## **REVIEW**

of the scientific works submitted to compete for the awarding of the scientific degree for the degree of PhD in Psychology to Gergana Kuzmova-Panova

## DECISION-MAKING UNDER NEGATIVE AFFECT AND THE THREAT OF BEING OUT OF A GROUP

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The doctoral thesis is submitted in English, containing main text of 144 pages composed in five chapters. So chapter one provides a theoretical wording of the problem and Gergana Ilieva Kuzmova discuss the need to belong as a fundamental basis for every social being. The chapter also relates to the term's origin, history and different forms of Ostracism. Additionally is introduced the problem of individual differences in coping with the pressure of the threat to be left out of a group. Chapter two presents theories and previous empirical data on Decision- making and Emotions and are dicussed Game theory and Prisoner's Dilemma gama as a method to study social interactions. Chapter three is dedicated to the empirical studies that she did on the topic of Ostracism and the cooperation tendencies with the help of a repeated Prisoner's dilemma game. Chapter four are presented summary and discussion on the results of our empirical experiments.

So chapter five contains the summary of contributions of Gergana Ilieva Kuzmova.

The concept of Ostracism is borrowed from Athenian democracy which is characterized as extremely stable. Other authors mentioned in the doctor thesis use the term "rejection" only for cases which concern clearly stated exclusion or isolation so informal ostracism can be found in classrooms, playgrounds, business offices, war and religious institutions, as well as modern online chat rooms. The term "social exclusion" and the term "rejection" in the literature are often used to describe any situation that threatens the need to belong, including a threat which is clearly and directly communicated and one that is passive and indirect, but leaving an unpleasant feeling in the individual. The focus of the Ostracism in the classical studies on group norms provide little support for the role that personality traits play in moderating the influence of the group. For example low self-esteem is associated with motivation to obey because of fear of rejection, while authoritarian individuals supposedly are motivated to obey because of their alleged need for order and discipline.

In chapter two are dscussed many authors fascinated by the topic of Decision-making. Cognitive science researchers highlighted the role of information processing, reasoning, and modeling algorithms for logical inference that are for example necessary to retrieve relevant knowledge from memory. The Prisoner's dilemma game is correctly described in details. As the social science advances, the Social Exchange Theory arises derived from Economic Theory. The Social Exchange Theory is presented that involves both interconnectedness and a shared commitment in which both parties perceive responsibilities to one another. As it is presented in the doctoral thesis that and other social theories perceive people as social beings looking for relationships in the hope of bringing them pleasant emotions. In line with this rationale the candidate formulates the current research questions:" what is willing to give up to fit into the social group and how to make decisions if it is threatened by dropping out of a group?".

In the theoretical part of the doctor thesis are discussed main concepts concerning Ostracism and Decision-making theories and I would like to recommend to Gergana Panova further deeper presenting in other publications and to reflect them in future scientific papers.

The further part of the doctor thesis is entirely the empirical part of that work. That research is inspired by the paradigm of Cyberball, which test the "ostracism" ond network. Gergana Panova decides to measure the cooperation after exclusion in a repeated PDG. Precisely is presented the aim of the experiments and it is to see if a man caught in a dilemma situation under negative experience would undertake the risky investment in trust.

In the first experiment are used a method inflicting Ostracism that is tested as a valid manipulation. The experiment is attended by 36 participants in the laboratory of New Bulgarian University. Full data analysis is performed on the data from 34 people (2 persons are excluded because of missing data). In the doctor thesis are measured the mood just before and after the game via the questionnaire BEF4-R (the shortened version of several mood scales . The personality characteristics action/state orientation are measured by ACS-90. In the first experiment, are not finded a significant difference in the two experimental groups measured by the cooperation in the Prisoner's Dilemma game after the manipulation.

The further goal of the research was to see why only several subscales detected the different experiences in the participants in relation to the ostracism manipulation so are entered the experience of Ostracism inside the Social Dilemma to see whether it would change the tendency towards cooperation.

Summarizing the results from the second experiment in relation to the cooperation, it can be concluded that the mood after manipulation, the action orientation and the interaction between mood and the action-orientation

explained about 39% of the variance in the rate of cooperation in the 3d period - after the manipulation and people in low mood again cooperated more as in the first experiment.

Furthermore Gergana Panova suggestes and decides in a third experiment to measure the Ostracism not only by a mood Questionnaire but by an extensive inventory that is used also by Williams (2007) in his studies on Ostracism.

In the third experiment is included a new Ostracism questionnaire that consisted not only of measures for mood but also items related to the 4 fundamental needs that according to the literature are connected to ostracism: the need for belonging, self-esteem, need for control and meaningful existence. She testes again the main four hypothesis. The results are presented in preliminary analyses, primary analyses and secondary analyses.

Summarizing the experiment three in general, the ostracised and the control group did not differ in their cooperation. The mood and belonging are lower in the excluded group compared to the included. There is no main effect or interaction effect of the personal characteristics: action / state orientation on mood and cooperation. The inclusion and exclusion groups are different in their experience of belonging and happy feelings. The conclusion from the Experiment three can be that the manipulation succeeded only partially measured by the subscales of Ostracism questionnaire.

For the fourth experiment Gergana Panova desides to investigate how mood relates to cooperation in comparison to the specific effect of ostracism (defined as reading a social negative story of an exclusion) and contrasts not only the effect of exclusion on that of the inclusion, but also the effect of the social event and that of other negative personal experience in relation to the cooperation in PDG. For the experiment four is specified the outcome of ostracism as a group-related event comparing it to the outcome of an experience

of an individual-related event including in the design with 6 experimental groups that included valence and also the type of experience. For the main part of the experiment is used all the stories as a method for mood manipulation including the negative social story as a method for induction of ostracism. The IV - the group of manipulation in 3 (event valence: positive vs. negative vs. neutral) x 2 (event type: individual vs. collective) levels are entered in a between-group factorial design.

The results show that the pretest suggested that the participants rated the content of the stories as meeting the requirements for the purpose of the manipulation. From the feedback of the participants, it can be assumed that the stories affected the mood as was our aim and also the sense of belonging. The pretest results gave reasons to believe that the new instrument of six stories can be successfully used in further studies as a methodological tool.

Summarizing the results as in previous studies, in the main experiment there is no difference between the level of cooperation of ostracized and non-ostracized people, there is a difference of the behavior of people who are subjected to social manipulation vs. individual event manipulation. After reading negative individual story the individuals defected more in a subsequent Prisoner's Dilemma game than people who read social negative story (with ostracism).

Looking at the trends that are not significant, in line with our hypothesis, people who read negative social story cooperated more than those who read a positive social story -H one in Experiment one-3 and SH5 in Experiment four. Overall people who read social stories cooperated more when there is an emotion in the story (either positive or negative). Also, people cooperated more after reading negative stories than positive. The most surprising finding is that people who read neutral stories cooperated at most.

The dissertation thesis is a prolonging researching process across four

experiments well prepared and done.

Discussing and summarizing the results Gergana Panova sets up future

projects and shares with the problems realizing her researches entirely and at

each step of the research.

The extended abstract of the thesis entirely presented the doctor

thesis. The contributions of the doctor thesis are adequate but according to me the

contributions could be more concrete and compacted.

I have a question to the candidate:

"Do you think that age difference and age determination of the researched

sample during the fourth experiments will give more precise information for the

researching phenomena?"

At the end I would to emphasize that the doctor thesis of Gergana Panova

presents herself as a professional researcher, realized a precise research project.

Summarizing my assessment of the doctor thesis presented by Gergana

Panova, I would like to emphasize that the scientific output impresses with the

subject of her research activity, which provides me with the objective grounds

and full professional confidence of the requirements for the degree of Ph.D. in

Psychology for which I will vote with complete satisfaction and confidence.

Reviewer:

/ Prof. N. Alexandrova/

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