, (especially those associated with threaten) capture the subjects' attention faster and for a longer while<sup>21</sup> but also have a stronger impact on the physiological parameters<sup>22</sup>. The studies on attention using Dot-probe or Stroop type tasks show that: the cognitive inference (the name of the color) is greater when the colored words indicate threaten.

From the field of studies upon learning and memory it is well known that: negative conditioning through punishment impacts the behavior faster and has a longer effect in time and on the personality than the reward conditioning<sup>23</sup>; those experiences that once provoked fear reactions leave deeper and more enduring marks in the memory than the positive ones do. Even if the subjective fear feeling is diminished, a very sensitive neuronal circuit persists to that type of stimuli that first generated the fear.<sup>24</sup> Also memory seems to be affected by the negative stimuli: usually the individuals are more inclined to maintain, stock and evoke negative stimuli, may they be words, images or events,<sup>25</sup> and the effect is more intense if the content is associated with threatens.<sup>26</sup> The neuron-imagistic studies support these data indicating that the neuronal circuits which respond to the negative stimuli are shorter and develop faster persisting for a longer period than the positive ones; the brain's response is more powerful to negative stimuli (manifesting itself through a wider activation respectively a higher amplitude EEG and ERP). The brain seems to have a different sensitivity in order to identify errors<sup>27</sup> and the inconsistent stimuli (a bad person behaving positively).<sup>28</sup>

The rule also applies in the case of emotional experiences: the negative ones are set up faster and affect the organism for a longer while and in a deeper way. For example: more

<sup>18</sup> SUSAN T. FISKE, "ATTENTION AND WEIGHT IN PERSON PERCEPTION: The impact of negative and extreme behavior". *Journal of Personality and Social Psychology*. 38(6), (1980): 889-906

<sup>19</sup> Nelson Gilbert, Alan J. Fridlund' and John Sabini, "Hedonic and social determinants of facial displays" *Chemical Senses* 12, (1987): 355-363

<sup>20</sup> Williams, J. M. G., Mathews, A., and MacLeod, C. "The emotional Stroop task and psychopathology". *Psychological Bulletin*, 120, (1996): 3-24

<sup>21</sup> Felicia Pratto and Oliver P. John "Automatic vigilance: The attention-grabbing power of negative social information". *Journal of Personality and Social Psychology*, 61, (1991): 380-391

<sup>22</sup> Vincze, „Self enhancing believes..." 59-76.

<sup>23</sup> Spence, J. T., and Segner, L. L. "Verbal vs. nonverbal reinforcement combinations in the discrimination learning of middle and lower class children". *Child Development*, 38, (1967): 29-38, 36

<sup>24</sup> Joseph LeDoux, Greg Quirk and Chris Repa, "Fear conditioning enhances short-latency auditory responses of lateral amygdala neurons: Parallel recordings in the freely behaving rat" *Neuron*, 15, (1995): 1029-1039.

<sup>25</sup> Felicia Pratto and Oliver P. John "Automatic vigilance: The attention-grabbing power of negative social information", *Journal of Personality and Social Psychology*, 61, (1991): 380-391, 389

<sup>26</sup> Karin, Mogg and Brendan, Bradley, "A cognitive-motivational analysis of anxiety". *Behavior Research and Therapy*. 36, (1998): 809-848

<sup>27</sup> PHAN, LUU, Paul COLLINS, DON TUCKER, "Mood, personality, and self-monitoring: Negative affect and emotionality in relation to frontal lobe mechanisms of error monitoring" *Journal of Experimental Psychology: General*, 129, (2000): 43-60.

<sup>28</sup> Bruce D. Bartholow, Gabriele Gratton and Monica Fabiani Ann B. Bettencourt "A psychophysiological analysis of cognitive processing of and affective responses to social expectancy violations". *Psychological Science*, 12, (2001): 197-204, 202

spontaneous individuals prove more negative emotions<sup>29</sup>, probably not by mistake, the negative emotions are better represented linguistically<sup>30</sup>; the euphoric state of those that win the lottery decreases rapidly after the happy event and levels itself to the prior value in a short while; on the other hand, recovering the emotional balance after a similarly intense loss lasts for a longer period of time;<sup>31</sup> those individuals that suffer a loss, be it even an insignificant one, reports a more unpleasant emotional state than the joy reported by those that have an equivalent gain<sup>32</sup>; the critics generate more frustration, dissatisfaction than the praise, satisfaction and joy do<sup>33</sup>; the consequences of an intense negative experience (abuse) are devastating and often leading to changes in the structure of the personality; recovery following the abuse is slow, difficult and guarantee-free; even if time helps removing the open the marks that individual often remains with the scars. On the other hand the positive experiences similarly intense do not cause major changes, do not produce structural changes and do not last in time.<sup>34 35</sup>

The disequilibrium in favor of the negative information was demonstrated as tied to more complex circumstances in life such as fulfilling the goals or intimate relationships: individuals invest more psychological effort in the blocked, unfinished, failed projects than in those which are successful; in the same way humans invest more psychological effort in maintaining failed relationships than in the prosperous ones<sup>36 37</sup>.

The priority of processing negative information is adaptive especially because a negative stimulus can hurt or destroy the organism. If an individual fails to notice a positive signal which could bring pleasure (for example the sound of leaves, in case that person is a hunter and he needs to eat) the cost of his negligence is that he stays hungry. However, if he ignores a negative signal (the sound of leaves in case that person is not armed and the woods are full of dangerous animals) this small negligence can have a great cost (himself as dinner). In this regard, the developments of such neuronal circuits that are hypersensitive to negative stimuli of danger become justified. From the evolutionary point of view those organisms that were more reactive to the negative information and avoided the threats, had in the end higher chances of survival and of passing on their genes to the predecessors. Even though sometimes this type of processing leads to errors (false alarms, wasted effort) the costs are minimum compared to the case when the stimulus would prove real.

If we only act based on the principle: „protect yourself and you shall survive” we would constantly live in alert, always prepared to run or fight, we would always feel threatened, we would not risk to discover, explore, try something new, because that which is new is also unpredictable. The high arousal is benefic on a short term because it maintains the body effectiveness to the optimum level however such an arousal on the long term would lead to the body's over-loading and loss of flexibility. If disequilibrium occurs in favor of a negative bias, its pathologic form manifests through various psychological diseases such as the anxiogenic diseases: general anxiety, social anxiety, phobias, paranoia, post traumatic stress (PTSD). It is well known that the symptoms of the anxiety disorders includes a permanent

<sup>29</sup> Stephanie VAN GOOZEN and Nico H. Frijda, “Emotion words used in six European countries”. *European Journal of Social Psychology*, (1993): 23, 89-95.

<sup>30</sup> James, R. Averill, On the paucity of positive emotions. In K. Blankstein, P. Pliner, and J. Polivy, (Eds.) *Advances in the study of communication and affect* (New York: Plenum, 1985), 745

<sup>31</sup> Philip BRICKMAN, Dan COATES And RONNIE JANOFF-BULMAN „Lottery winners and accident victims: Is happiness relative?” *Journal of Personality and Social Psychology*, 35, (1978): 917-927, 925

<sup>32</sup> KAHNEMAN, Daniel And Amos TVERSKY, “Choices, values and frames” *American Psychologist*, 39, (1984): 341-350, 346, 347

<sup>33</sup> GRAZIANO, William, Thomas BROTHEN And ELLEN BERSCHIED, “Attention, attraction, and individual differences in reaction to criticism”. *Journal of Personality and Social Psychology*, 38, (1980): 193-206, 204

<sup>34</sup> Jilian Fleming, Paul E. Mullen, Beverly Sibthorpe and Gabriele Bammer, “The long-term impact of childhood sexual abuse in Australian women. *Child Abuse and Neglect*, 23, 145-159.

<sup>35</sup> SILVER, ROXANNE L., Cheryl BOON, And Mary H. STONES. Long-Term Effects Of Incestuous ABUSE in childhood. *American Journal of Psychiatry*, 143, (1983): 1293-1296.

<sup>36</sup> ERIC KLINGER, Steven G. BARTA And Madeline E. MAXEINER, “Motivational correlates of thought content frequency and commitment”. *Journal of Personality and Social Psychology*, 39, (1980): 1222-1237, 1233, 1234

<sup>37</sup> Roy Baumeister, R. F. *Meanings of life*. (New York: Guilford Press, 1991), 167-170



state of alert, a high vigilance to the anxiogenic stimuli which the brain interprets as being threats, thus leading to a vicious circle and contributing to maintaining the disease.

The human condition implies not only the preservation instinct but also the knowledge and the exploration one. In order to explore and discover things, certain risks must be assumed. Usually we take risks when we estimate that our actions will be successful or we have at least one chance to reach the desired goal; this result is more precious than the loss in case of failure.

One of the few exceptions from the general rule is being hyperactive to negative information that refers to the self. In this case the process seems to be reversed: we tend to ignore or at least minimize the negative information while we over-estimate the positive one. In this information category Baumeister points out the studies that refer to the encouraging self biases and the positive illusions (see p. 4-8), being the same as the one indicated by Taylor and Brown: positive illusions.

Janoff-Bulman, a specialist in the psychological consequences of traumas, uses the victimizing experience to illustrate the fact that the disappearance of positive illusions can have serious consequences.<sup>38</sup> Based on case studies, the author reaches the conclusion that one of the principles of change at the perception level following trauma is the disappearance of the positive biases which often become completely erased and irretrievable. „For some victims the illusion of lack of vulnerability is often completely erased, covered in despair, depression and despondency. The therapeutic process with these patients becomes very difficult and often ending in fail because they can no longer believe in good and they give up. On the other hand those who succeed to surpass the victimizing trauma and use the appropriate coping mechanisms are those who manage to re-establish their positive perceptions about themselves, about others and about the world, admitting at the same time the limitations, the boundaries of these beliefs.”<sup>39</sup>

The two „wits” of the human psyche are contradictory but altogether complementary: while the negative setting inclines us towards defense and retreat behaviors, the positive setting inclines us towards exploration and knowledge; while the *negative setting* makes us alert and careful, the positive setting tends to make us more relaxed and optimistic and even risk-taking; while the one reflects prudence, the other one reminds us that with no risks taken there is no winning. Both illusions of the self capture the deep psychology of human and the individual characterized at the same time by both „postulates” is the „*paranoid optimist*”.

Thus, the *paranoid optimist*<sup>40</sup> is the person who takes risks in order to reach the targeted goals but at the same time is extremely cautious. The essence of the paranoid optimist is the paranoia against the environment and the optimism against the own competencies. Haselton and Nettle<sup>41</sup>, respectively Vincze<sup>42</sup>, argue that the cognitive system of the paranoid optimist type was the one that encouraged the natural selection during the phylogenetic evolution and in this approach the contrasting explanations can be dissolved.

The function of the positive setting is not only one of completion but it counter balances and offers protection against the negative flooding through the conviction of the unconscious lack of vulnerability „even though the world is a dangerous place I am a special person from above (the illusion of the self), and I make efforts and have the course of my life under control (the illusion of control), thus I have good chances to avoid mispleasures and have desired things happen to myself (the optimistic illusion)”. The double standard type data, highlighted during the national investigations, over the life satisfaction, illustrate this paradox. The individuals systematically report that the world is becoming more and more unsafe, the economic, political and educational situation of the country becomes worse; the people are becoming more superficial; families are breaking apart, etc. When questioned about their own life these same people say that: in the future they will have a better job, better life conditions,

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<sup>38</sup> Ronnie Janoff-Bulman, “The Benefits of Illusion, the Threat of Disillusionment, and the Limitation of Inaccuracy”, *Journal of Social and Clinical Psychology* 8 (1989): 158–175, 174.

<sup>39</sup> Janoff-Bulman, “The Benefits of Illusion”..., 164.

<sup>40</sup> Metaphoric designation “the paranoid optimist” was used by Haselton and Nettle (2006) in the article called „The Paranoid Optimist”

<sup>41</sup> Haselton and Nettle, “The Paranoid Optimist” 64

<sup>42</sup> Vincze, „Positive Illusion”, 214

their child will go to a better school; they will afford to go on vacation and they will change their house or car.<sup>43</sup> - According to a meta-analytical study comprising 70 studies from 9 different countries.

The positive bias, in its emphasized or even pathological form can lead to an exaggerated lack of vulnerability to risks: looking for hard sensations, mania and narcissism<sup>44</sup>, megalomania, the misinterpretation of reality. The exaggerated illusory image of the self is associated with the subjective presumption of the probability of success, which can encourage the individual to take on very difficult to realize projects with inappropriate resources and with insufficient safety measures. Consequently, the self-esteem leads to frequent failures which then become a source of threaten to the self-perception. In the bi-polar depression the maniac phase is characterized by exaggerated views of power, personal effectiveness and exalted future plans. The maniac periods are followed by depressive periods. Janoff-Bulman says that the under-estimation of vulnerability to negative events that can occur is a gift, an adaptive mechanism, which mediates the real interactions with the environment in such a way that these illusory beliefs establish and enhance themselves in our cognitive reality. Taylor argues that functional positive illusions are separated from pathological illusions such as hallucinations or megalomania, not only through their quantity but also because of their flexibility. While the delirium, the hallucinations or the manias are false beliefs which persist despite the facts, positive illusions, if they become contrary to the reality, will change, adapt and keep on contributing to the preservation of a positive self image.<sup>45</sup>

### 3.2.3. Error management theory

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The observations made about the cognitive and social biases have recently been integrated in an evolutionary theory called *Error Management Theory*, (*EMT*) – elaborated by Haselton and Buss<sup>46</sup>

EMT proposed the following equation: if the cost of failure is relatively lower than the benefits of success, it is beneficial to take some risks. The estimation of probability that the cost of failure is relatively lower to the benefits of success sometimes is not only more profitable than the underestimation (the negative illusion) but it is more profitable than the accurate evaluation.

It is more profitable to be aware that we are capable even if the reality does not exactly reflect this conviction. Sometimes the objective and accurate reasoning based on the already held information informs „the fulfilling of the dream. The low illusory conviction encourages us to more trials that increase the possibility of success. The awareness that we are capable, that we have the control and that we will be successful helps us take steps towards that goal. Even if sometimes these steps can seem insubstantial (being based on an error) they can open new perspectives and push the individual towards the desired objective. Positive illusions motivate people towards objectives; integrate positively the self confidence by the means of motivation and hope.

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<sup>43</sup> Hagerty, 2003 In. Haselton and Nettle, The paranoid Optimist, 49

<sup>44</sup> Randall C. Colvin and Jack Block, “Positive Illusions and Well-being Revisited: Separating Fiction from Fact”, *Psychological Bulletin* 116 (1994): 28.

<sup>45</sup> Taylor, *Positive Illusion*, 36

<sup>46</sup> Martie G. Haselton, and David M. Buss Error management theory: A new perspective on biases in cross-sex mind reading. *Journal of Personality and Social Psychology*, (2000):78:81–91

### 3.3. STUDY 1-3

#### 3.3.1. Objectives

Study 1-3 objective was to adapt and validate the instruments to the studied cultural background taking in consideration the cultural sensitivity of positive illusions.

So far, in Romania no study has been made referring to positive illusions on representative samples or on the general population. Taking into account the cultural sensitivity of positive illusions, we consider important to make such a study. We wish in particular to find out how prevalent positive illusions are in the general non-clinical Hungarian adult population in Transylvania, as well as how positive illusions are connected with mental health components within this population.

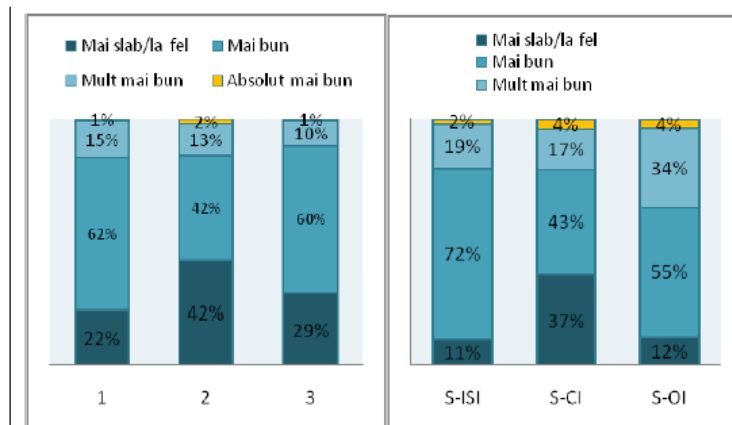
#### 3.3.3. Results

*NOTE: RESULTS ARE SELECTIVE*

General positive illusions (GPI)<sup>47</sup> in the general population have a normal distribution following the Gaussian curve, fulfilling thus one of the criteria required to make the following statistical analyses.

The mean of general positive illusions is fixed above the central value of the scale,  $m = 4.40$  (0.52), thus the majority of subjects estimated that they were “better” than the average,  $m = 4.52$  (.50), that they “had more control over the events”,  $m = 4.17$  (1.2), and that they “had better chances for success in the future”,  $m = 4.57$ , as compared with a general unknown person of the same age, sex, and social status.

*Graphic 1- frequency of positive illusions on the original and adapted scales*



According to the obtained data, 78% of the subjects from the general population have general positive illusions, this being a 15% lower value than the one obtained in former studies for the student population.<sup>48</sup> 86% of the subjects have values above the central value for the level of positive illusions about the self (PIAS), 52% for the illusion of control (IC), and 80% for illusory optimism (IO), which means that the lower total percentage of the GPI is due mainly to the low value of the IC (52%). While PIAS and IO values are similar to the

<sup>47</sup> Abbreviations: PIAS = positive illusions about the self, IC = illusion of control, IO = illusory optimism, GPI = general positive illusions.

<sup>48</sup> Vincze, “Pozitiv illuziók...”, 237.

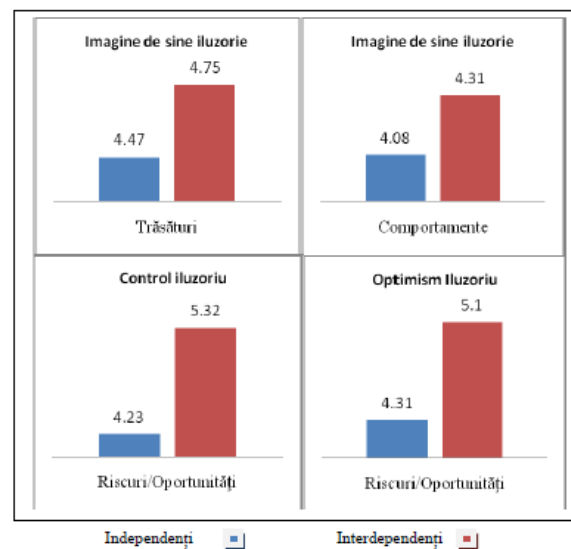
values presented by former studies made in the USA, Canada, and Western Europe (where the percents oscillate between the intervals of 85–95%), in case of the IC, these values are much lower.

TABLE 1- reliability and fidelity tests indicators (Guttman split half) (N = 409)

Scale	Guttman split half	$\alpha$	items
General population (N = 409)			
S-ISI	.881	.888	60 itemi
S-CI	.783	.877	20 itemi
S-OI	.735	.853	30 itemi
Student population (N = 524)			
S-ISI	.566	.790	20 itemi
S-CI	.810	.806	5 itemi
S-OI	.800	.810	7 itemi

Although former studies had demonstrated that positive illusions are independent of age, we started from the assumption that the younger generation with ages between 18 and 25 years had had no occasion to interiorize the collectivistic values, which means, we presumed that there would be significant differences in this to the advantage of the younger generations. The data were processed with ANOVA, and the quasi-experimental comparisons of age categories were made by means of the Bonferroni test. In the statistical analyses we operated with the critical  $\alpha$  limit of .05 in all cases.

Graphic 1- Comparisons of individualistic and collectivistic



The obtained data partially confirm this hypothesis. The PIAS seem to be independent of age, while there are significant differences ( $F = 4.05$ ) at level of the IC and IO on the whole, as well as ( $F = 4.34$ ) at the limit of  $p < .05$ . In case of the IC these differences, according to the post hoc test, are due to the differences between the young people of 18–25 years and the adults over 40 years ( $F = 4,056$ ) = 0.10,  $p < .05$ , to the advantage of the younger generations. In case of IO the differences are due to the differences between young people and adults aged 25–40 years and adults over 40 years ( $F = 4.340$ ) = 0.10  $p < .05$ , as well as between 25–40 year old adults and adults over 40 ( $F = 4.340$ ) = 0.11  $p < .05$ .

We presupposed that the individualistic or collectivistic nature of the characteristics may be decisive when we discuss the frequency of positive illusions. Conform to our

presuppositions significant differences were discovered between individualistic (e.g. rebellious) and collectivistic characteristics (e.g. conformist) to the advantage of collectivistic traits ( $t = -14.86$ )  $p < .01$ . Contrary to the results of former studies, the Transylvanian society seems to have positive illusions related to collectivistic rather than individualistic characteristics.

### Conclusions studies 1-3

Despite the fact that the need for positive self-esteem has deep roots in the intellectual and scientific thinking of the West,<sup>49</sup> following the cultural axis *individualistic-collectivist*<sup>50</sup>, influential theories and researches have emerged<sup>51</sup> which were appreciated as being an extraordinary challenge to the theories focused on the universality of the positively enhanced self-esteem.

It seems that the cross-cultural studies, which concluded that the need for positive self-esteem is a cultural product, ignored exactly the core of their own theory and that is the values prescribed by the collectivist culture differ substantially from those prescribed by the individual<sup>52</sup>. These studies committed the error of using the same instruments despite the cultural background elaborated for the individualist/independent cultures.<sup>53</sup> The idea that individuals show positive illusions for those attributes, features, aptitudes which are important to them and thought to be attractive by the society they live in – appears in Taylor's study<sup>54</sup>. The attributes believed to be attractive and appreciated in the independent cultural context are not necessarily as desired as in the interdependent culture. On the contrary, some independent attributes are underestimated by the members belonging to the interdependent culture. In order to demonstrate the above mentioned arguments, Sedikides et al.<sup>55</sup> performed a meta-analytic study including all the relevant inter-cultural studies realized to that point. Overall, the result of the study indicated that both members belonging to individualist cultures and those from the collectivist ones manifested the need to self-enhance their image when attributes appreciated in that socio-cultural background were taken into consideration. Individuals with a collectivist cultural background demonstrated positive illusions based on collectivist features, such as: „cooperative”, „respectful” „polite”, „dependent”; altogether, they asserted to be equals to the reference person or less „good” when they had to report the self based on individualist features such as: „intelligent”, „rebel” „authentic”, „independent.”

The model elaborated by Sedikides and Straub<sup>56</sup> called *the Self-Enhancement Tactitian Model*, (*SCENT*) can integrate these apparent contradictions. The model conceptualizes the self-enhancement as being an intelligent and flexible process which modifies according to requirements, socio-cultural rules and which anticipates the consequences of certain behavior according to the social position the individual occupies. For example, in a certain culture, a factor that enhances positive an illusion is hunting, whilst in another one, this is replaced by being successful in career or respected in society. The same way positive illusions vary from one person to another according to the relevance the features have for the individual, the same way they modify from one culture to another, only that these changes are wider.

<sup>49</sup> In the intercultural researches the notion of self-enhancement is used (self enhancement) which is operationalised through positive illusions.

<sup>50</sup> The axis individualistic-collectivist managed to capture deep structural cultural discrepancies and with its help they managed to understand the individual psychology (ex. self, social motivational behaviors, thinking patterns, etc.) not only as an isolated entity but also as an integrated member of a cultural system. The two cultural systems, the individualist and the collectivist one have significantly different implications at the level of self development, of emotions, cognitions and social motivations.

<sup>51</sup> For an overview of these studies see: Alan T. Fiske et al., “A szociálpszichológia kulturális mátrixa” (The Cultural Matrix of Social Psychology), in *Kultúra és pszichológia* (Culture and Psychology), ed. L. L. N. Lanh and M. Fülöp (Osiris: Budapest, 2003), 173

<sup>52</sup> Sedikides, et al., “Pancultural Self-Enhancement...”, 60

<sup>53</sup> Ibid, 70,71,73

<sup>54</sup> Taylor, *Positive Illusions*, 24

<sup>55</sup> Constantine Sedikides, Lowell Gartner and Jack L. Vevea, “Pancultural Self- enhancement Reloaded: A Meta-analytic Reply to Heine”, *Journal of Personality and Social Psychology*, 89 (2005): 539–551.

<sup>56</sup> Constantine Sedikides and M J. Strube, “Self-evaluation: To thine own self be good, to thine own self be sure, to thine own self be true, and to thine own self be better”, In M. P. Zanna (Ed.), *Advances in experimental social psychology* (New York: Academic Press 29: 1997), 209–269

Saying that the need of self-esteem is something exclusive for the individualist culture does not agree with the multiple evolutionary empirical analyses either. Having a positive self-esteem has multiple advantages in the body adjustment. The self-esteem responds very quickly even to the subtle changes of the social environment such as domination/submission or acceptance/rejection in the social relationships, warning the organism and adjusting the behavior according to these signals. The correct evaluation of the social position within the group is essential both in survival and in reproduction.<sup>57</sup> This argument is also supported by the studies that indicated positive self-esteem has a strong genetic component.<sup>58</sup> Considering the relevance of the self-esteem for individuals we believe that a strategy to enhance the self-esteem, such as social biases represented by positive illusions are universal and appear unconsciously and naturally, being part of the deep structure of the cognitive human design.

## CHAPTER 4

### POSITIVE ILLUSIONS RELATIONSHIP TO MENTAL HEALTH

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#### 4.1. DEVELOPMENT OF RESEARCH

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The most contribution of Taylor and her associates (1988-2005) was the recognitions that biases are not just cognitive errors due to limitations of the human cognitive systems, but rather a basic ground for mental health. Taylor and her associates studied the relation of positive illusions to mental health, gathering evidence for the many beneficial effects of self-enhancement on mental functioning and repeatedly reaching the conclusion that unrealistically optimistic beliefs are protective of health.<sup>59</sup>

Other studies shows that positive illusions proved to be key elements in coping with traumatic life events (e.g. in wartime) supporting psychological rehabilitation. Another line of studies pointed out that positive illusions not only serve protection, but promotes happiness and contentment<sup>60</sup>, creative and productive work<sup>61</sup>, higher motivation persistence and performance<sup>62</sup>, the capacity to care for others<sup>63</sup>. The conclusion o these studies was that positive illusions protect the self from harmful stimuli; help restoring self esteem in difficult times; provide an adaptive mechanism and enable individuals facing critical situations to adjust and cope better and confront the challenges of daily life.

Taylor and her associates have studied the relation of positive illusion to mental health gathering evidence for the many beneficial effects of self-enhancement (Taylor 2005). Self enhancers proved to be less depressive, anxious, and distressed (Faure & Loxton, 2003; Vincze, 2009); Positive illusions proved to be beneficial in such areas as prolonging life (Reed, Taylor, Wang, & Visscher, 1994); coping with chronic and terminal illnesses (Ransom, Sheldon, Jacobsen, 2008, Taylor, Kemeny, Aspinwall, Schneider, Rodriquez, Herbert, 1992; Taylor, Helgelson, Reed, Shokan, 1991); stress (Taylor & Armor, 1996); adversity and trauma (e.g. Bonanno, Field, Kovacevic, & Kaltman, 2002) drug abuse (Dégi, Vincze, & Roth, 2008) and becoming old (Gana, Alaphilippe & Bailly, 2004). Positive illusions, not only proved to serve protection and coping, but also seem to promote subjective feeling of happiness (Myers & Diener, 1995; Kobayashi & Brown, 2003), productive work (Catina, 2000), performance (Peter & Iso-Ahola, 2004) and development of interpersonal

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<sup>57</sup> Leary, M. R., Cottrell, C. A., and Phillips, M. (2001). Deconfounding the effects of dominance and social acceptance on self-esteem. *Journal of Personality and Social Psychology*, 81, 898–909.

<sup>58</sup> Michelle B. Neiss, Constantine Sedikides and Jeffrey Stevenson, “Self-esteem: A behavioral genetic perspective”. *European Journal of Personality*, 16, (2002b): 1–17.

<sup>59</sup> David G. Myers, Ed Diener, Who is happy?, *Psychological Science*, 6, (1995): 10-19.

<sup>60</sup> Taylor et al., “Psychological resources, positive illusions...”, 107

<sup>61</sup> Taylor, *Positive Illusions*, 69

<sup>62</sup> Catina, P. Seppo E. Iso-Ahola, „Positive Illusion and Athletic Success” *International Sports Journal*, 8, (2004): 2

<sup>63</sup> Sandra L. Murray, John G. Holmes, „A leap of faith? Positive illusions in romantic relationships” *Personality and Social Psychology Bulletin*. 23/ 6 (1997): 586

relationships (Murray, Griffin, Holmes, 1996; Luo & Snider, 2009). Moreover, Taylor et al. (2003) found that high self enhancers manifest lower physiological reactivity to stress in comparison with low self enhancers.

Some authors (for example Colvin and Block<sup>64</sup>) argue that powerful positive illusions may become pathological, and may trigger the appearance of narcissistic illusions. In accord with this standpoint, Taylor and Brown show that not every type of illusion is adaptive: grandomania, the misinterpretation of reality, and hallucination are not adaptive, but pathological illusions.<sup>65</sup> Taylor argues that functional positive illusions differ from pathological illusions such as hallucinations or grandomania due to their flexibility. Delusions or hallucinations are false beliefs which persist despite the facts. Positive illusions, however, when they contradict reality, are modified and restructured so as to adapt to the requirements of the environment, and they continue to help one to maintain a positive self-image.

## STUDY 4

### Objective

The goal of the current study is to investigate the prevalence of positive illusions, as well as their relationship with components of mental health in a mixed individualistic-collectivistic background. On the theoretical level the results of the study will help us to understand better the construct of positive illusions and their role in mental health. On the practical level the results will offer new information on the possibility to elaborate more efficient strategies for reducing psychological distress, as well as more precise instruments for the assessment of positive illusions. The present study adds up additional dimensions of mental health, for example cognitive dimension (cognitive vulnerability to distress).

Our hypothesis is that most subjects, regardless of their sex, education, and social status, will manifest positive illusions about the self, the illusion of control, and illusory optimism, which emphasizes the importance, as well as the persuasive and systematic nature of positive illusions. Building our hypothesis on the cultural theory of self-development, we presuppose that positive illusions will be less characteristic for the studied population as compared to the findings of previous studies (made in typically individualistic cultures). We suppose that the younger generation will have more powerful positive illusions than the older generations. We also suppose that positive illusions – positive illusions about the self, illusory control, and illusory optimism – will be connected with mental health components.

### Method

The study is aimed at the nonclinical (normal) adult population with ages between 18 and 54 years (with a mean age of 31.5). The final number of the participants in the study was N = 1744 (1301 women, 443 men (the also was some missing data)).

TABLE 3 – demographic data of sample

N = 1744 age		Sex	edu		
M = 31.5	18-25	man	439	General	Urban
SD = 8.93	545 (31.4%)	(25.5%)		117 (8%)	1224 (71.3%)
	25-40	woman		Medium	Rural
	874 (50%)	1298 (74.5%)		605 (35%)	481 (27.6%)
	Above 40			Superior	
	318 (18.3%)			815 (47%)	
Missing data	6	7 (0.3)		207 (10%)	19 (1%)

<sup>64</sup> Randall C. Colvin and Jack Block, "Positive Illusions and Well-being Revisited: Separating Fiction from Fact", *Psychological Bulletin* 116 (1994): 28.

<sup>65</sup> Shelley E. Taylor and Jonathon D. Brown, "Positive Illusions and Weil-Being Revisited: Separating Fact from Fiction", *Psychological Bulletin* 116 (1994): 21–27, 23.



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The data were collected during an interval of three years (2005–2008) with the help of some volunteer students. Besides the scales presented below other measurements were also applied; their results are going to be published in another study.

Positive illusions about the self were assessed with the *How Do I See Myself Scale* (HSM, Taylor and Gollwitzer, 1995). The HMS had been chosen because it has a very good validity, and shows higher correlations with mental health assessments than other scales evaluating self enhancement. The illusion of control was assessed by the *Illusion of Control Scale* (Kimmel & Kaniasty, 1980), while illusory optimism was assessed by the *Illusory Optimism Scale* (Weinstein 1980). Both scales were adapted to the assessed population by adding further items based on Sedikilides et al. (2003, 2005). (For more details on the adaptation of the scales see Vincze, 2009). Psychological distress was evaluated by the *Beck Depression Inventory* (BDI; Beck, Ward, Mendelson, Mock & Erbaugh, 1961; in Perczel, Kis & Aitai, 2001). The State/Trait Anxiety Inventory (STAI; Spielberger, 1975; in Perczel, Kis & Ajtai, 2001) and the *Eysenck's Neuroticism Scale* (trans. Eysenck & Matolcsi, 1984) was also used. Cognitive adaptation was evaluated by the *Dysfunctional Attitude Scale* (DAS, Weisman & Beck, 1980 in Perczel, Kis & Aitai, 2001) the *Automatic Thought Questionnaire* (ATQ, Hollon & Kendall, in Perczel, Kis & Aitai, 2001) and the *Attitude and Beliefs Scale II* (ABS-II, DiGiuseppe Leaf, Exner & Robin, 1988) that measures rational and irrational beliefs uncontaminated by affective items. These scales had been selected because they assess the chronic vulnerability to negative affectivity and measure rigid, inadequate cognitions. Several scales assessed psychological resources that might relate to self-enhancement, including the *Satisfaction with Life Scale* (SWLS, Diener, 1985), Life Orientation Test (LOT, Scheier & Carver, 1985); the *Rosenberg Self-Esteem Scale* (Rosenberg, 1965). To test the hypothesis concerning the relation of positive illusions to self deception and impression management, the *Balanced Inventory of Social Desirable Responding* (BIDR, Paulhus, 1991) was applied.

## Results

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Note: data presented here is only selective and it does not reflect all data and procedure obtained in this study

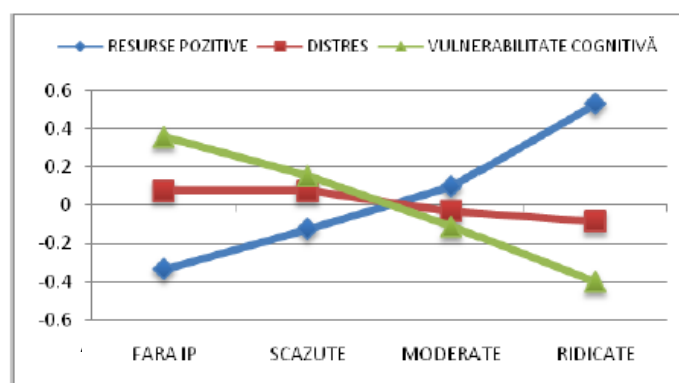
In order to establish the differences at the level of mental health components according to positive illusions, we used correlation, univariate analysis (ANOVA), as well as linear and binary logistic regression analysis. At the level of positive illusions four groups were created: a group without positive illusions, and groups with moderate, emphasized and exaggerated positive illusions, these representing the quasi-independent variable. According to the results obtained by simple correlations, on the whole, positive illusions are correlated negatively with negative affectivity. The analysis of variance revealed significant differences between the groups on the whole regarding the level of depression according to the PIAS ( $F = 32.27$ )  $p < .01$ . The post-hoc test indicates that the differences between each group, analyzed at the critical limit of  $p < .01$ , are significant. Regarding the level of depression as depending on illusory optimism, there are important differences between the groups ( $F = 44.91$ )  $p < .01$ . The post-hoc test indicates that the differences between each group pair formed on the basis of the IO level at the critical limit of  $p < .01$  are significant. We have had similar results in the case of the IC as well ( $F = 13.84$ )  $p < .01$ , and the post-hoc test shows that the differences between the groups with and without positive illusions are great. These results confirm the starting hypothesis of the study that the persons characterized by higher levels of positive illusions are less susceptible to depression than the persons without positive illusions, or those with lower levels of positive illusions.



TABLE 4- positive illusions relation to mental health dimensions

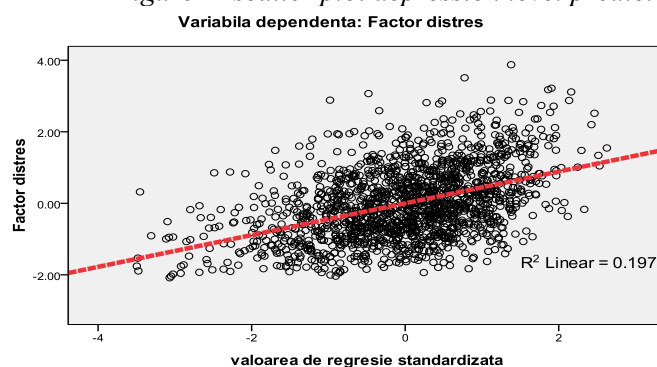
	Pozitive resources	Distres	Cognitive vulnerability
ISI	.313**	-.364**	-.190**
OI	.291**	-.357**	-.171**
CI	.120**	-.153**	-.124**
IPG	.299**	-.364**	-.219**

Graphic 2- psychological adaptation (factors) depending on the level of positive illusions



Similar results have been obtained in the case of the other mental health components (anxiety, neuroticism score, general psychological distress score) as well. The analysis of variance emphasizes the significant differences between the groups with respect to the anxiety level ( $F = 63.576$ ),  $p < .01$ , the neuroticism score ( $F = 26.045$ ),  $p < .001$ , and general psychological distress (negative emotional disposition) ( $F = 11.851$ ),  $p < .001$ . The post-hoc test points out that there are great differences between the analyzed groups, to the disadvantage of the groups with lower levels of positive illusions. Similarly, important differences have been revealed between the groups with respect to the variance of fury-hostility ( $F = 10.662$ ),  $p < .001$ , fatigue-inertness ( $F = 9.683$ ),  $p < .001$ , and confusion ( $F = 29.881$ ),  $p < .01$ . These results confirm the starting hypothesis of the study, namely, that persons with higher levels of positive illusions are less susceptible to anxiety and neurosis, and they show lower levels of psychological distress than persons without positive illusions, or with lower levels of positive illusions.

Figure 1- scatter plot depression level predicted by lack of illusions



The current study adds to the dimension of negative affectivity the adaptation to the cognitive level, this latter being an important aspect of mental health. Cognitive adaptation

was measured through dysfunctional attitudes, automatic thoughts, and rational/irrational beliefs according to the CBT model.

An objective of the present study was to investigate to what extent irrational cognitions (automatic thoughts, dysfunctional attitudes) explain the variance of depression better than positive illusions. For a more subtle analysis of the relationship between positive illusions and negative affectivity as well as the relationship between positive illusions and the cognitive component of mental health, we applied the multiple linear regression analysis. The variables introduced to the model satisfied the requirements of this analysis, and the scales included to the model fulfilled beforehand the reliability conditions of the regression analysis.

The analysis of variance revealed significant differences between the groups regarding the level of dysfunctional attitude ( $F = 2.604$ ,  $p < .05$ ), and automatic thoughts ( $F = 26.580$ ),  $p < .01$ . The total score of irrational thoughts (fundamental beliefs) was ( $F = 2.528$ ),  $p < .05$ . The applied post hoc test indicated significant differences only between the groups with and without illusions, to the disadvantage of those without positive illusions. The results confirm the starting hypothesis of the study, namely, that the persons characterized by higher levels of positive illusions are more rational, and that they have fewer negative automatic thoughts than the persons without positive illusions, or with lower levels of positive illusions. It is an interesting result that, while dysfunctional attitudes fall abruptly up to a certain moment together with the increase of the PI level, exaggerated positive illusions are associated with high levels of dysfunctional attitudes. This result confirms the assumption that only moderate positive illusions are associated with optimal psychological adaptation.

According to the obtained results, the three sets of variables together account for 45% of the variance of depression ( $F = 75.865$ ),  $p < .001$ ,  $R = .669$ ,  $R$  adjusted square = .442. The demographical variables account only for 2% of the variance of depression ( $F = .4409$ ),  $p < .05$ . Positive illusions together account for 10% of the variance of depression ( $F = 16.515$ ),  $p < .001$ ,  $R = .347$ , and  $R$  adjusted = .113. This means that people with higher levels of positive illusions are less susceptible to depression than those with lower levels. Out of the three factors, PIAS has the most powerful predictive value ( $R = 10\%$ ). The IC has been excluded from the model, having the weakest accounting power. The third set of variables, containing the dysfunctional attitudes, automatic thoughts and fundamental irrational beliefs accounts for 32% of the variance of depression.

According to the obtained data, the three factors of positive illusions act as protective factors ( $\text{Exp. } B < 1$ ) against depression. Out of these factors the PIAS has the greatest protective power ( $\text{Exp. } B < 0.5$ ); the factor with the weakest protective value seems to be the IC ( $\text{Exp. } B = .871$ ). Consequently, we may say that, with respect to the prediction of the variance of depression irrational beliefs are more important than positive illusions. Nevertheless, positive illusions also influence the presence or absence of depression.

Significant differences have been pointed out between the studied quasi-experimental conditions, in case of self esteem ( $F = 43.393$ ),  $p < .001$ , in case of life satisfaction ( $F = 12.938$ ),  $p < .001$ , and in case of positive emotional disposition ( $F = 22.454$ ). The post-hoc tests indicate that the differences between each analyzed group pair are significant, to the advantage of the groups with higher levels of PI. The obtained results confirm our hypothesis, namely, that the persons with higher levels of positive illusions have a better self esteem, are more satisfied with their lives, and have a more positive emotional disposition than persons without positive illusions, or with lower levels of positive illusions.

We obtained data on life satisfaction by using a regression model similar to the one in the former case. According to the results, the three sets of variables (demographical, PI, psychological resources) together account for 36% of the variance of life satisfaction ( $F = 7.188$ ),  $p < .0001$ ,  $R = .607$ ,  $R$  adjusted square = .317. The effect of the demographical variables is insignificant. Positive illusions together account for 20% of the variance of life satisfaction ( $F = 23.989$ ),  $p < .0001$ ,  $R = .454$ , and  $R$  adjusted = .157. Psychological resources account for 16% of the level of life satisfaction.

“Instead of the naive scientist we found a crook who manipulates data in the favor of his own theories” – the famous quotation from Fiske and Taylor<sup>66</sup> is confirmed anew by the data we obtained in this study. A common feature of these biases is that they distort the information in the favor of the self, and the function of this process is – probably – to protect, maintain, or enhance the image of the self. We may conclude that indifferent of the cultural background and the modalities of self construction people use, they need positive illusions, these representing a profound, universal human need and motive.

Another central objective of the current study was to investigate the relationship between positive illusions and different components of mental health in case of the general population. Our hypotheses referring to the relationship between positive illusions and the components of mental health have been completely confirmed by the obtained data. Thus, persons with high levels of positive illusions are less susceptible to depression and anxiety, and they experience less psychological distress in general than people without positive illusions or with low levels of positive illusions. Similarly, those who have a good opinion of themselves, who believe that they are able to control their present experiences, and who consider that the future holds in reserve for them a series of pleasant surprises, have shown a higher level of subjective happiness and are more satisfied with their lives than those with low levels of positive illusions. The results also confirm the study’s initial hypothesis, namely, that persons with higher levels of positive illusions are, from a cognitive point of view, less vulnerable to depression and anxiety than people without positive illusions, or with low levels of positive illusions. Our findings also show that the lack of positive illusions is associated with, but also predicts depression and anxiety, while the presence of these illusions is a protective factor of mental health.

## CHAPTER 5

### THE DARK FACE OF POSITIVE ILLUSIONS

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#### 5.1. CRITICS OF THE COGNITIVE ADAPTATION THEORY

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Despite the numerous studies supporting the benefits of self-enhancement, the critic proposed that self-enhancement (positive illusions) reflects defensive denial and that it is related to negative aspects of mental health (e.g. Myers & Brewin, 1996, Colvin, Block, & Funder, 1995). Critic suggests that a tendency to report high self enhancement may also come with a cost, revealing a ‘dark face’ of illusions (Mcgraw, Mellers, Ritov, 2004). Some highly self enhancing individuals make poor impressions on both strangers and friends (Colvin, Block, & Funder, 1995; Paulhus, 1998; Robins & John, 1997). Others state that positive illusions may trigger the appearance of narcissistic illusions (e.g. Colvin and Block, 1994; Robins and Beer, 2001). Other data shows that these individuals, when threatened, exhibit heightened aggression (Baumeister, Smart, & Boden, 1996) and physiological arousal (Shedler et al., 1993). Obviously, no one can argue that exaggerated illusions like grandomania, narcissistic self views are adaptive. An individual with inflated self views can set up goals he can never reach, or believe in success when he is doomed to failure, or assume risks he can’t handle. Failure resulting from such behavior can seriously undermine self esteem.

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<sup>66</sup> Fiske and Taylor, *Social Cognition*, 196.

## 5.2. THE ILLUSION OF MENTAL HEALTH

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In accordance to Shedler et al. (1993) among people who look mentally healthy (according to self-report measures of mental health), there are actually two subgroups: people who are ‘genuinely healthy’ and the others who are ‘apparently healthy’ but in fact distressed maintaining the ‘illusion of mental health’ through denial. “People in the defensive, neurotic group are characterized by a need to see themselves as well adjusted, despite underlying vulnerability. Presumably, they preserve a belief in their adjustment by disavowing much of their emotional life, and so have little awareness of their needs, wishes, and feelings” (Shedler et al., 1993, p.1113). They are able to hide their interior distress due to the deficit of scales to detect defensiveness. This argument is not novel, it is well known since Freud that self evaluation might be contaminated by defensive mechanisms affecting responses on test items that the subject considers a threat to the self (e.g. Eysenck, 1994, Epstein, 1992, for review: Weinberger, 1990). For that reason, many critics have insisted that the criterion measurements for adaption be independent external measures such as peer (Paulhus, 1998), expert (Colvin et al., 1995), or school grades rated adjustment (Robins & Beer, 2001; Gramazow, Elliot, Asher, & McGregor, 2003).

Another source of difficulty is related to the confusions between the term ‘defense mechanism’ and ‘defensiveness.’ While the term ‘defense mechanism’ is a theoretical construct that describes a cognitive process on unconscious level, it’s objective being the modification of the conscious experience, ‘defensiveness’ is a more broad term that refers to behaviors that protect the individual from anxiety, loss of self-esteem, or other disrupting emotions (Cramer, 1991a, *in* Cramer, 2003). Thus, defensive mechanisms can serve defensiveness, but there are other mechanisms as well such as conscious desire to act differently than one feels, in order to make a good impression. According to Cramer a critical distinction between defense mechanism and defensive behavior is that the former is always unconscious, while the latter may be consciously recognized by the individual (Cramer, 1991a, *in* Cramer, 2003). However, other authors believe that defensive mechanisms can be sometimes conscious as well (Erdelyi, 2001). In the present paper we are less concerned about the conscious, unconscious aspect, and more concerned about the motive of distortion. Both defensiveness and the use of defense mechanisms have been shown to distort peoples’ self-report of their emotional state (see Weinberg, 1990 for review).

## STUDY 5

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*Study 5 re-examines the relationship of self enhancement to psychological distress considering defensive denial, and cognitive adaptation as well. We hoped, that results will let one see more clearly in this debate, and take steps toward reconciliation of traditional and contemporary views regarding adaptive function of self-enhancement.* Participants were a sample of non-clinical adults from Transylvania (N=304). Cognitive adaptation was measured through dysfunctional attitudes, irrational beliefs and automatic thoughts. Levels of deception and impression management, as possible mediators, were also considered.

Self-enhancement, we believe, is like an umbrella that can reflect a healthy self perception and self acceptance, being generated by egocentric attention and memory (as stated in social-cognitive theories) be on the other hand, it can be generated by one’s need to see her/himself well adapted, to see himself accepted by others or to compensate personal weakness and incompetence that is unacceptable to self image, etc. Based on the cognitive model of distress, we presume that chief among the many underlying motives of “fake” self enhancement, are dysfunctional attitudes and irrational beliefs.

For example, Vincze (2005) found in a student sample that although in overall, those who self enhance also report less cognitive vulnerability to depression (have less irrational

core beliefs and negative automatic thoughts) than non self enhancers, but they have exaggerated levels of positive distortions (e.g. "I am much better than others") were related to dysfunctional beliefs. This tendency was also confirmed in a more large sample (N=1744) of the general population (Vincze, 2009). Other studies (Vincze, 2010, under review), found that although generally low self enhancers have had higher physiological reactivity to stress than high self enhancers, high self enhancers classified as being defensive show higher physiological reactivity to social stress challenge task than low self enhancers.

In the light of the above arguments, it is possible that positive illusions of defensive deniers (among other factors) to be predicted by less adaptive behaviors like self deception, impression management, dysfunctional attitudes (need for social approval, perfectionism, high demands toward performance) and irrational beliefs. We believe vulnerability itself does not predict dysfunctional illusions, just in if vulnerability is associated with defensive denial. But what seems obvious for common sense and intuition, is that it needs to be demonstrated scientifically as well.

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## Method

Three hundred and four participants (179 women and 125 men made up the final sample. Participants were nonclinical adults, ranging in age 19 - 55 years with a mean age of 33, 8 (SD=7.04). Participants participated on a voluntary basis.

Participants completed self-report measures of self-enhancement, mental health including measures of psychological distress and psychological resources. Within the following week, participants completed the early memory test.

*The Early memory test* (EMT, Shedler, Karliner & Katz, 1995) instructs participants to allow their thoughts to go back to early childhood, and recall their earliest memories and write it down (two earliest general, earliest with mother, father, and a high point memory). Open-ended follow-up questions ask subjects for their impressions of themselves in the memory, their impressions of other people, and the mood or feeling tone associated with the memory.

As assessment of the defensive neuroticism position, we replicated the illusory mental health procedure of Shedler et al. (1993) and Taylor et al (2003). EMI proved to have a good reliability and validity. Inter/rater reliability at first was  $r=.62$ . After selecting out the narratives the raters did not agree on, reliability was good ( $r=.72$ ). Based on this procedure four groups emerged: 'genuinely healthy group' (low in neuroticism and judged healthy by the clinician; N=94), 'illusion of mental health' (low in neuroticism but judged as distressed by the clinician; N=63) 'manifestly distressed participants' (high in neuroticism and judged distressed by the clinician; N=64). There have also been a fourth group named 'in Crisis' group (high in neuroticism but judged healthy by the clinician, N=73). Although we were mainly interested in the first two groups' behavior we will consider the Md and Inc group results when they provide relevant information to our objective.

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## Results

Results presented here are partial. There was a significant difference between groups in terms of psychological distress factor  $t(302) = 4.41, p<.01$  and resources  $t(302) = 5.46, p<.01$ , self enhancers being significantly less distressed than non-self-enhancers and having higher levels of psychological resources. Regarding overall cognitive adaptation, non self enhancers showed more cognitive vulnerability than self enhancers  $t(302) = 2.25, p<.05$ . Self enhancers proved to have less negative automatic thoughts  $t(302) = 2.63, p<.05$ , but we found no significant differences regarding dysfunctional attitudes and rational/irrational beliefs. We also found no differences between groups regarding levels of self deception and impression management. Similar to other studies (Shedler, 1993, Vincze, 2010 manuscript, under review) there were no significant differences between the Imh and the Gmh groups regarding levels of distress and positive resources, both groups being classified in the healthy

category. There were no differences on above factors dimensions either. Differences, as it was expected were significant only between Gmh and Imh groups compared to Md and InC groups, the two latter groups being more distressed and reporting less positive resources. Although both Gmh and Imh were rated “healthy” on affective dimension, regarding the cognitive dimension, data revealed significant differences between the two groups  $F_{global}=(22.89) p<.01$ , the Imh group showing more cognitive vulnerability in spite the fact that cognitive vulnerability was also assessed by auto evaluative scales (mean difference=.90,  $p<.01$ ). Evidently, DM and InC were also more vulnerable on this dimension than Gmh group. But we were not interested of this aspect in data. We consider interesting the fact that, that the Imh group manifested just as much cognitive vulnerability to distress like the groups who reported depression and anxiety. This result was concluding with previous data (Vincze, 2005), which proved that the IME group expressed just as much dysfunctional attitudes toward the self as did depressed and anxious subjects. The interaction of two factors on cognitive adaptation was also significant  $F=(6,302)=2.28, p<.05$ . Both factors together explained 22% of this dimension’s variance.

Graphic 3 – frequency of illusions in experimental groups

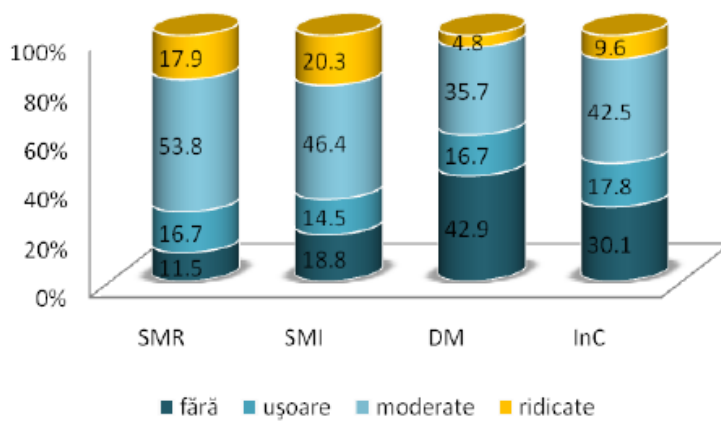


Figure 4 – Factors that influence coping strategies in genuine mental health group

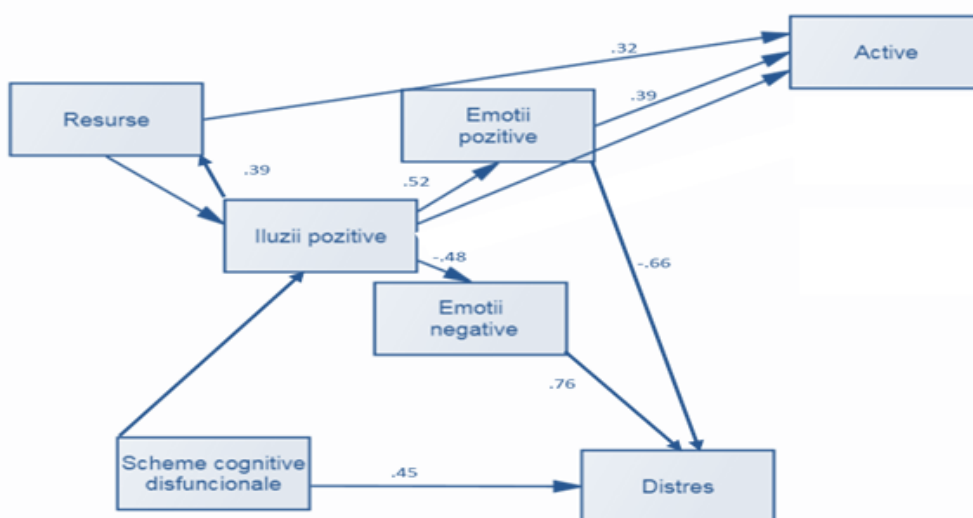
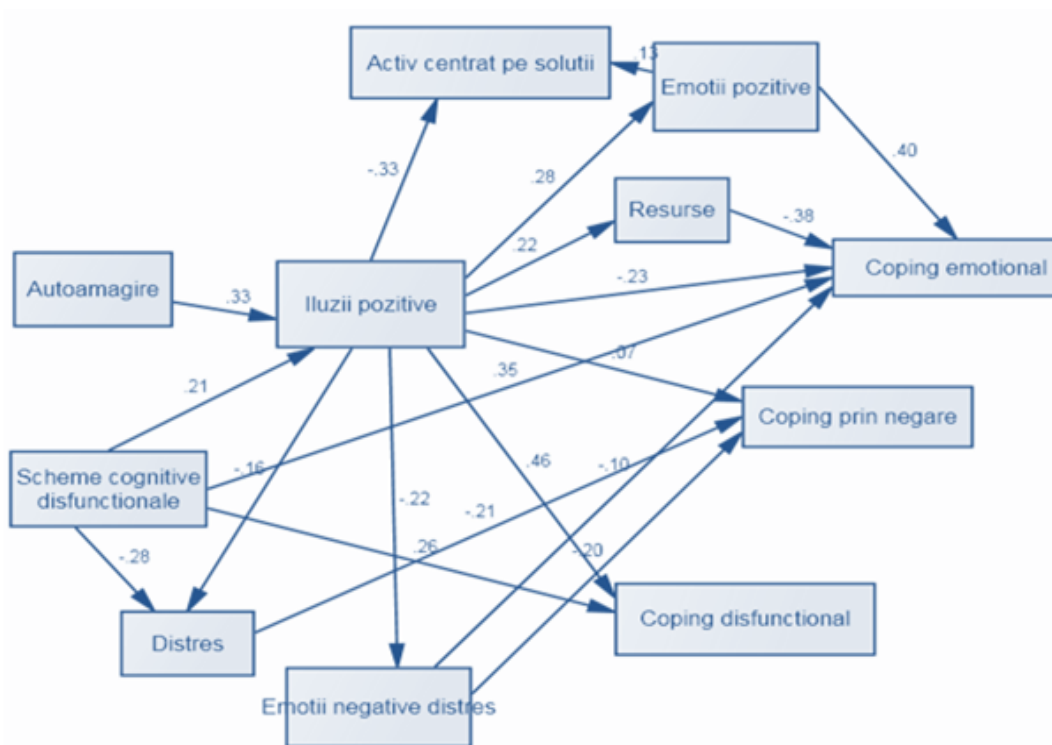


Figure 5 – factors that influence coping strategies in illusory mental health group



## STUDY 6

### Objective

The main objective of this paper was to reexamine the relationship of positive illusions to mental health adding to self report scales a more indirect measure of psychological distress. In accordance with the initial formulation, our reasoning was that if positive perceptions of the self, help people maintain genuine mental health, they will better manage emotionally disturbing information during a cognitive task. We expected self enhancing individuals to have shorter RTs in naming the color of negative stimuli, relative to those lacking illusions, or having low levels of illusions. Specifically, we hypothesized that self enhancers would have shorter RTs in the case of negative words and scared/angry faces, relative to non self enhancers. Basing our hypothesis on the optimal margin of illusions theory we assumed, that while moderate self enhancement would be linked to a higher performance on cognitive tasks, low and high self enhancement would be linked to greater interference on negative content tasks. If the defensive neuroticism account of positive illusions is correct, one might expect to see greater implicit distress reactions associated with positive illusions.



## Method

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Participants completed self-report measures of self-enhancement and measures of psychological distress. Within the following week, participants were engaged in computer based tests.

One hundred and two participants (24 men and 78 women) made up the final sample. All were currently taking psychology courses at the Babes-Bolyai University, Cluj-Napoca, Romania. Participant's age ranged from 18-29 years, with a mean age of 23.84 (SD=7.04). Students participated on a voluntary basis, but received extra credits for their participation. No participant dropped out during the course of the study.

Because previous studies show fluctuations in results with nonclinical but also clinical groups, two types of experimental tasks were used: a traditional Stroop task where words were printed in various colors, and a pictorial Stroop task, where different faces representing emotional states were presented in different colors. To our knowledge this is the first study to use the Stroop task to assess the implicit distress of self enhancers.

*Lexical version:* In the lexical version of the emotional Stroop task, 20 anxiety-related negative words were used, along with positive and general negative words, matched in frequency and length. For each emotional word, we had a neutral control word. Neutral words were chosen on the basis of the length of the emotional words. Words with emotional valence were taken from the published literature with the author's permission (i.e., MacLeod), but prior to use they were assessed for their appropriateness to each category by 3 independent evaluators. Stimuli were presented on black background. All words were printed in block capitals, in Times New Roman font, and were 48 sized. Each word was repeated 3 times, with the only constraint that no word or color was repeated in consecutive order. The colors were: blue, red, green. The order of presentation was randomly chosen by the computer program. There were 180 trials in total; the task lasted approximately 10 minutes.

*Pictorial version:* Faces used in the Stroop task were digital: 11 angry, sacred, happy and 11 neutral control faces were used. Ekman and Friesen's Pictures of facial affect (1976) standardized gallery was used with the authors' permission. We used the faces of 5 male and 5 female actors. The black-and-white faces were covered with a transparent filter (red, blue and green). Each face was presented 3 times with picture and color counterbalanced across the three face types. The final task consisted of a total of 120 trials and it lasted approximately 8 minutes. Participants were tested in groups of ten, by one experimenter in the Psychology Department computer room. Participants were required to name the color of each word/image as quickly and as accurately as possible. Instructions for the tasks were as follows (instruction for lexical task; pictorial task instructions were similar): "As already mentioned in class, this study assesses the speed and accuracy of color naming. You will see some words/images on the screen in front of you. Each word appears on its own. You will be asked to name the color of the words on your screen as quickly and accurately as possible by pressing the corresponding colored key on your keyboard. Please pay no attention to the content of the words/images, simply indicate the color in which they are printed. The task will be timed. Try not to make too many mistakes. If you do press a key and wish that you had pressed the other one, it does not matter. Please ask if you are not sure what to do. We will begin with a trial session, so that you become familiar with the task." No subject accurately guessed the nature of the research hypothesis.

## Results

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Result presented here are partial

### *Overall and within group latencies RT analysis*

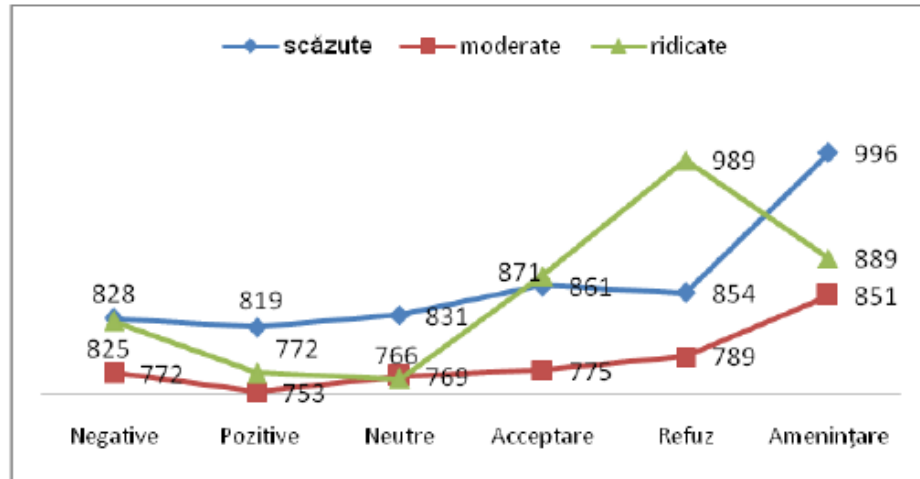
In order to check for the influence of emotional arousal on interference, we first compared the response latency to neutral stimuli with the response latency to emotional stimuli, in the overall sample, for both pictorial and lexical Stroop tasks.

Based on self-enhancement results, two groups were created for further analysis: a group with no self enhancement and a group manifesting self enhancement. We looked at performance differences in the two groups on the Stroop task, and our results showed that the



latency differences in the case of scared/angry and calm faces (within group) were actually due to the group with no self enhancement ( $t=3.89, p<.05$ ), while the group who reported self enhancement did not manifested any latency difference between neutral and emotional content stimuli ( $p>.05$ ).

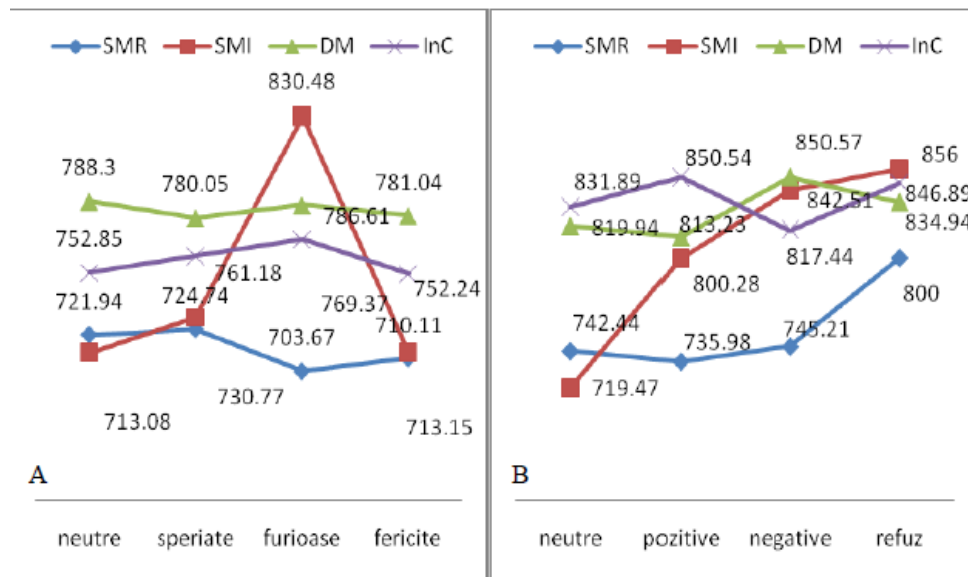
Graphic 4 – Cognitive performance depending on positive illusions level



In the lexical version, there was no significant difference between general negative words and neutral words, or between general positive and neutral words. We found significant differences in RT latencies for words with explicit threatening content ( $M=886\text{ms}$ ),  $t=3.49, p<.01$  and negative words with social rejection content ( $M=894\text{ms}$ ),  $t=3.33, p<.01$ , compared to neutral words ( $N=791\text{ms}$ ). This result indicated, contrary to what was observed in previous studies, that general negative words did not significantly affect attention, while social rejection and threat words did (Williams et al., 1996). Several modified Stroop studies suggest that an attentional bias operates not only for negative information (e.g., anxiety and depression-related words), but also for emotional stimuli in general, including positive words (Becker, Rinck, Magraf, & Roth, 2001) and pictorial stimuli (Bradley, Mogg, Groom, & de Bono, 1999).

In the present case, the RT analysis did not indicate differences between positive and neutral words. Positive words showed lower RT ( $M=770\text{ms}$ ) relative to threatening words ( $M=886\text{ms}$ ),  $t=4.10, p<.01$  and social rejection words ( $M=889\text{ms}$ ),  $t=3.77, p<.01$ . We also found a greater interference for social acceptance words ( $M=871\text{ms}$ ),  $t=3.41, p<.01$  relative to general positive words ( $M=770\text{ms}$ ), but results were not significant between acceptance and rejection words. This last result tells us that subjects were affected by the general social content and not necessarily by a negative content such as rejection. Although results in the case of social threat words were significant compared to neutral, compared to clinical groups (e.g., anxiety) the average RT of the subjects ( $M=889$ ) does not represent a “high” interference. Considering that reported results are highly dependent (sensitive) on the technology used (type of reaction required to stimuli), it would be difficult to accurately compare results. However in previous studies, using similar methodologies, clinically anxious individuals reported greater average interference on negative words (usually above 1000 ms).

Graphic5– cognitive performance of experimental group depending on positive illusions level



An unexpected result was observed when we split participants into two groups based on self enhancement scores. In The non self enhancement group results indicated no significant differences between RT latencies except for anxiety related threat words (M=1039) compared to neutral words (M=828)  $t=3.01$ ,  $p<.05$ . Contrary to our initial hypothesis, the self enhancing group manifested greater interference on social rejection words (M=1033)  $t=4.06$ ,  $p<.01$  compared to neutral words (M=750). Moreover in the case of this group significant RT differences were observed between social acceptance words (M=891),  $t=3.16$ ,  $p<.05$  and general positive words (M=825). There was no significant difference between acceptance and rejection RTs. Thus, it looks like the non self enhancement group was more affected by threat words, while the self enhancing group was affected by social content in general, independent of word valence. Regarding errors produced by possible interference, means signaled a tendency in favor of positive and neutral stimuli but we found no significant differences.

*Correlations between task performance and positive illusions*

Spearman’s correlations between positive illusions and latency measures (i.e., interference) for the pictorial and lexical tasks were performed.

Spearman’s correlations for the overall sample (N=102), for the pictorial task were all negative, indicating a tendency that higher self enhancement is associated with higher task performance and less interference, but most correlations were not significant. Significant correlations were observed only in the case of OPI and scared faces ( $r=-.25$ ,  $p<.05$ ) and threatening words ( $r=-.32$ ,  $p<.05$ ). An exemption was the relation of positive illusions to performance on rejection words. In this case, overall positive illusions were positively related to interference.

*Cognitive task performance depending on positive illusions level*

We were also interested in the differences on (1) color naming latency and (2) frequency of errors depending on SE. For each dependent variable analyses of variance (ANOVAs) were performed to explore whether the high SE group showed less interference than the moderate or low SE group. Three SE groups: high, medium, low were created based on cutoff points.

The analysis revealed no significant effects in the case of the pictorial task. The only significant differences we found was for scared faces,  $F(1,82)=3.615$ ,  $p<.05$ . Post-hoc analysis (Bonferroni) showed lower performance in the low compared to the high SE group. Of more importance is that there were no significant interaction effects involving the moderate SE group, suggesting that there was no speed-accuracy trade-off on this task. This

result indicates that this effect involves discrimination rather than a response bias. The same analysis was performed in the case of the lexical version of the task.

The analysis revealed no significant effects in the lexical task between groups on none of the conditions, except for rejection  $F(2,73)=5.03$ ,  $p<.05$  and threat words  $F(2,76)=7.44$ ,  $p<.01$ . Post-hoc RT analyses indicated that the high SE group ( $M=989$ ,  $SD=109$ ) manifested greater interference in RT latencies in the case of social rejection words compared to the low SE group ( $M=854$ ,  $SD=119$ ), ( $p<.05$ ), and also compared to the moderate SE group ( $M=789$ ,  $SD=208$ ), ( $p<.05$ ). Post-hoc analysis showed lower performance for the low ( $M=996$ ,  $SD=167$ ) compared to high SE group ( $M=889$ ,  $SD=136$ ),  $p<.05$ . Also, there was a significant difference between the low and moderate SE group ( $M=851$ ,  $SE=198$ ) in the case of threat words (Table 3).

Linear regression was conducted in order to explore the role of PI in accounting for the variance in RT latencies. Overall positive illusions accounted for 26% of RT latencies variance in the case of scared faces. The highest loading item was IO (14%). Overall positive illusions accounted for 34% in the case of threat words, and for 25% in the case of rejection words. IC had no significant impact while the highest loading item was PIAS. To assess mediation, we set out to conduct a series of regression analyses in which self-enhancement was entered as a continuous predictor, and cognitive task performance as outcome. Potential mediators (e.g., self reported anxiety, depression, and negative mood) were entered into the regression equation, but none of the three potential mediators met the criteria for mediation. Self enhancement was significantly associated with all three of them.

Figure 6 – Factors that influence the performance in genuine mental health group

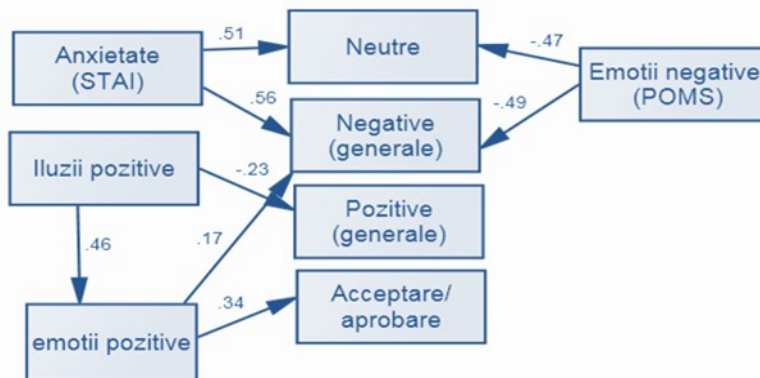
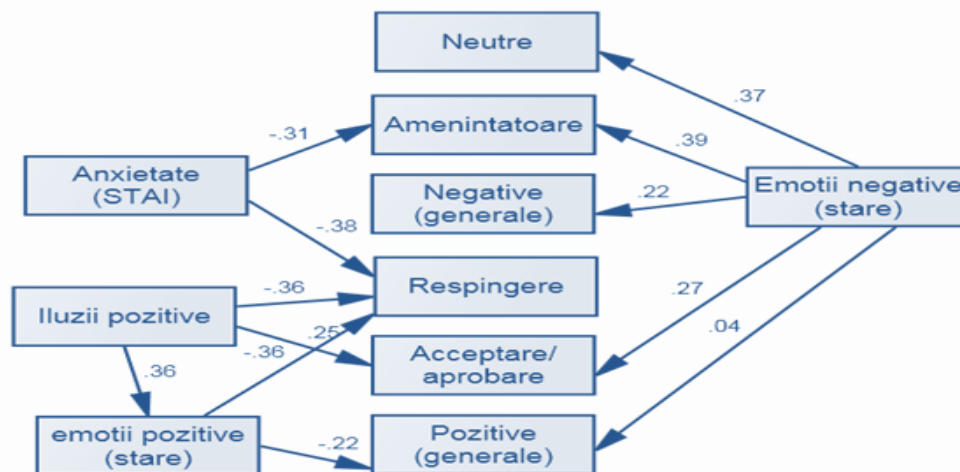


Figure 7 – Factors that influence the performance in illusory mental health group



Findings on the pictorial task were consistent with the notion that low and high self-enhancing individuals differ in their attentional bias regarding negative stimuli. Low self enhancers reported greater interference on anxiety related threat words (but not on general negative content words). These results were not in contradiction with self reported distress measures. Low self enhancer's positive illusions and RT latencies were related to self reported anxiety. Low self enhancers have the tendency of monitoring the environment for threatening stimuli rather than for positive stimuli, indicated by more interference for negative content (e.g., scared faces) than for neutral or positive content. This is consistent with Williams et al. (1996) suggestion, that a common feature shared by many different emotional disorders is a "sensitivity to and preoccupation with stimuli in their environment that represent their concern" (p. 3). This might lead to a vicious cycle, where attentional bias nurtures sensitivity to negative information which, in turn, maintains the lack of positive illusions.

An unusual result compared to previous studies, was the relatively low level of IC (50.5%). A similar value was found in the general population (). The explanation of this result may be found in the cultural background of the present sample. The Romanian and Hungarian society of Transylvania, although in the process of assimilation of individualistic values, is probably still bearing the mark of a mentality which heavily emphasized collectivism. In general, collectivistic-type cultures are characterized by less personal control. This cultural background was even named "interdependent" by Heine and Lehman (1995), expressing the fact that members of such cultures tend to depend more on each other than on self. The influence of past experiences has not completely faded; they have remained imprinted in our beliefs and conditioned responses, representing a solid cultural factor that cannot be ignored.

An interesting result was that high self enhancers, although they did not exhibit significant interference for other stimuli, showed higher interference for social rejection words compared to low and medium self enhancers. Interferences on socially rejecting words were significant compared to general negative words, neutral and positive words as well. Moreover this group showed greater interference for positive acceptance words compared to general positive words.

It is important to note that only high self enhancers were affected by social rejection information, unlike those reporting mild positive distortions. These results may say something about defensive deniers, who are particularly sensitive to social evaluation. As Schedler et al. note (1993) "People in the defensive group would be characterized by a need to see themselves as well adjusted, despite underlying vulnerability. Presumably, they preserve a belief in their 'adjustment' by disavowing much of their emotional life, and so have little awareness of their needs, wishes, and feelings" (p.1117). This way of handling information helps explain why high self enhancement has been associated with greater confidence, expectations of success and low levels of anxiety on the one hand, and with social maladjustment on the other hand. From this point of view, our results support to some extent the hypothesis that self enhancement might be related to denial. However, these assumptions are not novel: Freud assumed that unconscious vulnerability and frustration are hidden energies for the need of self-aggrandizing; however these aspects require further clarification.

Results of the present study have to be interpreted bearing in mind that clinical subjects (e.g., generalized anxiety disorder, social anxiety) may show more interference in general, but comparisons are not justified due to methodological differences. It is also important to note that results indicate no significant differences between "rejection" and "acceptance" stimuli. The self enhancers' group might simply be more affected the social nature of the information, and not necessarily by rejection. Additional research is needed to link the attentional biases, measured by the emotional Stroop, with social rejection.

Looking at the overall picture with the above observations in mind, we can say that mild unrealistically positive beliefs are related to less unconscious distress while low levels

and high levels of self enhancement are related to a certain level of unconscious distress. These results are important because they provide evidence that self enhancement may be associated with lower unconscious distress, therefore with lower stress reactions. Our findings provide evidence of the utility of implicit tasks in assessing mental health in a relatively easy way, in order to distinguish between secure and vulnerable self construal. These results address a growing need among self researchers, who have long recognized that self-report measures of mental health, although easy to work with, when used alone are not always reliable. A limitation of this study is its correlation nature, precluding inferences concerning the causal directions of the relations. It may be that self-enhancement leads to lower interference, or that attentional biases lead to various levels of self enhancement.

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## STUDY 7

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### Objectives

The goal of the present study was to replicate Taylor et al (2003) and Shedler et al (1993) study with some methodological modifications and ascertain if and how the self-enhancing cognitions of healthy adults might be similarly associated with indicators of stress regulation, specifically autonomic and HPA axis responses to stress.

### Method

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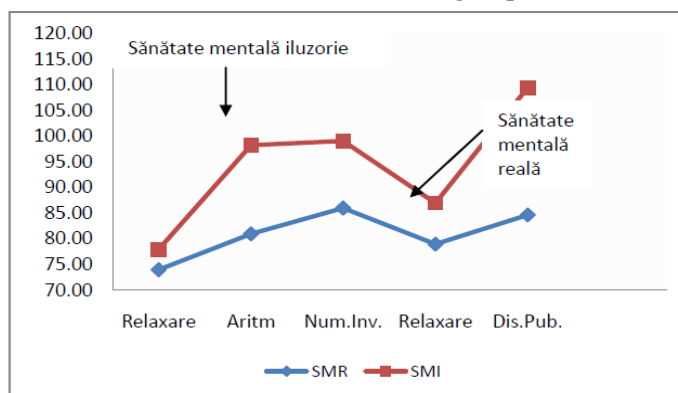
Participants completed self-report measures of self-enhancement, mental health, psychological distress, and psychological resources potentially related to the two perspectives on was activated and visible only after the initial 10-min baseline cardiovascular measures were taken. To provide a direct test of competing perspectives on self-enhancement, participants also completed three other stressful tasks used by Shedler et al. (1993): (c) mental arithmetic problems. These last two tasks are designed to elicit material about which participants may be defensive. The complete instructions are available in Shedler et al. (1993). We also used severe social stress challenge tasks instead of counting and arithmetic test.

### Results

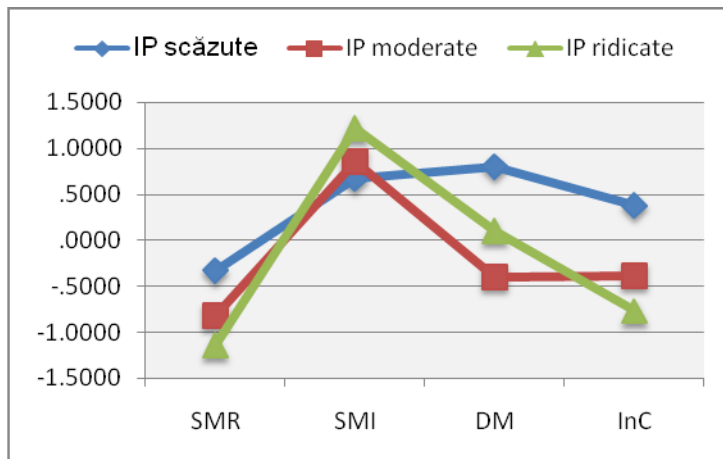
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Results presented here are only partial

*Graphic 2 – cardiovascular reactivity variance depending on level of illusions in IMH and GMH groups*



Graphic 3 – Pulse and electrodermal reactivity variance depending on level of illusions in different groups



Graphic 8 – Factors influencing FRS

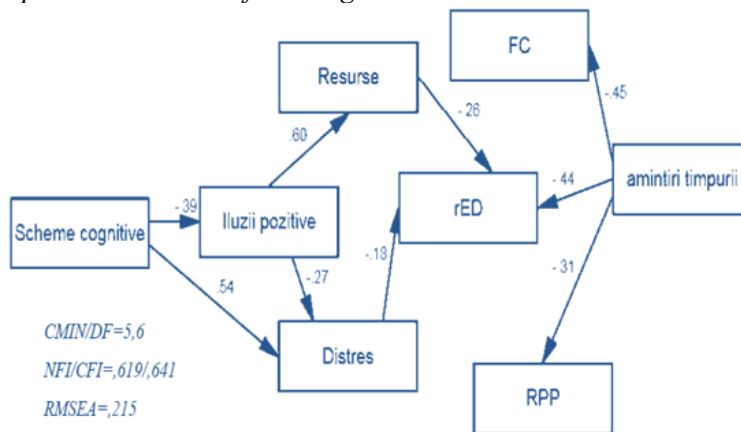
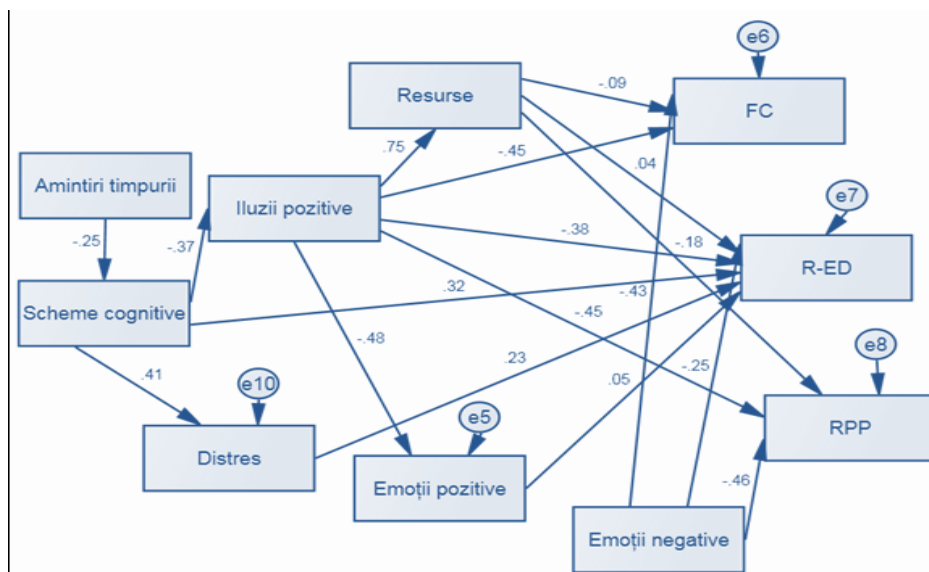


Figure 8 – Factors influencing frs in imh group





Overall, data supported the general finding that persons who have a good opinion of themselves, (believe that they are able to control their life and consider that the future holds in reserve for them a series of pleasant surprises), possess more psychological resources and are less susceptible to depression, anxiety and dysfunctional attitudes compared with those who lack this positive beliefs. This finding however seems to hold true only when we look at the overall picture. After clinical evaluation was considered and groups were split based on early childhood memories we found some doubtful.

At first glance, results revealed no differences between those with genuine or illusory mental health regarding the level of positive illusions, or self evaluated anxiety and depression. Both groups were characterized by the presence of positively biased perceptions and classified as non anxious and non depressed. While the Imh group did not differ from the Gmh group on the affective dimension of mental health Imh group manifested more dysfunctional attitudes, irrational beliefs and less rational beliefs. Moreover, their positive illusions were positively related to dysfunctional attitudes and irrational beliefs (not related though to automatic thoughts). Although the manifest distress group and the group in crisis has also reported higher levels of dysfunctional attitudes and irrational beliefs their positive illusions were negatively related those aspects. These are important findings for three reasons. Firstly, they suggest that defensive persons, in spite of the fact that they look healthy on the affective dimension, (being evaluated as non anxious and non depressed) hold dysfunctional attitudes an irrational beliefs that inspire some suspicion. This data might also suggest that persons categorized based on Shedler's procedure in the defensive group are not as defensive on cognitive adaptation measures compared to affective measures of mental health. Thirdly, they suggest that unrealistic positive self view could be 'apparent' being generated by absolutistic positive demands. The above was also supported at some level by the result that illusory mental health group were more self deceptive and manifested more desire to create a good impression. Obviously, these results are not evidence that those with illusory mental health possess only fake illusions they need to be cured. This issue raises many questions that require further clarifications.

There is also some contradiction in these results. Illusory mental health persons are believed to positively distort responses on auto evaluative scales. Although, cognitive adaptation was also measured by auto evaluative scales, they showed no positive distortion (at least, less distortion than on the affective dimension), behaving more like the manifested distress group. A reasonable explanation for the above result might be the fact that, while scales measuring affective adaptation usually are quite transparent, (it is more obvious what they intend to assess) scale measuring cognitive adaptation are less direct. For example items like *"Do you cry a lot?"*; *"Do you feel anxious without a reason?"*; *"Sometimes I wish to die"* can be perceived by one as threatening to the self and as a result can trigger defensive responses. In comparison with this items of scales like the DAS or ABS-II, are more indirect because they don't assess the outcome behavior (perceived usually as unwanted and disturbing) but the underlying dysfunctional or irrational belief, thus might not trigger defensive denial as much. For cognitive behavior specialists, it is well known that patients usually relate their feelings to the activating event and they don't recognize the link between their emotions and beliefs.

Illusory perceptions about the self, of the defensive person can be generated by high expectations toward the self set out in absolutistic and dogmatic claims like: *"I can't be an average person"*, *"I must be special or I am damned"* *"I must improve myself"* *"I must be outstandingly competent, or I am worthless"*. Can also be generated by a dysfunctional need for approval, e.g. *"Others must treat me considerately, or they are absolutely rotten."* *"I must be loved or cared for"*. Dysfunctional attitudes involve constant and harsh self-scrutiny and self-evaluation, chronic concerns about others' criticism, and the tendency to engage in defensive interpersonal strategies (e.g., suspiciousness, sacrificing intimacy, social distancing)

which perpetuate a vulnerable sense of the self (Dunkley, Blankstein, Zuroff, Lecce, & Hui, 2006).

Similarly, unrealistic optimism can be generated by absolutistic positive demands toward the world and self: *"The world should always give me happiness, or otherwise it is a catastrophic"*, *"I must have everything I want"*; *"My life has always been glorious and will continue to be like that"*. Unrealistic control can be generated by rigid dysfunctional beliefs like *"I must control my life in every way otherwise I am a loser."* It is not an optimistic bias to be found behind these but rather the maladaptive illusion of certainty. Behind these beliefs, obviously is not an optimistic bias rather the maladaptive illusion of certainty, e.g.: *"I'm sure that others will always like me"* *"I am convinced that they know who I am"*.

Over-generalizations based on the absolute positive reviews, can remain convenient, for a while without the power to provide compelling needs a positive person acting for, even if the objective reality, do not provide much cause for cloudless complacency. Behind this infantile and rigid need there is a massive need for love and acceptance. Consequences of such beliefs are in compliance with other symptoms of the illusory mental health person described by Shedler et al. (1993). Because these rigid expectations will never turn to reality the person remains unsatisfied, these demands can become an inexhaustible source of tension and frustration that can reinforce defensiveness (Ellis, 1994). This is not to say, however, that the assumptions above are new: since Freud it has been assumed that vulnerability residing in the unconscious is a hidden energy for the need of self-aggrandizing, narcissistic personality style. However, complacency is an unjustified obstacle to the person that the events in the event of an unfavorable outcome, they note, taking action to remedy the situation. Sooner or later, the inevitable result of accumulation of failures is the fact that the person cannot avoid further confrontation with the negative emotions.

According to Taylor (1989), adaptive illusions can be distinguished from defenses on two grounds: their prevalence and their relation to threat. Whereas positive illusions are highly prevalent in the general population, denial is less so. In a recent study (same cultural background) we found that approximately 89% of the population manifests the tendency to self enhance. Those who were not characterized by self enhancing tendencies were more prone to negative affectivity. Positive illusions incorporate information about stressful events, whereas defense mechanisms become more extreme in response to anxiety. While defenses typically break down under extreme stress, positive illusions function as a buffer against stress (e.g. Taylor et al., 1992, Taylor et al. 2003). Taylor argues that the critical difference between functional and pathological illusions lies in flexibility. While pathological illusions persist despite reality, functional illusions restructure depending on feedback, and they continue to help one to maintain a positive self-image.

One major cause of opposing views over self enhancement lies in what the two perspectives understand as 'rational' 'illusory' or 'self deceptive'. While positive illusion model and research lies on social cognitive theoretical background, critics quoted above is mostly supported by psychoanalytic theories. If we consider the overall picture the social cognitive perspective is supported, but when defensiveness was taken into account, we found evidence for both models. The self enhancing behavior of the illusory mental health group is more consistent with the traditional view of mental health while the self enhancing way of the genuine mental health group is consistent with the contemporary view of mental health. Positive illusion might play a less important role in the case of those with genuine mental health in contrast to what it was suggested by contemporary views. Our data shows that the distress level of a person with genuine mental health is independent of the levels of illusion. Although overall results indicated no differences between genuine and illusory mental health groups regarding level of self-enhancing beliefs and distress, both groups looking "healthy", positive illusions of defensive persons were related to cognitive vulnerability and self deception.



## CHAPTER 6

### FINAL DISCUSSIONS AND CONCLUSIONS

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One of the present study's objectives was to investigate the importance of positive illusions for the general nonclinical adult population of Transylvania. The results we have obtained confirm, in general, the first hypothesis of the research, namely, that the majority of subjects, indifferent of sex, education, and social environment will present positive illusions about themselves, illusion of control, and illusory optimism. In our study, 78 % of the investigated persons (N = 1744) evaluated themselves as being "better", "having greater control over events", and "having better chances of success in the future" as compared to an average person of the same age, sex, and social status.

Building our hypotheses on the cultural theory of the development of the self and on our arguments referring to the effect of the present cultural context on positive illusions, we presupposed that the examined population will have fewer positive illusions than the subjects surveyed in former studies who belonged to typically individualistic cultures. Although the majority of the general population we studied has positive illusions, these values are approximately 15% lower than those obtained in Western Europe or the USA where the percentage is between 85 and 95. Out of the three factors of positive illusions, the positive illusions about the self are the most frequent in the studied population, while the illusions of control the rarest (only 54% of the population presented the illusion of control).

Similarly, an important result is that the Transylvanian population shows higher levels of positive illusions in case of collectivistic characteristics as compared to individualistic ones. When we removed the items added by us (the collectivistic ones), and we took into consideration only the items of the original scale (the HSM Scale), the values of the positive illusion level fell to 68%, being thus approximately 20–25% lower than the values found in former studies. Therefore, the characteristics of the population the individual belongs to are relevant; thus, while the Americans have positive illusions with regard to some typically independent-individualistic characteristics (e.g. "self-efficacy"), the persons coming from collectivistic cultural environments show positive illusions connected rather with typically collectivistic characteristics (e.g. loyalty). According to the data obtained for the Transylvanian Hungarian population, the participants presented positive illusions both regarding typically individualistic and typically collectivistic characteristics, however, with a greater emphasis on collectivistic features. In case of the individualistic dimension the most valued characteristics were: "self-efficacy", "social dominance", "self-realization", "self-knowledge", "nonconformism", while in the collectivistic dimension characteristics such as "fitting in society", "harmonious attachment", "conformism", or "tolerance" were appreciated.

We may conclude that the need for positive illusions may be universal, but, these illusions will be shaped – naturally – according to the values of the individual, as well as of the (smaller and larger) group this belongs to. On the other hand, the somewhat opposite phenomenon also holds true, namely, that the characteristics specific to us are more valorized. For example, those who are more "independent" consider this characteristic – as well as those connected with it – more attractive, while the persons who are rather defined by the group they belong to or "interdependence" see collectivistic traits as relevant and important to the self. Several authors (for example Sedikides, Gaertner and Vevea<sup>67</sup>) have reached similar results and conclusions. They deny the idea that the need for positive illusions is an exclusive characteristic of individualistic cultures. Our results also support these authors' position that positive illusions are formed around different traits (some individualistic, others collectivistic), these being determined by cultural values.

The lower percentage of positive illusions as compared to the results of former studies can be explained by the fact that in Transylvania's cultural setting collectivistic values such as modesty, equality, being connected and dependent on others, self-compassion,

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<sup>67</sup> Constantine Sedikides, Lowell Gaertner and Jack L. Vevea, "Pancultural Self-enhancement Reloaded: A Meta-analytic Reply to Heine", *Journal of Personality and Social Psychology*, 89 (2005): 539–551.

expressing and accepting one's negative feelings are still accepted and encouraged, contrary to western cultures where, for example, people are discouraged to express their negative feelings and acknowledge their weaknesses.<sup>68</sup>

Though former investigations have shown that positive illusions are independent of age, starting from the assumption that the younger generations had been less affected by collectivistic beliefs, and that they had grown up in a society which integrated the individualistic beliefs to its system of attitudes, we presumed that young people would have more powerful positive illusions than the older generations. This hypothesis was partly confirmed. According to the obtained results, the positive illusions about the self were not influenced by age, nevertheless, the younger generations presented higher levels of positive illusions in the cases of control and optimism than the older generation.

The historical, cultural, religious, and political arguments which could account for the cultural differences in the cognitions about the self – be they distorted or realistic – are inexhaustible, and it is beyond the objectives of the present study to discuss them. Nevertheless, we are going to attempt to present some major particularities of the cultural values cultivated in Romania which could explain our results.

Firstly, in the past equality and conformity with the average were imposed by the social norms. Individuals were greatly encouraged to conform to the “average”, and they were severely punished if they expressed their personal opinions and needs, or if they tried to put themselves forward. The concept of equality was interpreted as interchangeable with being mediocre. To express one's personal qualities, needs, sentiments, and opinions, or anything individual was neither valued, nor encouraged, on the contrary, it was rather suppressed. A self-perception according to which one would be “higher than the average” was considered improper, impolite, and often it was even dangerous.

Secondly, self-compassion related to one's difficulties, problems, hard life was (and is still) accepted and even encouraged. People felt more comfortable discussing their problems and difficulties than speaking about their virtues or successes. Failures and problems did not necessarily disqualify people socially, and were not considered necessarily self-destructive (probably because they did not depend on the individual, but on the circumstances, the hard life conditions, the bad leadership etc.), contrary to typically individualistic cultures. If some people lived in better circumstances, this had to be kept secret, so that other people might not grudge it. Even nowadays such behavior can be detected. It is a kind of “competition” referring to “who has a harder life” and “who has more problems”.

Thirdly, mutual dependence, being the part of a community and of a large family has always been valued in this cultural background. During the communist regime, this tendency became even more emphasized, people being forced to highly depend on one another. Modesty, self-sacrifice, humility were and still are positively valorized. Moreover, both Protestantism and Roman-Catholicism, to which denominations the Hungarian community of Transylvania belongs to, encourages humility and suffering, giving them a positive note by the promise of reward in the next life. Both Protestantism and Roman-Catholicism promote values such as poverty, modesty, and humility – which are defined as typically collectivistic values.

Fourthly, during the communist regime, people had very little intimacy. Neighbors and colleagues had the right to know everything about one another. To protect one's intimacy was not permitted; moreover, it was almost dangerous, for it could be interpreted as a means to compromise the communist ideology. The communist regime promoted transparency, reducing private life to the possible minimum, blocking thus the probability of expressing positive illusions.

Many of the generation which lived under the communist regime has not succeeded in adapting themselves to and to profit from the possibilities of the competitive capitalist environment, remaining blocked in the ideas and beliefs acquired before, a fact which may lead to helplessness, frustration, and disappointment. The current economic situation remains unsatisfactory for the majority of the population, this being shown by the political instability

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<sup>68</sup> Fiske et al., “A szociálpszichológia kulturális mátrixa”, 173.

and social tensions. Many persons consider the future rather unsure and out of personal control. In addition to all these, the population surveyed by us – the Hungarians of Transylvania – are a minority in Romania. This could enhance the above described effects, which, consequently, result in positive illusions being suppressed. The expressions we often met with reflect well a conception contrary to that which promotes positive illusions: “if only it would not get worse”, “come what may”, “the future does not depend on us”, “it will be as God decrees”.

In this context, one must not wonder that positive illusions about the self, illusory optimism about the future, and the illusion of control do not appear to the same extent in the population we investigated as previous studies made on other populations inform us.

Another central objective of the current study was to investigate the relationship between positive illusions and different components of mental health in case of the general population. Our hypotheses referring to the relationship between positive illusions and the components of mental health have been completely confirmed by the obtained data. Thus, persons with high levels of positive illusions are less susceptible to depression and anxiety, and they experience less psychological distress in general than people without positive illusions or with low levels of positive illusions. Similarly, those who have a good opinion of themselves, who believe that they are able to control their present experiences, and who consider that the future holds in reserve for them a series of pleasant surprises, have shown a higher level of subjective happiness and are more satisfied with their lives than those with low levels of positive illusions.

The results also confirm the study’s initial hypothesis, namely, that persons with higher levels of positive illusions are, from a cognitive point of view, less vulnerable to depression and anxiety than people without positive illusions, or with low levels of positive illusions. Our findings also show that the lack of positive illusions is associated with, but also predicts depression and anxiety, while the presence of these illusions is a protective factor of mental health.

While the social cognitive approaches of psychology and of the neuro-sciences identify the closest causes of the human behavior such as: the computational or the algorithmic-implementation level, the evolutionary approach starts from the idea that a cognitive structure exists because it should solve a coping problem – the explanation of that behavior thus becoming a distal one.

The studies that managed to highlight the adaptive aspect of the biases indicate an important element tied to the debate on the rational-irrational human thinking: (1) it suggests that the criteria for processing the information were established in error by the heuristic perspective based on which the informational processing decisional human was set; (2) it offers a solid basis to distinguish the ecological reasoning from the cognitive one by virtue of the types of relational variables.

The evolutionary perspective offers a theoretical perspective on the positive illusions in which the biological, psychological and social models of positive illusions can be integrated. The evolutionary perspective clarifies the pros and cons of the adaptive function of positive illusions, explaining and re-interpreting their adaptive role. In this perspective the positive illusions are perceived as features needed by the cognitive system which was built not with the purpose of being rational, but with the purpose of working effectively even with the inclusion of some errors in order to reduce the costs of few but possibly fatal errors.

Positive illusions prove to be an evolutionary product due to the fact that:

- (1) Positive illusions ensured the solving of some adaptive issues in the evolutionary environment correlating with the improved fitness of the body, the counterbalancing of the negative setting, the protection of the body from negative flooding, the support of curiosity and taking on of some risks for knowledge and exploration, preserving motivation in reaching the goals.
- (2) The high prevalence of positive illusions in the population associated with normality are a solid sign that positive illusions have the characteristics of an evolutionary design representing a feature of the species.

- (3) The positive illusions are universal. Even though the social and cultural environment in which we live has a moderating effect on the content of the positive illusions, their presence is a constant feature of the human subject, a deep human need that manifests itself despite the cultural background in which it exists.
- (4) The positive illusions occur without special instruction, are used without conscious effort and without the consciousness of the way they work in.
- (5) Positive illusions cannot be identified when applying the general structures of the social standard model at the specific contents. The adaptive, proximal function of the positive illusions - to protect the self-esteem and contribute to preserving the health - is included in the explanations offered by the evolutionary perspective, it becomes more stable and profound.

In this new reflection positive illusions occur as complex social representations that offer the way of knowledge and reconstruction. They establish the connection between the subject and the socio-cultural environment, they fulfill knowledge functions, mediate communication, guide the social behavior and allow coping to the immediate context. Positive illusions are based altogether on cognitive origin, social and motivational causes. Positive illusions comply with cognitive, social and emotional logic and thus they integrate both the rational and the irrational thinking.

In the light of these results we may ask that, if the need for positive illusions is nevertheless a universal need, and the evolutionary theory gains ground over the cultural theory, what role positive illusions have, and why they have been formed.

Roy F. Baumeister, Ellen Bratlawsky, Cathrin Finkenauer and Kathleen Vohs in their study entitled *Bad Is Stronger than Good*<sup>69</sup> made a meta-analysis, trying to investigate which of the two information types – negative or positive – has a greater impact on us, surveying studies with very different subjects, such as learning, memory, attention, emotions, child development, or the quality of interpersonal relationships.<sup>70</sup> The majority of these studies reveal that negative information have priority in processing, and they have a greater impact on us in the sense that they are more thoroughly processed. One may argue (for example Baumeister et al.<sup>71</sup>) from a psychological point of view that it is more adaptive that our brain reacts more readily to negative than to positive information. Though sometimes this processing leads to errors, these errors save us from enormous costs. If we were not attentive and did not process danger signals efficiently, we could even pay for this with our lives.

One of the few exceptions from the general rule of being more sensible to the negative information is the sphere of the information referring to the self. In this case, the process seems to be the opposite: we tend to ignore, or at least to minimize the negative information, while we overestimate the positive ones (see Taylor<sup>72</sup> for an overview of these studies).

Therefore, the reactivity of the human brain to negative information is greater than to positive information because this served adaptability during the evolution. We believe that the function of positive illusions is to counteract this negative lack of balance. Though we are generally exaggeratedly reactive to dangers, we counterbalance this sensibility by the errors of positive illusions about the self, illusion of control, and illusory optimism. The negative setting makes us alert, while the positive biases defend us of the negative “flood” through the belief that “though the world is a dangerous place, we are clever enough to avoid dangers”, or “we have smaller chances to experience bad things” (illusory optimism).

The two “wisdoms” of the human psyche seem to be contradictory. One suggests caution, and the other reminds us that without trying there is no success. Though the two error types seem to be contradictory, each holds a powerful sway over human psychology. The person who is characterized by both “axioms” at the same time is called a “paranoid

<sup>69</sup> Roy F. Baumeister et al., “Bad Is Stronger than Good”, *Review of General Psychology* 5, no. 4 (2001): 323–370, 323–360 (the meta-analysis).

<sup>70</sup> By positive information I mean desirable, pleasant consequences; by negative information unpleasant, undesirable, painful consequences. Strength in this sense refers to the causal impact. To say that bad is stronger means that it produces more consistent, more lasting, and more complex effects than good.

<sup>71</sup> Baumeister et al., “Bad Is Stronger...”

<sup>72</sup> Taylor, *Positive Illusion*, 3–45.

optimist”, a suggestive name originating from Haselton and Nettle.<sup>73</sup> The two settings of the “paranoid optimist” mind will lead to different behaviours: withdrawal and approach. The authors argue that natural selection has favored the optimist paranoid cognitive system in the course of the phylogenetic evolution. Being largely spread amongst the population and associated to normality (individuals with no positive illusions are depressive), the positive illusions seem to be a possible evolutionary construct. The most important function of the positive illusions is mediating the development of the self-esteem and maintaining the convictions in the personal effectiveness and hope.

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<sup>73</sup> Martie G. Haselton and Daniel Nettle, “The Paranoid Optimist: an Integrative Evolutionary Model of Cognitive Biases”, *Personality and Social Psychology Review*, 10 (2006): 47–66, 47.

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