PROSOCIAL TRAITS AND TENDENCIES OF STUDENTS OF HELPING PROFESSIONS

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The book defines prosocial personality, the resources and procedures of its research. Informs about partial results of the research implemented at 828 university students of helping professions (from the monograph The prosocial personality aspect of behaviour and empathy). Analyzes the results from the research by gender, pays attention to traits and tendencies of prosocial personality of volunteers.
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CONTENTS

INTRODUCTION ..................................................................................................................... 6

1. PROSOCIAL BEHAVIOUR .................................................................................................. 7
   1.1 Terminology .................................................................................................................... 7
   1.2 Origin of prosocial behaviour ....................................................................................... 8
   1.3 Volunteerism .................................................................................................................. 13

2. PROJECT RESEARCH GOALS ......................................................................................... 16

3. PROJECT HYPOTHESES ................................................................................................. 18

4. SAMPLE DESCRIPTION, WORKING PROCEDURE ....................................................... 23

5. METHODS USED .............................................................................................................. 25

6. CHART AND STATISTIC PROCESSING OF PROJECT A ................................................. 33
   6.1 Prosocial traits and tendencies of students of helping professions ............................... 33
       6.1.1 Prosocial traits and tendencies by gender and volunteerism ............................... 41
   6.2 Personality traits according to Five-factor model in students of helping professions ...... 46
   6.3 Social desirability in students of helping professions .................................................. 57
   6.4 Emotional empathy in students of helping professions ................................................. 60
   6.5 Arousability and optimism in students of helping professions ...................................... 66
   6.6 Exocentric-endocentric altruism of students of helping professions ............................. 69
   6.7 Values and value orientation of students of helping professions ................................... 73

7. TABULAR AND STATISTICAL PROCESSING OF PROJECT B ....................................... 83
   7.1 Differences of Big Five traits by level of prosocial traits and tendencies ....................... 83
   7.2 Big Five traits by the level of prosocial tendency – Helpfulness .................................... 96
   7.3 Preference of values by level of prosocial traits and tendencies ..................................... 99

8. SUMMARY OF THE MOST IMPORTANT RESEARCH RESULTS ................................ 111

9. REFERENCES ..................................................................................................................... 114

10. NAME INDEX .................................................................................................................. 118

11. SUBJECT INDEX ............................................................................................................ 121
INTRODUCTION

In recent fifteen years there was extensive development of university disciplines in the Czech Republic, preparing large quantity of students for practice of a broad spectrum of future helping professions. The spectrum of helping professions includes for example physicians, teachers, educators, psychologists, social workers, psychotherapists, priests, nurses, hospital attendants or caretakers, as well as a number of other newly arising professions. The professional literature and the opinions of practicing helping workers agree that important preconditions of efficient performance of such professions include higher level of prosocial behaviour and empathy. But it is fact at the same time, that no broader research of such important personality preconditions has been implemented in the Czech Republic so far.

Prosocial behaviour in present psychology represents a phenomenon conditioned by mutually interconnected complex of specific personality dispositions and updated by the action of a number of situation conditions and circumstances. This book focuses particularly on theoretical and research connections of prosocial traits and tendencies.

The research project was implemented on relatively large sample respondents, as well as hundreds of students and helping professionals within pilot studies. The project is purposefully focused on identification of the level and structure of prosocial traits and tendencies, the structure of altruism and emotion empathy in students of helping professions. The interest is centred on mapping the above stated phenomena and their relationships to selected variables. The project also takes account of independent variables such as volunteering experience.

A significant part of the project consists of acquiring suitable psychodiagnostic methods intended for measuring the above stated phenomena within helping professions and their translation into Czech. These are scales diagnosing prosocial traits and tendencies, the level and structure of empathy, altruism and some other psychological variables, which have not been available in the Czech Republic so far.

This book discusses the issue of prosocial behaviour from professional psychological aspect. It was efficiently helped in this effort by a group of students and postgraduate students who participated in preparation of a lot of theoretical documentation and in collection and basic processing of large number of empirical data and who deserve thanks for it.

Author
1. PROSOCIAL BEHAVIOUR

1.1 Terminology

Helping, prosocial behaviour and altruism constitute related concepts that designate significant aspects of interpersonal situations influencing interpersonal relationships in many respects. Some authors of professional literature use only the term “prosocial behaviour”, others speak only about “altruistic behaviour”, and others use those concepts alternately. H. Bierhoff (2002), a significant theorist of prosocial behaviour, defines the above stated concepts including their mutual relationships as follows:

*Helping* is a broad concept covering all forms of interpersonal support. The helper invests and his investment is usually lower than the recipient’s profit.

*Prosocial behaviour* includes acts made in favour of another person without awaiting material or social reward; the helper’s good feeling is often present as reward. The term of prosocial behaviour is used for situations when the help to others is motivated both by selfish and by completely selfless reasons. We can speak of prosocial behaviour when the individual anticipates the other's benefit and the picture of such profit controls his behaviour.

*Altruistic behaviour* constitutes a type of prosocial behaviour for which empathic understanding of the other’s situation, selfless interest in the other’s needs and sympathy are characteristic. Altruistic behaviour is not based on will but on feeling. The fact that somebody suffers is developed in sympathy as something concerning also another person. Altruistic behaviour is not compulsory, and has therefore not the character of moral requirement.

Differences between altruism and prosocial behaviour are often defined very difficultly because empathic care and interest cannot be observed straight away, and the helper sometimes does not become distinctly aware of the complicated internal motives of his or her behaviour.1

*Aspects of prosocial behaviour.* The well known Polish psychologist, J. Reykowski (1979) suggested assessing the aspects of prosocial behaviour by the following features or circumstances:

1. social object: specific person, institution, idea;
2. aims of activity (related to the person): avoiding harm, “increasing the positives” in physical, material, moral, orientational, practical, emotional area;

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3. time dimension: short-term events, one-off (from minutes to hours) events, events persisting in time (on the scale of days-weeks), permanent events taking considerable part of life;
4. costs (expenses) of the activity: natural (indispensable time and effort for execution of the activity), additional expenses like threat of physical, material, moral, emotional harm, loss of value.

1.2 Origin of prosocial behaviour

At exploring prosocial behaviour, the question of its origin proved to be controversial. Certain part of scientists believe that it is genetically encoded information with which people come into the world. Another group tends rather to the theory of learning, stating that people are lead through rewards and punishments to help the needy. A short list of opinions from this area follows.

1. Some *evolutionarily oriented psychologists* believe that prosocial tendencies including altruism are inborn, genetically determined by an inner mechanism common to all human beings. One of the significant founders of sociobiology, E. O. Wilson (1975), states in connection with research of social behaviour of animals that family or blood kinship provide altruistic kindnesses to their related animals in favour of future offspring. An extreme example is the instinctive readiness to lay down one’s life to protect the colony. Risking of own life for the benefit of a kinship group is literally extreme altruistic behaviour – both to animals and to people. The term *kin altruism* is generally accepted for behaviour covering such protection of one’s own group as a whole. Simply said, people help particularly those who share their genes. The readiness to prosocial engagement corresponds to the succession given by the degree of genetic kinship. We help first those who have the most identical genes, i.e. our children, parents, siblings, and only later our uncles and aunts. Such tendency has universal character; it can be found across different cultures.

2. Besides the biologically oriented concepts, there are concepts stating that prosocial behaviour and altruism are learned during the *socialization process*. All societies create sets of unwritten rules defining how people should behave in different situations. Those unwritten directives or *social standards* express an agreement as for which behaviour is
acceptable and supported and which is unacceptable and unsupported. Prosocial behaviour favouring the society as a whole is rewarded, acknowledged and supported in the course of socialization. Social standards and values that originally existed outside the individual are internalized by most people in the course of life. From certain age, people behave prosocially not because of social commands but because they feel personal moral duty to “do the right things”. People who do not observe those internalized personal ideals are not punished by the society but by the feelings of guilt created inside them.

The standard of mutuality expresses the commitment to repay others for services they have provided to us (Trivers, 1971). This command constitutes one of the universal social standards. The reason consists in the fact that the preservation of the group is more likely if its members help each other. The standard of mutuality includes also a “personal motive” – the awareness that if we need help in future, those who are obliged to us will provide it to us.

The standard of social responsibility (Berkowitz, 1972) dictates the duty to help those who are somehow weaker than we are, for example the sicker and the poorer. The help to needy persons is not based on waiting for mutuality.

3. According to the economic concept, all interpersonal interactions are based on calculations of benefits and costs (punishments). In the course of social transactions people exchange different resources, e.g. money, information, social status, services. In such transactions, including prosocial behaviour, the principle of minimization of costs and maximization of benefits applies. That means in practice that the readiness to help increases when the benefits exceed the costs of our helping (Piliavin et al., 1981, 1982 and others). The benefits from prosocial behaviour can have the external (e.g. acquisition of social acknowledgement or money) or internal character (e.g. reduction of distress when observing another’s suffering). The economy of social interactions considers also two types of costs – punishments. The external punishment can consist in social disdain in case of not helping; the internal punishment can consist in feelings of guilt. In case of helping, the individual can perceive financial, time or other loss as punishment (expense).

4. Significant prosocial motive consists in the need of preservation of positive opinion of oneself. Cultural standards often include schemes of “good” or “bad” person. Helping others ranks among appreciated values and people who have internalized such value show more readiness to help (e.g. as volunteers), regardless from circumstances (Snyder and Clary, 2005). Not helping others in a situation when they needed help can harm the positive self-image and lead to feelings of guilt and humiliating shame.
5. By helping, people also regulate their own emotional conditions; prosocial behaviour allows internal manipulation with emotions. Two cases are possible in this connection. The first concerns intervention initiated by tension and discomfort caused to the observer by seeing the other person suffering. In this case, helping constitutes a means to reduce discomfort and arousability, optimizing the helper’s mood (Dovidio et al., 1991). In accordance with the other model of relief from negative condition within emotional interpretation, the prosocial act helps to improve the own negative mood (Cialdini et al., 1982). The offer of helping, rewarded by grateful smile, compliment stating how admirable person the helper is, etc., can improve the helper’s current bad mood and rid him or her at least situationally from anxiety, depression, feelings of offence or sorrow. Some authors also believe that positive mood caused e.g. by a pleasant event or optimistic spirit of the helper increases the probability of helping the needy (Salovey et al., 1991).

6. Another variable modifying the probability of prosocial behaviour is the belief in fair world (Lerner, 1980). It represents the generalized assumption that you have what you deserve. Undeserved suffering of another person endangers this assumption and activates the effort to re-create it through helping the suffering person. Helping is based on awaiting positive consequences. When it is efficient, i.e. when it solves the problem of the needy, the belief in fair world is restored. C. Dalbert considers the belief in fair world a stable personality disposition that acts upon perception and processing of the current situation and influences the accompanying emotions (Dalbert, 2001). But the picture of fair world often has also opposite consequences to the behaviour. When helping does not mitigate the other’s suffering and his or her negative condition keeps undermining the belief in fairness of the world, then devaluation of the suffering – victim can occur (for example through attribution of fault: “it’s his own fault”). Internal balance can be achieved and the belief in fair world can be restored in this other manner too.

7. The analysis of empirical studies confirms positive correlations between prosocial behaviour and empathy (see for example Eisenberg and Strayer, 1987; Davis, 1996). The dispositionally given empathy is understood as substitutive emotional condition caused by observing the emotional condition of another person. The resulting condition results from adoption of the other’s perspective and from understanding of the other’s feelings. People who help others more often are characterized by more empathy than those who do not. Current psychology distinguishes emotional empathy and cognitive empathy. Emotional concept understands empathy as emotional reaction of the observer to the observed emotions of another person (see e.g. Eisenberg and Strayer, 1987). Empathy
defined as ability, condition or process allows achieving emotional understanding of
behaviour and experiencing of psychical phenomena of other people, anticipating their
reactions, particularly through processes of identification and projection.

Cognitive concepts define empathy through cognitive aspects. Such concepts are related
to the term of role adoption of G. H. Mead (1934; quoted according to Davis, 1996) who
explained that skill as imagined placing of oneself on the place of the other person,
adoption of his or her role or attitude. An indispensable condition of that skill is the
process of interpersonal decentering in which the person must fight off primary
egocentric concentration on oneself, which was described by J. Piaget (1932; quoted
according to Davis, 1996).

The multidimensional concepts of empathy include particularly the approach of M. H.
Davis (1980, 1996) according to whom empathy includes four mutually related but
separate basic components or tendencies. Perspective taking reflects the tendency to
adopt the perspective of others, based on non-egocentric thinking and the tendency to
adopt the psychological view of the others. Empathic concern includes feelings of
concern, warmth, sympathy and interest in the others’ misfortune that can be shown in
altruistic behaviour. Fantasy concerns the tendency to move imaginatively into the
feelings and behaviour of fictive figures in books, plays and films. Personal distress
reflects the level of feelings of anxiety and uneasiness in intensive interpersonal situations
and of the ability to experience feelings of discomfort of other persons.

8. Very probable source of differences in prosocial tendencies consists in differences in
values and value orientations. They constitute a network of ideals, interests and activities
that fill the human life with meaning. P. Cakirpaloglu understands values as “a system of
acquired dispositions of human to act or to go to a goal in accordance with the desirability
determined by the conditions of existence” (Cakirpaloglu, 2004, p. 385).

S. H. Schwartz (1992) works on the concept of human values as desirable goals with
different importance that have the character of leading principles in human lives. They
differ from attitudes by higher generality and hierarchic organization. The basic content
aspect that differentiates the values is the type of the motivating goals expressed by the
values. The typology of different contents of individual values includes (in form of
deliberate goals) three universal conditions of human existence: 1. needs of individuals as
biological organisms; 2. requirements of coordinated social interaction, and 3. needs of
survival and benefit of the group. Schwartz organized the ten value types he reached
around two basic bipolar dimensions. Each pole represents a value type of higher order (value orientation) that combines two or more of those ten primary types.

9. The research of prosocial behaviour is theoretically closely related to the use of the five-factor model of personality that represents the approach to the personality called also Big Five in professional literature. That model of personality in current psychology represents a significant integration theoretical and research platform used in different psychological subdisciplines.

Prosocial personality and its measurement
The history of research of the factors determining prosocial activities is very long in psychology. Disregarding the oldest broadly conceived study by H. Hartshorne and M. A. May from 1928 (followed by works in 1929 and 1930) and focused on seeking prosocial features – with negative result, then until about the Eighties of the 20th century, the opinion that prosocial activities are determined to a large degree by circumstances and situation conditions and that altruistic personality essentially does not exist prevailed in the research of causes of prosocial behaviour (Latané and Darley, 1968; Piliavin et al., 1981).

But as from the Eighties of the 20th century, more and more studies pointing out differences in the readiness to offer help to a person in need started appearing (Penner, Davis, Rushton, Eisenberg). The idea of prosocial personality was rediscovered in scientific discussion. The discussion dealt with the basic question whether prosocial behaviour is always instigated by a form of own interest (egoism) or whether it can include motivations focused on others – altruistic motivations (Batson, 1991; Dovidio et al., 1991).

Seeking of personality features and tendencies significant for the consistency of prosocial behaviour followed two paths.

a) By ascertaining particularities of protagonists of exceptional deeds, e.g. of rescuers of Jews during World War II, by seeking the qualities that differ such extraordinary individuals from common people (for example Oliner and Oliner, 1988 in Batson, 1991).

b) By looking for personality characteristics in long-term helpers (voluntary blood donors, volunteers) through questionnaire inquiries and empirical studies (Staub, 1978; etc.).

The approach to search for prosocial traits of personality through identification of sets of personality traits that correlate highly with each other and all of them are related to prosocial ideas, feelings and behaviour was chosen by L. A. Penner et al. (1995). They understand such
set of traits and tendencies – prosocial personality – as permanent tendency to think of the welfare of others, to have empathic worry about others and to behave in a manner bringing benefit to others.

In accordance with their concept, L. A. Penner et al. (1995) created a method to measure the features and tendencies of prosocial personality. The measure of prosocial personality called PSB (The Prosocial Personality Battery) constitutes a tool for prediction of broad range of reactions and behaviours. The Battery captures several personality characteristics, with regard to the complex character of prosocial behaviour.

1.3 Volunteerism

Additionally to short-term helping that occurs spontaneously between two people – the person in need and somebody able to help such person – people help others also deliberately and in the long term. Such form of helping has found its expression in volunteerism.

Volunteerism is understood as unpaid service provided at no cost to a non-profit organization delivering directly or indirectly goods and services to individuals, groups of individuals or a thing (Wilson, 2000).

Volunteerism in the Czech Republic is regulated by legislation and defines volunteer activity as follows:

a) help to unemployed, socially weak persons, handicapped persons, seniors, members of national minorities, immigrants, persons after sentence of confinement, drug addicted persons, persons suffering from domestic violence, as well as help with care for children, youth and families in their leisure time;

b) help at natural, ecological or humanitarian disasters, at protection and improvement of environment, at care for preservation of cultural heritage, at organizing cultural or fund-raising charity actions for persons stated under letter a);

c) help at implementing development programs and within operations, projects and programs of international organizations and institutions, including international non-governmental organizations.²

Volunteer activity is mostly organized by volunteer centres and non-governmental non-profit organizations, so that the help recipient can completely rely on it in the agreed scope,

² Act No. 198/2002 Coll., on volunteer service.
time and place. The best known non-profit organizations in the Czech Republic are the Výbor dobré vůle – Nadace Olgy Havlové (Committee of Good Will – Olga Havlová Foundation), Český Červený kříž (Czech Red Cross), Fond ohrožených dětí (Fund of Endangered Children), Nadace člověk v tísni (Foundation Human in Need). Further they include citizens associations, including fellowships and clubs, special-purpose facilities of churches, e.g. Charity of the Czech Republic, and finally charitable trusts.

**Characteristics of volunteers**

The broadly adopted opinion on volunteers accepts the importance of the role of both demographic and personality factors and of social structure, e.g. family and culture. The demographic factors influence rather the human’s attitude, his or her devotion to ideals and richness of his or her social networks leading directly to volunteerism. L. A. Penner and M. A. Finkelstein (1998) and others try to find explanation of the circumstances initiating the start of volunteer activities and staying in them in spite of considerable costs and effort that must be invested during a longer period. They seek substantiation in personality and demographic characteristics, in interpersonal relationships and situational factors. Penner (2004) suggests that there are also non-social stimuli that can activate the wish to act as a volunteer. They can include personal circumstances in the individual’s life (e.g. loss of a beloved person due to a disease) but also a specific feeling or idea that gets importance for the potential volunteer. For a lot of individuals, volunteer activity has its importance particularly in the fact that they can self-fulfil in it, strengthening their own self-confidence. For example persons unemployed in the long term can feel useful to others in volunteerism.

The motives of individual volunteers are not necessarily unambiguously positive and they do not necessarily prefer the benefit of others. The negative ones include e.g.: rise of feeling of own importance, deficit of self-respect together with the wish to meet even more miserable people, domineeringness, effort to dominate and control others. Helping behaviour can also serve to steady the disturbed mental balance in consequence of an unsolved or unsolvable personal problem. In this connection the “helper’s syndrome” (Matoušek et al., 2003) must be mentioned – its background consists in a specific narcissistic disorder. The volunteer solves, mostly unknowingly, his or her early traumas of refused child, unsatisfied desire for recognition, gratefulness and admiration through helping. In all these cases, helping covers the actual motivation.

Certain set of personality dispositions including empathy play significant role in the decision to become a volunteer. For example M. Davis et al. (1999) found connection
between disposition empathy and the readiness to engage in certain types of volunteer activities. Similarly L.A. Penner and co-workers (Penner et al. 1995, 1997; Penner, 2002) proved increased level of traits of “prosocial personality”, i.e. empathy, altruism and moral justification in volunteers.
2. PROJECT RESEARCH GOALS

The **general goal** of the Research Project consists in achieving new knowledge on prosocial traits, prosocial tendencies, altruism and empathy in relation to helping professions.

**Partial goals** consist:

- in identification of the level and structure of prosocial traits, tendencies, altruism and empathy in students of helping professions, in difference by gender;
- in identification of the level of prosocial traits and tendencies, altruism and empathy in *specific helping population groups – volunteers* from among the students and their comparison to common students of helping professions;
- in acquisition of research data on *associations between groups of variables* and their description. **Independent variables** consist in: gender, volunteerism, the level of prosocial traits and tendencies found by the study, the level and structure of altruism; another group of **variables** (under certain circumstances dependent variables) consists of Big Five personality traits, components of emotional empathy, social desirability, arousability, optimism, value types and value orientation.

We expect the Project research to extend the theoretical knowledge on students of helping professions as well as on factors related to prosocial traits and tendencies, to altruism and empathy, usable for pregradual and postgradual preparation of students of helping professions.

In helping professions, prosocial behaviour with altruism, empathy, and social sensitivity constitutes a significant component of professional competences. Empathy, altruism and other described characteristics in humanistic psychotherapeutic and consulting approach are considered one of the basic or even key moments of the *helping relationship*. The research of constructs of altruism and empathy suggests that they are not fix traits and that they can be shaped and strengthened by right motivation and social training (Batson, 1991; Hatcher et al., 1994; McGaghie et al. 2002). Similarly to skills and theoretical knowledge, long-term development and training of empathy are indispensible for progress in the system of helping professions that brings benefit both to providers and to recipients. We consider the training of skills important for the quality of helping interaction extraordinarily significant particularly during special preparation for job in helping professions.
A significant trait of this study in the context of literature is a considerable large population sample acquired from university students across the Czech Republic, with accredited programs in the sphere of helping professions. The Research Project develops the current knowledge by extending the topic by some personality variables, understood as possible correlates of prosocial traits and tendencies, empathy and altruism.

The theoretical approach to the relevant issue, both with regard to setting of hypotheses and to interpretation of results, corresponds to the current level of knowledge on the relevant topic in world literature. The bases for a number of hypotheses consist in current knowledge on the characteristics of prosocial personality, particularly in the theory by L. A. Penner and colleagues (1995); the theory of altruism by J. Karylowski (1982); the theory by S. H. Schwartz on value types and value orientation (1992); C. D. Batson’s theory on empathy (1991) and further the knowledge on long-term and planned prosocial behaviour of volunteers (particularly the knowledge of L. A. Penner et al., 1995).
3. PROJECT HYPOTHESES

As the Project was segmented into two stages, the working hypotheses for partial goals are divided into two groups:

A. Hypotheses for description of population groups of students preparing for practice of helping profession.

B. Hypotheses for knowledge on prosocial traits and tendencies and their inner structure, on altruism and empathy and their mutual bonds in dependence on the found level and connection with other variables.

Hypotheses of group A

We expect the following particularities in the sense of difference or similarity in the personality structure of students of helping professions:

HA 1: The respondents show as high level of prosocial traits and tendencies measured by PSB (The Prosocial Inventory Battery)\(^3\) as the American students.

Hypothesis **HA 1** is related to the following scales: a) Social Responsibility – SR; b) Empathic Concern – EC; c) Perspective Taking – PT; d) Personal Discomfort – PD; e) Other-oriented Reasoning – O; f) Mutual Moral Reasoning – M; g) Self-Reported Altruism – SRA; h) Other-oriented Empathy; ch) Helpfulness.

**HA 1.1** Both genders **differ** in the level of prosocial traits and tendencies measured by PSB as follows:

- a) women score higher than men in the *empathy* (EC, PT, PD) components;
- b) both genders **do not differ** in the level of internalized *moral standards* (SR,M,O) and in the level of *self-reported altruism* (SRA).

**HA 1.2** Volunteers show higher level of prosocial traits and tendencies measured by PSB as compared to non-volunteers in both dimensions of prosocial personality:

- a) Other-oriented Empathy;
- b) Helpfulness.

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\(^3\) As the Czech Republic is lacking research solution of the topic of prosocial behaviour and no diagnostic tool to measure the internal structure of prosocial tendencies has been available so far, we have selected data from the USA, acquired from prof. L. A. Penner, the inventory author, for comparison of our results.
HA 2: With regard to the character of helping profession, we expect average and/or above-average levels of agreeableness and conscientiousness, average levels of extraversion, openness to experience and neuroticism (as measured by NEO) within the sample.

**HA 2.1** Men differ from table standard by: a) lower neuroticism; b) higher conscientiousness.

**HA 2.1.1** Women differ from table standard by: a) higher neuroticism; b) higher agreeableness; c) higher conscientiousness.

**HA 2.1.2** Both genders do not differ from table standard in the level of:
   a) Extraversion; b) Openness to Experience.

**HA 2.2** Both genders differ within the sample of students of helping professions from each other by men showing lower level of: a) Neuroticism; b) Agreeableness as compared to women.

**HA 2.3** Volunteers show higher score in the following scales as compared to table standard: a) Extraversion; b) Agreeableness; c) Conscientiousness.

**HA 2.3.1** Volunteers within the sample, as compared to non-volunteers, show higher level of: a) Extraversion; b) Agreeableness; c) Conscientiousness.

**HA 2.3.2** Women-volunteers are, as compared to men-volunteers, more:
   a) extraverted; b) agreeable.

**HA 4:** The level of social desirability is distributed randomly, both in sample (a) and in both genders in (b) and the subset of volunteers (c) (as measured by SDS scale).

**HA 5:** Factors of gender and volunteerism cause differences in the level of emotional empathy (as measured by MEE scale).

**HA 5.1** Women, as compared to men, show higher scores of emotional empathy.

**HA 5.2** Volunteers, as compared to non-volunteers, do not show different level of emotional empathy.

**HA 5.3** The respondents show as high emotional empathy as the American respondents.
HA 6: The observed sample shows identical level of: a) arousability; b) optimism as compared to the sample of helping professionals (as measured by AOS scale).

HA 6.1 Within the observed sample, the gender factor causes differences in the level of arousability and optimism: a) men show higher score of arousability as compared to women; b) men and women do not differ in their level of optimism.

HA 6.2 Volunteers show: a) the same level of arousability; b) higher level of optimism as compared to the non-volunteers from the sample.

HA 7: Exocentric altruistic orientation in the personality structure of the respondents prevails over endocentric altruistic orientation (as measured by EEA method).

HA 7.1 Women show higher level of altruism as compared to men.

HA 7.2 Volunteers show higher level of altruism as compared to non-volunteers.

HA 8: With regard to the character of helping profession, we expect the respondents to prefer group values included in the value orientation of a) Self-Transcendence; b) Anchoring to individualistic values (as measured by SVS – Schwartz Value Survey).

HA 8.1 The value orientation of men includes, more than the value orientation of women, the individualistic values of: a) power; b) hedonism; c) stimulation.

HA 8.2 Women, more than men, prefer the following values: a) benevolence; b) tradition.

HA 8.3 The motivation by values of benevolence is higher in volunteers as compared to non-volunteers.

Hypotheses of group B

The characteristics of prosocial traits and tendencies (components of prosocial personality according to PSB, i.e. empathy, moral standards of responsibility, altruism), found by research, are considered independent variables. The initial assumption is based on expectance of significant variability of the observed variables according to the source-independent factors.

HB 1: The level of the factor of prosocial personality of Other-oriented Empathy as independent source causes variability of the variable – level of traits of Big Five (as measured by PSB and NEO).
HB 1.1 The differentiated level of prosocial traits and tendencies in men causes variability of the variable of Neuroticism. The samples of men with differentiated level of the factor of Other-oriented Empathy differ from each other in the trait of Neuroticism so that higher level of that factor associates with lower Neuroticism.

HB 1.1.1 The differentiated level of the factor of Other-oriented Empathy in men causes increased variability of the following variables: a) Extraversion; b) Openness to Experience; c) Agreeableness; d) Conscientiousness. The sample of men with higher level of the factor of Other-oriented Empathy shows higher level of: a) Extraversion; b) Openness to Experience; c) Agreeableness; d) Conscientiousness, as compared to the sample of men with low level of that factor.

HB 1.2 The differentiated level of the factor of Other-oriented Empathy in women causes variability of the variable of the trait of Neuroticism so that the sample of women with higher level of the factor of Other-oriented Empathy differs from the sample of women with low level of that factor by drop of level of that trait.

HB 1.2.1 The sample of women with higher level of the factor of Other-oriented Empathy shows higher level of: a) Extraversion; b) Openness to Experience; c) Agreeableness; d) Conscientiousness, as compared to the sample of women with low level of the factor of Other-oriented Empathy.

HB 2: The differentiated level of prosocial tendencies – Helpfulness causes variability of the variables of the traits from the Big Five spectrum (as measured by PSB and NEO) as follows:

HB 2.1 The sample of men with higher level of prosocial tendencies – Helpfulness shows higher level of a) Extraversion; b) Agreeableness, as compared to the sample of men with low level of the factor of Helpfulness.

HB 2.2 The sample of women with higher level of prosocial tendencies – Helpfulness shows higher level of: a) Extraversion; b) Agreeableness, as compared to the sample of women with low level of the factor of Helpfulness.

HB 2.3 The factor of Helpfulness in both genders does not cause variability of the levels of: a) Neuroticism, b) Openness to Experience; c) Conscientiousness.
HB 3: The differentiated level of the factor of prosocial personality of Other-oriented Empathy causes variability of the variable – value orientation (as measured by PSB and SVS).

HB 3.1 The level of Other-oriented Empathy in men causes variability of the variable of value orientation of: a) Self-Transcendence; b) Conservation. The samples of men with differentiated level of the factor of Other-oriented Empathy differ from each other in these types of value orientation so that persons with higher Other-oriented Empathy show higher level of value orientation of: a) Self-Transcendence; b) Conservation.

HB 3.1.1 The level of Other-oriented Empathy in men – as independent variable does not cause increased variability of the variable of value orientation of Self-Enhancement. The sample of men with higher level of Other-oriented Empathy shows lower level of value orientation of Self-Enhancement, as compared to the sample of men with low level of the factor of Other-oriented Empathy, where the level of that value orientation rises.

HB 3.2 The level of Other-oriented Empathy in women as independent variable causes variability of the variable of the value orientation of: a) Self-Transcendence; b) Conservation so that higher level of Other-oriented Empathy associates with increased level of the above stated value orientation.

HB 3.2.1 The sample of women with higher level of Other-oriented Empathy shows lower level of value orientation of Self-Enhancement, as compared to the sample of women with low level of the Other-oriented Empathy, where the level of that value orientation rises.

HB 3.2.2 Other-oriented Empathy in both genders does not cause variability of the dispersion of data of the value orientation of Openness to Change.
4. SAMPLE DESCRIPTION, WORKING PROCEDURE

The basic sample of all university students of helping professions was determined in cooperation with a professional mathematician-statistician. The necessary number of respondents selected from the basic sample in order to achieve representativeness was sample by statistical-probability analysis of those samples. The method of selection met all attributes of random selection.

The target population consisted of university students of helping professions of the following disciplines: consulting in social work, education, elementary school teaching, social work, psychosocial rehabilitation, nursing, prevention and rehabilitation of social pathology, health care rescue worker, crisis radiology and toxicology, psychology, general medicine.

The research sample was acquired at the following university faculties of the Czech Republic: Faculty of Health and Social Studies of the University of South Bohemia in České Budějovice (Zdravotně sociální fakulta JU v Českých Budějovicích), Faculty of Education of the University of South Bohemia in České Budějovice (Pedagogická fakulta JU v Českých Budějovicích), Faculty of Theology of the University of South Bohemia in České Budějovice (Teologická fakulta JU v Českých Budějovicích), Faculty of Arts of the University of Ostrava in Ostrava (Filozofická fakulta OU v Ostravě), Faculty of Education of the University of Ostrava in Ostrava (Pedagogická fakulta OU v Ostravě), Faculty of Medicine of the Palacký University in Olomouc (Lékářská fakulta UP v Olomouci).

The study was implemented on a sample of 1 047 respondents. The integration of students into the sample resulted from their presence in lessons. The students were informed on the voluntary character of participation; only eight students refused to participate in the study. Questionnaires with incomplete data were subsequently eliminated from the above stated number. The final sample included 828 students aged 22.63 years, with standard deviation of 3.84 years. Even respondents whose number of missing values was negligible (about 0.2–5%) and distributed in different items stayed in the sample. Those values were substituted by average for each item.

From the gender perspective, the sample included higher number of girls than boys. In total there were 688 girls and 130 boys; 10 respondents were excluded from comparison of results by genders because they did not state their gender in the questionnaire.
The students were informed by a unified general instruction about the purpose of the study and the way of work with the questionnaires; the questioning was anonymous. The respondents stated their ages, genders and whether they are working as volunteers at present. The total number of volunteers amounted to 138 (37 men and 101 women) (the number of non-volunteers prevailed, n=690).

The author distributed most questionnaires personally and was present at their completion. About 40% questionnaires were distributed by her colleagues (university teachers) within their own teaching. During the completion the respondents did not get any additional information that could distort the results. The record sheets were collected immediately after collection; the respondents could not work with the questionnaires outside the lecture rooms.
5. METHODS USED

The following psychodiagnostic methods were used:

1. **PSB – The Prosocial Personality Battery** for measurement of prosocial traits and tendencies.
2. **NEO-FFI** – personality questionnaire.
3. **SDS** – Social Desirability Scale.
4. **MEE** – A Multi-dimensional Scale of Emotional Empathy for Adolescents and Adults.
5. **AOS** – Arousalability and Optimism Scale.
6. **EEA** – Combined method for ascertainment of *Endocentric and Exocentric altruism*.

**Ad 1. PSB – The Prosocial Personality Battery** – invented by L. A. Penner et al. (1995), in working translation by H. Záškodná, consist of 56 items (abbreviated version 30 items) for research of specific personality components in the sense of the tendency to think, feel and behave in specific manner. The measurement is based on the respondent’s information on himself or herself (self-report measure). When answering, the participants stated the level in which each item gives a true picture of them, by selecting the corresponding point on five-point Likert scale reaching from 1 (strong disagreement) to 5 points (strong agreement).

The subscale *Self-reported Altruism* (SRA) has a little different structure; it measures the answers also in a range of 1 to 5 points, but 1 point means never, 2 – once, 3 – more than once, 4 – often, 5 – very often (for example: “I helped carry things to an unknown person”).

The PSB inventory diagnoses **four components** classified into seven scales:

**1. Ascription of Responsibility** includes one subscale.
   - Social Responsibility; **SR**, from original items by S. H. Schwartz and J. A. Howard (1982), measures the tendency to assume responsibility for consequences of somebody’s acts. The scale called *Social Responsibility* includes items of the following type: “It is unforgivable to cheat another person, regardless from what such person has done to us.”
II. Empathy includes three subscales.

- Empathic Concern; EC, from the original of IRI items by M. H. Davis (1980, 1994), in the spirit of the tendency to experience concern, sympathy, care and interest for others who are in adverse situation. Typical formulation of the items is: “I often feel emotion on things occurring around me.”

- Perspective Taking; PT, from the original of items by M. H. Davis (1980, 1994). Perspective Taking corresponds to the tendency to adopt spontaneously the psychological perspective of another person. Example of item: “I sometimes try to understand my friends by imagining what the things look like from their perspective.”

- Personal Discomfort; PD, from the original of items by M. H. Davis (1980, 1994), measures the tendency to experience concern, anxiety and unease together with the person who ended up in uncomfortable interpersonal situation. Example of item: “I am scared of being in tense emotional situation.”

L. Penner et al. have called this subscale Personal Discomfort.

III. Moral Reasoning includes two subscales.

- Other-Oriented Reasoning; O, based on the theory of moral reasoning by L. Kohlberg (1984), and the Theory of Moral Development by C. Gilligan (1982). The scale ascertains the tendency to focus on the best interests of others when creating moral decisions. Typical item is as follows: “I usually base my decisions on my interest in others.”

- Mutual Moral Reasoning; M. This subscale is based on the theory of moral reasoning by L. Kohlberg (1984) and moral development by C. Gilligan (1982). The scale measures the tendency to consider the solution taking into account the interest of all parties concerned as the best solution in moral decision-making. Example of item: “I choose such behaviour that is based on considering the rights of all participants.”

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4 The names of the scales are not always identical to their original names. For example D. Batson called the emotional responses related to empathy Empathic Concern and Personal Distress. L. Penner et al. changed the names to Compassionate Concern and Personal Discomfort in order to avoid confusion with subscales in Davis’ empathy scale (Penner, L. A., Fritzche, B., Craiger, J. P., Freifeld, T., 1995).
IV. Helpfulness includes one subscale.

Self-reported Altruism; SRA, original items by J. P. Rushton et al. (1981), it captures the tendency to help individuals and groups of individuals in need. Example of item: “I offered a handicapped or elderly person to help him to cross the street.”

The seven subscales described above constitute two factors or dimensions of prosocial personality.

The first factor called Other-oriented Empathy consists of the sum of SR, EC, PT, M, O. People scoring high in this factor are probably predisposed to two types of experience – to emotional and cognitive empathy and to feeling of responsibility for the benefit of others and care for it. This factor concerns primarily prosocial ideas and feeling, summarizing particularly the cognitive and affective prosocial traits.

The other factor, Helpfulness, is a blend of PD (r) and SRA. People scoring high in it experience unpleasant empathic discomfort when another person experiences extreme anxiety and they further report help provided selflessly to a person in need. The items of this factor evaluate primarily the behavioral prosocial tendencies and the readiness to help.

Ad 2. NEO-FFI personality questionnaire by P. T. Costa and R. R. McCraee (1989), transformed by M. Hřebičková and T. Urbánek (2001) for the Czech population under the name of NEO-FFI five-factor personality inventory, measures general traits of personality through five scales. They are:

- Neuroticism scale (N) – it ascertains the level of adaptation and resistance on one hand and tendency to psychical exhaustion and unrealistic ideals on the other hand. It reflects how the individual experiences negative emotions like anxiety, embarrassment, shame, fears. The opposite pole consists in emotional stability, carefreeness, ease, balance.
- Extraversion scale (E) – it ascertains the quality and quantity of interactions among people, the need of stimulation. Extraversion includes particularly sociability, but also warmth, optimism, fellowship, activity, self-confidence, affiliativeness. Introversion is characterized by closedness, orientation on tasks, taciturnity, restraint, independency.
- Openness to Experience scale (O) – it measures seeking of new experiences, tolerance to and discovery of the unknown. Individuals with high scores are characterized by vivid imagination, intellectuality, originality, creativity, perceptiveness of inner feelings, interest in new experience, curiosity. Individuals with low scores are
characterized by conventionality, shallowness, conservativeness and lack of artistic traits, they prefer the known and tried, they hold down emotional reactions.

- **Agreeableness** scale (P) – it ascertains the quality of interpersonal orientation on an axis where one pole is sympathy and the other hostility. Interpersonal orientation is reflected in thinking, feeling and behaviour. Individuals with high scores show trustfulness, altruism, kindness, warm-heartedness and amiability. Persons with low scores are characterized by suspiciousness, vindictiveness, cynicism, heartlessness and lack of readiness to cooperate.

- **Conscientiousness** scale (S) – it ascertains the level of organization, motivation and persistence in target-defined behaviour. High score expresses diligence, tidiness, responsibility, discipline and reliability. On the contrary, low score attests unreliability, laziness, carelessness, aimlessness and lack of engagement (Pervin, 1993 in Hřebíčková, Urbánek, 2001).

The above stated five scales of the NEO inventory are included in 60 statements; the respondent’s tendency or diversion are captured by five-point Likert’s scale, from strong disagreement to strong agreement (number range from 0 to 4).

**Ad 4. Social Desirability Scale (SDS),** by D. P. Crowne and D. Marlowe, 1960, in working translation by H. Záškodná. For our purposes, we have used abbreviated 10-item version of the original 33-item questionnaire, due to the time demandingness of the whole questionnaire inquiry. The validity of the results of the abbreviated version was verified (see e.g. S. D. Barger, 2002). Agreement with an item means one point for the total score. Example of item: “I never hesitate to leave my work in order to help another person in need.”

High score corresponds, according to Crown and Marlow, to high need of social consent, affiliation, cooperation. Persons with high level of social desirability, as compared to persons with low level of social desirability, are more affiliative, express less aggression, are more cautious in demarcating their goals in a situation of risk adoption, have strong need of social approval, strive for harmonious interpersonal relationships. Alternative explanation of high score can be the effort to appear in socially more favourable light.

**Ad 5. Multi-dimensional Scale of Emotional Empathy for Adolescents and Adults – MEE,** by D. R. Caruso and J. D. Mayer (1998), in working translation by H. Záškodná, consists of 30 items in six subscales measuring the following factors:
1. Suffering – S, in the sense of sadness, worry at seeing pain of others, both people and animals. Typical item: “I am always upsam ple at seeing an injured animal along the road.”

2. Positive Sharing – PS, pleasing experiencing of joy and other positive emotions of other people. Typical item: “I am happy at seeing people treating each other nicely.”

3. Responsive Crying – RC, tendency to emotional response to negative conditions of other people. Example of item: “I cry when reading sad passages of books.”

4. Emotional Attention – EA, level of focusing attention on emotional manifestations of others. Typical item: “I hardly notice when people treat each other amiably.”

5. Feel for Others – FO, emotional harmony in the sense of letting impress oneself by emotions of others. Example of item: “I feel happy when seeing other people laughing and relishing.”


The respondents express their agreement, disagreement or neutral position to individual items through the five-point Likert’s scale using the zone of numbers from 1 to 5.

Additionally to the above stated six factors, the multidimensional scale measures total **Emotional Empathy** given by the sum of partial scores.

**Ad 6. Arousability and Optimism Scale – AOS**, by I. Sarmány-Schuller and A. L. Comunian (1997), as translated by K. Paulík (2008), includes 17 statements to which the respondents express their opinion by tendency and diversion on a scale in a range from 1 to 4. Typical item: “I like travelling without any specific program.”

The **Arousability** subscale (general emotional reactivity – arousability) measures individual differences in the structure of “arousal” reactions to events. It captures the strength of arousal in response to suddenly increased complicatedness of the situation, its changes, novelties or unexpected impulses. Arousable persons are more emotional (both in positive and negative sense), experience strong emotions easier, their emotional arousal lasts longer and they return later to the normal, non-aroused condition. Low score characterizes individuals who do not “get pumped up” by events so easily and take shorter time returning to the initial level of arousal. They show more resistance against anxiety, lower empathy, sensitivity, affiliation, social dependency etc.
The scale of *Dispositional Optimism* distinguishes people coping well and badly with life difficulties. The level of optimism is related to prevailing mood. High score on the AOS score is manifested as generalized expectation of positive course of events and of the result of an event or activity, as confidence in achieving the desirable results and as remaining in action although the procedure is lengthy and difficult. Low score corresponds to hesitation, doubts about positive development of events.

Typical item: “I believe the things to run according to my wish.” The advantage of this method consists in the fact that K. Paulík (2008) has compared the total score of both constructs, arousability and optimism, of the original Slovak sample of respondents to the Czech one.

**Ad 7. The combined method of Accident in the mountains measures the structure of altruism - EEA**, by A. Szuster, 2005 (in working translation by H. Záškodná, 2008) – it consists of combination of a short story and subsequent list of arguments with which the respondents reacts to the story contents. A. Szuster has called her method to distinguish two types of altruism: *endocentric* and *exocentric*, Accident in the mountains (*Wypadek w górach*).

The first part of the method describes an event in a mountain hut where the protagonist decides to take a trip in spite of adverse weather and does not return for a long time. The respondent’s task is to imagine being in the hut as one of the persons who should take an attitude to the given event.

The second part of the method includes a list of arguments that have character of reactions to an inner dilemma provoked by the story. It consists of a list of 29 items with ideas and feelings that a person in such situation could have. The list of items distinguishes two categories arguing by motives for non-helping (7 items) and for helping (22 items). The first group of arguments that could be called non-prosocial, includes arguments like “he will certainly return soon”, “he may have decided to stay over night in another hut”. The second group of items, with prosocial arguments, is put together so that “endocentric arguments” (the source of altruistic motivation is anticipation of desirable changes of own negative emotions or avoidance of undesirable changes in self-image) and “exocentric arguments (the source of altruistic motivation is anticipation of improved situation of the other person). The respondent’s task consists in marking any number of items of both types according to how they give a truest picture of him or her. If the respondent decides not to help, he or she does need to continue, and *vice versa*. The indicator of the type of prosocial orientation was
expressed by the size of EXO intensity according to the formula: 
\[ EXO = \frac{(Exocentric + 1)}{(Endocentric + 1) \times 10} \]

**Ad 8. SVS** – Schwartz Value Survey, by S. H. Schwartz, 1992 (in working translation by H. Záškodná) is structured into two parts. In the first part the respondents answer the question: “What values are important to me?” In the second part: “What principles do I follow in my life?” Each part includes a list of values to which the participant assigns a digit from 1 to 7. The higher the digit, the more significant, more important the relevant value is to the respondent. The respondents first select the most significant values out of a list of thirty, then opposite values to their personal orientation or with the lowest significance follow, and finally the remaining values.

They use the same procedure in the second part of the questionnaire, marking what significance the presented values have as a principle governing their life. The values stated from 31 to 57 are described by the inventory as acting styles.

S. H. Schwarz distinguishes ten types of significant motivationally different value types in his taxonomy. He understands the values as cognitive structures representing desirable goals of individuals and showed in their trans-situation behaviour. The values constitute a motivation continuum, not delimited impermeable categories. They are group into samples of value orientations related to specific motivation goals. They are:

1. **Universalism** (fairness, understanding, tolerance, protection of social and natural riches).
2. **Benevolence** (kind concentration on people the person is in frequent personal contact with, on their protection and support).
3. **Conformity** (turning away from behaviour that could cause harm to others or be in contradiction with social standards).
4. ** Tradition** (respect, fidelity, observance of customs).
5. **Security** (harmony and stability in the society, in interpersonal relationships and in relation to oneself).
6. **Power** (social status and prestige, control over people and resources).
7. **Achievement** (personal achievement based on competences).
8. **Hedonism** (pleasure and satisfaction of oneself).
9. **Stimulation** (excitement, new knowledge and challenges in life).
10. **Self-direction** (independent acting, possibility to create and learn to know).
The above stated values cluster into four quadrants in the circle, and their axes constitute two dimensions, i.e. *focus on oneself or not, and seeking of stability or change*. Value orientations:

- A. Self-Transcendence: Universalism and Benevolence
- B. Conservation: Conformity, Tradition, Security
- C. Self-Enhancement: Power, Achievement and part of Hedonism,
- D. Openness to Change: part of Hedonism, Stimulation, Self-Direction

The choice and verification of the diagnostic methods was performed on the base of pilot studies implemented by the Project Investigator.

Methods of mathematical statistics were used to verify the significance of differences in distribution of dependent variables as well as of connections among them: simple variance analysis (ANOVA), multifactorial variance analysis (MANOVA), Spearman correlation coefficient, Kolmogorov-Smirnov test, t-test. The calculations were performed by usual formulas with the help of SPSS, statistic program for Windows. The suitability of statistic analyses was ensured by continuous consultations with an expert – statistician.
6. CHART AND STATISTIC PROCESSING OF PROJECT A

6.1 Prosocial traits and tendencies of students of helping professions

The description of prosocial behaviour highlights the fact that no matter whether helping is spontaneous and short-term, or planned and permanent, it is an evolutionarily important behaviour shaped by essential cognitive and affective processes, including motives focused on oneself and on others, and with consequences to self-image of the individual and to social relationships. This section will present the data on the level and structure of prosocial traits and tendencies of future helping professionals – students of helping professions, differences depending on gender and on experience with organized and planned helping – volunteerism.

Hypothesis HA 1. includes predictions on identical level of prosocial traits and tendencies, as measured by The Prosocial Inventory Battery (PSB), with the sample of Americans.

Well arranged distribution of average values measured in the individual scales is presented in Table 1 where the columns correspond to scales of PSB inventory. The upper half of the table includes data of this study, the lower half includes data of the compared sample, the differences of averages of the sample of this study and of the Americans and the results of t-test.5

Table 1: Gross average scores, standard deviations in PSB subscales in the studied sample (n=828), compared sample (n=1112), and significance

<table>
<thead>
<tr>
<th>SS</th>
<th>SR</th>
<th>EC</th>
<th>PT</th>
<th>PD</th>
<th>O</th>
<th>M</th>
<th>SRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>19.8</td>
<td>13.6</td>
<td>16</td>
<td>6.1</td>
<td>10.8</td>
<td>10</td>
<td>14.3</td>
</tr>
<tr>
<td>SD</td>
<td>3.27</td>
<td>2.03</td>
<td>2.62</td>
<td>1.54</td>
<td>1.53</td>
<td>1.68</td>
<td>3.31</td>
</tr>
<tr>
<td>Americans average</td>
<td>27.4</td>
<td>15.7</td>
<td>15.4</td>
<td>11.9</td>
<td>11.6</td>
<td>12.2</td>
<td>15.9</td>
</tr>
<tr>
<td>SD</td>
<td>5.33</td>
<td>3.18</td>
<td>3.23</td>
<td>2.92</td>
<td>2.13</td>
<td>1.69</td>
<td>4.68</td>
</tr>
<tr>
<td>Difference of averages</td>
<td>–7.6</td>
<td>–2.1</td>
<td>+0.6</td>
<td>–5.8</td>
<td>–0.8</td>
<td>–2.2</td>
<td>–1.6</td>
</tr>
<tr>
<td>t-test</td>
<td>0.02</td>
<td>n</td>
<td>n</td>
<td>0.02</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
</tbody>
</table>

Legend to Table 1: The abbreviation SS = studied sample; SR – Social Responsibility; EC – Empathic Concern; PT – Perspective Taking; PD – Personal Discomfort; O – Other-oriented Reasoning; M – Mutual Moral Reasoning; SRA – Self-reported Altruism.

5 As the Czech Republic is lacking research solution of the topic of prosocial behaviour and no diagnostic tool to measure the internal structure of prosocial tendencies has been available so far, we have selected data from the USA, acquired from prof. L. A. Penner, the author of the PSB inventory used by us, for comparison of our results; n=1112.
All the values measured in the respondents of the interpreted study are, with one exception, lower than the expected levels. The exception consists in perspective taking of the other, where the Americans scored lower (for example: “I believe that everything has two sides, so I try to understand both of them.”)

Our respondents achieved lower values particularly in the Social Responsibility scale ascertaining the tendency to assume one’s share of responsibility in complicated causing of a situation, or to assume responsibility for another (for example: “If I broke a device because I handled it incorrectly, I would feel less guilty in case I received it partially damaged already”). The low score shows questioning of own responsibility for problems in the described situations. Students ascribe responsibility to another subject in the given situation context.

The above stated result can be linked also to M. Lerner’s idea included in his concept of belief in just world (1970). According to that author, people tend to think and behave in order to reestablish justice also in dependence on the cause of fault on the situation (attribution of altruism). People help only exceptionally to a person who has handled them ruthlessly, harmed them in any way, damaged them with the intent to achieve own profit. They also consider it fair for the one who has caused the situation to assume responsibility.

Markedly lower values, as compared to Americans, were measured also by the subscale PD, personal discomfort, that measures tendency to experience discomfort or anxiety when confronted with urgent situation of another person (for example: “When I see that someone is in need and needs help urgently, I go to pieces.”) Difficulties of others let the respondents of this study more indifferent and unconcerned as compared to Americans. Partial explanation can be related to the type of study orientation of a part of the respondents. Students of the Faculty of Health and Social Studies (e.g. of the discipline of Nursing, Health Care Rescuer) or of the School of Medicine are often closely confronted with seriously ill or injured people who expect the nursing staff particularly to help them professionally and calmly when solving their health problem. The students have some experience with urgent situations already, and therefore they can “harden” themselves to certain level and get emotional distance that subsequently can be shown in the lower score of personal discomfort. In this case it may not bee insufficient empathy, indifference and disinterest but for example learned control of own emotional conditions or beginning manifestation of “tiredness from sympathy”, described by M. L. Hoffman (2000), theorist of empathy.

With regard to the fact that the individual subscales include different numbers of items, the average values achieved in them have character of gross score and do not inform of the
character of the weight within the PSB inventory. The calculation of the weights of the individual subscales, given by the proportion of the number of items and the average in the relevant subscale, is shown in Diagram 1. The respondents score the highest in the scales that correspond in aggregate to moral reasoning, more exactly in the normative component of *Other-oriented Reasoning* (O=3.59), *Mutual Moral Reasoning* (M=3.31). They achieved higher scores also in two from three scales of empathy (EC with PT), more exactly in *Empathic Concern* (EC=3.38) and *Perspective Taking* (PT=3.19).

**Diagram 1: Average values of weighted scores in individual subscales in PSB, n=828; Americans n=1112**

<table>
<thead>
<tr>
<th>Weight of subscale</th>
<th>SR</th>
<th>EC</th>
<th>PT</th>
<th>PD</th>
<th>O</th>
<th>M</th>
<th>SRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americans</td>
<td>3.91</td>
<td>4.18</td>
<td>3.08</td>
<td>3.96</td>
<td>3.87</td>
<td>4.06</td>
<td>3.18</td>
</tr>
</tbody>
</table>

Legend to Diagram 1: SR – Social Responsibility; EC – Empathic Concern; PT – Perspective Taking; PD – Personal Discomfort; O – Other-oriented Reasoning; M – Mutual Moral Reasoning; SRA – Self-reported Altruism.

The chart under the diagram states average values of weighted scores in PSB subscales for the comparative sample.

Partial score of the empathy component of *Personal Discomfort* within PSB fell to last position with its value (2.02). The respondents got unexpectedly low scores also in the Social Responsibility Scale. (Example of question: “It is unforgivable to cheat another person, regardless from what such person has done to us.”) Under the perspective of the fact that two points on this PSB scale mean disagreement with the contents of the item, and agreement corresponds to 4 and 5 points, the average result of 2.7 in this SR subscale can be indisputable regarded as very low⁶.

Similarly low value was measured in *Self-reported Altruism* – SRA (2.85). But this value has different interpretation significance with regard to prosocial behaviour. The answer scale in a range from 1 to 5 points was formulated as follows in this case: 1 point = never, 2 = once,

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⁶ The scale of answers to all PSB items, except for the SRA subscale, oscillates in the range from 1 to 5; 1 point – I absolutely disagree, 2 – I disagree, 3 – I am not sure, 4 – I agree, 5 – I absolutely agree.
3 = more than once, 4 = often, 5 = very often. The respondents scored between 2 and 3 points on average, which means that they have some personal experience with kind altruistic selfless help of the following type: “I helped carry things (e.g. books, bag, parcels) to an unknown person.”

The variability of the differences stated is highly significant on 1% level of significance ($F_{[1.827]} = 926.6 > 4.824$).

As for comparison of average values of weighted scores of individual subscales in PSB with Americans (chart under Diagram 1), it can be seen that the respondents of interpreted study score lower in all subscales, except for Perspective Taking. Our students score higher in this cognitive component of empathy. The most frequent scores of items in the study implemented in the USA appear in the upper part of the scale, i.e. between 3 and 5 points.

As stated above, the subscales of PSB inventory 1–7 consist of the components of two factors of prosocial personality. The average and standard deviations of those factors, Other-oriented Empathy and Helpfulness for both compared population samples are summarized in Table 2.

Table 2: Averages, standard deviations in PSB factors, Americans, significance

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>70.05</td>
<td>23.20</td>
</tr>
<tr>
<td>SD</td>
<td>7.26</td>
<td>3.72</td>
</tr>
<tr>
<td>Median</td>
<td>69</td>
<td>20</td>
</tr>
<tr>
<td>n=828</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>82.3</td>
<td>27.7</td>
</tr>
<tr>
<td>SD</td>
<td>8.42</td>
<td>4.8</td>
</tr>
<tr>
<td>t-test</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>n=1112</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The measured average values of factor Other-oriented Empathy and factor Helpfulness, as compared to Americans, show significantly lower values of our respondents (see results of t-test) and only complete the above stated data.

The level of correlations of individual subscales 1–7 and both PSB factors for the whole sample, found by Spearman correlation coefficient, are presented in Table 3.
Table 3: Correlation coefficient for PSB subscales and components, n=828

<table>
<thead>
<tr>
<th>PSB subscales</th>
<th>SR</th>
<th>EC</th>
<th>PT</th>
<th>PD</th>
<th>O</th>
<th>M</th>
<th>SRA</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC</td>
<td>0.313(**)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT</td>
<td>0.369(**)</td>
<td>0.324(**)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PD</td>
<td>-0.147(**)</td>
<td>-0.071(*)&amp;</td>
<td>-0.121(**)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>0.174(**)</td>
<td>0.205(**)</td>
<td>0.244(**)</td>
<td>-0.170(**)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.192(**)</td>
<td>0.257(**)</td>
<td>0.199(**)</td>
<td>0.083(*)</td>
<td>0.374(**)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRA</td>
<td>0.189(**)</td>
<td>0.068</td>
<td>0.107(**)</td>
<td>-0.029</td>
<td>0.156(**)</td>
<td>0.106(**)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 1</td>
<td>0.764(**)</td>
<td>0.611(**)</td>
<td>0.696(**)</td>
<td>-0.157(**)</td>
<td>0.490(**)</td>
<td>0.513(**)</td>
<td>0.200(**)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>-0.021</td>
<td>0.103(**)</td>
<td>0.101(**)</td>
<td>0.298(**)</td>
<td>0.061</td>
<td>-0.018</td>
<td>0.052</td>
<td>0.061</td>
<td></td>
</tr>
</tbody>
</table>

Legend to Table 3: SR – Social Responsibility; EC – Empathic Concern; PT – Perspective Taking; PD – Personal Discomfort; O – Other-oriented reasoning; M – Mutual Moral Reasoning; SRA – Subject-reported altruism. Factor 1 – Other-oriented Empathy; Factor 2 – Helpfulness. (*) statistical significance on 5% level; (**) statistical significance on 1% level.

The statistic test proves high level of interconnection of the components of the construct of prosocial personality also with high percentage of significant correlations of subscales of both factors of prosocial personality that evidently constitute a consistent complex. From total number of thirty-six correlations, twenty-four correlations are positive and significant, although some of them are not convincingly high. But there are also four correlations indicating negative relationship; seven correlations are insignificant.

The first component of prosocial personality, Social Responsibility (SR), strongly correlates with the factor of Other-oriented Empathy; other significant correlations are not so close. It correlates negatively with Personal Discomfort (PD), which can be understood in the sense that the tendency to assume responsibility for acts of others is not united with Personal Discomfort.

In the second from the four components of prosocial personality, Empathy, both its cognitive component (PT) (correlating with all subscales and with both factors on 1% level) and the emotional component of empathy (EC) correlating with social responsibility, with moral standards of mutuality, but not correlating with altruism, play approximately the same role. Personal Discomfort (PD) with negative correlation constitutes an exception.

The third component of prosocial personality, moral reasoning (O, M) is firmly anchored in the factor of Other-oriented Empathy; the remaining significant associations of the partial components of this dimensions are not high.
The fourth component, altruism (SRA), associates the most strongly with Other-oriented Empathy and is followed by Social Responsibility (SR). Other associations are significant, although with lower values.

Personal Discomfort (PD) has significant position in prosocial personality; the six further subscales correlate negatively with it (SRA insignificantly, the other ones significantly). When ignoring the factor of Helpfulness, which includes the PD component, then only the M subscale constitutes an exception.

The factor of Other-oriented Empathy constitutes a firm, internally consistent complex, and correlates significantly positively with all subscales constituting this dimension (SR, EC, PT, M, O). The closeness of the relationships is high; the calculations significant on 1% level appear in a range from 0.490 to 0.764.

The factor of Helpfulness is internally less congruent; it correlates significantly with only one (PD) of the two components constituting it (PD and SRA). Also the associations of Helpfulness with the components of prosocial personality are significant but not too high. Correlations were recorded only in empathy (EC, PT, PD); the remaining associations (SR, O, M, SRA) are missing.

Both factors of Other-oriented Empathy and Helpfulness correlate mutually, but not significantly.

Before summarizing the described results it must be remarked that a lot of the above stated findings is correlative. That means that they show that two variables are mutually related, but the result does not allow concluding that one variable has led to the other.

Summary and interpretation of results

1. The centre of gravity of prosocial traits of respondents of the interpreted study is situated in the area of interiorized social moral standards of mutuality (M and O) and in the cognitive component of empathy, i.e. empathic concern, interest and understanding of the other’s situation by taking the other’s perspective (EC and PT).

With regard to the fact that the moral of care and mutual dependence constitutes an important part of altruistic personality and with regard to the fact that women constitute overwhelming majority of the respondents of this study (out of total number of 828, women are represented in proportion of 688 women to 130 men), the above stated findings correlate with the main conclusions of theory of moral reasoning by C. Gilligan. This significant author states that reasoning of women in solving moral dilemmas is based...
on empathy and sympathy and that mature caring perspective consists in mutual
dependency of people and concern for oneself and for others (Gilligan, 2001).

2. As for the structure of empathy of the respondents, two of its three components, i.e.
sympathy and understanding the other (EC and PT) are closely mutually interconnected,
while the third component, Personal Discomfort (PD) correlates negatively with both of
them. Explanation is offered by N. Eisenberg and R. A. Fabes et al. (1998) who
understand sympathy and understanding emotional condition of other person as
manifestation of orientation on others, while personal distress or discomfort as orientation
on oneself, i.e. as manifestation of need to relieve oneself. Empathy as partial substructure
of prosocial personality is obviously not monolithic; our results correspond to
multidimensional concept by M. H. Davis (1980, 1994) based on the assumption of
relative independence of individual components in the construct of empathy. Recent study
by C. Cliffordson develops that multidimensional concept, suggesting hierarchical
arrangement of empathy components, with one general dimension on the top. This
general dimension, identical to Empathic Concern (EC) overlaps to high level with
Perspective Taking (PT) and Empathic Fantasy\(^7\) (tendency to transmit oneself to feelings
and behaviours of fictive personalities in books, plays and movies). The general
dimension has the character of an integrated complex in which emotional reactivity
including also cognitive processes plays the main role (Cliffordson, 2002).

3. The less positive characteristics of the respondents include their unwillingness to assume
part of responsibility for adverse situation of the others and to engage in favour of them.
This phenomenon is particularly distinctive in case the respondents do not feel to have
caused the situation or the related circumstances (low score of Social Responsibility –
SR). The concept of social responsibility as component of prosocial personality is based
on the theory of personal standards and values by S. H. Schwartz (1977) in the context of
internal standards of behaviour created during socialization. In common life, prosocial
behaviour is activated by appeal to personal standards, to the feeling of sense of
belonging to others and conscience. The described result confirms the multiplicity and
varied interdependence of prosocial behaviour. The standard of social responsibility
constitutes only one determinant of behaviour, additionally to a lot of others, the common
action of which lead to higher or lower readiness to help.

\(^7\) The PSB inventory used in this study does not measure the fantasy component of empathy.
4. Components of prosocial personality: Social Responsibility (SR), cognitive and emotional empathy (PT, EC), network of internalized standards of mutuality (M,O) and realized altruism (SRA) are mutually closely related in students of helping professions (the correlation analysis has shown significant association of the above stated components). The finding fully supports the empathic-altruistic theory by C. D. Batson.

5. As (1991) as well as the found relationships between the degree of development of empathy and prosocial behaviour (Underwood and Moore, 1982). But it must be remarked that empathic concern by itself does not provoke help; empathy only evokes altruistic motivation, while altruistic motivation does not necessarily lead to helping behaviour. When it leads to helping behaviour, it is determined by other mediating variables, e.g. by the result of calculation in which costs and benefits are considered in context with other motives appearing at the same time.

6. Both dimensions of prosocial personality, Other-oriented Empathy and Helpfulness, differ from each other by internal composition, significance and function in the construct of prosocial behaviour. Calculations have confirmed the finding of L. A. Penner et al. (2005) of different extent of associations of both dimensions of prosocial personality with other variables. While we have recorded a lot of correlations with measured variables for the factor of Other-oriented Empathy, such associations are rare for the factor of Helpfulness. L. A. Penner stated that Other-oriented Empathy correlates quite highly with Agreeableness (dimension from Big Five) and with caretaker dimension (by Wiggin’s circumflex personality model; r=0.55 and 0.52), Helpfulness correlates lowly both with Agreeableness, and with caretaker dimension (r=0.11 and 0.15). Such results show that although both dimensions of prosocial personality predict helping behaviour, the motivation mechanism constituting their base differs in both of them. People with high score of Other-oriented Empathy are individuals caring for others; they probably help out of their own wish to be useful to others, accentuating their picture of good helping person. In case of Helpfulness, the question of motivation is less clear. Both dimensions also differ in relation to affective reactions to stress. Penner remarks that if an individual scoring high in the dimension of Other-oriented Empathy meets another person confronted with suffering, he or she displays affective reaction related to helping. Such reaction is not frequent in case of persons scoring high in Helpfulness.

7. Americans in general show higher level of prosocial behaviour as compared to Czech students. That difference probably reflects intercultural differences, more extensive experience with helping, e.g. within volunteer activities that have more tradition in
the USA, with broader engagement of different population groups in supportive, helping civic, church, self-helping or other associations (see e.g. data from National Centre for Volunteering Research, 2002 or extensive study implemented in the USA by T. W. Smith, 2006 8). The above stated result to disadvantage of the Czech future helping professionals is not rare; it confirms similar findings from studies implemented by author of this text (Mlčák and Záškodná 2006a, 2007, 2008), where samples of respondents, students of helping professions, got also lower values by the method of Prosocial Tendencies Measure – PTM (G. Carlo and B. A. Randall, 2002) and further by the method of Interpersonal Index Reactivity – IRI (Multidimensional scale of empathy by M. Davis 9).

6.1.1 Prosocial traits and tendencies by gender and volunteerism

With regard to the educational orientation of the respondents, we expect concordance of both genders in the level of prosocial traits and tendencies measured by PSB, except for empathy (EC, PT, PD) where we expect higher scores in women as compared to men. The calculated gross scores and weighted scores (the proportion of gross score and number of items in the relevant subscale) are summarized in Table 4.

Table 4: Average gross and weighted scores, standard deviations in PSB subscales by gender

<table>
<thead>
<tr>
<th>MEN</th>
<th>Average HS</th>
<th>SD</th>
<th>Average VS</th>
<th>WOMEN</th>
<th>Average HS</th>
<th>SD</th>
<th>Average VS</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=130 Subscale – items</td>
<td></td>
<td></td>
<td></td>
<td>n=688</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR</td>
<td>18.8</td>
<td>3.12</td>
<td>2.5</td>
<td>19.4</td>
<td>3.26</td>
<td>2.9+</td>
<td></td>
</tr>
<tr>
<td>EC</td>
<td>12.6</td>
<td>2.24</td>
<td>3.2</td>
<td>13.5</td>
<td>1.94</td>
<td>3.4+</td>
<td></td>
</tr>
<tr>
<td>PT</td>
<td>15.0</td>
<td>2.79</td>
<td>3.0</td>
<td>16.1</td>
<td>2.54</td>
<td>3.2+</td>
<td></td>
</tr>
<tr>
<td>PD</td>
<td>5.4</td>
<td>1.85</td>
<td>1.8</td>
<td>6.9</td>
<td>1.47</td>
<td>2.3+</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>11.0</td>
<td>1.41</td>
<td>3.7+</td>
<td>10.7</td>
<td>1.56</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>9.7</td>
<td>1.58</td>
<td>3.2</td>
<td>10.0</td>
<td>1.70</td>
<td>3.3+</td>
<td></td>
</tr>
<tr>
<td>SRA</td>
<td>15.2</td>
<td>3.80</td>
<td>3.0+</td>
<td>14.1</td>
<td>3.19</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Factor 1</td>
<td>64.1</td>
<td>6.91</td>
<td>2.9</td>
<td>67.6</td>
<td>7.20</td>
<td>3.1+</td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>23.6</td>
<td>4.31</td>
<td>3.0+</td>
<td></td>
<td></td>
<td></td>
<td>22.1</td>
</tr>
</tbody>
</table>

Legend to Table 4: SR – Social Responsibility; EC – Empathic Concern; PT – Perspective Taking; PD – Personal Discomfort; O – Other-oriented reasoning; M – Mutual Moral Reasoning; SRA – Subject-reported altruism. Factor 1 – Other-oriented Empathy; Factor 2 – Helpfulness. The data marked with plus (+) have gender difference in indicated direction.

9 The Czech working version of both above stated methods was created by PhDr. Z. Mlčák, Ph.D.
In spite of expectance, the differences between genders are distinctive; women score higher in five out of seven scales, particularly in empathy. By higher score in partial components of empathy, women increased total score of the factor of *Other-oriented Empathy*; on the contrary men show slightly higher score of altruism and thus of *Helpfulness*.

The highest inter-gender difference is related to the partial aspect of empathy, *Personal Discomfort* (PD) that reflects the level of personally oriented feelings of anxiety and uneasiness in intensive, emotionally charged interpersonal situations. Men master challenging situations subjectively better and with higher resistance than women; they do not get in emotional distress so easily when confronted with situation of need of another person.\(^\text{10}\)

### Table 5: Gross average scores, standard deviations in PSB subscales in volunteers – n=138

<table>
<thead>
<tr>
<th>PSB subscale</th>
<th>Men average n=37</th>
<th>SD</th>
<th>Women average n=101</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR</td>
<td>19.4</td>
<td>3.1</td>
<td>19.7+</td>
<td>3.6</td>
</tr>
<tr>
<td>EC</td>
<td>13.2</td>
<td>2.0</td>
<td>13.6+</td>
<td>2.3</td>
</tr>
<tr>
<td>PT</td>
<td>15.4</td>
<td>2.6</td>
<td>15.9+</td>
<td>2.7</td>
</tr>
<tr>
<td>PD</td>
<td>5.6</td>
<td>1.2</td>
<td>6.9+</td>
<td>1.6</td>
</tr>
<tr>
<td>O</td>
<td>10.7</td>
<td>1.4</td>
<td>10.8+</td>
<td>1.5</td>
</tr>
<tr>
<td>M</td>
<td>9.2</td>
<td>1.5</td>
<td>9.8+</td>
<td>1.6</td>
</tr>
<tr>
<td>SRA</td>
<td>15.1+</td>
<td>3.4</td>
<td>14.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Factor 1</td>
<td>64.9</td>
<td>6.7</td>
<td>66.7+</td>
<td>7.8</td>
</tr>
<tr>
<td>Factor 2</td>
<td>23.2+</td>
<td>3.3</td>
<td>22.4</td>
<td>3.5</td>
</tr>
</tbody>
</table>

**Legend to Table 5:** SR – Social Responsibility; EC – Empathic Concern; PT – Perspective Taking; PD – Personal Discomfort; O – Other-oriented reasoning; M – Mutual Moral Reasoning; SRA – Subject-reported altruism. Factor 1 – Other-oriented Empathy; Factor 2 – Helpfulness.

We performed similar comparison of the observed variables in the subset of volunteers. Specific group of volunteers consisting of 37 men and 101 women was created within the whole sample for this purpose. The score of individual prosocial components of volunteers and other indicators are summarized in Table 5. The data of the table show that the levels of volunteers coincide on principle with the levels of the whole sample; the total level as well as the distribution of the measured values differ only partially.

\(^{10}\) The results of the correlation analysis performed in both genders and volunteers are not included in this publication.
Multifactorial analysis of variance was used to find the influence of the factors of gender and volunteerism on the variability of the individual components of prosocial personality, including both factors. A selection of statistically relevant results is shown in Table 6.


Inter-gender differences are highlighted particularly in connection with empathy. The three components of empathy, Empathic concern, Perspective Taking and Personal Discomfort, including the summarized factor of Other-oriented Empathy – have significantly higher scores

<table>
<thead>
<tr>
<th>Source of variability</th>
<th>PSB subscales</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>SR – Social Responsibility</td>
<td>6.223</td>
<td>0.013*</td>
</tr>
<tr>
<td></td>
<td>EC – Empathic Concern</td>
<td>19.234</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>PT – Perspective Taking</td>
<td>11.013</td>
<td>0.001**</td>
</tr>
<tr>
<td></td>
<td>PD – Personal Discomfort</td>
<td>12.123</td>
<td>0.001**</td>
</tr>
<tr>
<td></td>
<td>O – Other-oriented Reasoning</td>
<td>0.736</td>
<td>0.391</td>
</tr>
<tr>
<td></td>
<td>M – Mutual Moral Reasoning</td>
<td>4.493</td>
<td>0.034*</td>
</tr>
<tr>
<td></td>
<td>SRA – Self-reported Altruism</td>
<td>6.663</td>
<td>0.010*</td>
</tr>
<tr>
<td></td>
<td>Factor 1 – Other-oriented Empathy</td>
<td>14.884</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>Factor 2 – Helpfulness</td>
<td>0.016</td>
<td>0.898</td>
</tr>
<tr>
<td>Volunteerism</td>
<td>SR – Social Responsibility</td>
<td>0.366</td>
<td>0.545</td>
</tr>
<tr>
<td></td>
<td>EC – Empathic Concern</td>
<td>2.854</td>
<td>0.092</td>
</tr>
<tr>
<td></td>
<td>PT – Perspective Taking</td>
<td>0.599</td>
<td>0.439</td>
</tr>
<tr>
<td></td>
<td>PD – Personal Discomfort</td>
<td>0.253</td>
<td>0.615</td>
</tr>
<tr>
<td></td>
<td>O – Other-oriented Reasoning</td>
<td>0.393</td>
<td>0.531</td>
</tr>
<tr>
<td></td>
<td>M – Mutual Moral Reasoning</td>
<td>5.640</td>
<td>0.017*</td>
</tr>
<tr>
<td></td>
<td>SRA – Self-reported Altruism</td>
<td>0.271</td>
<td>0.603</td>
</tr>
<tr>
<td></td>
<td>Factor 1 – Other-oriented Empathy</td>
<td>0.111</td>
<td>0.739</td>
</tr>
<tr>
<td></td>
<td>Factor 2 – Helpfulness</td>
<td>0.280</td>
<td>0.597</td>
</tr>
<tr>
<td>Gender* Volunteerism</td>
<td>SR – Social Responsibility</td>
<td>2.813</td>
<td>0.094</td>
</tr>
<tr>
<td></td>
<td>EC – Empathic Concern</td>
<td>4.501</td>
<td>0.034*</td>
</tr>
<tr>
<td></td>
<td>PT – Perspective Taking</td>
<td>1.803</td>
<td>0.180</td>
</tr>
<tr>
<td></td>
<td>PD – Personal discomfort</td>
<td>2.584</td>
<td>0.108</td>
</tr>
<tr>
<td></td>
<td>O – Other-oriented Reasoning</td>
<td>2.905</td>
<td>0.089</td>
</tr>
<tr>
<td></td>
<td>M – Mutual Moral Reasoning</td>
<td>2.155</td>
<td>0.143</td>
</tr>
<tr>
<td></td>
<td>SRA – Self-reported Altruism</td>
<td>0.788</td>
<td>0.375</td>
</tr>
<tr>
<td></td>
<td>Factor 1 – Other-oriented Empathy</td>
<td>1.264</td>
<td>0.261</td>
</tr>
<tr>
<td></td>
<td>Factor 2 – Helpfulness</td>
<td>0.219</td>
<td>0.640</td>
</tr>
</tbody>
</table>

Legend to Table 6: F = calculation of resulting proportion of dispersions; n = insignificant; (*) significance 5%; (**) significance 1%.
of women than men, which was expected (difference on 1% level). Men, on the contrary, show prosocial tendencies by stating altruistic acts they have performed in the past (SRA, difference on 5% level).

Another significant gender difference was observed in the level of internalized standards. Women score higher than men in the components of Ascription of Responsibility and Mutual Moral Reasoning (the differences are significant on 5% level).

The factor of volunteerism influences prosocial traits and tendencies much less, acting significantly as indicator of variability of the measured values only in the normative component of Mutual Moral Reasoning (M): $F_{[1.827]}=5.64>F_{[1.\infty]}=3.84$ on 5% level).

Mutual interaction of the factor of gender and volunteerism is significantly reflected in prosocial traits and tendencies only into the emotional component of Empathic Concern (EC) in the sense that women-volunteers show more empathy, concern and interest in others ($F_{[1.827]}=4.501>F_{[1.\infty]}=3.84$) (on 5% level) than men-volunteers.

Summary and interpretation of results
1. The level of prosocial traits and tendencies is demonstrably influenced by gender. Women score markedly higher than men in six out of the nine observed categories (Table 6), particularly in relation to empathy. Women show more concern for others, they are more empathic, more able to take the other’s perspective and more distressed when confronted with other’s suffering as compared to men.

Men, on the contrary, report altruistic acts performed in the past more often, which can be interpreted as inconsistent finding in the relationship to the basic empathic-altruistic hypothesis. But some questions of the questionnaire ascertain acts that can have rather courtesy character, they can correspond more to the conventional picture of male role, of the behaviour of “well educated” young man or attentive passer-by (example of such item: “I helped carry things (e.g. books, bag, parcels) to an unknown person.”)

Additionally to higher empathy, women show higher level of mutuality and solidarity and they are more ready to assume responsibility for other person. They show more collectivistic style of action, they prefer protection and harmony in relationships. This gender difference is stated by other studies too, for example J. Bybee (1998) interprets it as consequence of different socialization practices with stress on higher moral standards of girls than those of boys and with development of characteristics like tactfulness, friendliness, kindness, mutuality and concern for others in girls. On the contrary, aggressiveness, belligerence and competitiveness is tolerated in hither level to boys than
to girls. Also E. Hatfield et al. (1994) state that both genders differ significantly in social interactions. Rather collectivistic-oriented women are more attentive to emotional manifestations in social environment, they establish and keep eye contact more frequently, they are aware of own emotions better than men and they interpret emotional conditions of others with higher level of empathy.

But it must be stressed that prosocial behaviour as a whole includes great quantity of different forms. That is why in real, particularly urgent situations, men help more than women (Piliavin and Unger, 1985). Women help more often than men in non-endangering situations with lower risk or in situations requiring long-term support, they work for example as volunteers with old infirm people, handicapped and ill children. Men avoid such long-term challenging activities. It is obvious that the PSB inventory registers only a part of prosocial traits and tendencies reflected in the effort to help others in real life.

2. Volunteer experience influences prosocial traits and tendencies much less than gender; it is manifested significantly only in the normative component of mutual moral reasoning. When formulating the hypothesis of higher level of prosocial traits in volunteers, we based our reasoning on a number of findings showing that certain sample of personal dispositions, including empathy, interiorized standards of mutuality, personal responsibility and altruistic tendencies, plays a role in the decision to become volunteer (for example Omoto and Snyder, 1995; Penner et al., 1995, 2005; Davis et al., 1999; Penner, 2002, 2004; Finkelstein et al., 2005).

L. A. Penner found significant link of prosocial dimension of Other-oriented Empathy with the amount of time devoted to volunteerism. He described the differentiated amount of contacts with HIV/AIDS patients, directly proportional to the level of prosocial traits of the volunteers. He found also a link between personality and prosocial behaviour in working environment, or more exactly correlation between empathy and the readiness to engage in Organizational Citizenship Behaviour (OCB) he classifies in the same group as the help offered within volunteerism (Penner et al., 1997 etc.). We expected slightly high levels of prosocial characteristics of volunteers, but with regard to the fact that the comparison of volunteers was not performed with common population but with future helping professionals from whom higher or at least average level of prosocial traits and tendencies is expected, the result can be considered adequate. Alternative explanation can consist in the low number of volunteers in our sample and particularly in the time-limited volunteer practice of some of them as compared to volunteers from abroad.
Conclusion
The hypothesis HA 1 on intercultural concordance in the level of prosocial traits and tendencies of the construct of prosocial personality of the samples of Czechs and Americans was confirmed only in partial components. The Czechs scored in general less as compared to the Americans, but the differences measured were not essential. Significant differences (with significantly lower scores of the Czechs) were registered in Social Responsibility, further in the emotional aspect – Personal Discomfort and in both factors of prosocial personality.

The hypothesis HA 1.1 on inter-gender differences and similarities was confirmed in point a). As was expected, women show higher empathy in all the components measures, as compared to men. In point ad b), the hypothesis on the concordance of genders in the components of moral reasoning and assuming responsibility for acts of others was not confirmed. The internalized standards of mutuality are shown more intensively in women than in men. The similarity of men and women is only partial in this area.

Volunteers do not show higher level of prosocial traits and tendencies as compared to non-volunteers. The hypothesis HA 1.2 was not confirmed. Volunteers differ from non-volunteers only by more internalized socialized standards of mutuality; moreover, volunteers-women by more empathy.

6.2 Personality traits according to Five-factor model in students of helping professions

To assess the personality traits of students of helping professions, the indicators of those traits were evaluated with the help of a number of methods of mathematical statistics. The verification of assumption of normality of distribution of measures was performed by Kolmogorov-Smirnov test on all samples. To test the differences of measured and table values we used one-choice t-test. The results of statistical analysis are synoptically presented in the following tables.

Table 7: Big Five personality traits in the sample respondents

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>Measured values – average</th>
<th>Measured values – SD</th>
<th>Tab. value – average</th>
<th>Tab. value – SD</th>
<th>t-test</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism – N</td>
<td>22.24</td>
<td>7.46</td>
<td>22</td>
<td>8</td>
<td>1.01</td>
<td>0.313</td>
</tr>
<tr>
<td>Extraversion – E</td>
<td>31.61</td>
<td>6.63</td>
<td>32</td>
<td>8</td>
<td>0.987</td>
<td>0.324</td>
</tr>
<tr>
<td>Openness – O</td>
<td>27.39</td>
<td>5.57</td>
<td>28</td>
<td>7</td>
<td>0.977</td>
<td>0.329</td>
</tr>
<tr>
<td>Agreeableness – P</td>
<td>31.55</td>
<td>5.23</td>
<td>30</td>
<td>6</td>
<td>1.048</td>
<td>0.295</td>
</tr>
<tr>
<td>Conscientiousness – S</td>
<td>31.02</td>
<td>6.36</td>
<td>29</td>
<td>7</td>
<td>1.064</td>
<td>0.287</td>
</tr>
</tbody>
</table>
Table 7 shows high concordance of the levels of Big Five traits found by us with the population standard; the average values of personality traits are situated in standard range. The respondents of this study score approximately at the same level as common population, in all five factors measured; most subjects do not differ from common population, or there are possibly bipolar deviations from average, which do not look as deviations in final average.

Diagram 2: Big Five personality traits in the sample of respondents (n=828)

Legend to Diagram 2: From the left: Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness.

Almost absolute concordance of table standard and our measures was recorded for Neuroticism, Extraversion and Openness to Experience. The test statistics for Neuroticism was $t(827)=1.01$, for Extraversion $t(827)=0.99$, for Openness to Experience $t(827)=0.977$, the critical value of t-distribution at significance level of 0.05 being 1.66. We recorded slight differences in the traits of Agreeableness and Conscientiousness, in the sense of higher representation of more agreeable and conscientious individuals among students; but the differences are not statistically significant either. The test statistics for the factor of Agreeableness is $t(827)=1.048$, for the factor of Conscientiousness $t(827)=1.064$ (critical value 1.66). For more detailed survey of distribution of measured values see Table 8.

Table 8: Distribution of Big Five traits in categories of below-average, medium and above-average level

<table>
<thead>
<tr>
<th>Big Five</th>
<th>Average of sample</th>
<th>SD</th>
<th>Below-average abs. frequency %</th>
<th>Average abs. frequency %</th>
<th>Above-average abs. frequency %</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 828</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>22.24</td>
<td>7.46</td>
<td>95</td>
<td>11.5</td>
<td>620</td>
</tr>
<tr>
<td>Extraversion</td>
<td>31.61</td>
<td>6.63</td>
<td>102</td>
<td>12.3</td>
<td>643</td>
</tr>
<tr>
<td>Openness</td>
<td>27.39</td>
<td>5.57</td>
<td>78</td>
<td>9.4</td>
<td>675</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>31.55</td>
<td>5.23</td>
<td>49</td>
<td>6.0</td>
<td>624</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>31.02</td>
<td>6.36</td>
<td>57</td>
<td>6.9</td>
<td>618</td>
</tr>
</tbody>
</table>
The average values found in the respondents are mostly situated in the medium range for all factors, more exactly from 74.6% to 81.5% of all measured values. Considerable part of subjects does not differ from common population in the personality traits ascertained by the relevant method.

About 9% of the measured values correspond to the negative pole of the traits measured (by individual traits, from 6.0% to 12.3% of all data are situated in the below-average range); the positive pole is a little more frequent; students from 9.1 to 18.7 percent of all data are situated in the above-average range by individual traits.

We found the most distinctive representation of above-average levels in the factors of Agreeableness and Conscientiousness. On the contrary, the students have the most marked average level in the feature of Openness to Experience, 81.5% of them falling into this range. The data are organized in Diagram 3 for illustration.

Diagram 3: Distribution of Big Five traits in categories of below-average, medium and above-average level

Associations between the personality attributes of the respondents, verified by Spearman correlation coefficient, complete the characteristics of the sample both in distribution and in the structure of the Big Five traits. For example extraverts of the sample are most frequently agreeable and conscientious (significantly at a level of 1%), a little less frequently open to experience (5% significance) and only rarely neurotic (negative correlation at 1% level of significance). Openness to Experience does not correlate with others except for Extraversion. Neurotics from the sample are more frequently introvert, less agreeable, inconscientious, lazy.
Table 9: Correlation between Big Five traits in the sample

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>E</th>
<th>O</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>−0.381**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>0.000</td>
<td>0.083*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>−0.250**</td>
<td>0.200**</td>
<td>0.050</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>−0.314**</td>
<td>0.135**</td>
<td>−0.042</td>
<td>0.120**</td>
</tr>
</tbody>
</table>

Differences between the population standard and the sample of students will surface more markedly when considering the inter-gender peculiarities. Then it is obvious that the variability of the acquired data is typically determined by the gender factor and that mere analysis of the sample as a whole would lead to wrong conclusions.

Table 10: Averages, standard deviations, test statistics, significance, difference of averages and standardized values for both genders

<table>
<thead>
<tr>
<th></th>
<th>Men (n=130)</th>
<th></th>
<th>Women (n=688)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>SD</td>
<td>Comparison to standard</td>
<td>t</td>
</tr>
<tr>
<td>Neuroticism – N</td>
<td>18.69</td>
<td>8.04</td>
<td>−3.31</td>
<td>−4.69</td>
</tr>
<tr>
<td>Extraversion – E</td>
<td>30.96</td>
<td>7.41</td>
<td>−1.04</td>
<td>−1.60</td>
</tr>
<tr>
<td>Openness to Experience – O</td>
<td>26.47</td>
<td>6.03</td>
<td>−1.53</td>
<td>−2.89</td>
</tr>
<tr>
<td>Agreeableness – P</td>
<td>29.50</td>
<td>4.70</td>
<td>−0.50</td>
<td>−1.21</td>
</tr>
<tr>
<td>Conscientiousness – S</td>
<td>31.6</td>
<td>6.55</td>
<td>+2.60</td>
<td>4.53</td>
</tr>
</tbody>
</table>

The averages, standard deviations and comparison to table standard (the difference of averages in column 4 corresponds to table average from which the calculated average of the sample by genders was subtracted) are stated in Table 10.

The sample of **men** differs from population average statistically significantly in three source traits: N, O, S. Men show lower scores for **Neuroticism** and **Openness to Experience**; on the contrary, their scores for **Conscientiousness** are significantly higher. Emotional balance, ability to cope with worries, resistance against anxiety and everyday problems is typical for male students. Lower level of Openness is reflected in the tendency to conventionality and conservativeness of students in attitudes and opinions. Higher **Conscientiousness** of the students expresses systematic and disciplined nature, particularly in task-defined activities.
Men do not differ from population standard in further source traits, i.e. *Extraversion* and *Agreeableness*; they score slightly lower in both, but still in the range of broader standard. Those slightly reduced values suggest that there is slightly higher number of withdrawn, introverted, less affiliative and socially agreeable individuals among students, as compared to table standard.

**Women** differ from the table standard too, in four source traits from five, but more markedly in *Agreeableness* and *Conscientiousness*. Traits like kindness, cooperativeness, trustfulness, tolerance and diligence constitute dominant personality traits of female students of helping professions. Very marked traits include also demonstrable *neuroticism*, with balance that can be easily disturbed by stressing events and with worried character, not only as compared to population average but also as compared to more emotionally stable male students. The personality profile of female students is completed by high score of *Conscientiousness*, similarly to males, with traits of reliability, diligence, discipline, tidiness and responsibility.

The level of *Openness to Experience* is slightly reduced, less than that of men. Women, similarly to men, are not much interested in new things; they rather prefer known and tried things. Table 11 includes significant differences of the observed basic personality traits between genders.

**Table 11: Significant values of inter-gender differences in Big Five traits in the sample**

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent variable</th>
<th>F</th>
<th>sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>N – Neuroticism</td>
<td>34.358</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>E – Extraversion</td>
<td>1.436</td>
<td>0.231</td>
</tr>
<tr>
<td></td>
<td>O – Openness to Experience</td>
<td>2.269</td>
<td>0.132</td>
</tr>
<tr>
<td></td>
<td>P – Agreeableness</td>
<td>11.055</td>
<td>0.001**</td>
</tr>
<tr>
<td></td>
<td>S – Conscientiousness</td>
<td>1.781</td>
<td>0.182</td>
</tr>
</tbody>
</table>

**Legend to Table 11:** F = calculation of resulting proportion of dispersions; sign. = significance; n = insignificant; (***) = significance at 1% level.

The statistics specifies the above stated inter-gender differences within the sample. The gender factor differentiates significantly two traits of Big Five, N and P. Women are more neurotic, unstable, tense and worried as compared to men; on the contrary, men show more self-confidence, stability and relaxedness in experiencing and behaviour:

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11 Table 11 shows the sector of statistic calculation by multifactorial variance analysis. For the whole calculation for these and other variables see Annex.
N (F[1.827]=34.358>6.64 at 1% level). Women are also markedly more amiable, kind, while men show this source feature more markedly in opposite variant, i.e. in distrust, hostility: P (F[1.827] = 11.055>6.64 at 1% level of significance). The figure of higher level of Neuroticism and Agreeableness of female students, future helping professionals, completes the above described finding of higher level of those source traits not only as compared to the males of the sample but also to table standard.

Additionally to inter-gender differences, we were interested in any possible personality particularities of the specific subset of volunteers whose results, including statistical indicators, are stated in Table 12.

Table 12: Basic statistical parameters of Big Five in volunteers

<table>
<thead>
<tr>
<th>n=138</th>
<th>Average of sample</th>
<th>SD</th>
<th>Table value – average</th>
<th>Table value – SD</th>
<th>t</th>
<th>Sig. (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>22.65</td>
<td>7.20</td>
<td>22</td>
<td>8</td>
<td>1.096</td>
<td>0.028</td>
</tr>
<tr>
<td>Extraversion</td>
<td>32.98</td>
<td>6.28</td>
<td>32</td>
<td>8</td>
<td>1.441</td>
<td>0.013</td>
</tr>
<tr>
<td>Openness</td>
<td>28.51</td>
<td>5.57</td>
<td>28</td>
<td>7</td>
<td>0.713</td>
<td>0.479</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>32.43</td>
<td>4.12</td>
<td>30</td>
<td>6</td>
<td>3.665</td>
<td>0.001**</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>31.33</td>
<td>5.99</td>
<td>29</td>
<td>7</td>
<td>1.877</td>
<td>0.038*</td>
</tr>
</tbody>
</table>

Legend to Table 12: n – number of respondents, SD – standard deviation, t – t-test values, Sig. (t) – t-test significance.

In the distribution of personality traits of Big Five, Agreeableness (test statistics t(137)=2.36<3.67 at 1% level) dominates in volunteers of both genders, followed by Conscientiousness (test statistics t(137)=1.66<1.88 at 5% level). The remaining three calculations for Neuroticism, Extraversion, Openness to Experience did not exceed the critical value and are insignificant. Volunteers as a whole do not differ from common population in the level of these three traits; their values are situated in the range of broader standard, although slightly increased variability of Extraversion suggests higher level of that feature in a part of volunteers, or alternatively – higher number of volunteers with that feature.

Table 13: Inter-gender differences in Big Five in volunteers

<table>
<thead>
<tr>
<th>Men n=37</th>
<th>Women n=101</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men average</td>
<td>Table average</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>21.7−</td>
</tr>
<tr>
<td>Extraversion</td>
<td>30.8−</td>
</tr>
<tr>
<td>Openness to Experience</td>
<td>28.2+</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>31.2+</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>31.6+</td>
</tr>
</tbody>
</table>
But when looking at inter-gender differences within the sample of volunteers (Table 13), we can see that the suggested differences as compared to population average markedly deepen. The plus or minus signs mark positive or negative differences in relation to table standard of the traits.

The relevance of the described differences was assessed by multifactorial variance analysis; the main results are presented synoptically in Table 14.

Table 14: Difference in Big Five traits between volunteers and non-volunteers and interaction of volunteerism and gender factors\(^{12}\)

<table>
<thead>
<tr>
<th>Source of variability</th>
<th>Dependent variable</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volunteerism</td>
<td>N – Neuroticism</td>
<td>0.124</td>
</tr>
<tr>
<td></td>
<td>E – Extraversion</td>
<td>6.28*</td>
</tr>
<tr>
<td></td>
<td>O – Openness</td>
<td>0.034</td>
</tr>
<tr>
<td></td>
<td>P – Agreeableness</td>
<td>3.96*</td>
</tr>
<tr>
<td></td>
<td>S – Conscientiousness</td>
<td>8.19**</td>
</tr>
<tr>
<td>Gender x volunteerism</td>
<td>N – Neuroticism</td>
<td>1.050</td>
</tr>
<tr>
<td></td>
<td>E – Extraversion</td>
<td>3.86*</td>
</tr>
<tr>
<td></td>
<td>O – Openness</td>
<td>0.493</td>
</tr>
<tr>
<td></td>
<td>P – Agreeableness</td>
<td>4.13*</td>
</tr>
<tr>
<td></td>
<td>S – Conscientiousness</td>
<td>0.002</td>
</tr>
</tbody>
</table>

Legend to Table 14: F = calculation of resulting proportion of dispersions; (**) significance at 1% level; (*) = significance at 5% level; n = insignificant result.

As expected, the factor of volunteerism constitutes distinctive source of variability for Big Five traits. More exactly, volunteers differ from non-volunteers within the sample strikingly in three source traits:

1. volunteers are more extraverted (calculations in Table 14 specify that only female students-volunteers show high Extraversion score; male students-volunteers do not differ from non-volunteers): (F\(_{[1.827]}\) = 6.281>3.84);
2. more agreeable: P (F\(_{[1.827]}\) =3.96>3.84);
3. conscientious: S (F\(_{[1.827]}\) =8.199>6.64).

Differences can be seen also in combined effect and interaction of both factors (gender – volunteerism). Female volunteers are more extraverted: E (F\(_{[1.827]}\) =3.864>3.84) and more agreeable: P (F\(_{[1.827]}\) =4.132>3.84) than male volunteers and show both traits at higher level than both genders of non-volunteers too (the differences are significant at 5% level of significance).

\(^{12}\) Table 14 shows the sector of statistic calculation by multifactorial variance analysis. For the whole calculation for these and other variables see Annex.
Summary and interpretation of results

1. The sample of students of helping professions as a whole does not differ too much from the population standard in five basic personality traits. But when looking at the distribution of the traits in more detail, we can find marked gender differences in which future helping professionals differ from the table standard. (Bipolar differences were caused by insignificant calculations.)

2. Male respondents differ from population average demonstrably in three factors: in lower Neuroticism, lower Openness to Experience and higher Conscientiousness. Emotionally stable, self-possessed individuals resistant against anxious conditions and everyday problems, able to cope well with common concerns prevail among the students. They incline to higher conventionality and traditional view on authority and society, to rigidity, conservativeness in attitudes and opinions. They show excellent working qualities, reliability, planned and disciplined nature, particularly in task-defined activities.

   In the level of further two factors, i.e. Extraversion and Agreeableness, which are closely related to quantity and quality of social interactions, to Sociability and Affiliativeness, the students did not exceed the average limit. Males include both extraverted and kind individuals and slightly more frequently introverted, autonomous, independent, but also non-cooperative and non-kind individuals. According to the typology suggested by M. Hřebičková (2008), the personality profile of males coincides the most with the “well adapted type” showing low level of Neuroticism together with higher or medium score in other dimensions of the five-factor personality model.

3. Female respondents, who prevail in helping profession and shape the colour of the personality scheme of those professions to a large degree, differ from table standard more than males. The characteristic of their personality is dominated by two most distinctive traits by which they differ from the population standard, Agreeableness and Conscientiousness. The students show those two source personality traits in increased level. The personality of female student of helping profession can be delimited in aggregate by higher level of altruism, understanding for others, prevailing kind and nice behaviour, working discipline and responsibility, tidiness and self-demandingness. This resulting description matches the results of formerly implemented studies (Mlčák and Záškodná, 2006a, b, 2007, 2008).

   The above stated mosaic of female traits includes also higher neuroticism, worriedness and instability, both as compared to population average and as compared to substantially more stable male counterparts of this study. The feature of neuroticism is a part of gender
difference confirmed across cultures, the transcultural validity of which was confirmed by M. Hřebíčková (2004) in an extensive study implemented in twenty-five countries of the world through the NEO inventory. The author highlights in her study, among other things, the higher emotional vulnerability, anxiousness, easier falling embarrassed, repeated fear and sadness of women as compared to men.

From the perspective of evolutionary psychology and sociobiology, within which the concepts of kinship altruism and reciprocal altruism emerged, K. MacDonald (1995) points out that negative emotions can associate with kinship altruism, facilitation of origination of empathic feelings, e.g. empathic worry, empathy or distress. Negative oversensitiveness – neuroticism as opposite field of emotional stability, together with experienced negative emotions, can constitute the catalyst or “main driver of behaviour”. Negative emotions can facilitate also the reciprocal altruism by allowing feelings of anger and aversion to non-cooperating, exploiting individuals. The inter-gender difference consisting in women’s average inclination to higher Agreeableness and lower emotional stability than men can be understood, according to MacDonald, within family relationships, particularly relationships to children. If women provide for most parent care, including nursing care, then the feelings of anxiety and care for potentially endangered children and family members fulfil positive purpose and are adaptive, similarly to the traits of kindness, amiability and tolerance, reflected in prosocial behaviour. Men, to the contrary, need to dispose of more emotional stability for reciprocal altruism, apart from family relationships.

If higher anxiousness and worriedness of women in general fulfils socially positive functions, if they have become part of gender role from evolutionary and socialization perspective, then the selection of helping profession can seem optimum choice in case such traits can be used within the profession.

But there is another aspect too – helping others improves negative mood. Some studies (e.g. Cialdini et al., 1982) point out the possibility of reducing anxiety through helping others. Prosocial behaviour is considered one of a number of different techniques individuals used in order to feel well. It is also assumed that persons with strong anxieties have high level of affiliation need, as general, relatively constant interpersonal disposition, that leads to activation of specific interpersonal strategy of the subject, to react to others in friendly manner. In psychology, the opinion prevails that the affiliation need expresses the human’s effort to establish and maintain close and positive relationships to other people, with prevailing character of cooperation and love (e.g.
Schachter in Řehan, 2008), which are undoubtedly traits that are very welcome in helping profession. According to some authors, the personality consists of multilevel mesh of interpersonal behaviour aimed at reduction of anxiety. All interpersonal activities constitute attempts to avoid anxiety or to create and maintain optimum feeling of self-esteem (Leary in Kožený, Ganický 1976). The choice of helping profession and helping others can, additionally to other circumstances, participate in creation of positive feeling of self-esteem in rather anxious and unstable individuals.

4. In compliance with the results of studies implemented in volunteers (e.g. Penner and Finkelstein, 1998; Carlo et al., 2005), we expected higher level of Extraversion from volunteers of our study. The motive consists in the fact that extraverted, more affiliative individuals incline more to social situations and focus more frequently to other people. Their sociability and activity leads them to different social events and membership in groups. Statistic calculation specified the interpretation of the data acquired by us in the sense of significantly more marked feature of Extraversion in female volunteers, but not in male volunteers whose level of Extraversion corresponds to the population average. General conclusions on Extraversion of volunteers are not essentially changed by that because overwhelming majority of them consists of women. Men are represented only by a quarter of the total number of volunteers in the sample researched by us. But the differences of man must be of course taken into consideration. Extraverted individuals probably seek warm and positive social interactions and such efforts of them can facilitate volunteer behaviour.

Extraversion can provide affiliative disposition needed for volunteerism. But the way to volunteerism does not lead only through personality traits; the decision to become volunteer is co-determined by whether there is a link between the personality traits related to volunteerism and prosocial motives. In other words, extraverted individuals may be more ready to volunteer work than introverts, but only when they are highly motivated by prosocial values. Extraversion by itself may not predispose the individual to volunteer behaviour, unless such individual does not appreciate helping others. The study has confirmed other personality traits described in volunteers (Snyder and Clary, 2005) like Agreeableness in both genders, particularly in female volunteers.

Agreeableness together with Conscientiousness co-creates the personality base of selfless helping. Agreeableness constitutes a dimension that includes a lot of socially positively appreciated personality aspects like altruism and sympathy. Marked positive qualities of students-volunteers proving successful in interpersonal context include warmth,
communicativeness, cooperativeness, adaptability, readiness to help and kindness. From moral perspective, honest and unselfish humanists, sincere individuals full of emphatic understanding and respect to feelings of others prevail among volunteers. The third striking feature found in volunteers – Conscientiousness – includes a number of detailed descriptions concerning the approach to work and achieving of performance and results. Individuals scoring high in Conscientiousness work independently, efficiently and in a disciplined way. They approach tasks systematically, solve problems logically, give clear answers to questions. They work reliably and try to meet their duties, are responsible in their approach to other people.

From the perspective of such characteristics, the personality profile of volunteers resembles the description of “productive orientation” by E. Fromm (1997), embedded in the framework of assimilation and socialization, i.e. adaptation to the world of things and people. The productive orientation is characterized by the ability to give love (in the sense of care, responsibility, respect) and to work with effort for authentic life, when the person’s activities are aimed at the good and can be seen particularly in contacts with other people and in relations of affection.

**Conclusion**

The study has confirmed some predicted concordances and differences of the tested factors of personality of the respondents both as compared with table standard and by gender and last but not least by volunteerism membership.

The comparison of students with table standard showed:

- lower Neuroticism and higher Conscientiousness of male students as compared to common population;
- higher Neuroticism, Agreeableness and Conscientiousness of women as compared to common population (confirmation of hypotheses HA 2.1 and HA 2.1.1);
- concordance of table standard and the score of Extraversion found in students of both genders;
- lower level of Openness to Experience as compared to table standard in both genders (refusal of hypothesis HA 2.1.2).

Within inter-gender comparison, men are less neurotic, more emotionally balanced and more resistant against psychical exhaustion than women. Men show also less Agreeableness, express more hostility and less tolerance and friendliness (hypothesis HA 2.2 is accepted).
The personality structure of volunteers, as compared to non-volunteers, is dominated by the factors of Extraversion, Agreeableness and Conscientiousness. The highest level of socially positive, other-oriented traits of Extraversion and Agreeableness can be seen in female volunteers, within the whole sample (hypothesis HA 2.3 was accepted in all its parts).

6.3 Social desirability in students of helping professions

Social desirability expresses the need of social consent, of emotionally positive, friendly, accepting contacts with people. The component consists of relatively constant interpersonal disposition, affiliation characterized by seeking presence of other people, interest for cooperation and communication. Affiliation constitutes one of the motives stimulating and controlling prosocial behaviour of human. Increased need of social desirability can be reflected in answers in questionnaires (based on self report) and it is then related to the wish that other people perceive the subject as a positive and valuable person.

Hypothesis HA 4 includes the assumption of random distribution of level of social desirability in the sample and in the subsets according to gender and volunteerism. The results show that average score, M=4.75, SO=1.82, median=5 were most frequently measured in the sample. The value of relative standard deviation equals thirty-eight\textsuperscript{13} and corresponds approximately to normal Gauss distribution. It differs from ideal shape of Gauss curve only by a slightly indicated sharpness, which corresponds to slightly increased accumulation of measured data around medium, average values.

The assumption of normal distribution of input data was verified by Kolmogorov-Smirnov test (Kolmogorov-Smirnov Z=3.23). Such result proves that individuals with different levels of social desirability are represented in the sample and that above-average values do not have distinctively accumulative character in the direction of higher social desirability.

The differences between genders are insignificant, although the calculation indicates slightly, insignificantly higher level of social desirability in women, which corresponds to affiliation included in higher extraversion of a part of female volunteers (see features according to five-factor model in chapter 6.2). The two-sample paired t-test of medium value did not prove statistically significant test characteristics; the found value of t(827)=1.48<1.66 is lower than critical value.

\textsuperscript{13} By the formula: (SO/average value) multiplied by 100.
The result was confirmed by multifactorial analysis of distribution for the factors of gender, volunteerism and social desirability variable as follows: for gender $F_{[1.827]}=1.272<3.936$; for volunteerism $F_{[1.827]}=0.187<3.936$; for interaction of gender vs volunteerism $F_{[1.827]}=0.437<3.936$. The variability of the variable of social desirability stayed insignificant in connection with all factors, including their interaction.

Summary and interpretation of results

Most respondents of both genders (76%) show average level of social desirability; 13% respondents show below-average and 11% above-average social desirability. Volunteers do not differ from majority part of the sample in the described interpersonal characteristic. According to the authors of the questionnaire of social desirability used – SDS – short version by D. P. Crowne and D. Marlowe (1960), the level of the score shows the level of the need of social consent, sense of belonging, cooperation and affiliation. Alternative perspective of high score can consist in the effort to be seen in socially more positive light; therefore this method is often included in test batteries to capture the above stated, from the perspective of validity of results of negative aspect.

The questionnaire was included in the psychodiagnostic battery for both reasons. In connection with the first reason we rely on older and newer studies of correlations of opinions of external evaluators on selected respondents, with self reports of those respondents in the questionnaire of social desirability. The correlations showed significant concordance of the self report with external assessment. Researchers who interpreted negative correlations between the SDS scale and different negative symptoms or negative behaviour, respectively (and vice versa, positive correlation with the level of positive characteristics), arrived at similar conclusions. N. M. Bradburn and S. Sudman (1979) for example explained the above stated findings as a proof of the fact that persons who score high in tests of social desirability behave, in fact, in affiliative, altruistic manner, identical to basal characteristic of personality, assessed by those scales. Similarly, the well known couple of researchers, R. R. McCrae, P. T. Costa (1983) point out in this connection that a lot of psychologists keep considering the correlations with social desirability scales (SDS) a proof of weakness of measurement, in spite of twenty years of research showing that such interpretation is usually unfounded. The fact that the scale by Crowne and Marlowe was used in numerous studies as an indicator of socially desirable answers is, according to those authors, a little surprising when observing very little effort to confirm the validity of the scale. McCrae and Costa themselves used external proof to research predictive force of alternative interpretations stating that the values
of social desirability represented in SDS scale correspond to truthful hypotheses of behaviour. In an attempt to separate the measured substance, i.e. the real features, from stylization in self report, they demonstrated on 215 adults that persons with high SDS scores were very positively evaluated by their own spouses in real life because of their altruistic and affiliative features. Some support to the above stated conclusions consists also in the result of the author’s own pilot research within this study, confirming the concordance of results of sociometry and self report in SDS questionnaire of social desirability in two smaller samples of university students. (The samples included students of the Faculty of Health and Social Studies of the University of South Bohemia in České Budějovice; n=46.)

If we consider SDS also a scale for measurement of the level of lying, defence or social desirability, then that scale has contributed to positive evaluation of validity of the results of further scales used in the interpreted study, based on the self report method.

**Conclusion**

The need of social acceptance, the effort to get and maintain harmonic relationships to other people, preference of cooperation to competition is distributed randomly – non-cumulatively among the subjects; it does not demonstrate any effort to create a more socially positive picture of own person (HA 4a). The levels of social desirability are randomly distributed in the sample.

The sources of variability, i.e. gender, volunteerism, do not have any effect on the variability of social desirability (hypothesis HA 4 is accepted in points ad b), ad c)). No significant differences in the level of the observed variable have been found among students preparing for practice of helping profession.
6.4 Emotional empathy in students of helping professions

In accordance with hypothesis HA 5, we expect higher level of emotional empathy in women as compared to men and identical level of empathy of Czech and American respondents. The calculations obtained for verification of the hypothesis are summarized in the following tables.

Table 15: Numbers of positions in subscales, average scores, standard deviations, coefficients of factors of emotional empathy in MEE

<table>
<thead>
<tr>
<th>MEE Component</th>
<th>PP</th>
<th>Gross score Average n=828</th>
<th>SD</th>
<th>Weighted score Average n=828</th>
<th>Men Weighted score n=130</th>
<th>Women Weighted score n=688</th>
<th>Men Caruso &amp;Mayer n=279</th>
<th>Women Caruso &amp;Mayer n=473</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. S</td>
<td>8</td>
<td>26.8</td>
<td>4.8</td>
<td>3.4</td>
<td>3.1</td>
<td>3.4</td>
<td>3.7</td>
<td>4.1</td>
</tr>
<tr>
<td>2. PS</td>
<td>6</td>
<td>21.9</td>
<td>4.4</td>
<td>3.7</td>
<td>3.7</td>
<td>3.7</td>
<td>3.7</td>
<td>4.0</td>
</tr>
<tr>
<td>3. RC</td>
<td>3</td>
<td>8.1</td>
<td>3.2</td>
<td>2.7</td>
<td>1.7</td>
<td>2.9</td>
<td>2.4</td>
<td>3.5</td>
</tr>
<tr>
<td>4. EA</td>
<td>4</td>
<td>13.2</td>
<td>2.5</td>
<td>3.3</td>
<td>2.9</td>
<td>3.4</td>
<td>3.5</td>
<td>3.8</td>
</tr>
<tr>
<td>5. FO</td>
<td>5</td>
<td>14.0</td>
<td>3.0</td>
<td>2.8</td>
<td>2.4</td>
<td>2.9</td>
<td>2.8</td>
<td>3.3</td>
</tr>
<tr>
<td>6. EC</td>
<td>4</td>
<td>12.8</td>
<td>2.5</td>
<td>3.2</td>
<td>3.1</td>
<td>3.2</td>
<td>3.2</td>
<td>3.6</td>
</tr>
<tr>
<td>Empathy</td>
<td>30</td>
<td>94.7</td>
<td>6.2</td>
<td>3.6</td>
<td>2.8</td>
<td>3.3</td>
<td>3.2</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Legend to Table 15: PP = number of items; 1. S – Suffering; 2. PS – Positive Sharing; 3. RC – Responsive Crying; 4. EA – Emotional Attention; 5. FO – Feel for Others; 6. EC – Emotional Contagion; Empathy = average score of empathy sum.

The distribution of the scores shows considerable variability of levels of individual components within the empathy structure and, as expected, also evident difference between genders. The highest score was recorded in the Positive Sharing (PS) subscale, in the sense of co-experience of positive emotions with others; further in the Suffering (S) subscale, in the sense of sorrow, grief at seeing pain of others, people and animals, and finally in the Emotional Attention (EA) subscale, in the sense of attention paid to experience of others. The lowest levels were detected in the Reactive Crying (RC) subscale (particularly in men), as well as in Feel for Others (FO).

The Czech respondents of both genders score lower than the Americans; they are less empathic. But they resemble the Americans in the structure of parameters of emotional empathy, i.e. of the level of individual empathy components regardless of gender.

The inter-gender differences between the subscales are statistically significant at 1% level (in the male set they equal F[1.129]=150.9>2.26; in the female set 126.4>2.216). Statistically significant is also the difference between Czechs and Americans; the t-test of medial value has demonstrated significant test characteristic. The differences between genders are illustrated in Diagram 4.
We have used multifactorial variance analysis for the significance of differences of the level and structure of emotional empathy by genders, volunteer experience and interactions of independent sources.

In the general linear model, the gender factor plays significant source of variability (at 1% level of significance); the specific direction of differences is included in Table 16 above in text. The volunteerism factor is less conclusive as source of variability, as well as the interaction of both factors indicated. Statistics have shown a series of relevant differences between the variables – components of emotional empathy measured in MEE.

They have confirmed unambiguously the finding of higher empathy of women (they score higher (at 1% level) as compared to men, in almost all components of empathy. Marked differences were found in the following components: Suffering in the sense of pity, sadness and sorrow at seeing pain of others, people or animals (F[1.827]=34.9>6.64); Responsive Crying – tendency to emotional response to stress situation of other people (F[1.827]=155.1>6.64); Emotional attention, seen in focus of attention on emotional manifestations of others (F[1.827]=62.4>6.64); Feel for Others – as demonstration of feeling towards other person, emotional resonance (F[1.827]=50.0>6.64) and in Total Empathy (F[1.827]=61.18>6.64). We have recorded less distinct, but not completely negligible difference between men and women in Emotional Contagion with demonstrations of sensitivity to emotions of others in the sense of emotional induction (F[1.827]=3.726>2.756 at 10% level of significance).
Table 16: Survey of significant results for PSB subscales for factors of gender, volunteerism and variable component of emotional empathy (by MEE)

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent Variable</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Suffering</td>
<td></td>
<td>765.030</td>
<td>1</td>
<td>765.030</td>
<td>34.904</td>
<td><strong>0.000</strong></td>
</tr>
<tr>
<td>2. Positive Sharing</td>
<td></td>
<td>0.278</td>
<td>1</td>
<td>0.278</td>
<td>0.014</td>
<td>0.905</td>
</tr>
<tr>
<td>3. Responsive Crying</td>
<td></td>
<td>1338.817</td>
<td>1</td>
<td>1338.817</td>
<td><strong>155.122</strong></td>
<td><strong>0.000</strong></td>
</tr>
<tr>
<td>4. Emotional Attention</td>
<td></td>
<td>344.178</td>
<td>1</td>
<td>344.178</td>
<td><strong>62.435</strong></td>
<td><strong>0.000</strong></td>
</tr>
<tr>
<td>5. Feel for Others</td>
<td></td>
<td>418.541</td>
<td>1</td>
<td>418.541</td>
<td><strong>50.048</strong></td>
<td><strong>0.000</strong></td>
</tr>
<tr>
<td>6. Emotional Contagion</td>
<td></td>
<td>23.638</td>
<td>1</td>
<td>23.638</td>
<td>3.726</td>
<td>0.054</td>
</tr>
<tr>
<td>Emotional Empathy</td>
<td></td>
<td>11576.495</td>
<td>1</td>
<td>11576.495</td>
<td><strong>61.181</strong></td>
<td><strong>0.000</strong></td>
</tr>
<tr>
<td><strong>Volunteerism</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Suffering</td>
<td></td>
<td>12.107</td>
<td>1</td>
<td>12.107</td>
<td>0.552</td>
<td>0.458</td>
</tr>
<tr>
<td>2. Positive Sharing</td>
<td></td>
<td>76.737</td>
<td>1</td>
<td>76.737</td>
<td><strong>3.909</strong></td>
<td><strong>0.048</strong></td>
</tr>
<tr>
<td>3. Responsive Crying</td>
<td></td>
<td>2.888</td>
<td>1</td>
<td>2.888</td>
<td>0.335</td>
<td>0.563</td>
</tr>
<tr>
<td>4. Emotional Attention</td>
<td></td>
<td>2.085</td>
<td>1</td>
<td>2.085</td>
<td>0.378</td>
<td>0.539</td>
</tr>
<tr>
<td>5. Feel for Others</td>
<td></td>
<td>22.084</td>
<td>1</td>
<td>22.084</td>
<td>2.641</td>
<td>0.105</td>
</tr>
<tr>
<td>6. Emotional Contagion</td>
<td></td>
<td>25.128</td>
<td>1</td>
<td>25.128</td>
<td><strong>3.961</strong></td>
<td><strong>0.047</strong></td>
</tr>
<tr>
<td>Emotional Empathy</td>
<td></td>
<td>493.158</td>
<td>1</td>
<td>493.158</td>
<td>2.606</td>
<td>0.107</td>
</tr>
<tr>
<td><strong>Gender x Volunteerism</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Suffering</td>
<td></td>
<td>10.942</td>
<td>1</td>
<td>10.942</td>
<td>0.499</td>
<td>0.480</td>
</tr>
<tr>
<td>2. Positive Sharing</td>
<td></td>
<td>9.896</td>
<td>1</td>
<td>9.896</td>
<td>0.504</td>
<td>0.478</td>
</tr>
<tr>
<td>3. Responsive Crying</td>
<td></td>
<td>21.564</td>
<td>1</td>
<td>21.564</td>
<td>2.499</td>
<td>0.114</td>
</tr>
<tr>
<td>4. Emotional Attention</td>
<td></td>
<td>0.369</td>
<td>1</td>
<td>0.369</td>
<td>0.067</td>
<td>0.796</td>
</tr>
<tr>
<td>5. Feel for Others</td>
<td></td>
<td>1.970</td>
<td>1</td>
<td>1.970</td>
<td>0.236</td>
<td>0.628</td>
</tr>
<tr>
<td>6. Emotional Contagion</td>
<td></td>
<td>10.552</td>
<td>1</td>
<td>10.552</td>
<td>1.663</td>
<td>0.198</td>
</tr>
<tr>
<td>Emotional Empathy</td>
<td></td>
<td>36.522</td>
<td>1</td>
<td>36.522</td>
<td>0.193</td>
<td>0.661</td>
</tr>
</tbody>
</table>

Legend to Table 16: F = calculation of resulting proportion of dispersions; sign. = statistical significance; (*) significance 5%; (**) significance 1%.

The only component of emotional empathy, Positive Sharing, characterized by co-experiencing of joy and other positive emotions of other people, has remained statistically insignificant. The genders are very similar in this aspect of emotional empathy (F[1.827]=0.14>3.84).

Less conclusive source of variability – volunteerism – has provoked statistically significant results at 5% level only in two components: Positive Sharing (F[1.827]=3.91>3.84) and Emotional Contagion (F[1.827]=3.96>3.84). Volunteers show more empathy in this aspect. The calculations for the remaining four parts of emotional empathy (Suffering, Responsive Crying,
Emotional Attention, Feel for Others) including Total Empathy have ended under the level of significance.

The interaction of gender and volunteerism is statistically insignificant; the union of all the variables monitored did not lead to significant effect. Slightly increased value of data variability was recorded in the scale for Responsive Crying (female volunteers react more sensitively, by higher emotional response than the other women of the set); but the calculated value has not exceeded the level of 10% significance ($F[1.827]=2.499<2.756$).

Summary and interpretation of results

The results of research presented in Tables 18 through 21 show four main findings.

1. The first of them consists in the markedly higher level of empathy in women as compared to men; women score in five out of six subscales higher than men. The inter-gender differences are negligible in some subscales, i.e. in Emotional Contagion that expresses sensitivity to emotions of others, but in other components, the differences in empathy are very distinctive. The strongest differences can be seen in Responsive Crying where the weighted score of women achieves almost twice the score of men (it is 1.7 in men, while 2.9 in women). The empathic responsive crying with displays of sorrow and grief over the other’s misfortune is undoubtedly culturally anchored and constitutes typical part of gender roles.

Lower level of empathy in men constitutes a phenomenon verified by research and described in literature. For example the author of the multidimensional construct of empathy, including of the method (IRI) for its measurement, M. Davis (1983a, b), states statistically significant difference of level of empathy between men and women, in the sense of higher empathy of women in its partial components. These are, additionally to emotional and cognitive empathy, also personal distress (tendency to experience anxiety or discomfort when perceiving a person in emergency situation) and fantasy component (tendency to shift oneself imaginatively into feelings of fictive characters e.g. in movies). Also other studies aimed at cognitive and particularly emotional aspects of empathy confirm regularly such result (Batson, 1991; Penner et al. 1995; Bierhoff, 2002). Although general trend in social-psychological research shows higher empathy of women as compared to men, there are few empirical data on empathy available at therapists. Despite that, empiric evidence is gradually emerging, showing that both male and female therapists can be equally trained to be empathic consultants (Hatcher et al., 1994).
2. The second finding corresponds to the generally lower level of empathy of Czech respondents as compared to Americans. The intercultural difference found applies to both genders. The comparison of results of D. R. Caruso and J. D. Mayer (1998), authors of the MEE scale used by us, to the results of our probands shows lower level of empathy of Czech women in all monitored subscales and in five out of six subscales in men. An exception is only the level of Positive Sharing where Czech men scored higher than Americans. The result coincides with the lower empathy found in students by PSB method (chapter 6.1), as well as with studies published formerly, in which empathy was measured by IRI (Interpersonal Index reactivity) method designed by M. H. Davis (Milčák and Záškodná, 2007).

When ignoring the above stated Batson’s basic empathic-altruistic hypothesis that postulates empathy as a condition of altruistic behaviour, our result can be seen also in context of social processes. Emotional processes play essential role in regulation base of important social processes like helping behaviour, partner interaction or reduction of “self-justification“ (Stuchlíková, 2007). When considering the fact that empathy ranks among basic components of emotional intelligence (together with emotional self-awareness, self-implementation, interpersonal relations, control of impulses, adequate self-confidence, social responsibility, optimism, self-respect, etc.) that associates positively with the ability to master challenging life situations, which undoubtedly include also helping persons in need and emergency situations, we would expect higher level of emotional empathy in students of helping professions. It is assumed that emotional intelligence can influence positively coping with stress and leads to more adequate selection of suitable coping procedures (Výrost and Baumgartner, 2006).

3. The third finding is related to the structure of emotional empathy; it shows predominantly concordance in both genders and both sets (Czech and American respondents) compared. Similar structure of empathy of Czechs and Americans can be seen in the distribution of the level of scores of the most components of empathy. Both high and low scores have been equally measured in the same empathy components.

The key component of the structure of emotional empathy in students consists in Positive Sharing in the sense of emotional experiencing of positive feelings of others, co-experiencing of happiness and joy. The respondents have achieved the highest score in this partial component of empathy; it is at the same time the only sphere of emotional empathy where both men and women score the same. Men are able to rejoice, joy and be happy about happiness of others similarly to women, but they are not able to sympathize
with or share negative emotions, pain and suffering of people and animals so much as their female counterparts; they have weaker feel for others as compared to women. This special phenomenon of higher emotional empathy of men for positive rather than for negative emotions of others can be related with higher feature anxiety of women, which is contained in higher neuroticism of women in general as compared to men.

4. Volunteers differ from non-volunteers by higher level of two out of six empathy components. They are: positive emotional response to positive emotional manifestations of others and emotional “contagion”. This finding is compatible with the above described extraversion of volunteers, with their positive emotional “tuning” towards emotional experiences of others. But we had expected, in compliance with literature, even higher level of emotional empathy in volunteers than the level we measured. Our expectation was based on broad consensus presented across theoretical concepts in the assumption that empathy constitutes essential personality dimension for helping practice, including the voluntary one. Empathy is considered the central factor of well working alliance, the factor of relationship of helping worker with the client, which is reflected in the positive resulting effect of help. The measurement of empathy in volunteers shows that empathy itself will not transform into helping behaviour for no reason but that it requires quite specific motivation conditions.

**Conclusion**

The study confirmed higher emotional empathy of female students as compared to male students. Female students achieved markedly higher scores than their male counterparts in five out of six components of emotional empathy (confirmed hypothesis HA 5.1).

Students with volunteering experience did not score higher than the other students of the observed set in most aspects of emotional empathy (in four out of six). Hypothesis HA 5.2 was not confirmed.

Czech students show lower values of emotional empathy than Americans. Hypothesis HA 5.3 on identical level of empathy of the respondents of this study, as compared to American subjects, was rejected.
6.5 Arousalability and optimism in students of helping professions

Hypothesis HA 6 predicts identical level of: a) *arousability*; b) *dispositional optimism* as compared to the set of helping professionals consisting of secondary school teachers and social workers. Table 17 includes, additionally to average scores of arousalability and dispositional optimism in subjects of the interpreted study, also scores of the reference set of helping professionals (n=1003).\(^{14}\)

The results acquired by AOS method, arousalability subscale, show statistically significant differences between the two sets compared. The set of students of helping professions, as compared to helping professionals, is characterized on average by higher arousalability, with displays of emotional excitement, with less control of own behaviour, increased need of affiliation and sociability. The situation is different in description of the level of dispositional optimism; there are no significant differences in results between both sets.

**Table 17: Averages, standard deviations of arousalability and optimism in students of helping professions and reference set**

<table>
<thead>
<tr>
<th></th>
<th>Average n=828</th>
<th>SD</th>
<th>Average SS n=1003</th>
<th>SD</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arousability</td>
<td>17.4</td>
<td>3.4</td>
<td>15.2</td>
<td>3.8</td>
<td>0.003</td>
</tr>
<tr>
<td>Optimism</td>
<td>24.7</td>
<td>2.8</td>
<td>24.6</td>
<td>2.8</td>
<td>n</td>
</tr>
</tbody>
</table>

Legend to Table 17: SS = data of reference set, average and SD in the set of teachers and social workers (study by K. Paulík, 2008).

The subsequent analysis of the measured differences of arousalability and dispositional optimism by gender and volunteerism brought two findings: a) the compared subsets differ in arousalability level from each other; b) the compared subsets do not differ in the level of dispositional optimism, they show approximately the same level of this variable. Diagram 5 presents the summarized data for illustration of the calculations.

---

\(^{14}\) AOS method is not standardized or broadly used in research; therefore we compare our results to the results of recent extensive study of K. Paulík (2008) performed in a group of probands of similar professional orientation. The limits of our interpretation result from higher age of the respondents of K. Paulík’s study (M age = 39.8 years), while the age of the respondents of the interpreted study corresponds to 22.63 years.
It is obvious, thanks to the statistical specification of the results, that gender plays significant source of variability in the general linear model, while volunteerism and interaction with gender are insignificant.

The variance analysis showed significantly lower arousability of women as compared to men ($F_{[1.827]}=45.4>6.895$ at 1% level). As for dispositional optimism, genders do not show relevant difference ($F_{[1.827]}=0.52<3.936$ at 5% level).

Volunteerism as independent source of variability does not have influence on the variable of arousability, but its effect is significant, at 5% level, in the variable of dispositional optimism. Volunteers are demonstrably more optimistic as compared to non-volunteers ($F_{[1.827]}=4.008>3.94$).

The compound effect of both sources of variability, gender and volunteerism, stayed insignificant in both variables.

**Summary and interpretation of results**

The study demonstrated distinct *inter-gender differences* in the level of arousability. Men react more arousably, particularly in sudden, new or complicated situations related to more intensive emotional charge. The originated emotional excitation lasts longer and later falls back into the common, emotionless state. From the perspective of evolutionary psychology and in broader context of adaptation mechanisms, the emotions, particularly the negative ones, constitute psychical structures that helped the prehistoric man to survive in unusual or unknown situations containing potential risk for him (Tooby and Cosmides 2005). Those authors relate the adaptation value of emotions to narrowed thinking and behaving that finally
results in fight or flight, i.e. reactions significant in survival strategies of ancient men-hunters. Arousability probably did not constitute so important adaptation mechanism for women due to the life style different from that of men.

As for the higher score of arousability of students as compared to practicing professionals (social workers and teachers), this result can be attributed partially to different ages, i.e. to higher average age of professionals in the reference set. Students of helping professions may still not have sufficiently developed social skills and competences, which can lead to less clearly structured experiencing and behaviour in new, unusual situations that can get the form of stress to the individual (Blatný et al., 2002). Both compared sets do not differ in the level of the second variable observed; both the students of helping professions and the helping professionals are approximately equally optimistic.

Volunteer experience does not have influence on the level of arousability; volunteers and non-volunteers show approximately the same level of arousability.

The situation is different in dispositional optimism. Volunteers of both genders show demonstrably more optimism as compared to non-volunteers, females score slightly higher. Volunteers view the world with more optimistic, cheerful and carefree eyes, they behave actively in risk situations, with tendency to redefine the situation positively and with positive planning. When convinced of final result, they will continue their effort even in case of big difficulties. They use less strategies of denial and distancing from problem, which can play significant role when deciding whether to help or not (see Schwarz and Howard model).

Experiencing and behaviour of human both in common and in stressing situations is directed by one of the emotion qualities, the valence of positivity-negativity, influencing demonstrably the resulting level of task mastering (Stuchlíková, 2007). In relation to the valence of emotional experiencing, optimism constitutes dispositional attribute with typically long lasting experiencing of positive emotions. Positive and negative emotions are applied differently when mastering challenging situations; our behaviour is mostly motivated by the need to preserve the positive and reduce the negative emotional experiencing (Aspinwall et al. 2001). Positive emotions contribute to psychical and physical subjective wellbeing, they participate in developing the (intellectual, social and other) sources and are generally related to efficient mastering of situations. Dispositional optimism vs pessimism can have significant influence on mastering of challenging situations as mediating factors. Dispositional optimism that regulates the current psychical condition and acts in function of mediator of choice of strategy of situation solving plays, together with cognitive style, one of the most significant roles when mastering a challenging situation (e.g. Blatný et al., 2002; Carver and Scheier,
2002). It is therefore probable that many urgent, risk situations in which people help others or long-term care for the ill and handicapped rank among challenging and stressing life situations and that optimistic conviction and hope that “everything will turn out well” can play a significant role of mediating factor that reduces the stress for the helper, thus facilitating helping. The strategies experienced by optimists in risk situations bear signs of activity, positive redefinition of situation, while pessimism is grouped with defensiveness, anxiousness that co-creates the blocking factor of motivation of successful performance, thus possibly reducing the probability of helping other person in need. So doubts of pessimists can disrupt the effort of an individual even before the very beginning or in the course of an activity.

Conclusion
The set of students of helping professions shows higher level of arousability as compared to the set of helping professionals, secondary school teachers and social workers (hypothesis HA 6 refused in part ad a). The hypothesis was confirmed in part ad b); both sets compared show concordance in the level of optimism.

Men react more arousably than women; both genders show similar level of optimism (HA 6.1 is confirmed).

Volunteers are significantly more optimistic than the rest of the set, while they do not differ from non-volunteers in the level of arousability (HA 6.2 is confirmed).

6.6 Exocentric-endocentric altruism of students of helping professions

The theoretical criterion by J. Karylowski (1982) and his successors, distinguishing two types of altruistic motivations, has become our starting point of the research of the structure of altruistic orientation. The motivation generated in case of endocentric mechanisms applies to situations with source in form of anticipation of desirable changes or avoiding undesirable changes in own image. The exocentric motivation has source in form of anticipation of improved situation of the other person.

Hypothesis HA 7 states that exocentric form of altruism prevails over the endocentric in the observed subsets and that such form of altruism characterizes rather women than men and volunteers rather than non-volunteers. The measured data are summarized in Table 18.
Table 18: Averages and standard deviations of exocentric altruism and endocentric altruism for the sample, men, women and volunteers

<table>
<thead>
<tr>
<th></th>
<th>Average of sample</th>
<th>Men</th>
<th>SD</th>
<th>Women</th>
<th>SD</th>
<th>Male volunteers</th>
<th>SD</th>
<th>Female volunteers</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exo</td>
<td>2.7</td>
<td>2.1</td>
<td>0.56</td>
<td>2.9</td>
<td>0.55</td>
<td>2.6</td>
<td>0.48</td>
<td>3.2</td>
<td>0.53</td>
</tr>
<tr>
<td>Endo</td>
<td>1.4</td>
<td>1.0</td>
<td>0.32</td>
<td>1.5</td>
<td>0.37</td>
<td>1.4</td>
<td>0.33</td>
<td>1.8</td>
<td>0.34</td>
</tr>
</tbody>
</table>

The distribution of scores within the sample shows differences between men and women in the sense of higher average scores of altruism in women as compared to men, as well as higher level of altruism of volunteers as compared to non-volunteers of the sample, particularly women. We recorded the highest average score of both forms of altruism in female volunteers (sum of endocentric and exocentric altruism) and the lowest in the males of the sample.

The sample as a whole, including the defined subsets, is characterized by prevailing exocentric form of altruism. The average level of exocentric altruism is almost twice the size of the endocentric form of altruism. It is obvious that the impulse for origin of the altruistic tendency consists in most respondents in the effort to improve the situation of the other person in stress. The wish to reduce one’s own negative emotional condition in contact with a person in need plays lower role in altruistic tendencies (endocentric altruistic type).

Diagram 6: Distribution of exocentric and endocentric altruism in men, women, male and female volunteers of the sample, n=828

Diagram 6 illustrates the differences between genders, volunteers and non-volunteers in both forms of altruism. The extent of the differences is specified by statistic calculations. The
factor of gender as well as of volunteerism enters demonstrably into the general linear model. Their combined effect is not involved in the variability of the acquired data.

Multifactorial variance analysis confirmed distinctive differences of both genders in the level of exocentric and endocentric altruism. The difference between men and women is statistically significant at 1% level both in exocentric altruism ($F_{[1.827]}=11.172>6.895$) and in endocentric altruism ($F_{[1.827]}=9.029>6.895$); women show markedly more altruistic tendencies than men, particularly the exocentric form.

Statistically significant differences at 5% and 1% level were found also at comparing the volunteers and on-volunteers within the sample. In exocentric altruism, the differences are significant at 5% level ($F_{[1.827]}=5.96>3.84$; in endocentric altruism at 1% level of significance ($F_{[1.827]}=9.24>6.895$). The volunteers are more altruistic in both forms of altruism with focus in exocentric form.

The effect of interaction of the observed factors of gender and volunteerism stayed under the level of significance; both factors do not influence each other as for the type of altruism.

**Summary and interpretation of results**

1. Students of helping professions, particularly women, show higher level of exocentric altruism as compared to endocentric altruism. The author of the method used, A. Szuster (2005), classifies prosocial behaviour on the base of its sources. The model using the works of J. Reykowski, J. Karylowski, M. Jarymowicz and accepting Hoffman’s opinion, is based on the assumption that certain cognitive, intellectual and emotional reactions or psychical processes of regulation with focus on interests and needs of others can be seen in prosocial behaviour. Cognitive processes are about perception of other person’s needs and perception of a situation from other person’s perspective.

The perception of other person’s needs constitutes a complicated form of orientation activities, based on integration of information coming from different sources including reading their common significance. The mechanism in cognitive processes that play an important role in helping allows distinguishing ME and THEM. The dissonance provoked by the contradiction between what an individual perceives as standard and between what the individual finds in reality leads to behaviour aimed at elimination of such discord, which results also in helping. The difference between the current status and the standards of normal (or ideal) status, in short desirable status, seems to be very important source of motivation. Although the condition of origin of motivation in connection with both types of prosocial orientation is always some type of connection of personal interest with other
person’s interest, the item concerned by personal interest differentiates the type of motivation. The behaviour motivated by endocentric altruism is about anticipation of internal strengthening related to own value, with self-respect, while the behaviour motivated by exocentric altruism is about anticipation of external strengthening resulting from improved condition of another person.

Both forms of altruistic orientation are probably distinguished also by the cognitive component of empathy, the type of perspective taking of the other person. Theoreticians of empathy identified at least three types of perspective taking (e.g. Batson et al., 1997): a) ability to imagine how the other person perceives the event and what feelings he or she experiences in consequence of it (“imagine other”); ability to imagine how we would feel in such situation ourselves (“imagine self”); c) imagination as against fictive characters or animals. It can be assumed that the trigger of exocentric altruistic behaviour will consist rather in the ability to imagine the other’s thinking and feeling (“imagine other”), while the trigger of endocentric orientation will consist in the ability to imagine oneself (“imagine self”). Imagining oneself is related to distress, giving origin to the wish to get rid of negative feelings.

2. The level and the observed type of altruism have distinctive gender aspect; the female students show higher level of both types of altruism as compared to their male counterparts, but particularly of the exocentric type.

Volunteers of both genders are more altruistic than non-volunteers in both types of altruism; female volunteers are more characterized by prevailing exocentric altruism focused on the needs of other persons.

**Conclusion**

Exocentric altruistic orientation prevails over endocentric altruistic orientation in the personality structure of the students; women and volunteers show higher level of both forms of altruism than men and non-volunteers. Hypothesis HA 7 was accepted in all its parts.

The results of exocentric and endocentric altruism of students show that the foundations of sensitivity to problems of other persons can consist of different factors and that the behaviour resulting from recognizing the other person’s condition can be regulated by expectance of internal stimuli of different types. Our findings by far do not show all regulation mechanisms of behaviour; on the contrary, they concern only several factors. This state is caused by the complicated character of the relevant issue; that is why our results give only fragmentary answer to the question of conditionality of human altruism.
6.7 Values and value orientation of students of helping professions

The features of human’s values include the fact that they control the selection or evaluation of behaviours and phenomena, motivate the selection of behaviours and constitute the standards of evaluation of people and events. The values as results of evaluations have subjective character; nevertheless, evaluations of different people often resemble each other when such people belong to the same society or have common experiences. If we want to consider the prevailing values of students, future helping professionals, we can predict the preference of such types of values that are directed to other people and are congruent with others’ needs and interests. The list of value types by S. H. Schwartz includes the values of universalism, benevolence, tradition and security.

The average score of preference of value types are listed, together with standard deviations, by observed indicators in Table 19.

Table 19: Distribution of values, average values, standard deviations in both genders, volunteers, sequence of preference of values

<table>
<thead>
<tr>
<th>Value</th>
<th>Sample M n=828</th>
<th>SD</th>
<th>Rank</th>
<th>Men M n=130</th>
<th>SD</th>
<th>Wo-</th>
<th>Men M n=688</th>
<th>SD</th>
<th>Male volunteers n=37</th>
<th>SD</th>
<th>Female volunteers n=101</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Universalism</td>
<td>11.1</td>
<td>2.4</td>
<td>10</td>
<td>10.9</td>
<td>2.6</td>
<td>11.1</td>
<td>11.4</td>
<td>2.8</td>
<td>10.9</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Benevolence</td>
<td>40.0</td>
<td>5.2</td>
<td>3</td>
<td>38.6</td>
<td>5.5</td>
<td>40.3</td>
<td>39.6</td>
<td>6.0</td>
<td>41.0</td>
<td>5.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Conformity</td>
<td>15.1</td>
<td>3.0</td>
<td>8</td>
<td>15.3</td>
<td>3.0</td>
<td>15.1</td>
<td>15.4</td>
<td>3.0</td>
<td>15.1</td>
<td>3.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Tradition</td>
<td>39.2</td>
<td>6.7</td>
<td>4</td>
<td>38.1</td>
<td>7.1</td>
<td>39.3</td>
<td>38.6</td>
<td>7.0</td>
<td>40.3</td>
<td>7.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Security</td>
<td>37.6</td>
<td>6.2</td>
<td>5</td>
<td>38.4</td>
<td>6.6</td>
<td>37.3</td>
<td>39.3</td>
<td>6.8</td>
<td>36.9</td>
<td>5.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Power</td>
<td>13.7</td>
<td>5.4</td>
<td>9</td>
<td>15.5</td>
<td>5.3</td>
<td>13.3</td>
<td>15.8</td>
<td>5.7</td>
<td>13.6</td>
<td>5.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Achievement</td>
<td>44.9</td>
<td>6.0</td>
<td>2</td>
<td>45.2</td>
<td>6.4</td>
<td>44.8</td>
<td>45.3</td>
<td>6.4</td>
<td>45.0</td>
<td>6.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Hedonism</td>
<td>26.5</td>
<td>4.6</td>
<td>6</td>
<td>27.2</td>
<td>4.7</td>
<td>26.4</td>
<td>28.6</td>
<td>5.0</td>
<td>26.7</td>
<td>4.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Stimulation</td>
<td>18.0</td>
<td>4.6</td>
<td>7</td>
<td>18.9</td>
<td>5.1</td>
<td>17.8</td>
<td>18.8</td>
<td>4.9</td>
<td>18.7</td>
<td>4.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Self-direction</td>
<td>52.5</td>
<td>6.6</td>
<td>1</td>
<td>53.1</td>
<td>7.4</td>
<td>52.4</td>
<td>52.9</td>
<td>7.7</td>
<td>52.0</td>
<td>6.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The total survey of value preferences recorded in the sample in men and women, in volunteers of both genders shows high differentiation of individual value priorities with strikingly graduated hierarchy of value types.

The sample as a whole has the strongest motive in the value of Self-direction (52.5), followed by Achievement (44.9) and Benevolence (40). The less motivating are the values of Universalism (11.1), Power (13.7) and the value of Conformity (15.1). The differences in preferences of individual values are very striking within the whole sample. The difference in the desirability of the values in the value hierarchy is statistically significant at 1% level, \(F_{[1,827]}=1.88<6528.46\).
The homogeneousness of the sample as a whole, given by the similarity between the whole sample and the subsets (gender, volunteers of both genders) concerns both the level of average scores and the structure of value preferences. In other words, the sample and all the subsets defined show the same sequence of preferred personal values, differing only by the intensity of the preference.

With regard to the great quantity of the data listed in Table 20 and with regard to the concordance of the sequence of the preferred value types in the defined subsets, only the necessary sector of data constituting Diagram 7 can be presented for illustration and example.

The respondents are most interested in and motivated by the individualistic value of Self-direction. Self-direction as primary motivation goal of the respondents, regardless of their gender and volunteerism membership, consists in the desire of self-reliance and independence in thinking and behaviour and results from the need to control the events in one’s life. It is not included among the “other-oriented” collective value types; it is a value serving primarily to individual interests. Also the second value type in the rank of preferences of the respondents – Achievement – corresponds to individualistic motivation, relates to achieving of social prestige, recognition and positive appreciation. The collective values expected by us: Benevolence, Tradition and partially Security have ranked only third through fifth.

Diagram 7: Distribution of value preferences in the sample, n=828

With regard to the fact that the above stated sums include few items and a lot of value types, S. Schwartz suggests combining the adjacent value types to create more reliable indexes of broader value orientation, e.g. Conservation as average of items of Conformity,
Tradition and Security. When classifying ten value types into four value orientations by two dimensions stated by Schwartz (1. collectivistic – individualistic dimension; 2. persistence – change), those groupings get another dimension and interpretation significance. The relevant calculations are summarized in Table 20.

Table 20: Distribution of scores of value orientations of the sample

<table>
<thead>
<tr>
<th>VALUE ORIENTATION</th>
<th>M</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Self-transcendence (1. Universalism, 2. Benevolence)</td>
<td>51.1</td>
<td>collect.</td>
</tr>
<tr>
<td>II. Conservation (3. Conformity, 4. Tradition, 5. Security)</td>
<td>91.9</td>
<td>collect. persistence</td>
</tr>
<tr>
<td>IV. Openness to Change (part. 8, 9. Stimulation, 10. Self-direction)</td>
<td>83.5</td>
<td>individ. change</td>
</tr>
</tbody>
</table>

Legend to Table 20: M = total average score in the relevant value orientation; Dimension = collectivistic or individualistic value orientation; change or persistence).

The summarized scores of four value orientations show the desirable life goals reflected into the respondents’ life style in case the values were interiorized. The respondents are predominantly anchored in the collective – other-oriented value orientation, in Conservation, with value types of Conformity, Tradition, and Security (although the value of Security, as S. H. Schwartz states, serves both for collective and for individual interests). But great part of respondents sees their leading life goal in a completely opposing value orientation emphasizing individual independence, freedom and liberty.

The following picture shows the motivational continuum of the value types measured. The respondent's values placed near each other express content proximity and motivation similarity. For example the most preferred Self-direction (number 10 in the circle), although belonging to individualistic value types, strongly approximates Universalism (number 1) or Benevolence (number 2), i.e. “other-oriented values”, with its motivational contents. On the contrary, the value type of achieving Power (number 6) also belongs to individualistic values, but is very distant from another individualistic value type – Self-direction (number 10) – in the motivational continuum.
Value orientation of respondents
Distribution of scores of value orientation of the sample (n=828)

Legend to picture: the digits surrounding the circle from 1 to 10 correspond to value types by S. H. Schwartz:

The picture of distribution of value types supports also convincingly other characteristics of the value orientation structure.

First, although the respondents scored slightly higher in individualistic than in collective values (the proportion of the sum of scores is 155 to 143), the probable focus of the values of great part of the probands is situated in the continuum of two “strong” values, 4 and 5 (Tradition, Security), together with the close type with number 2 (Benevolence). No other “strong couple” of content-related value types appears in the circle. The value focus is strengthened by the fact that all these three value types belong to the category of collectivistic – collective values expressing and also defending rather others’ interests than one’s own interests;

Second, the individualistic value preferences show two distinctive motivationally different value types, i.e. the above stated wish of Self-direction (number 10) and Achievement (number 7). These priorities can reflect the personality differentiation within the sample. Some link between them suggests the value of Hedonism (number 8) typical for the male part of respondents, as well as Achievement (number 7).

Third, the individual rank of a lot of students lists values that exclude each other and are mutually conflicting in close proximity. They constitute the most preferred values, with key
significance for the individuals, situated on the top of the value hierarchy. For example the values of *Self-direction* as manifestation of the need of self-reliance and free self-expression and *Tradition* (the first and the fourth place, respectively) as manifestation of inter-generation respect are situated in the motivation circle almost opposite each other, thus expressing the motivation opposites in both Schwarz dimensions, both in the dimension of “individualism-collectivism” and in the dimension of “change-persistence”.

Similarly, other highly preferred values (ranking second and third in the value hierarchy) are opposed – kind, caring orientation on people – *Benevolence* – and wish of own *Achievement*. But in this case the motivational goals related to the values may not exclude each other and create potential internal conflict because a person can get achievement and social acknowledgement in activities serving primarily to others’ achievements, e.g. when providing for their welfare in performing prosocial activities.

Values and value orientation belong to culturally co-conditioned personality structures; thus it is possible to expect different levels of acceptance of values as life goals related to gender roles anchored in cultural stereotypes. We expect also “more prosocial”, other-oriented values in volunteers. We used the variance analysis to verify the differences in results by gender and volunteerism.

Table 21: Survey of significant results in differences in value preferences by gender, volunteerism (measured by SVS – Schwartz Value Survey)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Universalism</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>2. Benevolence</td>
<td>1%</td>
<td>10%</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>3. Conformity</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>4. Tradition</td>
<td>10%</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>5. Security</td>
<td>5%</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>6. Power</td>
<td>1%</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>7. Achievement</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>8. Hedonism</td>
<td>5%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>9. Stimulation</td>
<td>10%</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
<tr>
<td>10. Self-direction</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
</tbody>
</table>

Legend to Table 21: A = gender as source of variability; B = volunteerism as source of variability; C = interaction of gender and volunteerism as source of variability; sign. = statistical significance; n = non-significant.

The general linear model of multifactorial test for value inventory is influenced only by the factor of gender. The factor of volunteerism and the interaction with the factor of gender have exceeded only the marginal 10% level of significance.

The strength of value preference has marked gender dimension in the respondents. Men and women differ significantly in six out of ten value types, most conclusively in the value of
Power Enhancement, Self Enhancement (individualistic value, more frequent in men) and in the value of Benevolence (collectivistic value, more frequent in women).

The desire for power, dominance and socially appreciated status is markedly more typical to men than to women (F[1.827]=15.63>6.64 at 1% level). A continuous area with value type of power consists in Security, significantly preferred also by men (F[1.827]=4.96>3.84 at 5% level). Both concordant value types express higher need of men than that of women to avoid actively the threat of uncertainty or to overcome it by control of relations and resources.

Less distinctive inter-gender difference can be seen in higher interest of men for mutually congruent value types of Hedonism and Stimulation; both similar types include desire for agreeable pleasure and excitement (Hedonism F[1.827]=6.31>3.84 at 5% level; Stimulation (F[1.827]=2.83>2.756) at 10% level).

Other difference between genders related to motivationally opposed values of Security and Hedonism is worth noticing; both these value types are more frequently recorded in men than in women (5% level of significance). While security ranks among both individualistic and collectivistic value types, as it stresses protection of individuals and of whole groups, hedonistic impulses correspond to individualistic goals of men.

Women of the sample are, in compliance with their gender role, motivated demonstrably more than men by the prosocial value type of Benevolence that includes indulgence, kindness, amiability, cooperativeness (F[1.827]=7.81>6.64 at 1% level). Higher priority of women, as compared to men, consists in the value of Tradition (10% significance /F[1.827]=3.04>2.756/), resulting from protection of both collective and individual interests. Preservation of Traditions is related to collective solidarity, to the expression of uniqueness of the relevant group, to respect to social standards and symbols. The motivational goal of traditional values consists of respect, commitment and adoption of habits of the group that guarantees survival. It is related to motivationally compliant Security. Both value types include submissive self-control, preservation of traditions and protection of stability.

Genders do not differ in preference of the value types of Universalism, Conformity, Achievement, and Self-direction.

The effect of the factor of volunteerism was statistically shown in less conclusive data variability, suggesting only marginal differences between the subsets defined. The calculation of two value types has got just above the limit of 10% significance: Benevolence (F[1.827]=3.51>2.756) and Hedonism (F[1.827]=2.945>2.756). As expected, it corresponds to stronger representation of kinder, more affiliative individuals among volunteers of both
genders; more distinctive differences apply to men, volunteers versus non-volunteers. *Hedonism* – seeking of sensual pleasure – is similar case and male volunteers enjoy it more often.

The combined effect of the factors of *gender* and *volunteerism* did not have distinctive impact. Slightly increased scores of the value of *Hedonism* suggest some differences linked to interaction of the observed factors (male volunteers show slightly higher scores of hedonism than the rest of the sample), but the calculation exceeded the critical F value only at 10% level ($F[1.827]=3.371>2.756$). Other interactions of the sources of variability are insignificant.

**Summary and interpretation of results**

The analysis of the results of value orientations of students of helping professions allows the following summary:

1. Value preferences of the students are distinctly structured; the attractiveness of individual values is markedly graduated within the value hierarchy. Most students state clear life priorities and life goals they head towards and strive for, as well as the areas they are not interested in and motivated by. The expressed preferences and rejections show very differentiated motivational strength of individual values.

2. The most attractive value type for students of both genders is *Self-direction* related to the need of independent, self-reliant, free control of own life. The second ranks the value of personal *Achievement*. The students are motivated by the need to master tasks successfully, as compared to the standard of excellence, the need of acknowledgement related to personal ambitions and the effort to get social prestige.

The fact that both values constitute the top of the value hierarchy suggests that students, particularly male students, include a lot of individually autonomous individuals freed from strong group bonds, subordinate to their own interiorized standards. Such personal standards can mean psychical support at seeking new opportunities and trying out new behaviours without the restricting pressure of collective traditions and habits. Preferring of values like Hedonism and Stimulation suggests it.

Although individualistic values rank first and second in order of preference, the summarized scores of content-close values constituting value orientations show the value orientation of *Conservation* as a significant motivational goal, covering the values of Tradition, Security and Conformity. (*Conformity by S. Schwartz constitutes the effort to avoid tension or conflict in group.*) Surprisingly, the value of *Universalism* ranks at the opposite end as the least motivating. The positioning of most preferred values into
opposite quadrants, at places excluding each other in the circle model of the motivation continuum, suggests internally inconsistent value hierarchy of a part of respondents. We have recorded the most distinctive heterogony with latent conflict in the individual value type of *Self-direction* on one hand and the collectivistic value type of *Tradition* on the other hand. They are mutually opposed in the motivational circle, expressing motivational opposites in both dimensions, both in the dimension of individualism-collectivism and in the dimension of change-persistence.

It must be reminded in this connection that the research data acquired by the questionnaires (self-reports) summarize the values included in the layer of consciousness that are accessible to self-observation. Motives partially conscious or completely unconscious can lie under the conscious motives. The clarified value orientation, expressed by differentiated preferences of individual values, can be only seeming, and it is evident that the rank of values is continuously shaped and crystalized with regard to the respondents’ age.

It is probable, in spite of the above stated conflicting character of the internal arrangement of values, that the synergetic effect of motivationally compatible collectivistic value types (Tradition, Security and Benevolence, close in the motivational continuum), contains mighty and normative potential of the students, particularly female students. Such “other-oriented” values are the ones to form the colour of the effort for self-determination and individual achievement.

3. The selection of values as life goals has distinctive gender dimension in the students. Although both genders prefer approximately the same values and high level of concordance can be seen in the value hierarchy (see Table 20), the quantification of the value structure has shown marked inter-gender differences in the strength of preference of value types. Men and women differ from each other significantly in the level of importance assigned to individual values in six out of ten value types. The most conclusive differences are related to *Self Enhancement and Benevolence*. The individualistic *Self Enhancement* typically characterizes men, while women prefer more the collectivistic *Benevolence*. There are more female students with positive orientation on other people, preferring collective goals over personal goals. They create emotional bonds to members of their own group, having support of their benefit and welfare at heart. They consider expressing of solidarity as a part of the structure of prosocial feeling, thinking and behaviour.
The gender membership is one of the variables influencing the individualistic and collectivistic orientation of individuals across cultures. H. C. Triandis (1995), well-known researcher in the area of intercultural studies, explains higher individualism and autonomy of men by greater opportunities to self-realization offered to men traditionally by a lot of societies. Fewer opportunities of women, together with their higher sensitivity to the needs of children, can be reflected in collectivistic tendencies of women. Triandis further quotes the results of a study on dominant techniques used by people for self-expression or self-description. Women use most the “dependent technique” in self-description. It is characterized by self-conception defined in context of the relation of dependence or mutual dependence. Dependence can have different forms, most frequently psychological or economic, in traditional societies. Men, on the other hand, use most frequently the “autonomous technique” for self-description.

4. Two value types are immediately related to prosocial behaviour. They are Benevolence defined by S. Schwartz as preservation and reinforcement of welfare of the people the individual is in frequent contact with, and Universalism as perception of, appreciation of, respecting of and provision for welfare of all people and the nature. While Benevolence is related to personal relationships, Universalism is linked to social justice and prosocial behaviour on broader social base. This study has confirmed such two-component structure of values, derived from empirical studies (Schwartz, 1992) and pointing out that Benevolence and Universalism are closely related. Students without gender differences stated Universalism at the last, tenth place in order of preference, while Benevolence ranked third, but the calculation of correlation of both value types is highly significant; both value types join very closely in the respondents15.

5. The description of the value priorities of students of helping professions can be complemented with other principles organizing the value structure. The relations of the values to negative emotions, anxiety and fear (Schwartz, 2005 in Řeháková, 2006) constitute an example. The values like Conformity, Tradition, Security and Power constitute a possibility to master successfully feelings of fear and anxiety. People suppress tendencies that could be socially disturbing; they try to avoid conflicts (Conformity), respect shared experience (Tradition), control actively threats to stability (Security, Power). The motivational goal of Achievement has double role from this perspective; it means confirmation of own competence and abilities, and the achievement

15 This text does not include correlation analysis performed within the study; it will constitute the subject of a publication under preparation.
of social standards can help the individual to control anxiety. It is also worth noticing that the values like Benevolence, Stimulation, Hedonism, Self-direction, preferred by the students, express motivations free from fear and anxiety.

6. The volunteers without gender difference include, in compliance with our expectation, higher number of nicer, more affiliative individuals. The difference in the level of Benevolence is more distinctive in the subset of men (volunteers versus non-volunteers). Hedonism – seeking of sensual pleasure – is similar case; male volunteers seek it more often than non-volunteers.

Conclusion
The hypothesis HA 8 on predominance of collective values in value orientation of respondents over individualistic values was confirmed only in point ad b) Conservation; it was not confirmed in point a) Self-Transcendence. The value orientation of Self-Transcendence includes the value of Benevolence preferred by the respondents, but the students did not state the second component, Universalism, as an attractive goal.

Men differ significantly from women in the extent of preference of individualistic values of Power, Hedonism, Stimulation (hypothesis HA 8.1 was not confirmed). Women, more often then men, prefer collective values of Benevolence and Tradition (hypothesis HA 8.2 was confirmed).

The value type of Benevolence constitutes higher priority for volunteers and they are more motivated by that type as compared to non-volunteers (hypothesis HA 8.3 was confirmed).
Since long years, the research of prosocial behaviour has been seeking the answer to essential questions like whether people are altruistic by nature, which motivates them to offer both spontaneous and planned help, why volunteers invest their time for the benefit of unknown people and also which are the attributes of those who help others to solve their own problems. This study assumes that there are stable individual differences in the tendency to help others and also that there is a sample of mutually related personality traits that play an important role in individual differences in prosocial thoughts, feelings and actions.

A partial goal of the study consists in identification of the structure of traits and tendencies of prosocial personality, including associations with Big Five personality traits and value orientation.

The hypotheses on the variables observed, their mutual bonds depending on the level of prosocial traits and tendencies found are stated in Section five.

**7.1 Differences of Big Five traits by level of prosocial traits and tendencies**

The hypotheses of group B formulated by us are based predominantly on the knowledge included in social-psychological theories. We work on the assumption that personality differences in Big Five source traits are apparent among individuals showing different levels of traits of prosocial personality (empathy, altruism, internalized moral standards). We also assume that there are differentiated associations between prosocial traits and source personality traits according to the five-factor model. Table 22 shows the calculations of correlations of the relevant traits.
Table 22: Distribution of values of correlations of Big Five traits – and factors of Other-oriented Empathy and Helpfulness in the sample

<table>
<thead>
<tr>
<th></th>
<th>Other-oriented Empathy</th>
<th>Helpfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>−0.108 (**)</td>
<td>0.012</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.132 (**), 0.073(*)</td>
<td></td>
</tr>
<tr>
<td>Openness</td>
<td>0.243(**)</td>
<td>0.056</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>0.404(**)</td>
<td>0.056</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.144(**)</td>
<td>−0.045</td>
</tr>
</tbody>
</table>

The data shown in Table 22 prove high level of correlation of the observed variables, i.e. Big Five traits and traits and tendencies of prosocial personality (factor of Other-oriented Empathy and factor of Helpfulness). Six out of the ten calculated correlations are statistically significant. The factor of Other-oriented Empathy correlates with all traits of the five-factor model significantly positively, while with Neuroticism negatively. Helpfulness is positively related to Extraversion; the remaining correlations are insignificant. The result of close association of Agreeableness with the factor of Other-oriented Empathy corresponds to the findings by (Penner et al., 1995) whose study states significant correlation between Agreeableness and the factor of Other-oriented Empathy: r(249)=0.52, p<001), as well as insignificant correlation between Agreeableness and Helpfulness 0.11 (n).

In order to specify in more detail the links of prosocial traits with source personality traits and in order to capture inter-gender singularities, three subsets with low, medium and high level of the prosocial personality dimension of Other-oriented Empathy were singled out within the research sample, separately for men and for women. About 58% respondents were classified into the medium file, by the median; 42% subjects were divided into further two subsets with high and low levels of prosocial tendencies, respectively. Normal distribution was verified by Kolmogorov-Smirnov test.

With regard to inter-gender differences, both in the level of prosocial traits and tendencies and the observed personality traits, hypotheses for both genders are formulated separately. Let us remind that Other-oriented Empathy includes the components of prosocial traits of cognitive and emotional empathy, as well as moral reasoning in compliance with social standards, in summary: EC – Empathic Concern, PT – Perspective Taking, SR – Social Responsibility, O – Other-oriented Reasoning, M – Mutual Moral Reasoning.

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16 The procedure of division of the sample was consulted with an expert, mathematician-statistician.
We expect in compliance with the hypothesis that men will show the effect of Other-oriented Empathy on the score of Neuroticism as follows: increasing level of Other-oriented Empathy will lead to decreasing level of Neuroticism and vice versa, decreasing level of Other-oriented Empathy will be reflected in increasing level of Neuroticism in the files tested (HB.1.1).

Further, we expect in the sample of men that the effect of high level of the prosocial trait of Other-oriented Empathy will be reflected in increased level of source traits of: a) Extraversion; b) Openness to Experience; c) Agreeableness; d) Conscientiousness, as compared to the sample of men with low level of Other-oriented Empathy (hypothesis HB 1.1.1).

Summary results of statistical analysis that has determined the character of the differences of the traits of five-factor model in the samples with differentiated level of Other-oriented Empathy are synoptically stated in Table 23.

Table 23: Distribution of values of Big Five traits by level of factor 1 - Other-oriented Empathy and gender

<table>
<thead>
<tr>
<th>Factor 1 Other-oriented Empathy (measured by PSB)</th>
<th>Personality traits – Big Five</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men n=130</td>
</tr>
<tr>
<td></td>
<td>Low Factor 1</td>
</tr>
<tr>
<td></td>
<td>19.44 27.98 24.63 27.61 32.20</td>
</tr>
<tr>
<td></td>
<td>Medium Factor 1</td>
</tr>
<tr>
<td></td>
<td>18.29 32.35 27.25 30.27 30.49</td>
</tr>
<tr>
<td></td>
<td>High Factor 1</td>
</tr>
<tr>
<td></td>
<td>19.20 32.20 28.40 32.00 30.60</td>
</tr>
<tr>
<td></td>
<td>Level of significance</td>
</tr>
<tr>
<td></td>
<td>n 1 % 5 % 1 % n</td>
</tr>
<tr>
<td></td>
<td>Women n=688</td>
</tr>
<tr>
<td></td>
<td>Low Factor 1</td>
</tr>
<tr>
<td></td>
<td>24.56 30.27 26.17 29.04 28.89</td>
</tr>
<tr>
<td></td>
<td>Medium Factor 1</td>
</tr>
<tr>
<td></td>
<td>23.00 31.95 27.76 32.21 31.25</td>
</tr>
<tr>
<td></td>
<td>High Factor 1</td>
</tr>
<tr>
<td></td>
<td>20.65 33.31 28.95 35.22 31.58</td>
</tr>
<tr>
<td></td>
<td>Level of significance</td>
</tr>
<tr>
<td></td>
<td>1 % 1 % 1 % 1 % 1 %</td>
</tr>
</tbody>
</table>

Legend to Table 23: abbreviations of personality traits measured by NEO inventory: N= Neuroticism; E = Extraversion; O = Openness to Experience; P = Agreeableness; S = Conscientiousness; Factor 1 = Other-oriented Empathy.

The average values of Big Five traits of the respondents suggest deviations in the expected directions for both genders. The factor of prosocial personality of Other-oriented Empathy constitutes a very strong source of variability of the Big Five traits; eight out of ten calculations exceeded the level of significance at 1% or 5% level. The differences between subsamples of women are greater (all calculations are significant at 1% level) than those of men (three out of five calculations exceeded the critical value, two of them at 1% level and one at 5% level of significance). High differences for both genders identically were confirmed
for Extraversion and Agreeableness. The partial results are described in more detail for each gender separately and illustrated by diagrams for better clarity and understanding.

**Analysis and description of results of men**

Diagram 8 presents, in three columns, subsets of men with low, medium and high level of the prosocial personality dimension of Other-oriented Empathy. Slight fluctuation of values, visible in individual columns, has the expected direction, but no considerable weight; the variance analysis has not shown significant differences of Neuroticism according to the graduated level of the factor of Other-oriented Empathy.

**Diagram 8: Differences in the trait of Neuroticism in samples with graduated level of Other-oriented Empathy for men**

Legend to Diagram 8: Factor 1 = dimension of prosocial personality of Other-oriented Empathy (sum of scores of cognitive, emotional empathy and moral reasoning).

The calculation stayed below the level of significance \( F[2,129]=0.28<3.067 \). The reason of non-confirmed hypotheses consists probably in the generally lower level of that trait in the men included in the study \( (M=18.7) \) on the background of the population average (tabular value \( M=22; \ SO=8 \)).

Prosocial characteristics of men include, according to our assumption, higher level of the following traits: a) Extraversion; b) Openness to Experience; c) Agreeableness; d) Conscientiousness. We expect men with higher level of the prosocial Other-oriented Empathy to have higher level of the above stated Big Five traits as compared to the men with lower level of Other-oriented Empathy.
Diagram 9: Differences in the trait of Extraversion in samples with graduated level of the factor of Other-oriented Empathy in men

Statistics has demonstrated increasing Extraversion according to the level of Other-oriented Empathy. The subset with low level of this trait includes higher representation of less extraverted men as compared to the sample of “more prosocial” individuals; the differences have exceeded 1% level of significance (F[2.129]=5.18>4.824). The results show that more affiliative, more optimistic, more sociable respondents are also more likely to be ready to help others. Good mood activates helping behaviours, among other things, because it facilitates interest in others and relates to the picture of successfully mastered problem (Berkowitz, 1987). Introversion with traits of reticence, restraint and orientation on tasks, not on people can constitute personality obstacle to helping others (the average score of this subsample is 28, corresponding to the lower zone of the population standard, which is E=32; SO=8).

Diagram 10: Differences in the trait of Openness to Experience in samples with graduated level of Other-oriented Empathy for men

The level of Openness to Experience also shows fluctuation according to increasing level of Other-oriented Empathy. The subsample of men with lower level of Other-oriented Empathy displays lower levels of openness, together with signs of conventionality and
conservativeness. More men of this sample prefer the known and the tried and tested, they have tendency to soften emotional reactions.

Higher level of Other-oriented Empathy is joined with more frequent representation of probands receptive to inner feelings, curious, interested in new experiences. (The test characteristics at 5% level of significance corresponds to $F[2.129]=3.09>3.067$.) But in general, the men of this study show, as compared to population standard, lower levels of the trait tested, corresponding to lower zone of average (tabular values amount to 28; SO=7).

Diagram 11: Differences in the trait of Agreeableness in samples with graduated level of Other-oriented Empathy for men

As was expected, the differentiated level of Other-oriented Empathy influences very strikingly the level of Agreeableness in men. The interpersonal orientation of the sample of “more prosocial” men is demonstrably characterized more frequently by traits like kind-heartedness and amiability. On the contrary, thinking, feeling and behaviour of a lot of men with low scores of Other-oriented Empathy include more likely suspiciousness, insensitivity and unwillingness to cooperate with others. The differences between samples are statistically significant at 1% level ($F[2.129]=5.53>4.824$). But it must be complemented that unpleasantly oriented men are represented in minority in the sample ($M$ sample of men as a whole amounts to 29.5; tabular standard = 30; SO=7).
The distribution of the values of Conscientiousness for men is rather random and does not depend on the level of the source of distribution. There are no significant differences in the observed variable between samples with different levels of Other-oriented Empathy. The measured levels of Conscientiousness for men are predominantly accumulated around and slightly above the population average (standard = 29; SO=7). Test characteristics $F[2.129]=1.0052<3.067$.

**Analysis and description of results of women**

While no significant variability of Neuroticism was found in men according to the differentiated level of Other-oriented Empathy, the situation of women is different. Statistics have confirmed the expected drop of Neuroticism for women with higher level of the prosocial trait of Other-oriented Empathy. The relevant calculations are illustrated by Diagram 13.
The graduated level of Other-oriented Empathy is demonstrably reflected in the distribution of Neuroticism in women. The inverse proportion of the values of both variables observed can be seen in the samples at decreased Neuroticism when factor 1 increases. The variability of differences is significant at 1% level of significance \(F[2.687]=7.5093>4.824\). Higher prosocialness grouped in the factor of Other-oriented Empathy in women (emotional and cognitive component of empathy and internalized social standards) is distinctly related to low level of Neuroticism. Higher Other-oriented Empathy can be seen in women together with satisfaction and stability. Also women’s characteristics like tension, unease, uncertainty, nervousness, and embarrassment do not create favourable ground for prosocial characteristics and helping others. Our expectation of higher stability, mental balance in “more prosocial women” and vice versa, higher Neuroticism in “less prosocial” women was confirmed.

Hypothesis HB 1.2.1 states that in the samples of women, the level of Extraversion, Openness to Experience, Agreeableness and Conscientiousness fluctuates with some regularity according to the level of the factor of Other-oriented Empathy. The following diagrams inform of the character of distribution of the data measured in relation to the hypothesis.

**Diagram 14: Differences in the trait of Extraversion in samples with graduated level of Other-oriented Empathy for women**

The level of Extraversion is not evenly distributed in the population of female students; significant differences were recorded by the level of Other-oriented Empathy \(F[2.687]=5.926>4.824\) at 1% level). As Diagram 14 shows, higher level of Extraversion with typical talkativeness, optimism, amusing character and orientation on others can be seen in more extent in the sample of more prosocial individuals. Introverted girls accumulate more at
the opposite pole, i.e. that with low level of prosocial traits. Their average score of Extraversion, 30.3 is situated in the lower zone of broader standard and is lower not only as compared to other female students of this study but also as compared to the population standard corresponding to 32, SO=8. Similarly as in men, introversion in women with typically low affiliation and lower social activity also does not constitute favourable characteristic for presence of prosocial traits.

Diagram 15: Differences in the trait of Openness to Experience in samples with graduated level of Other-oriented Empathy for women

Statistically significant differences between the observed subsets were found in the level of the trait of Openness to Experience. The “more prosocial” subset of female students is at the same time more open to experience, is not afraid to seek new experiences, to discover and tolerate the unknown. Lower level of the tested trait, with displays of conventionality and poor interests can be often seen among girls with low empathy. The difference between samples with high, medium or low factor of Other-oriented Empathy is convincingly high (F[2,686]=7.145 >4.824 at 1% level).

Diagram 16: Differences in the trait of Agreeableness in samples with graduated level of Other-oriented Empathy for women
The distribution of the source trait of *Agreeableness* in the female sample in the samples by level of *Other-oriented Empathy* is differentiated very distinctly, undoubtedly the most of all Big Five traits observed by us. The samples of girls with low and high levels of prosocial traits differ from each other strikingly in the level of *Agreeableness*. The calculated value $F$ exceeds many times the critical value $F$ at 1% level, or more exactly: $F[2.687]=39.5898>4.824$.

Similarly as for men in whom the difference between samples with different levels of *Other-oriented Empathy* is, however, not so distinctive, strong correlation of high level of *Agreeableness*, kindness, trustfulness on one hand and high level of prosocial *Other-oriented Empathy* on the other hand applies for women too. It must be noted at the same time that the average score of “strongly prosocial girls”, 35.2, exceeds the population average of 30; $SO=6$ and comes under the boundary zone of above-average scores.

**Diagram 17: Differences in the trait of Conscientiousness in samples with graduated level of Other-oriented Empathy for women**

For the trait of Conscientiousness, significant differences between samples of female students with low and high factors of *Other-oriented Empathy* were found in the sense of direct proportion. The sample with lower level of prosocial traits includes higher number of less conscientious, rather lazy individuals, also indifferent, with weak will and tendency to hedonism. The sample of girls with high empathy shows more often characteristics like reliability, diligence, systematic nature and demandingness on themselves. The differences between the observed subsets are significant at 1% level ($F[2.687]=7.67>4.824$).

**Summary of results and conclusion**

It was found in the relevant stage of the study that prosocial traits grouped in the factor of Other-oriented Empathy are significantly related to factors of personality resulting from the
five-factor model. It is the case for men significantly with three out of five – with Extraversion, Openness to Experience and Agreeableness, for women significantly with all.

**Neuroticism - Other-oriented Empathy.** The distribution of the scores of Neuroticism and Conscientiousness in the samples of men with graduated level of the factor of prosocial personality of Other-oriented Empathy is more or less accidental. The samples of men with low, medium and high level of prosocial traits do not differ from each other essentially in the level of source traits of Neuroticism and Conscientiousness. The differentiated scores of prosocial traits do not relate to the level of Neuroticism and Conscientiousness; no significant, expected regularities were found. (Hypotheses HB 1.1 and HB 1.1d) were not confirmed.

But it is necessary to point out the generally lower level of Neuroticism in male students (the average level found in the sample amounts to 18.7 while the tabular value corresponds to 22). The profile of male students described in the first part of study A includes stability, higher resistance against experiences of anxiety and fears. That means that men with generally lower level of Neuroticism prevail in all three subsets, including the subset of men with low level of prosocial traits. Contrary to our expectance, little anxious, emotionally stable and self-confident individuals prevail here as well (M=19.4). To specify the character of deviations of the trait of Neuroticism by the level of prosocial traits, it would be necessary to perform research with a sample of men including also individuals with higher scores of Neuroticism belonging to the above-average zone. The above stated result has therefore limited validity only for predominantly emotionally stable, resistant men.

The distribution of results is different for women. More prosocial, more empathic women with strongly internalized moral standards are less neurotic, anxious, more relaxed and satisfied and on the contrary, less “prosocial” women are more often more neurotic. Higher level of Other-oriented Empathy can be seen in women rather together with satisfaction and stability. Characteristics like tension, unease, uncertainty, nervousness, and embarrassment do not create favourable ground for prosocial characteristics and helping others. One of the reasons can consist in insufficient sensitivity to social impulses. Anxious individuals seem not to be able to adapt to some aspects of social situation. That can be caused by excessive preoccupation with considerations about themselves, focus on their own emotional experiences, which at the same time reduces the possibility to deal with situational aspects that can include also the other's distress. Our expectation of higher stability, mental balance in more prosocial women and vice versa, higher Neuroticism in less prosocial women was confirmed.
Extraversion - Other-oriented Empathy. As for the trait of Extraversion, measurements have proved its parallel increase with increased Other-oriented Empathy in both genders. Prosocial students show strikingly more sociability, talkativeness, contemplativeness and kind-heartedness as compared to less prosocial individuals. A significant component of Extraversion consists in affiliation that can be understood in the sense of a general, relatively stable interpersonal disposition leading to activation of specific interpersonal strategy of the subject to react to others in friendly manner. It expresses the person’s effort to establish close and positive relations with other people that can get the character of cooperation, friendship or love. Affiliative persons are friendly, sociable, helping, skilful in dealing with people and open to their feelings. The character component related to affiliation and called Cooperativeness, the high level of which is related to helping and empathy, social tolerance and sensitivity, appears also in the theory of temperament and character by C. R. Cloninger and colleagues (1993) (for more details see e.g. Kožený et al., 1994).

In Extraversion, connection with positive affect in everyday life was repeatedly found; extraverted persons report positive emotions and good mood more frequently than introverted ones. The connection of Extraversion and positive affectivity is so consistent that some psychologists suggest terming the factor of Extraversion Positive Emotionality (Tellegen et al., 1988). And it is good mood that activates helping thinking, feeling and behaviour, last but not least because it instigates interest in others and relates to the picture of successfully mastered problem (Berkowitz, 1989). If we admit that prosocial behaviour is often implemented in stressing conditions or constitutes stress for the helping person, then Extraversion in dynamic connection among stressing life events does not intensify the given state (like e.g. Neuroticism) but on the contrary, inclines to improve the state.

The above stated result does not put Extraversion into the role of predictor of prosocial behaviour. It cannot be declared that extraverts help more than introverts in practice; still, from the perspective of source traits, higher Extraversion creates more suitable personality ground for prosocial thinking and feeling than introversion. More reserved introversion, with effort to preserve distance and with focus on tasks and not on people can constitute one of the personality obstacles to prosocial orientation (HB1.1.1 was confirmed in points a, b, c).

Openness to Experience – Other-oriented Empathy. Additionally to Extraversion, Openness to Experience constitutes another factor that shows mobility according to increasing level of Other-oriented Empathy in both genders. Lower level of Other-oriented Empathy is more associated to lower scores of Openness, with prevailing conventionality and conservativeness, with preference of the tried and tested. Higher level of Other-oriented
Empathy is more frequently associated to inquisitiveness and curious interest in new experiences.

Helping in real situations is connected very often with some level of experience of stress or discomfort by the helping person. The empirical study performed in persons with differentiated scores of Big Five factors showed selection of different coping strategies used by subjects to master stressing events that included loss, threat or challenge. The authors of the study, R. R. McCrae and P. T. Costa (1986) confirmed the predisposing influence of personality traits to the use of specific type of behaviour strategy to master stress. High level of both Extraversion and Openness to Experience correlated with a lot of efficient coping procedures. McCrae and Costa stated particularly activity, rational action, positive thinking or application of humour as example of reasonable and efficient procedures to cope with stress. Low level of Openness to Experience was connected, similarly to Neuroticism, with passiveness, indecision and relying on faith. Subjects with high level of Neuroticism showed, additionally to the inefficient strategies of coping with stress, also hostile reactions, escape to fantasy and feelings of guilt.

Agreeableness – Other-oriented Empathy. Among all Big Five factors, the distribution of Agreeableness is the most differentiated in the subsets distinguished by the level of scores of Other-oriented Empathy. It applies to both genders, particularly to women, that the scores of personality characteristics of the factor of Agreeableness rise strikingly with increasing level of prosocial traits grouped in the dimension of Other-oriented Empathy. Interpersonal orientation of more prosocial students is characterized by kind-heartedness, kindness, confidence and amiability. On the contrary, subjects with low score of Other-oriented Empathy show traits of unkindness, suspiciousness, insensitivity and unwillingness to cooperate in interpersonal relationships.

High interconnection of the traits grouped in Agreeableness and the traits grouped in Other-oriented Empathy is evident also from the calculations; the correlation of the traits of prosocial personality and Agreeableness achieved a value of 0.404, highly exceeding the level of significance.

The authors of a study on motivation to volunteer work (Penner and Finkelstein, 1998) think that people with higher Other-oriented Empathy help out of interest in the others’ welfare, out of the satisfaction they get from the fact that they are helping and out of the feeling of responsibility for the others’ happiness. Persons with higher share of Helpfulness show prevailing reasons of the type of reinforcement of their own feeling of efficiency and competence.
7.2 Big Five traits by the level of prosocial tendency – Helpfulness

We expect, in accordance with Hypothesis HB 2, rather indistinctive differences in the variability of values of Big Five traits by the graduated level of the factor of Helpfulness in both genders. We expect higher values of the observed traits only for Extraversion and Agreeableness, both in men and in women.

Table 24: Distribution of scores of Big Five traits by level of factor of Helpfulness and gender

<table>
<thead>
<tr>
<th>Factor of Helpfulness (measured by PSB)</th>
<th>Personality traits by NEO</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>N</td>
<td>E</td>
<td>O</td>
</tr>
<tr>
<td>Low Helpfulness</td>
<td>18.56</td>
<td>30.04</td>
<td>24.33</td>
<td>29.78</td>
</tr>
<tr>
<td>Medium Helpfulness</td>
<td>17.74</td>
<td>31.11</td>
<td>26.85</td>
<td>29.13</td>
</tr>
<tr>
<td>High Helpfulness</td>
<td>20.17</td>
<td>31.33</td>
<td>27.29</td>
<td>29.61</td>
</tr>
<tr>
<td>ANOVA level of significance</td>
<td>n</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
</tbody>
</table>

|                                        | Women                     |     |     |     |
| Low Helpfulness                        | 22.10                     | 31.39| 26.86 | 31.48 | 30.96 |
| Medium Helpfulness                     | 23.52                     | 31.37| 27.93 | 31.89 | 31.00 |
| High Helpfulness                       | 22.73                     | 33.11| 27.60 | 32.74 | 30.54 |
| ANOVA level of significance            | n                         | 5 % | n   | 10 % | n   |

Legend to Table 24: Abbreviations of personality traits measured by NEO inventory: N = Neuroticism; E = Extraversion; O = Openness to Experience; P = Agreeableness; S = Conscientiousness.

The statistical calculations for graduated level of Helpfulness and the observed Big Five traits show refusal of most predictions included in the hypotheses of group HB 2.

Helpfulness does not constitute source of variability of any of the observed source traits of Big Five in the sample of men. There are some differences in two source traits (E; O) in the predicted direction between the samples with graduated level of prosocial tendencies, but the measured differences are not significant. The levels of Extraversion and Openness to Experience change in the sense of direct proportion so that the sample with higher willingness to help others includes slightly higher number of extraverts and individuals open to experience. The registered increase of the extraversion scores supports the hypothesis, but the calculation did not exceed the level of significance (F[2.129]=0.273<3.0675 at 5% level).

Variability of the source trait of Agreeableness in the direction of prediction has not been captured either (F[2.129]=1.2699<3.0675 at 5% level).

The sample of women has different situation; the factor of Helpfulness caused high variability of values in two out of five Big Five traits. The effect of Helpfulness can be seen significantly in the level of Extraversion and Agreeableness – the level of both traits rises with increasing Helpfulness. The above stated findings are illustrated in the following two Diagrams.
Diagram 18: Differences in the trait of Extraversion in samples with graduated level of the factor of Helpfulness for women

![Diagram 18](image)

The distribution of results in the dimension of extraversion – introversion differentiates the samples of girls with lower and higher level of prosocial tendencies – Helpfulness (F[2,687]=4.74>3.009, at 5% level of significance). Extraversion of girls rises slightly together with the level of Helpfulness, which allows the interpretation that interpersonal characteristics like affiliation, activity and sociability, included in extraversion, facilitate altruistic behaviour, while unsociability and introversion can reduce the tendency for helping. Extraverted orientation on other people facilitates perception and adequate evaluation of their situational distress and needs can constitute suitable base for helping. Extraversion includes also assertiveness, self-assurance and seeking of excitement, which can be understood as a barrier against experiences of discomfort in confrontation with other’s suffering (included in Helpfulness).

Diagram 19: Differences in the trait of Agreeableness in samples with graduated level of the factor of Helpfulness for women

![Diagram 19](image)

Slight, but continuous increase of Agreeableness of girls in samples with increasing level of Helpfulness corresponds to 10% level of significance (F[2,687]=2.665>2.356). Helpfulness is not such a distinctive source of variability of the values of the feature of Agreeableness like Other-oriented Empathy, but it allows deducing about higher representation of kind,
sympathetic, altruistic girls in the sample with higher score of Helpfulness than in the sample with low score of that factor.

As for Hypothesis HB 2.3 predicting that Helpfulness does not cause variability of the observed personality traits in both genders, F test has produced the following results (the calculation tables are stated in annex):

a) calculation of differences of Neuroticism: for men (F[2.129]=1.142<3.0675 at 5% level); for women (F[2.687]=2.3166<3.0675 at 5% level);

b) calculation of differences of Openness to Experience: for men (F[2.129]=2.243<3.0675 at 5% level); for women (F[2.687]=2.21<3.0675 at 5% level);

c) calculation of differences of Conscientiousness: for men (F[2.129]=0.776<3.0675 at 5% level); for women (F[2.687]=0.340<3.0675 at 5% level).

Summary and conclusion
While a number of significant connections to the Big Five traits was found in case of the factor of prosocial personality of Other-oriented Empathy, we have recorded only slight associations, and only for women, in the second factor, Helpfulness. The measurement made in men produced only insignificant results; the level of none of the source traits is influenced by differentiated level of the factor of prosocial personality of Helpfulness. There are no essential differences in the levels of Neuroticism, Extraversion, Agreeableness, Conscientiousness and Openness to Experience among men with high, medium and low level of the prosocial tendency of Helpfulness (HB 2.1 is rejected; HB 2.3 is accepted).

The samples of women with higher level of prosocial tendencies – Helpfulness – include higher number of extraverted and agreeable women as compared to the samples with lower level of Helpfulness.

The above stated calculations show that, according to the five-factor model, the feature of extraversion has most significance for the level of Helpfulness (see Table 24). Statistics has not produced significant result for men, but the predicted direction of score variability was recorded. It must be added for the sake of completeness that the sample of men shows slightly lower extraversion on average (table value is 32; M for men = 30.96). Even such slightly shifted level of extraversion could have played its role with regard to the insignificant calculation.

As for the traits closely related to quantity and quality of social interactions, to sociability and affiliativeness, they did not exceed the limit of average by their levels of Extraversion and
Agreeableness. Males, as compared to tabular standard, include slightly more frequently introverted, autonomous, independent, but also non-cooperative and non-kind individuals.

We can understand the fact that extraversion of girls rises slightly together with the level of Helpfulness so that interpersonal characteristics like affiliation, activity and sociability, included in extraversion, facilitate altruistic behaviour, while unsociability and introversion can reduce the tendency for helping. Just the fact that extraverted individuals seek more frequently social interactions increases the probability for them to come across a social situation that will require them to intervene in favour of another person. (We remind that the factor of Helpfulness includes self-description of personal experience with altruistic action.)

Extraverted orientation on others facilitates also perception and adequate evaluation of their situational distress and needs, constituting the basic condition for “starting” a chain of thoughts and feelings that can lead to helping. Extraversion includes assertiveness, self-assurance and seeking excitement, which can be understood as a barrier against experiences of discomfort in confrontation with other’s suffering (included in Helpfulness) and which can reduce psychical costs of helping, thus increasing the probability of helping.

7.3 Preference of values by level of prosocial traits and tendencies

The concept of prosocial behaviour suggests that the foundation of sensitivity to problems of others can consist of different factors and that behaviour, as consequence of recognition of the other’s state, can be regulated by expectation of inner impulses of different types. Motivational regulation functions of values constitute one of the main functions of values. Internalized values constitute internal personal standards determining the behaviour, including prosocial behaviour.

With regard to the structure of the factor of prosocial personality of Other-oriented Empathy (unification of empathy and internalized social standards) we expect that its graduated level will be linked to preference of different values by the respondents. We expect that students scoring high in the factor of Other-oriented Empathy, as compared to students scoring low in the factor of Other-oriented Empathy, will prefer other value types. For respondents with higher level of the factor of Other-oriented Empathy we also expect more frequent motivation by values grouped in the value orientations of Self-Transcendence and Conservation, as compared to subjects with lower level of the factor of Other-oriented
Empathy. We rely on the fact that both value orientations, *Self-Transcendence* and *Conservation*, express benefit of others or relation to preservation of optimal state or improved situation of others, and therefore they should have closer relationship to prosocial thinking, feeling and behaviour by their motivational contents (Hypothesis HB 3).

We also expect inverse relation for the value orientation of *Self-Enhancement* (drop of interest in the values of Self-Enhancement with parallel increase of the factor of *Other-oriented Empathy* in the samples). The reason of prediction of inverse proportion of both variables consists in the individualistic motivational contents of the value orientation of Self-Enhancement; its motivational goal is primarily personal, not collective. We consider the value type of *Openness to Change* insignificant in relation to prosocial traits and tendencies, with regard to the fact that it is motivationally related both to collective and to personal goals.

The average scores measured for individual value orientations, listed by the level of prosocial *Other-oriented Empathy* and by genders, are shown in Table 25.

Table 25: Distribution of the score of value orientation by level of the factor of Other-oriented Empathy for the whole sample and by genders

<table>
<thead>
<tr>
<th>Other-oriented Empathy (measured by PSB)</th>
<th>Value orientation by SVS</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>Total sample n=828</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Factor 1</td>
<td>63.79</td>
<td>73.82</td>
<td>73.46</td>
<td>83.47</td>
<td></td>
</tr>
<tr>
<td>Medium Factor 1</td>
<td>66.30</td>
<td>77.12</td>
<td>71.79</td>
<td>83.82</td>
<td></td>
</tr>
<tr>
<td>High Factor 1</td>
<td>69.96</td>
<td>79.52</td>
<td>69.19</td>
<td>84.27</td>
<td></td>
</tr>
<tr>
<td>Level of significance – ANOVA</td>
<td>1 %</td>
<td>1 %</td>
<td>5 %</td>
<td>n</td>
<td></td>
</tr>
<tr>
<td>Men n=130</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Factor 1</td>
<td>62.78</td>
<td>72.41</td>
<td>74.28</td>
<td>85.62</td>
<td></td>
</tr>
<tr>
<td>Medium Factor 1</td>
<td>65.20</td>
<td>77.80</td>
<td>74.58</td>
<td>85.73</td>
<td></td>
</tr>
<tr>
<td>High Factor 1</td>
<td>74.60</td>
<td>88.00</td>
<td>70.30</td>
<td>83.70</td>
<td></td>
</tr>
<tr>
<td>Level of significance – ANOVA</td>
<td>5 %</td>
<td>1 %</td>
<td>n</td>
<td>n</td>
<td></td>
</tr>
<tr>
<td>Women n=688</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Factor 1</td>
<td>64.10</td>
<td>74.26</td>
<td>73.17</td>
<td>82.79</td>
<td></td>
</tr>
<tr>
<td>Medium Factor 1</td>
<td>66.46</td>
<td>76.86</td>
<td>71.15</td>
<td>83.36</td>
<td></td>
</tr>
<tr>
<td>High Factor 1</td>
<td>69.59</td>
<td>78.82</td>
<td>68.83</td>
<td>84.16</td>
<td></td>
</tr>
<tr>
<td>Level of significance – ANOVA</td>
<td>1 %</td>
<td>5 %</td>
<td>5 %</td>
<td>n</td>
<td></td>
</tr>
</tbody>
</table>

Legend to Table 25: Value orientation measured by SVS method (S. H. Schwarz): A = Self-Transcendence; B = Conservation; C = Self-Enhancement; D = Openness to Change. Factor 1 = Other-oriented Empathy.

The distribution of the average scores within individual types of value orientation corresponds to our expectance, both in the sample of men and of women. The variance analysis showed high effect of the factor of *Other-oriented Empathy* for differences in three
out of four value orientations, Self-Transcendence, Conservation and Self-Enhancement. In the first two value orientations (Self-Transcendence and Conservation), the scores rise in the same direction, in the direction of direct proportion; in Self-Enhancement, it is quite the other way round (the higher the sample scores in Other-oriented Empathy, the lower it scores in Self-Enhancement). The differences between the samples with high and low levels of Other-oriented Empathy are statistically significant. F test produced the following results (calculation tables are stated in annex): Self-Transcendence \( (F[2.827]=16.291>4.824 \text{ at } 1\% \text{ level of significance}) \); Conservation \( (F[2.827]=8.873>4.824 \text{ at } 1\% \text{ level of significance}) \); Self-Enhancement \( (F[2.827]=4.347>3.0066 \text{ at } 5\% \text{ level of significance}) \).

**Results for men**

Hypothesis HB 3.1 was formulated in connection with verification of association between the level of Other-oriented Empathy and the value orientation: a) Self-Transcendence; b) Conservation. The following diagram shows progressive, continuous increase of the value orientation of Self-Transcendence, according to how Other-oriented Empathy rises in partial subsets. The data are conclusive; the statistics confirm high significance of the differences presented \( (F[2.129]=4.6157>3.0675 \text{ at } 5\% \text{ level of significance}) \).

**Diagram 20: Differences in value orientation of Self-Transcendence by the level of the factor of Other-oriented Empathy for men**

The men in the sample with higher level of traits of prosocial personality (the factor of Other-oriented Empathy) show on average higher level of the values constituting Self-Transcendence. More prosocial men are more motivated by values of Universalism and Benevolence, displayed by interest in the surroundings and particularly by kind orientation on
people together with the effort to protect and support them. On the opposite pole, in the sample with low level of those phenomena, the value orientation of the subjects towards Self-Transcendence is distinctively lower (M score of the subsets corresponds to 74.6 to 62.8).

The situation is similar as for the value orientation of Conservation in men; Diagram 21 presents the results for illustration and for clarity.

**Diagram 21: Differences in value orientation of Conservation by the level of the factor of Other-oriented Empathy for men**

The variable of Other-oriented Empathy influences significantly the distribution of results for the value orientation of Conservation for men. Its influence on the increase of the value orientation is highly significant ($F[2.129]=5.367>4.824$ at 1% level). As expected, regularity could be seen; i.e., the sample with higher level of the factor of Other-oriented Empathy is represented by strikingly higher number of probands professing tradition, loyalty, observance of customs, preferring and seeking stability and harmony, as compared to the sample with lower or low factor of Other-oriented Empathy.

Hypothesis HB 3.1.1 expects inverse proportion between the level of the prosocial traits of Other-oriented Empathy and the value orientation of Self-Enhancement for men. The inner structure of those variables is not congruent; the prosocial traits and tendencies include primarily orientation on others, while Self-Enhancement constitutes purely individualistic life orientation. The data measured to verify the hypothesis (Diagram 22) suggest slight drop in the expected direction, but only in bipolar comparison of the sample with high factor of Other-oriented Empathy to other two samples.
Diagram 22: Differences in value orientation of Self-Enhancement by the level of the factor of Other-oriented Empathy for men

The slight fluctuation measured at the scores of Self-Enhancement does not have permanent, regular and one-direction character. The value F calculated by us did not exceed the critical value F of statistical significance ($F_{[2.129]}=0.3102<3.0676$ at 5% level); the distribution of the acquired data does not suggest unambiguous effect of the observed indicator. The detailed specified ascertainment of the progress of changes of the dependent variable would require another analysis.

Results for men

The statistical analysis should, in accordance with Hypothesis HB 3.2, confirm or disprove the effect of the source of variability of the factor of Other-oriented Empathy on the variable – value orientation of women: a) Self-Transcendence; b) Conservation.

The following diagram composed of the average scores of the tested variable of Self-Transcendence illustrates its permanent, non-fluctuating increase in the samples with graduated level of prosocial tendencies in women. ANOVA demonstrated that those growth data reflecting the differences of the samples are highly conclusive at 1% level ($F_{[2.687]}=11.2116>4.824$).

Diagram 23: Differences in value orientation of Self-Transcendence by the level of the factor of Other-oriented Empathy for women
The evident continuous increase of the score of the variable by the graduated level of *Other-oriented Empathy* in the expected direction confirms the validity of the prediction of the tested hypothesis for women, point ad a). Women with higher level of empathy and internalized prosocial moral standards, similarly to men, show on average more frequent selection of values expressed motivationally by Universalism and Benevolence (for example protection of nature, support to close persons with regard to their best interests). In direction to low scores of *Other-oriented Empathy* in women, the level of the value orientation of *Self-Transcendence* drops (M score of antipoles of women corresponds to 69.6 to 64.1). Women with low scores of empathy are more frequently motivated by other goals attractive to them than by Universalism and Benevolence and show different priorities in their value system (see the hypotheses of group A on values).

Similar increase of attractiveness of value orientation of women at increasing *Other-oriented Empathy* was recorded also when testing *Conservation*. The calculation is illustrated by the following Diagram 24.

**Diagram 24: Differences in value orientation of Conservation by the level of the factor of Other-oriented Empathy for women**

Diagram 24 shows distinctive, regular and continuous increase of the scores of the observed variable across samples. The differences in preferences of the value orientation of *Conservation* (with values of the types of Conformity, Tradition, Security) are conclusive at 5% level ($F[2.687] = 4.79 > 3.0089$). Women with higher scores of empathy and moral standard consider values like loyalty, observance of customs, security, harmony and stability more frequently as desirable life goals, leading principles of their own behaviour. The above stated result is consistent with the prevailing opinion that empathy and respecting of social standards constitute indispensable conditions of all relevant social relations.
Results for hypothesis HB 3.2.1

The value orientation of Self-Enhancement corresponds rather to individualistic than to collective orientation and, from the gender perspective, motivates men more frequently than women (see the hypotheses of group A). This fact accounts for Hypothesis HB 3.2.1 on inverse proportion of the level of Other-oriented Empathy and value orientation of Self-Enhancement in women.

Diagram 25: Differences in value orientation of Self-Enhancement by the level of the factor of Other-oriented Empathy for women

The distinctive differences between the scores of the samples are statistically significant at 5% level ($F[2.687]=4.056>3.0089$); with increasing “prosociality” and empathy of women, their motivation by values of personal achievements and power in the sense of control over people and resources, obtention and use of competences decreases.

Diagram 26: Differences in value orientation of Openness to Change by the level of the factor of Other-oriented Empathy for women

Insignificant differences between the samples ($F[2.687]=0.388119<3.0089$) show that women with low, medium and high levels of Other-oriented Empathy do not differ from each other essentially in the value orientation of Openness to Change in the sense of self-
determination, effort for independence and self-reliance and in the sense of need of stimulation. The values concentrated in the tested value orientation are attractive for female respondents approximately identically across samples.

Diagram 27: Differences in value orientation of Openness to Change by the level of the factor of Other-oriented Empathy for men

Like in the preceding case for women (Diagram 27), we have recorded only slight deviations of the measured scores of the value orientation of Openness to Change for men as well. The calculation did not exceed the critical value F of statistical significance (F[2.129]=0.0647<3.0676 at 5% level); the distribution of the data of the respondents is random and does not suggest effect of the observed indicator.

Summary and interpretation of results

The expected source of differences in prosocial motivation of students of helping professions is the differences in values and value orientations. According to S. Schwartz (1994) whose typology we base our assumptions on, values are the ideas of what is desirable, what directs the path people select from among several behaviours, how they assess people and events and explain their own behaviours and assessments. The decisions of people how they should behave reflect the relative importance they assign to particular values. Individual values differ depending on the motivational goal they express. The sample of values oriented primarily on satisfaction of the others’ goals includes Universalism and Benevolence. Those value types are particularly relevant for prosocial behaviour, which means that we expected that students who attach great importance to such values would be "more prosocial" than students who consider such values less important.
The main results are stated in the survey.

1. Students of both genders with higher scores of emotional and cognitive empathy, social responsibility and internalized moral standards grouped in the factor of Other-oriented Empathy show, as compared to students with low scores of this factor, higher preferences of Self-Transcendence. More prosocially oriented students are more motivated by values of Universalism and Benevolence, interest in surrounding nature, they evaluate positively tolerance among people, appreciate social justice and freedom and first of all, those students are characterized by positive cognitive-affective assessment of people, kind orientation on people with effort to protect and support them. In students with low levels of the factor of Other-oriented Empathy, the preference of the value orientation of Self-Transcendence decreases markedly. Similar conclusions are shown in the study by S. Hitlin (2003) who investigated the relevance of values for understanding of individual differences in prosocial tendencies. Hitlin found correlation between the significance attached to particular values and the strength of identity of volunteer role in university students. He found significant positive relation between the value type of Benevolence (as measured by the importance attached to things like true friendship, honour, ability to forgive, willingness to help) and the volunteer identity. He also found significant negative relations between the values related to longing for power and personal achievement and the volunteer identity. The considerations of aspects of prosocial or altruistic personality of different authors include references to differentiated value preferences related to prosocial behaviour (e.g. Staub, 1978; Schwartz, 1994). Differences both in final and in instrumental values are described between “altruists” and “non-altruists”. But it must be observed that the above stated findings only show that particular values and prosocial traits and tendencies are related to each other, but they do not demonstrate that differences in values cause differences in prosocial behaviour.

2. Another sample of values related to prosocial thinking and feeling of students is Conservation (Conformity, Tradition and Security). The level of score of the factor of Other-oriented Empathy is significantly reflected in the preferences of Conservation in the sense that the samples of students with high scores of the factor of empathy show at the same time high scores of preference of the values of Conservation. Anchoredness in tradition, in solidarity between generations, in group symbolism, shared experiences and customs of social groups they are devoted to and they live their life in constitute preferred source of inner stability and harmony for students with high levels of the factor of Empathy.
3. The value orientation of *Openness to Change* in the sense of self-reliance and independence of group bonds is distributed randomly in the students. The values grouped in this value orientation are attractive to female students across samples with differentiated scores of the factor of *Empathy* approximately equally. The relation of the traits of prosocial personality and the value orientation of *Openness to Change* does not have regular character.

4. Obvious gender difference can be seen in the preference of values of *Self-Enhancement*. Preference of the individualistic value orientation of *Self-Enhancement* decreases in women with increasing scores of the factor of *Other-oriented Empathy*, as opposed to men. Inverse proportion between the level of the factor of *Empathy* and the value orientation of *Self-Enhancement* applies to women. The explanation can consist in incompatibility of motives following from both psychical phenomena; while prosocial traits and tendencies include primarily orientation on others, *Self-Enhancement* with values of power and achievement serves primarily to satisfaction of own needs and represents individualistic life orientation.

The above stated difference between genders confirms the common practice that men and women often react differently to a person in need of help. These differences bring about three questions: whether help will be offered, why such help will be provided and under what circumstances it will be provided. Researchers prove that helping in public is sometimes related to self-oriented motives. Public prosocial behaviour has negative relation to empathic taking of the other’s perspective and to internalized prosocial moral reasoning and it has positive relation to hedonistic and appreciation-oriented value orientation (such characteristics correspond rather to men). It is viewed as demonstrated that women show more sympathy (Eisenberg and Miller, 1987a) and sometimes higher level of interiorized prosocial moral reasoning (Eisenberg and Fabes, 1998). Other studies state that adolescent boys are more interested in acquiring social acknowledgement and prestige than adolescent girls (Carlo et al., 1991). The above stated findings, including our results, suggest the significance of value priorities because internalized values and beliefs, as S. H. Schwartz (1977) postulates, unite with each other and create personal standards representing inner standards that determine the individual’s behaviour, including prosocial behaviour.

5. The understanding of prosocial behaviour and altruism shows that the foundation of sensitivity to problems of others can consist of different factors and that behaviour, as consequence of recognition of the other’s state, can be regulated by expectation of inner
impulses of different types. These concepts do not clarify all regulation mechanisms of behaviour, rather on the contrary, they concern only particular factors acquired by studies. The status quo reflects the complicated character of the issue dealt with; therefore, in this connection, each of the directions quoted gives only fragmentary answer to the question of conditioned character of human altruism. The present reasoning of prosocial or altruistic personality often ends by negative answer to the typical question whether the knowledge of personality traits or motives is sufficient for prediction of prosocial behaviour.

Personality psychologists and social psychologists have recently focused on models of mediation and mediated mitigation of behaviour. Such more complex models offer a base for consideration of links between personality traits, motives and social behaviour. For example the study by G. Carlo et al. (2005) focused on coordination of Big Five personality traits (a), motivation to volunteerism by prosocial values (b) and volunteer behaviour (c) has shown the following relations between personality and behaviour:

- the personality traits conceptually related to volunteerism (Agreeableness and Extraversion) relate to volunteer behaviour more strongly than less conceptually related traits (Conscientiousness, Neuroticism and Openness to Experience);
- the motivation by prosocial values mediates relations between Agreeableness, Extraversion and volunteerism;
- the interactions of Extraversion and Agreeableness influence motivation by prosocial values and that motivation predicts volunteerism.

The results by Carlo et al. highlight the significance of internalized prosocial values for creation of the relationship between personality features (particularly the feature of Agreeableness) and prosocial behaviour. The influence of the feature of Agreeableness on the willingness to engage in volunteerism is largely mediated by motivation by prosocial values. On the other hand, the above stated authors did not find supportive evidence for direct interaction effect of Agreeableness and Extraversion on volunteerism. Their findings are consistent with the functional model of volunteerism (Omoto and Snyder, 1995), according to which prosocial values can partially account for the effects of personality traits on voluntary, selfless helping.

**Conclusion**

The factor of prosocial personality of *Other-oriented Empathy* has effect on the variability of value orientations of Self-Transcendence and Conservation. The tested samples of men show
significant differences in the value orientations of *Self-Transcendence* and *Conservation* according to the level of the factor of Empathy. (Hypothesis HB 3.1 was confirmed.)

The level of preference of the value orientation of *Self-Enhancement* in men with different scores of the factor of *Other-oriented Empathy* is approximately equal. (Hypothesis HB 3.1.1 was not confirmed.)

The differentiated level of the factor of *Other-oriented Empathy* associates in women with conclusive differences in preference of the value orientations of *Self-Transcendence* and *Conservation*. (Hypothesis HB 3.2 was confirmed.)

The factor of *Other-oriented Empathy* acts upon the variability of the value orientation of *Self-Enhancement* in women so that with increasing empathy of women, the attractiveness of values of personal achievement and power as desirable life goals decreases. (Hypothesis HB 3.2.1 was confirmed.)

The factor of prosocial personality of *Other-oriented Empathy* in both genders does not cause variability of the dispersion of data of the value orientation of *Openness to Change*. The distribution of scores of the value orientation is accidental. (Hypothesis HB 3.2.2 was confirmed.)

If we want to summarize the study results, we must point out that they were obtained only on the base of introspective statements of the respondents. Despite the anonymous character of the questioning, it is probable that some of the self-descriptions attest rather to the distorted self-image of the respondents or to the impression they want to give to others than to their true nature. Another circumstance limiting generalizations for real life situation concerns the fact that we found the following in the students: 1. level and structure of prosocial traits and tendencies, 2. level of personality dispositional factors related to prosocial personality and 3. value orientation related to motivation and to life goals and preferences, but still we cannot predict with certainty prosocial behaviour in respondents in whom we diagnosed excellent structure of prosocial personality. As a matter of fact, real behaviour of a person is always the result of interaction of internal dispositions and external situational conditions in some proportionality. The relation between the source traits according to the five-factor model, the prosocial personality and the motives included in values is complicated and other studies will be needed to find to which degree these factors influence prosocial behaviour in real life situations.
8. SUMMARY OF THE MOST IMPORTANT RESEARCH RESULTS

The main objective of the project was to gain new scientific knowledge about the level, structure and chosen interrelations of prosocial, empathic and affiliative tendencies within a sample of college students specialising in helping professions.

This objective was sampled with a view to the fact that there is little empirical evidence proving that people engaged in helping professions display a relatively high level of prosocial, empathic and affiliative tendencies, though according to expert literature these characteristics are generally considered to be the most important component of the individual traits which are needed for practising helping professions. These traits are considered to constitute decisive competencies of people engaged in helping professions and represent principal factors of each personality-based authentic helping relationship. Czech professional literature lacks such empirical evidence in spite of the rapid extensive and diversified development of helping professions and related study branches.

Despite this extensive diversification, the problems of prosocial, empathic and affiliative tendencies remain a common denominator for all helping professions and related fields of activity, and their investigation can be beneficial across all specialisations.

Prosocial, empathic and affiliative tendencies were investigated in context with other relevant variables which include the basic dimensions of five-factor personality model, aspects of arousability, optimism, orientation of values, and social desirability. The project also takes account of independent variables such as gender and volunteering experience.

Summary of project results

1. It was found on the basis of five-factor personality model that among the students of helping professions, women display a higher level of neuroticism (NEO FFI) along with a higher level of agreeableness (NEO FFI) in comparison with men. Women also display a higher level of almost all traits of prosocial personality (PSB). Their interest in other people is more intense, they are able to assume responsibility for enhancing or maintaining other people’s benefit (PSB). Women also significantly differ from men considering their level of cognitive and emotional empathy (PSB, MEE). Compared with men, women’s lower level of arousability (AOS). More than men, women incline to altruistic thoughts and feelings. However, men claim larger numbers of altruistic, really accomplished deeds aimed at others’ benefit, and helpfulness (EEA, PSB).
2. Women and men in helping branches are rather focused on the collective and their value preferences include such aims of life as benevolence, conformity, tradition. Women accentuate cooperation with others, care for others more than men; unlike men, they do not pay much attention to values connected with boosting the self, they do not pursue success, might or prestige. Both genders appreciate the value of self-direction.

3. Some differences were found which positively correlate with prosocial traits and tendencies. In comparison with persons lacking volunteering experience, the volunteers displayed a higher level of extraversion (NEO FFI), agreeableness (NEO FFI) and conscientiousness (NEO FFI). Regarding the interaction of gender and volunteering, it was proved that women volunteers had a higher level of extraversion (NEO FFI) and agreeableness (NEO FFI) than men volunteers. When compared with non volunteers, the volunteers do not display a globally different rate of emotional empathy; though, considering some partial components comprising emotional empathy, higher levels were found in volunteers as regards positive sharing and emotional contagion. The volunteers also display a higher level of dispositional optimism (AOS) and of exocentric and endocentric altruism (EEA). As regards the interaction of gender and volunteering, women reach higher levels of exocentric as well as endocentric altruism than men (EEA). As to the preference of values, benevolence is more expressed than in non volunteers (SVS).

4. Project shows that men engaged in various helping specialisations characterised by a higher level of other-oriented empathy (PSB) display a higher level of extraversion (NEO FFI) and openness to experience (NEO FFI). The level of helpfulness in men (PSB) was not significantly connected with the dimensions of the Big Five model. Men with a higher level of other-oriented empathy (PSB), in comparison with men displaying a low level of this variable, preferred collective-related values such as universalism, benevolence, tradition (PSB).

5. Within project it was found that women studying helping specialisations characterised by a higher level of other-oriented empathy (PSB) display a higher level of extraversion (NEO FFI), openness to experience (NEO FFI), agreeableness (NEO FFI) and conscientiousness (NEO FFI) in comparison with women having a low level of other-oriented empathy (PSB). A higher level of helpfulness (PSB) in women, in comparison with those displaying a low level (PSB), was connected with a higher level of extraversion (NEO FFI), of agreeableness (NEO FFI) and also with a lower level of neuroticism (NEO FFI). Women with more expressed other-oriented empathy (PSB)
prefer collective-related values such as universalism, benevolence, tradition, conformity (SVS).

6. Disregarding the gender of the students of helping specialisations, the results of project prove that the respondents with a higher level of exocentric altruism (EEA) also display a higher level of ascription to responsibility (PSB), empathic concern and perspective taking (PSB), and other-oriented empathy (PSB). The level of exocentric altruism is lower in respondents with more expressed arousability (AOS), neuroticism (NEO FFI) and personal distress (PSB).

As explained above, the empirical findings presented in the study should be understood mainly as a set of information aiming at mapping a specific terrain within psychology domain under domestic conditions, and which offers useful and socially important potential, especially in the society ruled by strongly accented individualism.
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10. NAME INDEX

A
Aspinwall, L. G.   68

B
Barger, S. D.   28
Batson, C. D.  12, 16, 17, 40, 63, 64, 72
Baumgartner, F.   64
Berkowitz, L.   9, 87, 94
Bierhoff, H.   7, 63
Blatný, M.   68
Bradburn, N. M.   58
Bybee, J.   44

C
Cakirpaloglu, P.   11
Carlo, G.   41, 55, 108, 109
Caruso, D. R.   28, 60, 64
Carver, C. S.   68
Cialdini, R. B.   10, 54
Clary, E. G.   55
Cliffordson, C.   39
Cloninger, C. R.   94
Comunian, A. L.   29
Cosmides, L.   67
Costa, P. T.   27, 58, 95
Craiger, J. P.   26
Crowne, D. P.   28, 58

D
Dalbert, C.   10
Darley, J. M.   12
Davis, M. H.   10, 11, 12, 15, 26, 39, 41, 45, 63, 64
Dovidio, J. F.   10, 12

E
Eisenberg, N.   10, 12, 39, 108

F
Fabes, R. A.   39, 108
Finkelstein, M. A.   14, 45, 55, 95
Freifeld, T. S.   26
Fritzsche, B. A.   84
Fromm, E.   56

G
Ganický, P.   55
Gaertner, S. L.   116
Gilligan, C.   26, 38, 39

H
Hartshorne, H.   12
Hatcher, S. L.   16, 63
Hatfield, E.   45
Hitlin, S.   107
Hoffman, M. L.   34, 71
Howard, J. A.   25, 68
Hřebíková, M.   27, 28, 53, 54

K
Karylowski, J.   17, 69, 71
Kegelmeyer, J.   116
Kohlberg, L.   26
Kožený, J.   55, 94

L
Latané, B.   12
Leary, T.   55
Lerner, M.   10, 34

M
MacDonald, K.   54
Marlowe, D. A.   28, 58
Matoušek, O.   14
May, M. A.   12
Mayer, J. D.   28, 60, 64
McCrae, R. R.   27, 58, 95
McGagbie, W. C.   16
Mead, G. H.   11
Midili, A. R.   116
Miller, P. A.   108
Mlčák, Z.   53, 64
Moore, B.   40

O
Oliner, P. M.   12
Oliner, S. P.   12
Omoto, A.   45, 109

P
Paulik, K.   29, 30, 66
Penner, L. A.   12, 13, 14, 15, 17, 25, 26, 40, 45, 55, 63, 84, 95
Pervin, L. A.   28
Piaget, J.   11
Piliavin, J. A.   9, 12, 45

R
Randall, B. A.   41
Reykowski, J.   7, 71
Rushton, J. P.   12, 27

Ř
Řeháková, B.   81
Řehan, V.   55

S
Salovey, P.   10
Sarmány-Schuller, I.   29
Schachter, S.   55
Scheier, M. F.   68
Schroeder, D. A.   116
Slaměník, I.   7
Smith, T. W.   41
Snyder, M.   9, 45, 55, 109
Staub, F.   12, 107
Strayer, J.  10
Stuchlíková, I.   64, 68
Sudman, S.    58
Szuster, A.  30, 71

T
Tellegen, A.  94
Tooby, J.   67
Triandis, H. C.   81
Trivers, R. L.  9

U
Underwood, L.   40
Unger, R. K.   45
Urbánek, T.   27, 28

V
Výrost, J.  64

W
Wilson, E. O.  8, 13

Z
Záškodná, H.  25, 28, 30, 31, 53, 64
11. SUBJECT INDEX

A
Achievement 31–32, 73–81, 105–110
Agreeableness 19–21, 28, 40, 46–57, 84–99, 109–112
Altruism
   Self-reported altruism 18, 25, 27, 33, 35, 43
   Endocentric and exocentric altruism 25, 70
AOS 20, 25, 29–30, 66–67, 111–113
Arousability 10, 16, 20, 25, 29–30, 66–69, 111–113
Arousal 29
Attribution 10, 34

B
Benevolence 20, 31–32, 73–82, 101, 113
Big Five 12, 16, 20–21, 40, 46–52, 83–86, 92–109, 112

C
Cognitive empathy 10, 27, 63, 107
Concepts of empathy 11
Conscientiousness 19–21, 28, 46–57, 84–98, 109, 112
Conservation 22, 32, 74–75, 79, 82, 99–110
Cooperation 23, 28, 54, 57–58, 94, 112

D
Distress 9, 11, 39, 42, 44, 54, 63, 72, 93, 97, 99, 113

E
Emotional conditions 10, 34, 45
Emotions 10, 27–30, 45, 54, 60–68, 81, 94
Empathic concern 11, 18, 26, 33–44, 84, 113
Empathy
   Other-oriented Empathy 18–22, 27, 36–45, 84–113
   Emotional empathy 10, 16, 19, 25, 28–29, 40, 60–65, 84–86, 111–112

F
Feelings (see Emotions)

G
Guilt 9, 95

H
Hedonism 20, 31–32, 73–82, 92
Helpfulness 18, 21, 27, 36–43, 84, 95–112

I
Individual differences 29, 83, 107
Introversion 27, 87, 91, 94, 97, 99

K
Kin altruism 8

L
Learned 8, 34
M
Mood 10, 29–30, 54, 87, 94
Moral development 26
Moral reasoning
  Mutual Moral Reasoning 18, 26, 33, 35–45, 84
  Other-Oriented Reasoning 18, 26, 33–53, 84
  Moral standards 18–20, 37–38, 44, 83, 93, 104, 107

N
NEO 19–28, 54, 85, 96, 111–113
Neuroticism 19–21, 27, 46–56, 65, 84–98, 109–113

O
Openness to Experience 19–21, 27, 47–53, 56, 85–87, 90–98

P
Perspective Taking 11, 18, 26, 33–43, 72, 84, 113
Power 20, 31–32, 73–82, 105–110
Prosocial personality 12–27, 36–43, 46, 83–86, 93–111
PSB 13, 18–25, 33–45, 62–64, 85, 96, 100, 111–113

R
Reduce discomfort 10

S
Security 31–32, 73–81, 104–107
Self-direction 31–32, 73–82, 112
Similarity 18, 46, 74–75
Social Desirability Scale 25, 28, 58
Socialization 8–9, 39, 44, 54–56
Social responsibility 9, 18, 25, 33–43, 46, 64, 84, 107
Stimulation 20, 27, 31–32, 73–82, 106
SVS 20–22, 25, 31, 77, 100, 112–113

U
Universalism 31–32, 73–82, 101–107, 112–113

V
Values 9–11, 20–23, 31–58, 65, 73–90, 96–113
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