ХРОНИКА НАУЧНОЙ ЖИЗНИ

DOI: 10.24411/2076-8176-2018-11983

Philosophy of Natural Sciences at the East European Network for Philosophy of Science Conference in Bratislava

Elena F. Sinelnikova

St. Petersburg Branch of S.I. Vavilov Institute for the History of Science and Technology, St. Petersburg, Russia; sinelnikova-elena@yandex.ru

The second conference of the East European Network for Philosophy of Science (EENPS) held in Bratislava (Slovakia) on June, 20–22, 2018. The East European Network in Philosophy of Science is a network of philosophers of science and researchers from related disciplines working at the academic institutions in East, South-East and Central Europe (Former Republics of Yugoslavia, Former Soviet Republics, Romania, Bulgaria, Turkey, Greece, Cyprus, Poland, Slovakia, Czech Republic, and Hungary). The first conference of EENPS had held in Sofia (Bulgaria) in 2016.

The second conference was organized by EENPS in co-operation with the Department of Logic and Methodology of Sciences, Comenius University in Bratislava. Co-chairs were **Lilia Gurova** (New Bulgaria University) and **Marcin Milkowski** (Polish Academy of Sciences), and chair of the Local Organizing Committee was **Lukáš Bielik** (Comenius University in Bratislava). Participants were from Australia, Italy, Hungary, Romania, Serbia, Bulgaria, Estonia, Spain, Greece, Austria, Argentina, the UK, Montenegro, Belgium, Czech Republic, Germany, France, Poland, Slovenia, Slovakia and Russia. The official language of the conferences was English. EENPS meeting was held during the conference.

There were two keynote lectures. The first one "Rationality and Reasoning Research: A Guide for the Perplexed" was given by **Vincenzo Crupi** (University of Turin, Italy). The speaker articulated a principled classification of different cases relying on a view of experimental work from a philosophy of science perspective. His conclusion was that normative considerations retain a constructive role for the psychology of reasoning — contrary to recent complaints in the literature — but not the one that "normativist" cognitive scientists (including prominent Bayesians) have often assumed.

The second keynote lecture "Games in Science: Reliability, Reproducibility, and Reputation" was given by **Barbara Osimani** (Ludwig Maximillian University, Germany). The author focused on medicine and the pharmaceutical industry and analyzed how issues of reliability, reproducibility, and reputation constrain the games played by the different actors involved, and particularly how such strategic dimensions are embedded in evidential requirements and methodological standards.

The program of the conference consisted of five symposiums: General Philosophy of Science; Philosophy of Natural Sciences; Philosophy of Cognitive and Behavioral Sciences; Philosophy of Social Sciences; History, Philosophy and Social Studies of Science. There were presented more than 30 papers.

The symposium on Philosophy of Natural Sciences had 5 sessions. The fist presentation was given by **Maria Ferreira Ruiz** and **Mariana Cordoba** (both from University of Buenos Aires-CONICET, Argentina). In their paper "Biological information — what was the problem again?" the authors focused on the notion of information in biology. Firstly, they reconstructed the problem(s) around the concept of information in biology. In order to support their reconstruction, they drew from various accounts available in the philosophy of biology literature, but, what is more, they also argued for the need of a broader and more comprehensive perspective and turned to discussions around the concept of information beyond biological contexts. Secondly, their analysis yielded a set of adequacy criteria that any philosophically sound account of biological information should meet and in reference to which the various available accounts of biological information should be evaluated.

The paper "Physical Causation in General Relativity" by **Manuel Jesus Herrera Aros** (University of Buenos Aires-CONICET, Argentina) focused on a criticism that opens an important line of analysis. The speaker intended to contribute with some clarifications and/or precisions that would allow elucidating the conditions that must be satisfied for a correct application of Phil Dowe's Conserved Quantity Theory in the context of the general relativity. Aros also stressed that discussion of this problem seemed to may give impetus to the development of the theory of physical causality.

The main theme of **Cristian Ariel Lopez's** and **Manuel Herrera Aros's** (both University of Buenos Aires-CONICET, Argentina) paper "Getting Physical Possibility Straight: What Makes an Event Physically Possible?" was the necessity of extra-nomic criteria to determine what is physically possible and what is not. Even though such criteria were not always clear or explicit in the scientific discourse, they matter in something like the way physical laws were generally supposed to matter, in Lopez's and Aros's opinion. By involving such criteria that favored certain generalization and forbid others and also played an essential role in explanation of phenomena, the authors hoped not only to reach a far-reaching, practice-based understanding of physical possibility, but also to get a sharper notion of what was the theoretical content of a physical theory.

The presentation by **Özlem Yilmaz** (Konrad Lorenz Institute, Austria)"What Is 'Individual Plant'?" was devoted to the plant phenome that refers to the traits (or a trait), that we observe or measure, of an individual plant (its morphology, physiology, behavior). Plants considered as processes, not things, and thinking life as processes. That approach, according TO the author, helped to understand plant life, as plant phenome would be explained and, concepts of 'individual' and 'organism' would be analyzed in plant science.

The aim of **Guglielmo Militello's** (the University of the Basque Country, Spain) paper "Functional Integration in the Endosymbiotic Origin of Mitochondria" was to investigate how the endosymbiotic relationship between the proto-mitochondrion and a proto-eukaryotic cell

has led to a more integrated biological organization and a new biological individual (i.e. the eukaryotic cell) by means of a functional redefinition of both the endosymbiont and the host. The two following theoretical questions were analyzed: How did the endosymbiont and the host achieve a functionally integrated organization? What were its evolutionary consequences? These questions discussed by adopting an organizational approach, according to which the analysis of both structural and physico-chemical conditions of biological phenomena could shed some light on the organization of living beings. The functional redefinition of the bioenergetic systems of proto-mitochondrion and proto-eukaryote were examined because they seemed to have played a pivotal role in the emergence of a more functionally integrated organization of the eukaryotic cell, exhibiting a specific kind of individuality.

Sebastian Fortin and **Jesus Alberto Jaimes Arriaga (**University of Buenos Aires-CONICET, Argentina) in presentation "The Problem of the 3N Dimensions in Quantum Mechanics: a Chemical Approach" introduced a new perspective on the question about the 3N dimensions, coming from chemistry. In the context of quantum chemistry, they used the so called orbital approximation, which allows them to write the total wave function of a system as a product of mono-electron wave functions therefore, it evolves in the space of three dimensions. In particular, they argued that it was possible to formalize the procedure performed by chemists when they used the orbital approximation, as the result of the application of two mathematical operations: first a projection in the Hilbert space, and then a change of variables. With the help of this formalization researchers could go beyond the approximation itself and propose a valid argument for the ontology of quantum chemistry.

In their presentation "About the Limits of the Chemical Periodic System" **Alfio Zambon** and **Fiorela Alassia** (both National University of Patagonia San Juan Bosco, Argentina) made a summary of the different proposals formulated in order to assign limit elements to the periodic system, following a historical thread. Another point was that the proposal of a periodic system based on triads of atomic numbers provides an alternative argument to formulate the limits of the periodic system, by using only chemical arguments such as relationships between atomic numbers, and not physical numbers based on quantum mechanics. Moreover, it also provided an argument in favor of the ontological as well as the epistemological independence of chemistry with respect to physics.

Vlasta Sikimic's (University of Belgrad, Serbia) presentation "Argumentative Structures in Biology: a Study of Pathogen Discoveries" explained that argumentative schemes were necessary in order to understand the development of non-parsimonious results in pathogenesis. She argued that the pursuit of diverse hypothesis is epistemically beneficial from the perspective of the scientific field as a whole, as there are various reasons why results in biology are, in general, not so quickly agreed upon and reliable.

Finally, the paper by **Damian Luty (**Institute of Philosophy, Adam Michiewicz University in Poznan, Poland)"Non-Individuals and Structural Reconceptualization of Objects in Spacetime Structuralism" showed that there is a genuine competition between the concept of spacetime points as non-individuals and the concept of observables, when it comes to accounting for spacetime ontology in structural terms. The speaker discussed pros and cons of both concepts.

The Book of Abstracts of EENPS 2018 Bratislava Conference is available at https://sites.google.com/site/eastnetworkphilsci/eenps-2018/book-of-abstracts-eenps-2018.

Философия естествознания на конференции Восточно-Европейской сети по философии науки в Братиславе

Е.Ф. Синельникова

Санкт-Петербургский филиал Института истории естествознания и техники РАН, Санкт-Петербург, Россия; sinelnikova-elena@yandex.ru

Статья посвящена симпозиуму по философии естествознания, который проходил в рамках конференции Восточноевропейской сети по философии науки. Эта конференция состоялась в Братиславе (Словакия) 20–22 июня 2018 г. в сотрудничестве с Департаментом логики и методологии науки Университета Коменского в Братиславе. С докладами выступили учёные из Австралии, Италии, Венгрии, Румынии, Сербии, Болгарии, Эстонии, Испании, Греции, Австрии, Аргентины, Великобритании, Черногории, Бельгии, Чехии, Германии, Франции, Польши, Словении, Словакии и России. Всего в работе конференции приняло участие около 50 человек. В ходе конференции состоялось две лекции ведущих специалистов в области философии науки, а также прошло собрание Восточноевропейской сети по философии науки. Симпозиум по философии естествознания был разбит на пять заседаний, доклады были посвящены философским вопросам в биологии, физике, медицине, химии и т. п.