

REVIEW

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habilitated in professional field 2.3. Philosophy

on the submissions for participation in the competition for the academic position of Associate Professor in the professional field 3.2. Psychology,

by the candidate Assist. Prof. Evgeniya Dimitrova Hristova, Ph.D.

I. Assessment of compliance with the minimal national requirements and the requirements of New Bulgarian University

The candidate for the position of Associate Professor, Assist. Prof. Evgeniya Dimitrova Hristova, Ph.D., meets the minimal national requirements for this position in the professional field 3.2. Psychology, as formulated in the Regulations for application of the *Law for the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB)*, as well as the requirements of New Bulgarian University, formulated in the *Decree for the Development of the Academic Staff of NBU*.

According to many of the indicators, Dr. Evgeniya Hristova's individual results significantly exceed the minimal national requirements and the NBU requirements. For example, with a minimal requirement of 50 points of citations for the academic position of Associate Professor, Dr. Hristova scored 330 points or 6.5 times more than the minimal requirement. She also scored more than twice as many points on the additional NBU criteria.

II. Research activities and results

In the competition for the academic position of Associate Professor in the professional field 3.2. Psychology. Dr. Evgeniya Hristova participates with one monograph (*Life against Life: Moral Dilemmas in Allocation of Limited Medical Resources*. Sofia: NBU Publishing House, 2023) and 25 other publications, of which 15 articles and 1 study refereed in SCOPUS/Web of Science and 7 articles and 2 studies published in non-refereed peer-reviewed journals. Dr. Hristova lists a total of 22 citations of these publications in SCOPUS/Web of Science. Dr. Hristova has not provided information on citations in publications in non-peer-reviewed journals, but according to Google

Scholar (as of 5.05.2024), the total number of citations of her publications is 807, with 634 in the last 5 years alone.

In this part of my review, I will mainly focus on the submitted habilitation thesis – the monograph *Life against Life: Moral Dilemmas in Allocation of Limited Medical Resources* and on the publications that contain the main contributions of Dr. Hristova, as they are presented in her attached list of contributions.

The monograph presented by Dr. Hristova is 211 pages in length and contains an introduction, 12 chapters divided into 3 parts, a conclusion and a list of references containing 156 titles, the main part of which are in Latin (only 6 sources in Bulgarian are cited). The content of the book is organized around one main question: how should life-saving resources be allocated when they are not enough for all those in need. This central question is examined from three different perspectives: the perspectives of the major philosophical ethical theories; the regulatory documents containing prescriptions for action in conditions of scarce medical resources; and the psychological perspective of ordinary (lay) people (the potential users of medical services) about how medical resources should be equitably allocated in conditions of scarcity. These three perspectives are presented in the three parts of the book: I Theoretical Foundations, II Medical Practices and Guidelines, and III Psychological Research, respectively.

The first part of the book outlines in brief the main theoretical views in general ethics (utilitarianism, deontology, etc.) that justify the most frequently discussed principles for allocating scarce resources: utility maximization, egalitarianism, protection of the weakest, etc. The main problems and dilemmas that arise when these principles (or different interpretations of them) lead to conflicting conceptions of the fair allocation of scarce medical resources are also discussed.

The second part of the book discusses the ethical principles underlying modern medical standards for the allocation of limited medical resources, using British, American, Italian and other European standards as examples. Particular attention is given to the allocation rules developed in the context of the COVID-19 pandemic, and to the problem of equivalence of non-start and termination of life-sustaining interventions.

The main scientific contribution of the monograph is contained in the third part, which presents empirical research on the attitudes of ordinary (lay) people, and discusses these attitudes in the context of the norms codified in general and current medical ethics presented in the first two parts of the book. Some of this research, including research conducted by Dr. Hristova, clearly show some significant discrepancies between the principles accepted in the medical standards for allocating limited resources on the one hand and what the majority of people accept as fair on the other hand. Although the studies show the highest support for the utilitarian principle of

"maximizing utility" adopted in most medical standards, they also show significant support for the egalitarian principle of allocation on a first-come, first-served basis, the application of which is explicitly ruled out as discriminatory in most medical standards. The same medical standards allow for egalitarian random assignment when the utilitarian principle is inapplicable, but psychological studies show that random assignment receives very little support from laypersons.

The discrepancies identified raise a number of research and practical questions. The research questions relate to the reasons for the discrepancy and whether these reasons are the same for different groups in society. The most important practical question is in what direction a convergence of the positions about fair distribution of limited resources should be sought of those empowered to make such distributions on the one hand, and of ordinary people on the other. This question also implies another one: whether such convergence is at all achievable and, if it turns out that it is not, how we should deal with the unintended negative consequences of the conflict between official prescriptions and their public appraisal. These questions are left open in the monograph presented, with the author unobtrusively stating her position on the need to seek a consensus in the form of a 'social contract' to be reached in the course of a rational dialogue between the advocates of the different views of equitable distribution. The book, as the author herself puts it, aims to initiate such a dialogue. To the extent that the book presented is indeed thought-provoking and making the rational dialogue on the issues raised seem achievable, I believe that the stated aim has been largely achieved.

The results of some of Dr. Hristova's own research on attitudes to the allocation of scarce medical resources, conducted together with Prof. Grinberg, have also been published in 2 papers that Dr. Hristova submitted for her participation in the competition. These are:

Hristova, E., & Grinberg, M. (2021). Moral Judgments and Triage Principles related to COVID-19 Pandemic. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society*, 1602–1608. <https://escholarship.org/uc/item/3hc2j666> (под номер 6.2. в справката на кандидата)

Христова, Е., & Гринберг, М. (2021). Морални дилеми при недостиг на медицински ресурси. *Българско списание по психология*, 1 (4), 59-67. (под номер 7.1. в справката на кандидата)

The first of these two publications is in a SCOPUS-indexed journal.

The other 23 publications (articles and studies) with which Dr. Hristova participates in this competition, she herself has assigned to four thematic areas: moral judgment in dilemmas such as the Trolley Dilemma, cooperation in the Prisoner's Dilemma Game, the use of Eye Tracking equipment to study cognitive processes, and the use of physiological data in the study of emotions related to cognitive processes.

The first group of publications (6 in total) present the results of studies on the influence of various situational and personality factors on judgment in moral dilemmas of the Trolley Dilemma

type. I would like to draw particular attention to one of these studies, conducted in collaboration with a large international team of scientists representing 45 countries from all continents, the results of which were published in the highly impactful journal *Nature Human Behavior*.

Bago, B., Kovacs, M., Protzko, J., Nagy, T., Kekecs, Z., Palfi, B., ..., **Hristova, E.**,... & Matibag, C. J. (2022). Situational factors shape moral judgements in the trolley dilemma in Eastern, Southern and Western countries in a culturally diverse sample. *Nature Human Behaviour*, 6 , 880 - 895. <https://doi.org/10.1038/s41562-022-01319-5>. . (под номер 6.1. в справката на кандидата)

This study confirms the universality (independence of culture) of the influence on moral judgment of one widely studied situational factor, the presence/absence of physical contact between the agent and the victim. At the same time, the interaction effect between intention and the presence/absence of physical contact found in the original study by Green et al. (2009) is not found in so-called Eastern and Southern cultures.

The second group of publications (7 in total) are on studies of decision-making processes in prisoner's dilemma games. The influences of various factors from the proximal and the more distant context of the game on participants' decisions are investigated and different explanations of the found effects are tested. Among this group of publications I would stress (Hristova & Grinberg, 2010).

Hristova, E., & Grinberg, M. (2010). Testing two explanations for the disjunction effect in Prisoner's Dilemma games: Complexity and quasi-magical thinking. In S. Ohlson, R. Catrambone (Eds.), *Proceedings of the 32nd Annual Meeting of the Cognitive Science Society* (pp. 332-337). Cognitive Science Society <https://escholarship.org/uc/item/3t20s2q7> (под номер 6.12. в справката на кандидата)

This paper presents the results of testing two explanations of the well-known disjunctive effect, manifested in the tendency of participants to choose non-cooperation more often when their opponent's move is known to them (regardless of what that move is: cooperation or non-cooperation), than when their opponent's move is unknown to them. The results presented here show that the manifestations of the disjunctive effect are affected by the complexity of the payoffs representation, as well as by the so-called "quasi-magical thinking" manifested in the participant's belief that his/her move can affect the opponent's next move, regardless of the absence of any grounds for such a belief. The research on the disjunctive effect presented in this paper is also remarkable in that it is the first time that eye-tracking equipment has been used to study this effect.

Dr. Hristova has assigned the articles describing studies with eye-tracking equipment to a separate category. In addition to studying the effects of various factors on the attention of participants in prisoner's dilemma games, the eye-tracking equipment has also been used to study the perception and evaluation of works of art, reading in dyslexic children, etc.

Another group of 4 publications (all published in SCOPUS/Web of Science indexed journals) presents results from studies of emotional reactions in situations of moral judgment,

decision making, and interaction with artificial agents, using equipment for measuring biological indicators (skin conductance).

My overall assessment of the publications submitted by Dr. Hristova for taking part in the competition for the academic position of Associate Professor is highly positive. Although, with the exception of the monograph, all the other publications are co-authored, in more than half of these publications (15 out of 25) she is the lead author, with significant contributions to the design and the conduct of the research presented. Dr. Hristova's involvement in large-scale international research, the results of which have been published in prestigious and highly impactful journals such as *Nature Human Behavior*, is an unquestionable recognition of her abilities and research competence.

III. Teaching and learning activities

Over the years, Assist. Prof. Evgeniya Hristova has taught numerous courses in both undergraduate programs in psychology (in Bulgarian and English), in the Master's program in cognitive science, as well as in other programs offered at NBU by other departments. She is one of the course leaders in Experimental Psychology. I would especially like to point out the innovative character of some of the courses she teaches, which are unique for Bulgaria: these are the courses introducing the methodology using eye-tracking equipment and the one developed together with prof. Maurice Grinberg, named "High-tech tools for complementary and alternative communication".

Dr. Hristova has supervised successfully 25 student theses (17 undergraduate and 8 graduate theses). She has joint publications with some of the students she supervised (Veselina Kadreva, Ivanka Nikolova, Katerina Paliakova, Nina Simeonova), and with others, besides the mentioned ones, she has joint participations in national and international conferences (Victoria Todorova, Georgi Manchev). The student evaluation of Dr. Evgeniya Hristova's teaching is very good.

IV. Administrative and public activities

Assist Prof. Evgeniya Hristova was the Director of the Master's Program of Cognitive Science in the period 2006-2012, Program Director for the Master's Programs at the Department of Cognitive Science and Psychology in the period 2013-2014, Consultant for the Master's Program of Cognitive Science from 2012 to 2018, Director of the Laboratory of Neuroscience at the Department from 2008 to 2015. Since 2021, she has been the Director of the Decision and

Behavior Research Lab (*Decision Lab*) in the Department of Cognitive Science and Psychology. From 2018 to 2022, she was a member of the Accreditation Commission of the Faculty of General Education of NBU.

I would especially like to highlight Dr. Hristova's participation in the Research Ethics Committee of the Department of Cognitive Science and Psychology since the establishment of the committee in 2012. Thanks to her participation and later chairing of the committee, international standards for informed consent and protection of participants in psychological research have gradually become established in the research activities of the department.

V. Personal impressions

I have known Jenny Hristova for more than 20 years, since the time when she was a student in the master's program in cognitive science at NBU, and later in the doctoral program of Department of Cognitive Science and Psychology at NBU. Since then I have always been impressed by her intelligence, motivation for research and willingness to learn new research methods (new not only for her, but also for Bulgaria). Twenty years ago, the Department of Cognitive Science and Psychology purchased equipment for eye tracking, which had not been used for research in this country before. Jenny Hristova was one of the first who explored and began actively using this equipment in her research. She created courses for the undergraduate psychology and the graduate cognitive science programs in which she successfully trained students how to use this equipment for approaching a variety of research and applied questions.

VI. Opinions, recommendations and comments on the activities and achievements of the candidate

I have given my assessment of the candidate's achievements in research and other activities in the preceding sections of this review. I have no significant comments to add on the material submitted for this competition. My recommendation to Dr. Hristova is to present in more detail how she sees the future development of her research program at the final meeting of the Scientific Committee appointed for this competition.

Conclusion. Dr. Evgeniya Dimitrova Hristova meets the minimal national requirements and the NBU requirements for the academic position of Associate Professor in the professional field 3.2. Psychology. On some of the criteria she significantly exceeds the minimal requirements. Based on this, as well as on the significant results she has achieved in her research, teaching and public

activities, I strongly recommend that Dr. Hristova be admitted to election by the Academic Council of NBU and elected as Associate Professor of Psychology at NBU.

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Signed :

/Prof. Dr. Lilia Gurova/