

BALKAN JOURNAL OF PHILOSOPHY

Vol. 14, Issue 1, 2022

The issue is sponsored by the Bulgarian National Science Fund, competition “Bulgarian Scientific Periodicals – 2021”, project No: KII-06-HII 3/6 from 15.11.2021

TABLE OF CONTENTS

Special issue devoted to the topic of “The epistemology of computer simulation”

Articles on “The epistemology of computer simulation”

The epistemology of computer simulations / 3
From the Editorial Board

Invited paper
Computer Simulations as Fiction in Science / 5
Miloš Agatonović

The Missing Link of Machine Learning in Healthcare / 11
Diana-Abasi Ibanga, Sara Peppe

Articles on other issues

Organic Marxism in China: The Challenges and their Origins / 23
Zhihe Wang, Zanmei Cui, Wenxi Zhang, Qing Tang

The Music Sent by God / 35
Bogdana Todorova

Rationality of Wisdom-Inquiry and Redefining the Tasks of Universities / 41
Peeter Müürsepp, Maria Jakubik

On Closing the Gap: or How to Challenge your Students to Engage in Philosophising / 53
Madelaine Angelova-Elchinova

Contemporary Subject's Identity: Building the System's Model / 59
Evgeniya V. Kuznetsova

Complications (Complexity) between Normative and Descriptive: A challenge for Clarity / 65
Florian Çullhaj

Cases of Misunderstanding: Reasons why Conversational Implicatures Might Fail / 73
Elena Teofilova Tsvetkova

Book reviews

Brian G. Henning, Joseph Petek, and George Lucas (eds.) *The Harvard Lectures of Alfred North Whitehead, 1925-1927: General Metaphysical Problems of Science*. Edinburgh: Edinburgh University Press / 79
Rosen Lutskanov

SPECIAL ISSUE OF THE BALKAN JOURNAL OF PHILOSOPHY

**the topic of the 2022 special issue of our journal:
“THE EPISTEMOLOGY OF COMPUTER SIMULATIONS”**

Computer simulations and the scientific models of natural and social phenomena that they utilize have been a focus of philosophers of science for the last two decades. Discussions and debates regarding their various epistemological features and the exact nature of the scientific insights they provide are increasingly relevant to a variety of academic and social issues. They have been compared with both experimental techniques and theoretical inferences, and numerous specific cases have been thoroughly analyzed. Moreover, these scientific techniques have been central to tackling pressing global issues, such as climate change or the covid-19 pandemic. This makes answering the

philosophical questions concerning them extremely important. We thus invite submissions that address the epistemology and ethics of computer simulations and modeling across scientific fields.

We are interested in submissions addressing various philosophically relevant epistemic features of different types of computer simulations in science, such as agent-based and equation-based simulations. These features include the categorizations and definitions of computer simulations, questions of their validation, as well as similarities and differences between simulations and scientific experimentation; we especially encourage case-based studies of computer simulations exploring phenom-

ena of current wider interest. We also welcome novel and less discussed philosophical takes on the topic, including the controversies that the results of simulations generate within the scientific community and the public, the way they inform policy, and

the criteria that underlie their interpretation in various scientific, public, and political contexts.

From the Editorial Board of
Balkan Journal of Philosophy

Articles

Invited paper

COMPUTER SIMULATIONS AS FICTION IN SCIENCE

Miloš Agatonović

The Academy of Applied Preschool Teaching and Health Studies,
Preschool Teacher Training College, Cirila and Metodija No. 22–24,
37000 Kruševac, Republic of Serbia
e-mails: milos.agatonovic@vaspks.edu.rs; agatonovicmilos@yahoo.com
ORCID iD: <https://orcid.org/0000-0001-6598-1792>

Abstract:

The present paper intends to show that computer simulations used in science are akin to fiction. Starting from the problem of defining computer simulation, the paper discusses the uses and disadvantages of simulations in science. Computer simulations have a representational function, but they do not resemble the phenomena that they purport to represent. Computer simulations do not preserve the content of the models, input data, and theories from which they proceed, since the content is modified by computational processes. Because of the complexities of these processes, we cannot control or test the methods used to process the content of computer simulations. Still, simulations may help to explain the behaviour of a possible aspect of the phenomenon under examination. Although their role in doing so may be limited, by conforming to and immersing us in the worldview of science, simulations, thus reinforce the intuitions of the existing body of scientific knowledge, and similarly to the “believable fiction” described by John Woods, provide genuine understanding.

Key words: computer simulations, analogue simulations, experiments, measurement, theoretical models, fictions.

1. Introduction

The present paper will discuss the roles of computer simulations in science while trying to show that computer simulations are like fiction. The dis-

cussion relies on recent studies of the philosophical problems regarding computer simulations: the problem of defining computer simulations (Section 2), epistemological problems regarding the use of computer simulations in science (Section 3 and Section 4), and a comparison between computer simulations and fiction (Section 5). On the one hand, the paper relies heavily on the studies of computer simulations by Eric Winsberg, Paul Humphreys, R.I.G. Hughes, Anouk Barberousse, and other eminent theorists from the field. On the other hand, it relies on John Woods’ study of fiction, his book *Truth in Fiction* (Woods, 2018). Based as it is on these well-known studies, the paper does not provide new insights into the fundamental nature of computer simulation or fiction. Rather, it provides a new perspective on these phenomena, shedding light on the similarity between them (with emphasis on simulations used in science), to reveal the implicit theses that underlie any “believable fiction” as well as any computer simulation.

2. Defining Computer Simulations

With the development of computational technology, computer simulations have developed as a means of representation. In these terms, computer simulations are the media that use computational programmes to represent and explore phenomena of interest. One of the first uses of computers in science was concerned with solving mathematical problems

in nuclear physics. In 1946, Stanislaw Ulam presented the idea of using computers for the statistical calculations in mathematical physics (i.e. regarding problems of neutron diffusion) to John von Neumann (Eckhard, 1987, p. 131). Von Neumann was taken by this idea, believing that “the statistical approach is very well suited to a digital treatment” (Eckhard, 1987, p. 131). Von Neumann outlined how this method could solve neutron diffusion and multiplication problems in fission devices for the case “of ‘inert’ criticality”, which was the first formulation of Monte Carlo computation for a computing machine. This use of computers in science, which Ulam and von Neumann envisioned, is often regarded as a forerunner of computer simulations.

Because the computational capacities of computer simulations are used, above all, for mathematical problem solving, computer simulations are defined primarily in that regard. According to Humphreys’ working definition: “A computer simulation is any computer-implemented method for exploring the properties of mathematical models where analytic methods are unavailable” (Humphreys, 1990, p. 501). In this narrow sense, computer simulations are defined as programmes used on computers to explore the behaviour of mathematical models that represent an approximation of certain aspects of actual phenomena. In a broad sense, computer simulations can be understood as an encompassing method used for exploring different systems, in sciences and outside of it. In these terms, simulations cannot be reduced to mathematics, since they require an imaginative capacity for choosing models, drawing inferences from these models, and interpreting and presenting them in a credible manner. Therefore, processes associated with computer simulations include model selection, application of the models that can be run on a computer, and calculation of the output of algorithms, in addition to visualization of data and data analysis (Winsberg, 2019). This definition is consistent with the definition by Eric Winsberg, according to which true simulation has the following characteristics:

- Successful simulation studies do more than compute numbers. They make use of a variety of techniques (most of which, *pace* Hughes, involve imaging in one way or another) to draw inferences from these numbers.

- Simulations make creative use of calculational techniques that can only be motivated extra-mathematically and extra-theoretically. As such, unlike simple computations that can be carried out

on a computer, the results of simulations are not automatically reliable. Much effort and expertise goes into deciding which simulation results are reliable and which are not (Winsberg, 2003, p. 111).

Winsberg refers to Hughes’ general account of theoretical representation, according to which any theoretical model represents an actual phenomenon in terms of denotation, demonstration, and interpretation (DDI account) (Hughes, 1999, p. 125). According to Hughes, a theoretical model denotes something not in the sense of referring to an actual object but rather dealing with a class of systems – some actual, others merely possible (Hughes, 1997, p. S330). It suffices to say that the elements of a theoretical model could denote a physically possible fictional system (Hughes, 1999, p. 127). From a theoretical model, from its behaviour and internal dynamics, we can derive hypothetical conclusions about the world, and arrive at new or novel facts, such as predictions. In these terms, predictions are demonstrated from theoretical models (Hughes, 1997, p. S332). The conclusions that are demonstrated within a model also have to be interpreted in terms of the phenomena that the model represents. However, as Hughes suggests, a model does not provide a faithful representation of a phenomenon but only the best explanation of the behaviour of a system, a possible aspect of a phenomenon (Hughes, 1999, p. 127).

Hughes proposes the DDI account not as “a set of speech acts individually necessary and jointly sufficient for an act of theoretical representation to take place”, but rather as a method for examining theoretical models (Hughes, 1997, p. S329). Following Nelson Goodman’s dictum that “denotation is the core of representation and is independent of resemblance” (Goodman, 1968, p. 5), a theoretical model is a symbol that refers to an actual phenomenon, without a need to be similar to it. However, since a theoretical model represents a possible phenomenon, it is a case of indeterminate denotation in which it would be irrelevant to denote an actual object. As in Goodman’s example, the identity of the man in Rembrandt’s *Landscape with a Huntsman* is not relevant, even if he were an actual person, because the *Landscape* is simply a man-picture, a picture that represents a man (Goodman, 1968, p. 26). Likewise, a simulation of a black hole does not have to represent an actual black hole, for it is a possible black-hole-representation constituted by our best theories.

3. The Uses of Computer Simulations in Science

In philosophy, computer simulations are usually discussed in a broad sense, while they are defined as a function of models of certain kinds. However, “model” as a term is rather vague since its use is not fixed and depends on the context. Nelson Goodman pointed out:

Few terms are used in popular and scientific discourse more promiscuously than ‘model’. A model is something to be admired and emulated, a pattern, a case in point, a type, a prototype, a specimen, a mock-up, a mathematical description – almost anything from a naked blonde to a quadratic equation – and may bear to what it models almost any relation of symbolization (Goodman, 1968, p. 171).

Different models are used in simulations. According to Winsberg (1999), any simulation modelling process starts from the theory used to describe the phenomenon of interest, from which we formulate models in the following hierarchical order: a mechanical model, a dynamical model, a computational model, and as a result, a model of the phenomenon. A mechanical model is a characterization of the phenomenon, which merely resembles it such that we can apply the theory. This kind of model is a “simulacrum”, as claimed by Nancy Cartwright (Cartwright, 1983). According to Cartwright’s simulacrum account of models, “[a] model is a work of fiction. Some properties ascribed to objects in the model will be genuine properties of the objects modelled, but others will be merely properties of convenience” (Cartwright, 1983, p. 153). With a specific class of parameters, boundary values, and initial conditions, from a mechanical model, we can formulate a dynamical model (Winsberg, 1999, pp. 279–81). From a dynamical model, with the *ad hoc* modelling assumptions, approximations, and reduction of degrees of freedom, we can formulate a computational model (Winsberg, 1999, pp. 281–3). And from a computational model, with the use of imaging techniques, data analysis, and interpretation, we formulate a model of the phenomenon (Winsberg, 1999, pp. 283–4). As with creating a mechanical model, all the *ad hoc* modelling assumptions, approximations, and interpretation during a simulation process are for the sake of convenience, to create a model that is in the theory’s range, in order to provide the best explanation of the phenomenon.

In contrast to computer simulations, which use

computational platforms to create a model of the phenomenon of interest, analogue simulations use a non-computational modelling framework. This modelling framework creates the models under experimental conditions. For example, physicists use a “dumb hole”¹ phenomenon from the mechanics of fluids to create an analogue simulation of a black hole, under experimental conditions, for research of a black hole event horizon phenomenon (i.e. Hawking radiation) (Unruh, 1981; Unruh, 1995; Unruh, 2008). Here, because physicists can achieve the isomorphic relation between the modelling of the dumb hole phenomenon from the mechanics of fluids and the modelling of the behaviour of the quantum field near the black hole event horizon, a dumb hole can provide a suitably modelled simulation of a black hole and related phenomena. Although an adequately modelled dumb hole would be a convenient analogy for a black hole, it would still be a simulacrum in Cartwright’s terms. As Dardashti and others (Dardashti et al., 2015, p. 12) claim, “[m]odelling frameworks almost always involve idealizations, and hence they are usually adequate only under a certain domain of conditions” (Dardashti et al., 2015, p. 12). Models are tools of convenience and are only “accurate to a certain desired degree” (ibid.).

Whether analogue or computational, simulations always start from theories. To apply a theory, we need a model as a guide to characterizing the phenomenon of interest as a recognizable system. If models, as well as simulations, provide a characterization of the system that is recognized as adequate by scientific experts, then they can generate predictions, explanations, or even pieces of evidence that can support or falsify scientific theories. The role of simulations in science is like the role of experiments, although simulations can be used when experiments are not feasible or suitable to perform, for instance due to cost or ethical restrictions.

Some theorists claim simulations are, in a methodological sense, the same as experiments. Stephen D. Norton and Frederick Suppe (Norton & Suppe, 2001) try to support the thesis that adequate simulations run on computers can “realize” a model of a physical system. When the models are adequate and the conditions satisfied, computer simulations can research actual phenomena, as phenomena can be experimentally produced by the manipulation and control conditions. Briefly put, from this perspec-

¹ The term “dumb hole” refers to the sonic analogue of black holes, named (from the expression “deaf and dumb”) by W. G. Unruh (Unruh, 2008, p. 2907).

tive, simulations are experiments *in silico*. In addition, some theorists discuss observation and measurement *in silico* in a specific sense. Computational methods are used in chemistry (i.e. in molecular mechanics) to determine the behaviour of chemical structures in conditions which cannot be produced experimentally for different reasons. For example, *ab initio* simulations (simulations that start from the first principle) in molecular dynamics can be used in the research of material properties under extreme conditions, such as extremely high pressure and temperature (Gygi & Galli, 2005). According to Gygi and Galli, these simulations “provide direct evidence of various chemical species appearing (and disappearing) during the early stages of the decomposition” (Gygi & Galli, 2005, p. 29–30). Some theorists hold that the results of computer simulations used in a measurement constitute the measurement outcome (Parker, 2017). Because of the advantages of the use of computer simulations in measurement, the National Institute of Standards and Technology (NIST) of the United States has funded a programme for the research of reliability of measurement *in silico*.

4. Two Epistemological Problems Concerning the Use of Computer Simulations in Science

Theoretical models, as well as simulations, have a representational role. However, if the core of representation is denotation independent of resemblance, as claimed by Goodman, how accurate and reliable are simulations used for observations and measurement? We emphasise two principal problems with the application of computer simulations in science, drawn from Anouk Barberousse and Marion Vorms (Barberousse & Vorms, 2014). First, there is the *failure of content-preservation*, for the content of the models, input data, and theory from which a simulation starts are “not strictly preserved throughout the computational process of the simulation” (Barberousse & Vorms, 2014, p. 3596). Second, there is the *loss of epistemic control* – “human agents cannot follow the successive steps of the computational process” (Barberousse & Vorms, 2014, p. 3596). Citing these problems, one could potentially deny that the use of computer simulations in science is justified. In traditional terms, scientific claims should be supported by direct empirical evidence or be inferred (deductively or inductively) from other well-supported scientific claims. So, from the traditional point of view, if input data derived from a piece of empirical evidence processed

by the computational system is not strictly preserved in the simulation, we can question the results of the simulation. Also, if we cannot control or test the method used to process input in a computer simulation, the results of the simulation are not warranted.

Regardless of these problems, computer simulations are widely used in scientific practice today. To justify the use of computer simulations, I claim that the epistemology of simulations should be regarded differently from the epistemology of the traditional view of science. That is, rather than denying altogether the explanatory power of simulations according to traditional scientific assumptions, we can compare the way we gain knowledge using simulations with the way we engage with and learn from fiction.

5. Computer Simulations and Fictions: Comparison²

Although simulations and fiction do not directly represent phenomena of interest (either scientific or aesthetic), they represent a certain situation within the context familiar to us, and this situation conforms to actual phenomena. For example, when we read Arthur Conan Doyle’s stories about Sherlock Holmes and his adventures, we experience ourselves holding that it is true that Holmes lives in London, at 221B Baker Street, because of plausible descriptions in the stories, etc. Yet in fact, 221B Baker Street did not exist in the 19th century when, according to Conan Doyle’s stories, Holmes lived there. Needless to say, Holmes is not a real person but a fictional character. Analogously, when a simulation of a black hole is run on a computer, the model is believable. However, because it is an idealized representation that employs different approximations, black hole simulation strictly speaking cannot be accurate, al-

² Agatonović’s paper “The fiction of simulation: a critique of Bostrom’s simulation argument” (Agatonović, 2021) intends to show that Bostrom’s argument (Bostrom, 2003) assumes that simulations of reality created and run by post-human civilizations would be indistinguishable from non-simulated reality. According to Agatonović, Bostrom’s argument is similar to the fictional story about the simulation of actual reality (“fiction of simulation” – FS). The FS story starts from the indistinguishability thesis, as any believable fiction inherits the actual world, claimed by the world-inheritance thesis drawn from John Woods (Woods, 2018: 81). Following Agatonović’s points from his critique of Bostrom’s argument, Section 5 of the present paper attempts to show that simulations, in general, are much like believable fiction, as described by Woods, given that they both immerse us in a representation of a phenomenon of interest.

though it can be convenient for understanding the phenomenon. Other such analogies between simulations and fiction are clear. *In situ* of Conan Doyle's stories, readers engage with Holmes as if he were a real, flesh-and-bone person and his adventures happened as described, even though they can acknowledge that in reality Holmes is a fictional character. Similarly to engaging with fiction, when a group of scientists is simulating a black hole, they refer to a simulated representation of the black hole *as if* they are referring to the actual phenomenon, even though in reality it is a model that best fits descriptions and conditions from accepted scientific theories. The scientists are justified in investigating black holes in this way because the simulation models theoretical insights regarding black holes even though it does not represent an actual black hole.

John Woods formulated several basic theses to which every fictional story world is subjected: first, *the world-inheritance thesis*, which claims that the world of fiction inherits the actual world, except for adjustments invented in the story (Woods, 2018, p. 81); second, *the storyworld epistemic access thesis*: "what readers know of the world of the stories... is what we know or could come to know about their own world at the times in which those stories were set" (Woods, 2018, p. 81); third, *the world-inheritance semantic-preservation thesis*: "Meaning, reference and truth hold constant in the transition from the world to the story, save for auctorial provision otherwise" (Woods, 2018, p. 81). According to Woods, without these theses, fiction could contain some queer fictional entities, such as humans with no spines, with the effect that readers could not easily be immersed in such a fictional world. In not-reinforcing real-world intuitions, such fictions become unbelievable, contrary to the purpose of fiction, and people do not engage with them. To emphasise this point, Woods introduces the *no spines-no readers thesis* claiming: "In the absence of what the world inheritance and storyworld access conditions provide, the Holmes stories would have null readerships" (Woods, 2018, p. 82).

These theses, to which any fiction is subjected according to Woods, are also valid in simulations. If the principal role of simulations is representational, then simulations must assume a certain context of the actual world to which the phenomena that a simulation represents belong. If a simulation represents a black hole, this simulation assumes theories from which we derive assumptions about the existence and properties of black hole phenomena.

These theories constitute the context of reality, which must be assumed to make the simulation believable. Hence, the body of scientific knowledge that grounds the creation of black hole models represents a context of reality that lends believability to the simulations themselves. Surely, a simulation always involves a certain approximation throughout the representation of the phenomenon, but it preserves the meanings and uses of the theoretical terms that inform the description of the simulation, as these are used in theoretical or empirical scientific research. If there are radical discrepancies between the simulation of a black hole and an actual phenomenon, at least as contemporary physics understands it, then the simulation is unconvincing and should be discarded.

6. Conclusion

Although simulations assume what we already know and serve as approximations for our convenience, when they are credible they can be used for heuristic purposes in science: for solving problems in observation, measurement, and calculation related to real phenomena, and thus reinforcing the intuitions of the existing scientific knowledge. As believable fiction should conform to the actual world and our common knowledge about it, convincing simulations in science should conform to the scientific representation of reality and the existing scientific knowledge. Therefore, while fiction and simulations may be inaccurate in a certain sense, if they are convincing, they can conform to an existing body of knowledge about reality and reveal truths which are not self-evident but are nonetheless relevant to us.

References

- Agatonović M (2021) The fiction of simulation: a critique of Bostrom's simulation argument. *AI & Society: Journal of Knowledge, Culture and Communication*. <https://doi.org/10.1007/s00146-021-01312-y>.
- Barberousse A, Vorms M (2014) About the warrants of computer-based empirical knowledge. *Synthese* 191(15): 3595–3620.
- Bostrom N (2003) Are you living in a computer simulation?. *Philosophical Quarterly* 53(211): 243–255.
- Cartwright N (1983) *How the Laws of Physics Lie*. Oxford: Oxford University Press.
- Dardashti R, Thebault K P Y, Winsberg E

(2015) Confirmation via analogue simulation: what dumb holes could tell us about gravity. *British Journal for the Philosophy of Science* 68(1): 55–89.

Eckhard R (1987) Stan Ulam, John von Neumann, and the Monte Carlo method. *Los Alamos Science Special Issue* 1987, 131–137.

Gygi F, Gall, G (2005) Ab initio simulation in extreme conditions. *Materials Today* 8: 26–32.

Goodman N (1968) *Languages of Art: An Approach to a Theory of Symbols*. Indianapolis: Bobbs Merrill.

Hughes R I G (1999) The Ising Model, Computer Simulation, and Universal Physics In *Models as Mediators*, eds M. Morgan & M. Morrison, 97–145. Cambridge: Cambridge University Press.

Hughes R I G (1997) Models and representation. *Philosophy of Science* 64: S325–S336.

Humphreys P (1990) Computer Simulation In *PSA 1990* (Volume 2), eds A. Fine, M. Forbes & L. Wessels, 497–506. East Lansing, MI: The Philosophy of Science Association.

NIST *Virtual Measurement*.
<https://www.nist.gov/itl/virtual-measurement>, accessed 20 Oct 2021.

Norton S D, Suppe F (2001) Why atmospheric modeling is good science In *Changing the Atmosphere: Expert Knowledge and Environmental Governance*, eds C. Miller & P. Edwards, 88–133. Cambridge, MA: MIT Press.

Parker W (2017) Computer simulation, measurement, and data assimilation. *British Journal for the Philosophy of Science* 68(1): 273–304.

Unruh W G (2008) Dumb holes: analogues for black holes. *Philosophical Transactions of the Royal Society A* 366: 2905–2913.

Unruh W G (1995) Sonic analogue of black holes and the effects of high frequencies on black hole evaporation. *Physical Review D* 51(6): 2827–2838.

Unruh W G (1981) Experimental black-hole evaporation?. *Physical Review Letters* 46(21): 1351–1353.

Winsberg E (2019) Computer Simulations in Science In *The Stanford Encyclopedia of Philosophy*, ed. E. N. Zalta. Retrieved from <https://plato.stanford.edu/archives/win2019/entries/simulations-science>.

Winsberg E (2003) Simulated Experiments: Methodology for a Virtual World. *Philosophy of Science* 70(1): 105–125.

Winsberg E (1999) Sanctioning Models: The Epistemology of Simulation. *Science in Context* 12(2): 275–92.

Woods J (2018) *Truth in Fiction: Rethinking its Logic*. Cham: Springer.

THE MISSING LINK OF MACHINE LEARNING IN HEALTHCARE

*Diana-Abasi Ibanga**, *Sara Peppe***

*Department of Philosophy, University of Calabar
Cross River State, Nigeria
e-mails: ibanga.letters@gmail.com, idianabasi@unical.edu.ng
<https://orcid.org/0000-0003-4068-2520>

**Department of Philosophy, University of York
York, United Kingdom
e-mail: sara.peppe@york.ac.uk
<https://orcid.org/0000-0002-9719-9284>

Abstract:

The aim of this article is to show how the ambivalent nature of reality might impact artificial intelligence (AI) use in medicine. The work illustrates that machine learning (ML) modelling requires some significant levels of data straight-jacketing to be efficient. However, data objectification will be counter-productive in the long run in AI-enabled medical contexts. The problem is that the ambivalent nature of realities requires a non-objectified modelling process, which is missing in machine learning at the moment. On the basis of this, the study hypothesizes that AI-enabled medicine will continue to depend largely on human intelligence to be efficient at least for the foreseeable future. The implication of this is that intelligent machines should be viewed as co-workers with man. The study draws from the theories of ontology in the Western continental tradition (especially the Heideggerian ontology) and the African philosophical tradition to ground the discourse.

Key words: artificial intelligence, human intelligence, ontology, machine learning, healthcare.

1. Introduction

In the last few years, Artificial intelligence (AI) is blooming, improving its ability to carry out a vari-

ety of tasks in a human-like way. Artificial intelligence is a field of computer science devoted to developing machines that mimic humans' behaviour and potentially exceed it. Over the past few years, AI is having recourse to machine learning (ML) algorithms that learn from data self-sufficiently. ML is currently used in engineering, autonomous vehicles, social networks, finance, and many other sectors (Lo Piano, 2020, p.2). Machine learning algorithms, which learn from data without being explicitly programmed, are being massively employed by AI. Therefore, ML algorithms are ubiquitous and currently used in several branches of our lives.

In medicine, ML aims to provide clinicians with the possibility of accessing, in real-time, the entire corpus of medical experience and harnessing it in medical practice. Machine learning algorithmic models can analyse an impressive amount of data that could not be handled by any individual physician otherwise. Furthermore, they do so in a way that has an advantage over other commonly used computer models that do not involve ML. Such models interpret data and make decisions relying on transparent logical rules (e.g., if-then and either-or rules), which cannot catch all the pertinent information regarding a given condition. By contrast, ML

models interpret data relying on an analysis they have themselves developed through algorithms to learn from examples. Thus, with ML models, every clinician could take advantage of the entire corpus of clinical data and make their decisions enlightened by these algorithms. It is anticipated that with ML every patient would then be able to receive personalized therapies and recommendations in the light of the comprehensive knowledge of relevant experts in a given field (Rajkomar et al, 2019, pp. 1347–1348).

To date, ML has produced concrete results in a variety of medical branches. For example, significant achievements have been attained in the area of retinal diseases (De Fauw et al., 2018, pp. 1342–1343), skin cancer (Esteva et al., 2017, p.115), and genomics (Esteva et al., 2019, pp.26–27). Similarly, Valentina Bellemo et al. (2019) found that AI technology can detect, in an effective way, diabetic retinopathies, even when retinal images are taken by technicians without medical training. Also, Oscar Holmström et al. (2021) used a DL system for screening purposes, detecting atypical cervical cells before cancer's full development. Of equal importance, being that some of the diagnostic devices are portable and relatively small, as in the case of the cervical cancer screening scanner, people can be examined in rural areas with limited medical resources (Holmström et al, 2021, p.2).

In many medical specialties, deep learning (DL), i.e., a subset of ML, is capable of outperforming physicians in several tasks such as those associated with image classification and object detection, electronic health record data analysis, and genomics predictions (Esteva et al., 2019, 24-28). The efficiency of ML and DL in medicine is indisputable, with clinicians performing in a poorer or equal way than machines (Esteva et al., 2017, p.117).

Major issues related to the implementation of ML in medicine in some parts of the world include the high costs involved in the deployment of ML in healthcare, concerns about policy and the legal framework required for ethical application of ML in healthcare, paucity of infrastructures, and the issue of scarcity of data (Lee and Yoon, 2017; Rajkomar et al., 2019; WHO 2021). Such is true particularly in the case of sub-Saharan Africa (Owoyemi et al, 2020, pp.2-3). This latter issue is indeed connected with the thesis of this paper, namely, the fact that data gathered in particular parts of the world may not reflect the complex interplay of behavioural, social, cultural, and educational characters that occur elsewhere. In other words, data-scarcity and data-

diversity are the main challenges ML-enabled healthcare would encounter in different contexts. For example, a study conducted by Amit Kaushal et al. (2020) demonstrates that the majority of algorithms in the US are trained with data from patients that come from some specific states of the US, such as New York, Massachusetts, and California. In the considered states, there are educational, social, behavioural, and cultural characteristics that do not adequately represent the entirety of the USA. This leads to the idea that acknowledging the existence of diverse educational and cultural backgrounds as well as social and behavioural characteristics would play an important role in the process of data gathering for ML model training.

Surely, gathering data from other states and parts of the world would help in this case, but we believe that educational, behavioural, social, and cultural variables are not the only variables that should be taken into account in ML medicine. Indeed, while ML models can perform better than physicians at certain tasks, it should be investigated whether they are able to take into account patients' perspectives, values, and needs, which play significant roles in personalizing healthcare. Most importantly, the ML algorithms could be unable to read or understand data in their ambivalent state.

We suggest that along with these issues, a crucial problem with the deployment of ML in medicine deals with the very nature of ML models that need indispensable objectification of data for their development. We suggest a twofold approach investigating (a) the idea that the complex and ambivalent nature of reality cannot be caught by objectified data, and underlining (b) that AI-medicine needs to rely on human intelligence (HI) to be successfully implemented.

Specifically, looking at the process of building a ML model for medical purposes, data used are medical records data, images of given conditions, genome repositories, and the like (Esteva et al., 2019, pp.24-28). These data represent the core of ML models' building process. Indeed, relevant data to a given condition are collected and prepared and their quality is controlled (Chen et al. 2019, p.411). High-quality prepared data represent the dataset used to train the model and after that, the actual ML model is developed (Chen et al., 2019, pp.411-413). We notice that in this process there is no place for anything other than very clear and specific data, able to catch relevant aspects of a given condition. There is no place for aspects that escape objectified data and

cannot be captured in an image, medical record, or genome repository, with the evident consequence that some medically relevant aspects of reality evade the process. Since AI alone cannot apprehend patients' lived experiences as well as the ambivalence characteristics of data, we believe that AI will need to be largely dependent on HI for the foreseeable future.

Furthermore, our research will offer an extension and development of current studies on the deployment of ML in medicine by expanding the discussion.

We will begin with an elaboration on ML, describing its processes, potentialities, and drawbacks in medical practice. Moreover, we will look at the data used to build ML models. After that, we will deepen the divergence between objectified data and the ambivalent nature of reality, highlighting the reason why AI may be counterproductive in medicine. Finally, we will consider HI as a stringent precondition to the deployment of ML in medicine.

2. Machine Learning in Medicine: Concept and Processes

In this section, we discuss machine learning (ML) and the various processes it adopts in its workability. This involves looking at the ML algorithms, their functionalities, and applications in medicine as well as their limitations. A general definition of ML is usually given as 'a computer program that learns from experience with respect to certain tasks without being explicitly programmed' (Hurwitz and Kirsch, 2018, p.65; Siddique and Chow, 2020, p.220). The goal of ML is to learn from data without human supervision or intervention (Lake et al., 2017, p.3). However, for the machine to learn, someone (preferably, a human being) has to teach the machine first (Ma et al., 2021, p.3; Koteluk et al., 2021, p.6). This process of teaching is called model or data training, which involves feeding the machine with instructions and rules known as algorithms (Koteluk et al., 2021, p.9). The machine is then set upon a task. Drawing on the training it received, the machine is able to make decisions when encountering new data (Shalev-Schwartz and Ben-David, 2014, pp.19–21). Algorithms and data are crucial for machine learning.

ML is categorized into four main learning approaches and techniques. They include supervised, unsupervised, semi-supervised, and reinforcement

learning. Let us briefly explain each of these learning approaches.

Supervised Learning: This is a task-driven approach in which the machine infers a function from labelled training data and examples (Sarker, 2021, p.3). A function refers to the relationship between variables in correspondence to specific tasks (Adamu-Iria, 2006, p.8). Supervised learning is tied to specific tasks and prior labelled data. The most common tasks here are those that have to do with classification and regression analyses.

Unsupervised Learning: This is a data-driven approach in which the machine infers a function from an unlabelled dataset without the need for human intervention (Sarker, 2021, p.4). In other words, there are no specifically labelled tasks and a collection of examples for the machine to learn from in order to infer a relationship. Rather, the machine is trained and set upon a task without being given a bag of prior examples to compare new features in the dataset (Sidey-Gibbons and Sidey-Gibbons, 2019, p.4; Deisenroth et al., 2020, p.11). The most common tasks for unsupervised learning are those that have to do with cluster and association analyses.

Semi-Supervised Learning: This is an intermediate approach that combines the features of supervised and unsupervised learning processes (Shalev-Schwartz and Ben-David, 2014, p.23; Myszczyńska et al., 2020, p.441). That is, it operates both labelled and unlabelled datasets or learns 'with supervision' and 'without supervision'. The most common tasks involved here are those that are grouped under classification and cluster analyses.

Reinforcement Learning: This is an environment-driven approach in which the machine automatically evaluates its operations in specific contexts and optimizes them to improve its efficiency (Hurwitz and Kirsch, 2018, pp.16–17). This learning process deploys positive and negative reward systems to guide the optimization of the machine's operational efficiency. This is a recent approach adopted in some ML models.

These different approaches to and techniques of learning are deployed in real world situations depending on their capabilities (i.e., algorithm functionality), nature of data, and specified tasks (Koteluk et al., 2021, p.3). Data and algorithms are crucial for ML to perform certain tasks.

Let us, now, briefly discuss the various algorithms and functionalities. There are quite a number of them including linear regression, logistic regression, linear discriminant analysis, decision tree, ran-

dom forest, Naïve Bayes, AdaBoost, K-nearest neighbour, etc. These algorithms are categorized under the following functionalities – Classification, Regression, Clustering, and Association. Figure 1 shows the learning categories each of the functionalities and algorithms are grouped.

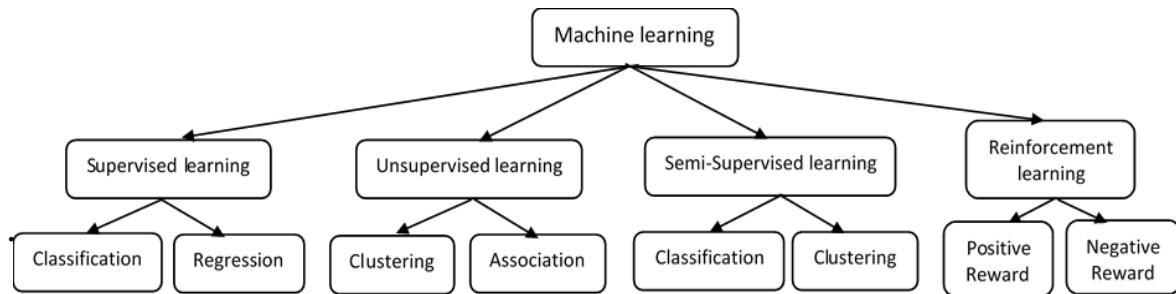


Figure 1: Types of Machine Learning techniques with their associative functions

Classification: This is the type of supervised modelling that allows the machine to predict a certain score based on prior class label (Ibanga, 2020a, p.122). There are different types of classification including binary, multiclass, multilabel classifications. Algorithms usually deployed for this function are: Naïve Bayes, Linear Discriminant Analysis (LDA), logistic regression, K-nearest neighbours, Support Vector Machine, Decision Tree, Random Forest, Adaptive Boosting (AdaBoost), Extreme Gradient Boosting (XGBoost), Stochastic Gradient Descent, Ripple Down Rule Learner (RIDOR), etc. Most of the algorithms use if-then rules in the schema, which are easily interpretable (Koteluk et al., 2021, p.9). This function can be used to sort out medical records along binary lines (Lee and Yoon, 2017, p.7; Myszczyńska et al., 2020, p.404). The problem, however, is that most of the classifications may be impacted by the problem of noisy data (Koteluk et al., 2021, p.22).

Regression: This type of supervised modelling also enables the machine to interpret data based on prior labels and examples (Sarker, 2021, p.8). However, regression differs from classification because it facilitates interpretation of continuous data (Ibanga, 2020a, p.122). The most popular regression algorithm is the simple and multiple linear regression, which determines relationships using the best fit straight line (Ibanga, 2020a, p.116). Others are LASSO and Ridge regression, and polynomial regression. The drawback with these algorithms is that

they allow for elimination of less important features of a dataset (Sarker, 2021, p.8).

Clustering: This is an unsupervised ML technique that allows for the discovering of trends and patterns in data (Myszczyńska et al., 2020, p.441). It functions by grouping data in such a way that phenomena that seem similar are grouped together. This

approach focuses on “large datasets without concern for the specific outcome” (Sarker, 2021, p.8). It is used in a broad range of areas including health analytics (Lee and Yoon, 2017, p.7; Myszczyńska et al., 2020, p.404). Some of the algorithms used in this function include K-means, K-medoids, DBSCAN, CLARA, OPTICS, BOTS, etc. Some of the unsupervised algorithms do not work well for simple kinds of data (Sarker, 2021, p.10).

Association: This is an unsupervised approach in ML that uses if-then rules to discover relationships in large datasets (Ibanga, 2020a, p.120). It is not sequential in terms of taking into account the order of phenomena in a dataset. This approach is widely deployed in many areas including medical diagnostics (Myszczyńska et al., 2020, p.442). Some of the most popularly used algorithms for this technique are AIS and SETM, Apriori, ABC-RuleMiner, FP-Growth, ECLAT, etc. However, the most widely used algorithm for this function is Apriori (Sarker, 2021, p.13). Most of the Association algorithms have problems with noisy data (Ma et al., 2021, p.9).

ML has been applied in medical diagnosis and prognosis (WHO, 2021). Recently, it has been used to detect the spread and likely occurrence of COVID-19 (Swayamsiddha et al., 2021; Shorten et al., 2021). Medical image processing, which is a very important aspect of medical diagnosis, can be aided with ML techniques such as classification and cluster analyses (Sarker, 2021, p.16; Koteluk et al., 2021, p.15). Nevertheless, in the area of medical

imaging, specialists have experienced the challenge of blurred classificatory boundaries due to ‘unspecific, subtle and overlapping’ of data with contingent phenomena (Lopez-Cabrera et al., 2021, pp.1331, 1342).

Ultimately, data remains a crucial part of ML. Sarker (2021, p.17) observes that “the effectiveness and the efficiency of a machine learning-based solution depend on the nature and characteristics of the data and the performance of the learning algorithms.” Data is fundamental to the learning success of the algorithms embedded in computer programs (Deisenroth et al., 2020, p.11). As the saying goes about machine programming, ‘garbage in garbage out’. There is a balance of opinions among researchers and programmers that ML models training needs a carefully controlled process of data collection and data transformation (Rajkomar et al., 2019, pp.1354-1355; Koteluk et al., 2021, pp.9-10). Therefore, different learning outcomes depend on data characteristics.

If the data are bad, e.g. they are non-representative or poor-quality, have irrelevant features, or are of insufficient quantity for training purposes, then the machine learning models may become useless or will produce results with lower accuracy. A successful machine learning model depends on both the data and the performance of the learning algorithms. The sophisticated learning algorithms then need to be trained through the collected real-world data and knowledge related to the target application before the system can assist with intelligent decision-making (Sarker, 2021, pp.17–18).

Data preparation and quality remain a big challenge in the field. Training data must be representative enough for the machine that is learning to make truly intelligent decisions. But the most challenging data-related problem of ML is data ambivalence, an issue of which data scientists may be unaware or negligent. There are certain data that the machine cannot understand and interpret correctly. Data scientists often interpret this as the problem of noisy data, which they hope to overcome with better fit algorithms. On the contrary, this problem has to do with the very nature of the phenomena themselves from which data are extrapolated. The phenomena, which the datasets are modelled after, are indeterminate and ambivalent – whereas the models are stable and determinate. When the ML work on real-world

data, they tend to impact data quality (Sarker, 2021, p.17) by streamlining the data to fit into the models (Hurwitz and Kirsch, 2018, p.16). Without this process of data objectification – streamlining and regularization – ML models would not be effective and efficient (Deisenroth et al., 2020, p.262). ML data processing is static. Data training is done with the expectation that there is regularity in the way phenomena are constituted and present themselves. This is the reason why learning is crucial in ML – because the learning process is based on prior experience assumed to be regular. ML algorithms interpret changes in data on the basis of this assumption of regularity of experience. It is upon this assumption that there arises the belief that someday machines will be completely independent of human interference and ultimately come to replace human beings in many areas of endeavour (Shuaib et al, 2020, p.894). This assumption is challenged in the next section.

Our study on machine learning algorithms and its application in medicine opens up the field to fundamental philosophical issues. The most fundamental for us is the ontological issue, which concerns the ambivalent nature of phenomena sequestered in ML disambiguated forms (algorithms). It is evident from the presentation so far, that the process of ML in medicine points to one direction, namely: medical phenomena being explored by ML need to be relatively stable and disambiguated for classificatory recognition that will allow ML to achieve its goals. However, this leads to issues in phenomenological ontology. What is the nature and behaviour of phenomena? Will the character of phenomena enable ML to achieve its objective? In the next section, we will find that (medical) phenomena are ambivalent, which poses a challenge to the efficiency of ML in such a context. In the next to last section, we will draw from this finding to develop what may be called a ‘third party solution’ to plug the gap.

3. Drawback and Gap: Data Ambivalence

An ontology of illness or disease is a crucial window into understanding the gap in ML-enabled diagnostics. But, first, what is ontology? Ontology is the study of being qua being (Unah, 2002, p.4). Being is defined, simply, as ‘what is’ or what is usually referred to as ‘reality’ in philosophical literature. ‘Reality’ or ‘what is’ may be real or ideal, objective or subjective, material or immaterial, concrete or abstract (Omogbe, 2005, p.13). So, ontology is the

study of reality in all the facets of understanding stated above. Ontology focuses on unravelling the fundamental nature of reality in terms of its internal (intrinsic) constitution, development, and relations with other phenomena in nature/existence. Since disease or illness is a form of reality or 'what is', by the implication of its existence as either real or unreal, the ontology of illness is therefore the study of the fundamental nature of disease/illness in terms of the nature of its internal constitution, development, and relations with other phenomena.

To study illness or disease ontologically means that one views the phenomenon categorically as being. To view illness as being means that one views it fundamentally, holistically, and critically. The implication of this is that illness is not seen simply as objective, positive, and scientific. The ontological study of illness/disease allows for the implication of the character of being in the phenomenon. In other words, the ontological presentation of illness allows it to mirror the character of being in terms of its fundamental nature considered holistically. From here, we should ask the question: what is the character of being or reality? The answer to this question will allow us to implicate the nature of being in the reality of illness.

The question 'what is the character of being' simply points to the essential nature of reality, its fundamental constitutive elements, the nature of the relations of these elements internally and externally, the source and nature of its development, its mode of existence and appearance, and the implication of all these characteristics in its overall understanding as a unified phenomenon.

Being is generally acknowledged to be constitutive of opposite values. In the African philosophical tradition, this is expressed in the Igbo aphorism: *Ife kwulu, ife akwudebeya* (If one stands, another thing stands by it). "Another thing" in this aphorism is usually interpreted as a being of opposite nature (Ibanga, 2021, p.80). This is further explained in another Igbo aphorism: *Egbe bere ugo bere nke si ibe ya ebela nku kwaa ya* (let the kite perch let the eagle perch if one says the other should not perch let his wings break), which points to the differential values of the categories of being (Francis, 2018, p.152). These mean that opposite values are implicated in being. However, philosophical traditions differ on their explanations of the internal and external relations of these constitutive values (Omeregbe, 2005, p.116). Many adherents of the continental tradition, for example, (inspired by the works of

Parmenides, Heraclitus, Georg Hegel, etc.) view the opposites as being mutually exclusive values linked together dialectically (Lawhead, 2002). Their mutually exclusive nature predisposes them to contradiction, conflictual struggle, and supersession of one by another (Ucheaga, 2000, p.253). This means that being is characteristically self-contradictory and conflictual. This is also implicated in its external relations. In contrast to this view, some continental philosophers, like Martin Heidegger, have tried to explain that the exclusivity of categories of being does not necessarily imply contradiction and/or conflict (Heidegger, 1996), since these categories are merely phases of the same reality.

In the African philosophical tradition, views inspired by the ubuntuists, complementarists, consolationists, conversationalists, and communalists coincide in recognizing that even though being is constitutive of opposite values, such opposite values are in a mutually inclusive relationship (Chimakonam and Ogbonnaya, 2021) – because of their nature to yearn for each other. Yearning is the innate character of being (Agada, 2015, p.24). The opposite values are symbiotic and complementary because of their subjective implication of each other and their characteristically incomplete nature (Asouzu, 2007, p.41), which being explores via centripetal yearning. African philosophers, generally, believe that the original state of being is harmony and balance (Ekei, 2014, p.111; Ijomah, 2014, p.78). Being seeks to restore this original state of being by yearning for the other. In other words, a state of disunity and strife contradicts the original nature of being, and thus, being seeks the restoration of this original state by reconciling the other (opposite) to itself. In the process, the yearning of the opposites allows for momentary instantiation of different phases of being in its inexhaustible ambivalence. This complementary and ambivalent character of being is implicated in its internal and external relations (Asouzu, 2007, p.52; Ekei, 2014, p.196). Thus, in the African philosophical tradition, emphasis is placed on centripetal mutuality of values.

The implication of these two (but opposite) views is that being is multifaceted. Being is a combination of values, that is, a many-sided reality (Asouzu, 2007, p.49). This multi-dimensionality of reality means that it is ambivalent, that is, it can express itself as *a* or *b*. This means that reality cannot be straight-jacketed and pinned to a particular state of affairs (Unah, 2002, p.7). Sometimes, being can manifest as it is (ever) known; other times, being

can manifest as it is never known. This indeterminateness of being makes it a reservoir of possibilities – always able to throw up new phases of itself. This indeterminateness of being is defined by the nature of being itself (Unah, 2002, p.7). But it is also contingent on its relation to place and time. As being progresses in time in relation to place, it changes proportionally and disproportionally (Ibanga, 2020b; Peppe, 2021). Sociological and psychological jurisdictions are crucial in understanding the changes in being and how these changes can be represented in codes and algorithms. However, we are arguing that this indeterminate and ambivalent nature of being along with its proximity to sociological and psychological jurisdictions is not taken into account in ML programming.

This position becomes clearer when the nature and character of being is implicated in the interpretation of the phenomenon of illness. First and foremost, illness or disease is a form of being. Illness is an expression of being and, in turn, is being-in-itself (see Bradfield, 2002, pp.3,11). As an expression of being, thus, a microcosm of being, illness embodies within itself the character of being. To say that illness/disease embodies the character of being means that it is indeterminate and ambivalent. In other words, illness/disease is a many-sided reality that perpetually transforms in character/nature – continually revealing new phases of itself ad infinitum (Svalaslog et al., 2017, p.433-434). This nature of indeterminateness and ambivalence becomes more apparent when the phenomenon of illness or the being that manifests this phenomenon crosses sociological and psychological boundaries. The character of indeterminateness and ambivalence implicated in the nature of illness means that it cannot be straight-jacketed in terms of being definitively predicted to behave in a certain way all the time, especially in relation to place and time (Toombs, 1987; Bradfield, 2002). The implication of this is that computer models and algorithms cannot be trusted to definitively characterize the phenomenon of illness or even make conclusive future references to it.

ML in healthcare contexts takes the phenomenon of change for granted. ML models operate on the basis of the principle that qualitative change is a characteristic phenomenon in nature. But then ML is modelled to interpret change, radical qualitative change, in negative terms. The point is that ML admits a set of values as the standard form for a given phenomenon and interprets any radical change or deviation from the standard form as significant –

mostly in negative terms. Despite this negative bias, recognizing change is crucial for the success of ML in a healthcare context. The problem, however, is that understanding the phenomenon of change through computer algorithms alone is grossly limited (Lee and Yoon, 2017, pp.8-9). ML models are trained to understand change as a static phenomenon. They do not take the dynamic nature of change into consideration. ML models do not see change as an ambivalent and indeterminate phenomenon. Rather, they recognize changes as an effect and try to link them to biological causes by comparing the present state to prior models.

ML seeks to understand biological changes that may be linked with illness, by identifying patterns and trends in the phenomena and comparing them to the given standard form (Rajkomar et al., 2019, p.1348; Koteluk et al., 2021, p.15). Without comparing patterns and trends to prior standard form, ML would neither understand what it sees nor attribute meaning to it (Shalev-Schwartz and Ben-David, 2014, pp.19-21). This approach to understanding change is one-sided because it does not consider the fact that the change is indeterminate and ambivalent. This one-dimensional understanding of the phenomenon of change makes ML deployment in medicine significantly limited and limiting. It is, therefore, crucial that while we deploy ML in diagnosis and prognosis, we should understand the gaps (the limitations) in the models we deploy.

4. Connecting the Dots

Artificial Intelligence (AI) is a one-sided intelligence. Its modelling is pre-determined and fixed to definite characteristics. This allows AI to straight-jacket data fed into it to fit its own modelling (Hurtwitz and Kirsch, 2018, p.16) – which is determinate. This data straight-jacketing allows the ML models to see only what they are pre-determined to see. If the illness assumes a new dimension of self-revealing, the ML models are likely to fall short in their interpretations. ML algorithms require that the phenomenon should to a certain extent behave in a fixed way – perhaps as previously given (Shalev-Schwartz and Ben-David, 2014, pp.19-21). ML models are built on the basis of the assumption that the given medical phenomenon can/will replicate its characteristics given the same place and time. If the phenomenon of illness is determinate, then predicting its future behaviour will be possible without any further future input. One model of the phenomenon can, therefore,

be used to determine all its future references. There would be no need for a new diagnosis and prognosis; all that the machine would do is look at the prior references of the phenomenon and on that basis prescribe therapies to the sick person.

AI is then expected to predict illness with a high level of accuracy (Ahuja, 2019). This is the dream for ML in healthcare. It is hoped that someday intelligent robots will replace medical personnel, with attendant high-level efficiency (Shuaib et al., 2020, p.893). But it can be seen from the analysis thus far that AI is overrated. There will be no such time in history when medical personnel will be completely replaced by ML algorithms. It would be a complete disaster if machines replace humans in healthcare because AI is limited in a way human beings are not. The indeterminacy and ambivalence of the phenomenon of illness means that AI will not conclusively predict illness. ML modelling will continuously be fed with new data that inform our perspectives on the phenomenon (Hurwitz and Kirsch, 2018, p.46). This means that ML modelling will remain infinite and open; some prior models will even be obsolete.

AI cannot understand the indeterminateness and ambivalence of change. This is because AI is constrained and determinate. It takes an indeterminate and ambivalent intelligence (being) to understand indeterminacy and ambivalence in phenomena. Since ML models are determinate, they will have to depend on superior intelligence that is able to understand this characteristic. The indeterminate and ambivalent nature of human beings make human intelligence best suitable for this crucial task.

Human intelligence (HI) is defined as the ability to learn from experience, adapt to new situations, and understand abstract notions (Colom et al., 2010, p.489-490). Ultimately, intelligence is about the application of knowledge to navigate one's environment and solve problems. This definition is also used to define artificial intelligence (WHO, 2021, p.4). This has prompted some AI researchers to claim that AI will surpass HI (Shuaib et al., 2020, p.894). This sort of claim rests on a misunderstanding of the structure of HI. On the one hand, AI is a straight-jacketed, fixed, monolithic, static, linear, and determinate type of intelligence. The AI enablers are designed to disambiguate and understand phenomena from that unambiguous lens. This makes ambivalent characteristics become unreadable. So, the intelligence of the machine is grossly limited in terms of its epistemic abilities. By contrast, HI reflects the very nature of being – namely ambivalence

and indeterminateness. Thus AI differs fundamentally from HI.

There is a level of intelligence that requires critical thinking, in which AI cannot engage. For instance, it is doubtful that the intelligent machine would be able to conceptualize the notion of nothingness, which is a key concept in critical thinking. It is equally doubtful that the robot would understand the place of the supernatural notions of God, devil, witchcraft, soul, spirit, etc., which are transcendental categories that are increasingly becoming relevant in a healthcare context (Koenig, 2012; Enercoff et al. 2015; Ibanga, 2020c). These notions cannot be underpinned with the objective algorithms. To understand these notions will require the robot to become a philosopher. It is HI that can attempt to understand these notions because of its capacity and capability to engage in transcendental exercises (Unah, 2002, p.63). In addition, the ambivalent structure of human consciousness allows it to understand phenomena, which are essentially ambivalent. For HI to understand phenomena is like fitting a square peg in a square hole, while the structure of AI, which is disambiguated, makes understanding phenomena like fitting a round peg in a square hole, so to speak. ML is limited even in areas that do not require deep thinking as such, as Chong Ho Lee and Hyung-Jin Yoon point out in the following passage:

Although chronic kidney disease is one of the hottest areas of research, its codes are not assigned in many administration claim databases; most cases of acute kidney injury not requiring dialysis therapy are not coded in claim databases (Lee and Yoon 2017, p.10).

Krittanawong (2018) has also pointed out that AI “cannot engage in high-level conversation or interaction with patients to gain their trust, reassure them, or express empathy, all important parts of the doctor-patient relationship.” Ahuja (2019) speculates that in the future robots may be able to engage in such conversations with patients; however, if this becomes possible, intelligent machines would still be unable to understand the spiritual and transcendental (philosophical) concerns of the patient that the physician is grappling with today in clinics (Enercoff et al., 2015, p.1666). As noted earlier, the robot would need to become a philosopher to connect with patients at the level of their transcendentality and recognize how this may entangle with their health and bodily systems. This area of medicine is

beyond the orthodox physician at the moment (Toombs, 1987; Sulmasy, 2006; Balboni et al., 2015; Ibanga, 2020c), and it would equally surpass the understanding of robots whose knowledge of healthcare is programmed based on the limited knowledge of the physician regarding such matters. The limitation of AI points to the fact that AI will not become independent of HI. Indeed, HI is crucial for the success of AI and its variants ML and DL.

Even though AI may reach the point where it can conduct real-time CT scans or other physical scans, physicians will still be needed for interpretation in ambiguous and challenging cases. AI-based systems are based on precedence in the case of ML and DL, but such algorithms can underperform in novel or unusual cases of drug side effects or treatment resistance where there is no prior example to build on. For these reasons it can be concluded that AI-based systems will support the skills of physicians and are unlikely to replace the traditional physician-patient relationship (Ahuja, 2019).

Rather than viewing AI as superior, or potentially superior in the future, to HI, it should be viewed as complementary. While the robot could become a co-worker with humans, it could not become independent of them. For example, areas that require high level physician-patient interaction and critical thinking, such as neurology, would still require traditional physical examination by human physicians (Krittanawong, 2018). Therefore, in combination with HI, AI can advance care delivery more effectively than either HI or AI could achieve on its own (Ahuja, 2019). The inexhaustibility of phenomena means that AI will continue to need HI to guide it to understand new phases of phenomena. Man is the eye of the robot. Ultimately, AI models see what the programmers want them to see (Gabriel, 2020, p.431). After all, AI models are “mere tools of their designers, who are human persons” (Metz, 2021, p.56).

5. Conclusion

AI is being used more and more in medicine and has become capable of outperforming physicians in certain medical branches and providing opportunities for easy and quick diagnosis and proposed treatment in developing countries. AI is useful, but plays only an ancillary role in medicine, while HI remains vital in healthcare. To demonstrate this, we have drawn

on the nature of ontology and examined the ambivalence of being and reality in the ontology of disease. First, we considered what ontology is and highlighted that ontology studies reality in several facets. Ontology considers the internal constitution of reality and its development and relations with other phenomena. Similarly, the ontology of illness focuses on the investigation of the internal constitution of disease and its development and relations with other phenomena. Drawing on the African tradition, which shows that being is constitutive of opposite values (Chimakonam and Ogbonnaya, 2021) and that opposite values are implicated in being, we noticed that the opposites we retrieve in being are mutually dependent and complementary. This makes being multifaceted and reality multidimensional; thus, both are ambivalent. Indeed, being is a reservoir of possibilities due to its indeterminateness and subjectivity to change. This leads us to think that reality cannot be limited and fixed. More specifically, ML programming does not account for the ambivalent nature of being nor for the sociological and psychological aspects, which are crucial in understanding the changes in being. Similarly, since illness is a form of being, it exhibits the same character of indeterminateness and ambivalence of being, and this becomes clearer when disease crosses sociological and psychological boundaries. Therefore, due to its ambivalence, illness also cannot be established in a clear-cut and fixed way. In light of this, we have noticed that ML models are unable to capture change, which loses its ambivalence and indeterminateness with ML algorithms. We have concluded that AI is a one-sided type of intelligence, which is unable to deal with multidimensional manifestations of illness. We have also concluded that since AI is limited in capturing the ambivalence and indeterminacy of disease, it cannot predict illness conclusively and needs to rely on HI, which is capable of reading disease under the lenses of indeterminacy and ambivalence.

References

- Adamu-Iria M O (2006) *Understanding Basic Statistics*. Lagos: Nile Ventures.
- Agada A (2015) *Existence and Consolation: Re-inventing Ontology, Gnosis and Values in African Philosophy*. Calabar: 3rd Logic Option Publishing.

- Ahuja A S (2019) The Impact of Artificial Intelligence in Medicine on the Future Role of the Physician. *PeerJ* 7: e7702. doi: 10.7717/peerj.7702
- Asouzu I (2007) *Ibuanyidanda: New Complementary Ontology Beyond World Immanentism, Ethnocentric Reduction and Impositions*. Zurich: LIT VERLAG GmbH & Co. KG Wein.
- Balboni T A, Balboni M J, Fitchett G (2015) Religion, spirituality and the intensive care unit: the sound of silence. *JAMA Internal Medicine* 175(10): 1669-1670. doi: 10.1001/jamainternmed.2015.4471
- Bellefleur V, Lim Z W, Lim G, Nguyen Q D, Xie Y, Yip M Y T, Hamzah H, Ho J, Lee X Q, Hsu W, Lee M L, Musonda L, Chandran M, Chipalo-Mutati G, Muma M, Tan G S W, Sivaprasad S, Menon G, Wong T Y, Ting D S W (2019) Artificial intelligence using deep learning to screen for referable and vision-threatening diabetic retinopathy in Africa: A clinical validation study. *Lancet Digital Health* 1: 35-44.
- Bradfield B (2002) Mental illness and consciousness of freedom: the phenomenology of psychiatric labelling. *Indo-Pacific Journal of Phenomenology* 2(1): 1-14.
- Chen P C, Liu Y, Peng L (2019) How to develop machine learning models for healthcare. *Nature Materials* 18(5): 410-414.
- Chimakonam J O, Ogbonnaya U L (2021) *African Metaphysics, Epistemology, and a New Logic: A Decolonial Approach to Philosophy*. Cham: Palgrave Macmillan.
- Colom R, Karama S, Jung R E, Haier R J (2010) Human intelligence and brain networks. *Dialogues in Clinical Neuroscience* 12(4): 489-501. doi: 10.31887/DCNS.2010.12.4/rcolom
- De Fauw J, Ledsam J R, Romera-Paredes B, Nikolov S, Tomasev N, Blackwell S, Askham H, Glorot X, O'donoghue B, Visentin D, Driessche G V D, Lakshminarayanan B, Meyer C, Mackinder F, Bouton S, Ayoub K, Chopra R, King D, Karthikesalingam A, Hughe, C O, Raine R, Hughes J, Dawn S A, Egan C, Tufail A, Montgomery H, Hassabis D, Rees G, Back T, Khaw P T, Suleyman M, Cornebise J, Keane P A, Ronneberger O (2018) Clinically applicable deep learning for diagnosis and referral in retinal disease. *Nature Medicine* 24(9): 1342-1350.
- Deisenroth M P, Faisal A A, Ong C S (2020) *Mathematics for Machine Learning*. Cambridge: Cambridge University Press.
- Ekei J C (2014) *An Introduction to African Philosophy*. Lagos: Smagh & Co. Nig. Ltd.
- Ernecoff N C, Curlin F A, Buddadhumaruk P, White D B (2015) Health Care Professionals' Response to Religions or Spiritual Statements by Surrogate Decision Makers During Goals-of-Care Discussions. *JAMA Internal Medicine* 175(10): 1662-1669. doi: 10.1001/jamainternmed.2015.4124
- Esteva A, Kuprel B, Novoa R A, Ko J, Swetter S M, Blau H M, Thrun S (2017) Dermatologist-level classification of skin cancer with deep neural networks. *Nature* 542(7639): 115-118.
- Esteva A, Robicquet A, Ramsundar B, Kuleshov V, Depristo M, Chou K, Cui C, Corrado G, Thrun S, Dean J (2019) A guide to deep learning in healthcare. *Nature Medicine* 25(1): 24-29.
- Francis D A I (2018) *A Critique of Ujamaa Version of African Socialism: Towards Advancement of African Capitalism*. Ph.D thss. University of Calabar.
- Gabriel I (2020) Artificial intelligence, values, and alignment. *Mind and Machines* 30: 411-437. doi: 10.1007/s11023-020-09539-2
- Heidegger M (1996) *Being and Time*. Trans. Joan Stambaugh. New York: State University of New York Press.
- Holmström O, Linder N, Kaingu H, Mbuuko N, Mbete J, Kinyua F, Törnquist S, Muinde M, Krogerus L, Lundin M, Diwan V, Lundin J (2021) Point-of-care digital cytology with artificial intelligence for cervical cancer screening in a resource-limited setting. *JAMA Network Open* 4(3): 1-13.
- Hurwitz J, Kirsch D (2018) *Machine Learning*. Hoboken, NJ: John Wiley & Sons, Inc.
- Ibanga D A (2020a) *Research Methodology & Qualitative-Quantitative Operations on SPSS*. Abuja: Krispolis.
- Ibanga D A (2020b) Infinitude and logic: traveling through time. *Research Trends in Humanities* 7(1):157-163. doi: 10.6093/2284-0184/6648
- Ibanga D A (2020c) Sexual and reproductive health in (Nigeria) Africa: issues, debate and approaches. *Asian Journal of Humanity, Art and Literature* 7(1): 21-32. doi: 10.18034/ajahal.v7i1.366
- Ibanga D A (2021) *An Introduction to Marxist Philosophy*. Abuja: Krispolis.
- Ijiomah C O (2014) *Harmonious Monism: A Philosophical Logic of Explanation for Ontological Issues in Supernaturalism in African Thought*. Calabar: Jochrisam Publishers.
- Kaushal A, Altman R, Langlotz C (2020). Geographic distribution of us cohorts used to train deep learning algorithms. *JAMA* 324(12): 1212-1213.

- Koenig H G (2012) Religion, Spirituality, and Health: The Research and Clinical Implications. *ISRN Psychiatry*, 2012: 1–33. doi: 10.5402/2012/278730
- Koteluk O, Wartecki A, Mazurek S, Kolodziejczak I, Mackiewicz A (2021) How do machines learn? Artificial intelligence as a new era in medicine. *Journal of Personalized Medicine* 11(32): 1–22. doi: 10.3390/jpm11010032
- Krittanawong C (2018) The role of artificial intelligence and the uncertain future for physicians. *European Journal of Internal Medicine* 48: e13–e14. doi: 10.1016/j.ejim.2017.06.017
- Lake B M, Ullman T D, Tenenbaum J B, Gershman S J (2017) Building machines that learn and think like people. *Behavioral and Brain Sciences* 40: e253. doi: 10.1017/S0140525X16001837
- Lawhead W F (2002) *The Voyage of Discovery: A Historical Introduction to Philosophy*. Belmont: Wadsworth Group.
- Lee C H, Yoon H (2017) Medical big data: promise and challenges. *Kidney Research and Clinical Practice* 36(1): 1–11. doi: 10.23876/j.krccp.2017.36.1.3
- Lo Piano S (2020) Ethical principles in machine learning and artificial intelligence: cases from the field and possible ways forward. *Humanities and Social Sciences Communications* 7(9): 1–7.
- Lopez-Cabrera J D, Orozco-Morales R, Portal-Diaz J A, Lovelle-Enriquez O, Perez-Diaz M (2021) Current imitations to identify covid-19 using artificial intelligence with chest X-ray imaging (part ii). The shortcut learning problem. *Health and Technology* 11(6): 1331–1345.
- Ma P, Zhang Z, Wang J, Zhang W, Liu J, Lu Q, Wang Z (2021) Review on the application of metalearning in artificial intelligence. *Computational Intelligence and Neuroscience* 2021: 1–12. doi: 10.1155/2021/1560972
- Metz T (2021) African Reasons why AI should not Maximize Utility. In *African Values, Ethics and Technology: Questions, Issues, and Approaches*, ed. B. D. Okyere-Manu, 55–72. Cham: Palgrave Macmillan.
- Myszczyńska M A, Ojamies P N, Lacoste A M B, Neil D, Saffari A, Mead R, Hautbergue G M, Holbrook J D, Ferraiuolo L (2020) Application of machine learning to diagnosis and treatment of neurodegenerative disease. *Nature Reviews Neurology* 16: 440–456. doi: 10.1038/s41582-020-0377-8
- Oh Y, Park S, Ye J C (2020) Deep learning covid-19 features on CXR using limited training data sets. *IEEE Trans Med Imaging* 39(8): 2688–2700. doi: 10.1109/TMI.2020.2993291
- Omogbe J (2005) *Knowing Philosophy: A General Introduction 2nd ed*. Lagos: Joja Educational Research and Publishers Limited.
- Owoyemi A, Owoyemi J, Osiyemi A, Boyd A (2020) Artificial intelligence for healthcare in Africa. *Frontiers in Digital Health* 2(6): 1–5.
- Peppe S (2021) Gödel, the Unreality of Time and Mathematical Platonism. *Research Trends in Humanities* 8: 111–117.
- Rajkomar A, Dean J, Kohane I (2019) Machine learning in medicine. *The New England Journal of Medicine* 380(14): 1347–1358. doi: 10.1056/NEJMra1814259
- Sarker I (2021) Machine learning: algorithms, real-world applications and research directions. *SN Computer Science* 2(160): 1–21.
- Shalev-Schwartz S, Ben-David S (2014) *Understanding Machine Learning: From Theory to Algorithms*. Cambridge: Cambridge University Press.
- Shorten C, Khoshgoftaar T M, Furht B (2021) Deep learning applications for covid-19. *Journal of Big Data* 8(1): 1–54. doi: 10.1186/s40537-20-00392-9
- Shuaib A, Arian H, Shuaib A (2020) The increasing role of artificial intelligence in health care: will robots replace doctors in the future? *International Journal of General Medicine* 13: 891–896. doi: 10.2147/IJGM.s268093
- Siddique S, Chow J C L (2021) Machine Learning in Healthcare Communication. *Encyclopedia* 1: 220–239. doi: 10.3390/encyclopedia1010021
- Sidey-Gibbons J A M, Sidey-Gibbons C J (2019) machine learning in medicine: A practical introduction. *BMC Medical Research Methodology* 19(64): 1–18. doi: 10.1186/s2874-019-0681-4
- Sulmasy D P (2006) *The Rebirth of the Clinic: An Introduction to Spirituality in Health Care*. Washington, DC: Georgetown University Press.
- Svalaslog A L, Donev D, Kristoffersen N J, Gajovic S (2017) Concepts and definitions of health and health-related values in the knowledge landscapes of the digital society. *Croatian Medical Journal* 58(6): 431–435. doi: 10.3325/cmj.2017.58.431
- Swayamsiddha S, Prashant K, Shaw D, Mohanty C. (2021). The prospective of artificial intelligence in Covid-19 pandemic. *Health and Technology* 11(6): 1311–1320.
- Toombs K S (1987) The meaning of illness: a phenomenological approach to the patient-physician

relationship. *The Journal of Medicine and Philosophy* 12: 219–240.

Ucheaga D (2000) Hegel's Theory of Dialectic and Philosophy of History. In *Philosophy & Introduction to Computer Science* 2nd ed., ed. P. Alozie, 251–258. Calabar: Elcrof Publishing Company.

Unah J (2002) *On Being: Discourse on the Ontology of Man*. Lagos: Fadec Publishers.

World Health Organization (WHO) (2021) *Ethics and Governance of Artificial Intelligence for Health: WHO Guidance*. Geneva: World Health Organization.

ORGANIC MARXISM IN CHINA: THE CHALLENGES AND THEIR ORIGINS

*Zhihe Wang**, *Zanmei Cui***, *Wenxi Zhang****, *Xiaoqi Guan*****

*Institute for Postmodern Development of China and
Center for Process Studies, Claremont, California, USA
e-mail: claremontwang2011@qq.com

**School of Marxism, Hebei University of Sciences and Technology,
Hebei, China
e-mail: cuizanmei@sina.com

***School of Marxism Studies and
Center for Marxist Philosophy, Renmin University of China, Beijing, China

****School of Marxism at Hainan Tropical Ocean University, Hainan, China

Abstract:

Organic Marxism, a new development in the history of Marxism, has elicited scrutiny in China. Beyond merely being considered absurd, it has been accused of curbing China's development on the pretext of ecological motivations, weakening China's dominant ideology by introducing ideological competition, and enabling religious infiltration by promoting Alfred North Whitehead's process philosophy and constructive postmodern philosophy, which are of a religious nature. Fortunately, organic Marxism has survived despite fierce attacks from fundamentalist Marxists. This paper intends to answer three questions related to this topic: How can organic Marxism survive in China? What is it about organic Marxism that attracts the Chinese most? What lessons can be learned from the fundamentalist Marxists' attacks?

Key words: Whitehead, organic Marxism, ecological civilization, China, process philosophy.

Introduction

William James once remarked that a new theory is always attacked as absurd in the beginning (James 1981). Organic Marxism, a new development in the history of Marxism, has experienced a similar fate in China. Beyond merely being considered absurd, it

has been accused of curbing China's development on the pretext of ecological motivations, weakening China's dominant ideology by introducing ideological competition, and enabling religious infiltration by promoting Alfred North Whitehead's process philosophy and constructive postmodern philosophy, which are of a religious nature. Fortunately, organic Marxism has survived despite fierce attacks from fundamentalist Marxists. This paper intends to answer three questions related to this topic: How can organic Marxism survive in China? What is it about organic Marxism that attracts the Chinese most? What lessons can be learned from the fundamentalist Marxists' attacks?

I. The Emergence of Organic Marxism in China

Organic Marxism, also called "Process Marxism," is "an interpretation and new development of Marxism proposed by contemporary constructive postmodern thinkers and process philosophers based on an organic worldview and the latest scientific advances in order to cope with the crisis of modernity, especially the ecological crisis" (Wang and Yang,

2015). Because process philosophy is also the basis of non-dualistic, yin-yang thought and many other features of traditional Chinese thought, it has a natural affinity with Chinese culture and its traditional view of humans as participants in nature, rather than as onlookers. When this perspective is applied to Marxism, it does not detract from the urgency of overthrowing capitalist relations of domination, but it strengthens some neglected features of Marxism, such as ecological awareness and sensitivity. When organic Marxism was introduced into China, it added new depth to the arguments made by some Chinese Marxists that national policy should balance economic development with ecological concerns.

Prior to the introduction of organic Marxism into discussions about Marxism in China, there was conflict between what might be called “reform Marxism” and “fundamentalist Marxism.” There were many varieties of reform Marxism, but they had several characteristics in common: 1) a strong belief in “development first, environment later”; 2) a recognition that Marxist analysis needs to be adapted to changing conditions in society; and 3) an openness to dialogue with other perspectives. By contrast, the fundamentalists insisted that China should simply apply the writings of Marx and Lenin in a literal way to current conditions in China. In fact, many of them were simply Stalinists who regarded socialist ideology as having reached its pinnacle of development with forced collectivization and state-owned industry, despite the famines and economic disasters that resulted from them. Since the fundamentalists were the dominant group in several branches of the Communist Party and the central government, they were a formidable obstacle to change in agriculture, education, industry, or other areas of the economy. In addition to Marxists, there were also economic liberals who were teaching a kind of market fundamentalism from their university posts.

Until organic Marxism was introduced in China, the proponents of ecological Marxism, one of the variants of reform Marxism, were making little headway. The desire to develop industry as rapidly as possible dominated all policy discussions. There was a nodding acceptance that ecological concerns should be introduced, but only after China was fully developed at some time in the distant future. There was simply no platform from which ecological Marxism could make its views heard. Discussions of ecological Marxism took place within the confines of academia, but in the absence of a form of Marx-

ism that appeared closely tied to Chinese culture, there was little basis of popular support for those ideas. Organic Marxism was able to give ecological Marxism a “nationalist” element by linking it to traditional Chinese thought.

Process thinkers like John B. Cobb, Philip Clayton, Justin Heinzekehr Jr., and Chinese scholars Zhihe Wang and Meijun Fan among others, are regarded as the “representatives of organic Marxism” (Secretary Department of the Philosophy Department of the Social Sciences Commission of the Ministry of Education of the People's Republic of China 2018). Organic Marxism officially appeared in China in 2015 through a series of articles by Cobb, Clayton, Wang, and Zhihua Yang in *Marxism and Reality*, a top Marxism Studies journal in China, and through the publication of the Chinese translation of Clayton and Heinzekehr's book, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe* by People's Press. According to Zhihua Yang, however, the first appearance of the term “organic Marxism” in a Chinese context” was in a lecture by Zhihe Wang and Meijun Fan, entitled “Constructive Postmodernism, Organic Marxism, and Ecological Civilization”, given on June 12, 2013 at Tianjin Normal University (Yang, What is Organic Marxism? 2015).

Since 2015 organic Marxism has attracted more and more attention in China and become “a hot spot and a highlight in Chinese academia” (Guan 2019). Some distinguished Marxist scholars like Huibin Li, Chief Editor of *Marxism and Reality*, regard organic Marxism as “a new innovation of Marxism in a new era” (H. Li 2015). It was regarded as “opening up a new perspective,” and “injecting new blood into Marxism Studies in the West” (C. Li, On the Origin, Evolution, Theoretical Claims and Meaning of Organic Marxism 2016). Thus far 227 articles on organic Marxism have appeared in leading Chinese publications such as: *The People's Daily*, *Philosophical Researches*, *Philosophical Trends*, *Marxism and Reality*, *Studies on Marxism*, *Social Sciences Abroad*, *Studies in Dialectics of Nature*, *People's Tribune*, *Jianghai Academic Journal*, and *Academic Research*, etc. It has also become the topic of a number of dissertations and theses in China. These works not only explore organic Marxism's relationship to traditional Marxism, traditional Chinese culture, and ecological Marxism, but also explore organic Marxist ecological thought, eco-justice, eco-economic thought, communitarianism, and educational thought. Several conferences on organic

Marxism have also taken place including the “International Symposium on Organic Marxism and Ethics of Science and Technology” at Taiyuan University of Science and Technology (Nov.3, 2015), the “International Forum on Organic Marxism and Contemporary China,” at Beijing Normal University (July 2, 2016), and the “International Symposium on Studies of American Organic Marxism’s Ecological Civilization,” at Beijing Forestry University (Aug. 17, 2016).

In addition to publications and conferences, several Chinese Universities have established research centers focused on organic Marxism, such as Hebei Normal University’s Center for Organic Marxism, Chinese University of Political Science and Law’s Center for Process Marxism and Practice Philosophy, and Taiyuan University of Science and Technology’s Center for Organic Marxism and Ethics of Science and Technology (Guan 2019). In addition, Changfei Xie, an associate professor of Northeast Normal University, received a grant on “A Study of the Eco-economic Thought of Organic Marxism” from the National Social Science Foundation in 2016. Zhaoming Dan, an associate professor at Huazhong Agriculture University received a grant on “A Study of Organic Marxist View of History” from the Ministry of Education Planning Fund in 2016.

As a new theory, organic Marxism inevitably prompted attacks from some fundamentalist Marxists. The critics published articles such as: “Unmasking the Disguise of ‘Organic Marxism’”, and “Theological Swindlers from Claremont School of Theology of the US, Ranked No. 10548 in the World, Have Deceived over 50 Universities in China” on social media platforms like *Thought Torch* and *Terrorist Battle Line*. These articles were also shared widely on other websites including *Zhihu*, *Coastline BBS*, *Global Vision*, *China Today*, *cwzg.cn*, *Sohu*, and *516fc.net*, etc.

In these articles Organic Marxism was accused of the following offenses:

- (1) Enabling religious infiltration by promoting Whitehead’s process philosophy and constructive postmodern philosophy;
- (2) Propagating process philosophy and theism by publishing articles and books in China;
- (3) Curbing China’s development on the pretext of promoting ecological civilization;
- (4) Weakening China’s dominant ideology by propagandizing “organic Marxism” (Secretary Department of the Philosophy Department

of the Social Sciences Commission of the Ministry of Education of the People’s Republic of China 2018).

Fortunately, organic Marxism has survived such ferocious attacks. Although some respected Chinese scholars did not fully agree with organic Marxism, they did not support the approach of vilifying it. Noted scholar Yusheng Huang, Chairperson of Tsinghua University’s Philosophy Department, decried this approach by saying, “Taking advantage of the current unique situation, some have tried to demonize Chinese and foreign scholars by making far-fetched claims connecting academic ideas with political conspiracies, slamming scholars’ academic propositions as political conspiracies, turning scholars’ academic viewpoints into political ideologies, stigmatizing scholars one doesn’t like or whose opinions differ from one’s own, then turning them into hostile forces so that they can be ‘legitimately’ removed is a complete return to the evils of the ‘Cultural Revolution’! If the academic world allows or promotes this, all academics will be in danger” (Y. Huang 2017). Shengyuan Dang, a senior researcher at the Chinese Academy of Social Sciences, and president of the China Society for Literary Theory of Marxism and Leninism, stressed that “It is unacceptable to treat organic Marxism as a heresy or evil doctrine although it is also unacceptable to implant it totally into contemporary Chinese culture” (Dang 2017).

Some Marxist scholars such as Zanmei Cui and Xianli Meng have demonstrated that organic Marxism did not come out of nowhere. Their research showed that, “organic Marxism did not form suddenly.” It has its own theoretical source and verifiable roots. Its evolution has been from organic philosophy (process philosophy) to constructive postmodernism, from constructive postmodern Marxism to organic Marxism; it has experienced a long journey. In this process, ecological concerns and the pursuit of the harmony between humankind and nature have been its point of growth” (Cui and Meng, *The Inner Derivative Logic of Organic Marxism: Origin, Development, and Evaluation* 2018). In her article, “From Ecological Marxism to Organic Marxism: Exploring the Development Trajectory of Organic Marxism,” Zanmei Cui argued that organic Marxism is based on ecological Marxism. For her, “there is a derivative logic between ecological Marxism to organic Marxism” (Cui 2019).

II. What about Organic Marxism Attracts the Chinese Most?

Why do so many Chinese scholars risk attack from dogmatic Marxists to defend organic Marxism? What is it about organic Marxism that attracts them most? There is no single answer to these questions. Here we offer three possible responses:

Organic Marxism has provided support for the construction of China's ecological civilization.

Due to the increasingly severe ecological crises from air, water, and land pollution, more and more Chinese have realized the unsustainability of the capitalist development model, a model that relies on continued access to inexhaustible resources. While human desires may be unlimited, the Earth's resources are not. "They can neither meet the needs of capitalism's infinite expansion, nor meet Communism's distribution according to need" (Pan 2010). For Yue Pan, a leading figure in China's ecological movement and Vice Minister of the Ministry of Environmental Protection in China, "If China continues to walk the old road of Western industrialization, it will come to a dead end" (Pan 2010). Therefore, the Chinese government has paid much attention to the ecological civilization model, which emphasizes the harmonious symbiosis between humankind and nature. In 2012 ecological civilization was ratified as the "fifth pillar" of the Chinese Communist Party (CCP)'s platform, and in 2018 was adopted into China's Constitution. Building China's ecological civilization has become "a central policy objective of the Chinese government" (Gare 2012).

President Xi Jinping has faith that "the prosperity of ecology means the prosperity of civilization, while the decline of ecology means the decline of civilization" (Xi, Pushing China's Development of an Ecological Civilization to a New Stage 2019). He not only regards a good ecology and environment as "the most inclusive [element for] people's livelihood and well-being," but also conceives building an ecological civilization as "vital for sustaining the development of the Chinese nation" (Xi, Pushing China's Development of an Ecological Civilization to a New Stage 2019). As a Marxist, Xi believes "To study Marx is to study and practice Marxist thought on the relationship between man and nature" (Xi, Speech at the Ceremony Commemorating the Bicentenary of the Birth of Marx 2018). Ecological civilization undoubtedly embodies the Marxist worldview in his eyes.

The unifying theme of organic Marxism is its pursuit of an ecological civilization, one "that promotes humans as part of non-human nature and offers sustainable ways of living with non-human nature" (Murray 2017). It is therefore no wonder that Chinese Marxists have developed a strong interest in it since "Marxism has inculcated in many Chinese a desire to save the world" (Cobb and Vltchek 2019). For some Chinese Marxists, organic Marxism is "a doctrine following ecological Marxism that reflects the global ecological crisis" (Secretary Department of the Philosophy Department of the Social Sciences Commission of the Ministry of Education of the People's Republic of China 2018). In his endorsement of the book, *Organic Marxism*, Naishe Qiang, a senior editor of the Chinese Academy of Social Sciences' publication, *Philosophical Trends*, claimed "Organic Marxism is a timely guide for responding to the pressing issues facing us" (Qiang 2014). Ping Ren, president of Jiangsu Normal University, has defined organic Marxism as "Marxism in the era of ecological disaster." He has conceived of organic Marxism as "a framework for saving the Earth" (Ren and Clayton 2016).

In reality almost all organic Marxists feel the urgency of ecological issues and the necessity of creating an ecological civilization. As John Cobb stated, "Today more and more people recognize that global capitalism is destroying itself and, in the process, rendering the planet uninhabitable" (J. J. Cobb 2014). To David Griffin, "Ecological civilization is urgently needed if humankind and other species want to continue to live and flourish on the planet" (Griffin 2008).

To Chinese Marxists, "Ecological civilization is not only organic Marxism's theoretical aim, but also its practical pursuit" (He 2016). The active efforts that organic Marxism has made towards building an ecological civilization "have both theoretical and practical meaning for China" (Yu 2017).

Since organic Marxism regards ecological civilization as an unprecedented, systematic project, it will require not only a fundamental transformation to the modes of production and the underlying development model, but also a fundamental transformation of worldview, values, and ways of living. Accordingly, organic Marxists have also proposed new concepts such as economy for community, development for community, and "a lifestyle of creative frugality" (McDaniel 2008). They are convinced that these proposals can help China to free itself from GDP worship and global competition for

unlimited growth, and move it towards building an ecological civilization. Therefore, to some Chinese Marxists, “organic Marxism resonates deeply with China’s strategy for ecological civilization” (He 2016). For Ming Huang and Xiaying Lu of Zhejiang University, organic Marxism is the doctrine and theory China urgently needs as it faces the task of creating an ecological civilization, because it not only integrates the ecological thought of Chinese Marxism and the ecological ethics of traditional Chinese culture characterized by the oneness of nature and human beings, but also “offers a blueprint for ecological civilization from macroscopic targets to micro measures” (Huang and Lu 2016).

Yuchen Wang, a leading figure in ecological Marxism studies, argues that “organic Marxism as a movement in contemporary ecological studies is worthy of attention. It is significant for us to find a way to resolve the ecological crisis and create an ecological civilization” (Y. Wang 2015). For Zhihe Wang and Tao Yang, the greatest theoretical and practical meaning of organic Marxism is that it raises the question: “Is it possible for a socialist developing country like China to pursue a development pathway that [allows it to] leap beyond the Western advanced countries while building an ecological civilization that avoids the defects of the capitalist industrial civilization and takes advantage of the strengths of a socialist system and traditional Chinese culture?” (Wang and Yang, *Organic Marxism and Its Contemporary Meaning* 2015). With many Chinese still stuck in the notion of linear development and committed to the belief that China has to finish its journey to modernity, (“The Unfinished Project” according to Habermas), no matter what it takes, organic Marxism provides “a third way”, a way to expand thinking and explore other possibilities.

Organic Marxism Has Chinese Elements

Another important reason for the Chinese people’s attraction to organic Marxism lies in its Chinese elements. In Zhihua Yang’s view, “Among all kinds of Marxism in the West, organic Marxism is the only Marxism that contains distinctive Chinese elements” (Yang, *Exploring Organic Marxism from Chinese Angle* 2015). For Changxue Li of the Central Party School, the distinctive Chinese elements of organic Marxism are reflected in many respects, including its origin, source, theoretical proposals, philosophical methods, and values. This makes organic Marxism different from both Western Marxism, and indigenous forms of Marxism such as those

found in Cuba and China. His conclusion is: “Organic Marxism with Chinese elements is a new paradigm in the history of Marxism” (C. Li, *Organic Marxism: A New Paradigm with Chinese Elements* 2016).

What impresses Chinese Marxists deeply is that organic Marxism actively absorbs and draws lessons from Chinese traditional philosophy such as the “process thought” found in the *I Ching (The Book of Changes)*, Confucianism’s “person-in-community” ideology, “harmony between humans and nature” in Daoism, the concept of inter-being in Hua Yen Buddhism, the emphasis on “the primacy of each present moment of experience” in Chan Buddhism, the body as an organic microcosm of the universe that is found in traditional Chinese medicine, etc. (Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe* 2014). For John Cobb, the current socialist system in China “has deep foundations in the thousands of years of Chinese culture” (Cobb and Vltchek 2019). To Zhihe Wang, Kaige Gao, and Meijun Fan, deep organic connections exist between organic Marxism and Chinese traditional thought. For this reason, they have called organic Marxism “Marxism with Dao,” meaning that it aims to find the common good within Mankind and Nature. Because “it not only criticizes the injustice of capitalism and fights against the reckless waste of consumerism, but also treats nature, the general population, farmers, and future generations with kindness” (Wang, Gao and Fan, *Organic Marxism Is a Marxism with Dao* 2016).

Besides the critical appreciation of traditional Chinese culture, organic Marxism also appreciates the efforts of contemporary Chinese Marxism such as caring for the vulnerable and the poor, decrying “an overly abstract form of philosophy that gets lost in theory and neglects practice,” etc. (Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe* 2014). In addition, Chinese Marxists appreciate organic Marxism’s care for China, especially its moral support for China’s construction of an ecological civilization (Feng and Meng 2015). According to an analysis by Qingzhi Huan and Jun He of Peking University, “One important reason why organic Marxism receives widespread attention from outside academia (even from the government) is that it clearly established an immediate foothold in the construction of ecological civilization in contemporary China while retaining traditional Chinese wisdom or culture” (Huan and He 2017).

Like John Foster and some Western historians of science who see China as a “potential ray of hope in the necessary ecological transition in the Anthropocene,” despite its own serious environmental problems, leading organic Marxists like John Cobb and Philip Clayton have positive views of China (J. B. Foster 2017). Cobb is convinced that “the hope of ecological civilization lies in China” (J. Cobb 2010). To Philip Clayton, “[o]f all the nations on this planet, the People’s Republic of China is most likely to lead other countries to a sustainable ecological civilization. Sadly, the leadership will not come from the United States, and no other country is strong enough to take the leading role” (Clayton, Preface to Chinese Edition 2014).

Organic Marxists hope “China as a latecomer can take advantage of catching up from behind to an advanced level, and create a new civilization that is concerned with the environment, cares about the poor, and appreciates diversity by overcoming the defects of traditional capitalism and transcending the profit-oriented development model” (X. Wang 2017).

Chinese Marxists appreciate the open attitude of organic Marxism. Some see organic Marxism as a commendable contribution from the West with a tolerant attitude and openness towards Asian culture. They regard this attitude “as an important starting point of transforming human civilization” (Cui, A Summary of Overseas and Domestic Research Status on Organic Marxism 2019).

Organic Marxism Has Deep Convergences with Ecological Marxism

Another important reason why many Chinese Marxists appreciate organic Marxism is that it shares many commonalities with ecological Marxism. After being introduced into China more than 30 years ago, ecological Marxism is “one of the most influential movements in contemporary Western Marxism” and has become “part of the totality of Marxism in China”; it has been, to some extent, “accepted by the mainstream Marxist camp” (Z. Wang, Ecological Marxism in China 2012). One of the major contributions of ecological Marxism is identifying the theoretical grounding of ecological civilization in Marx. In John Cobb’s words, “A few American Marxists have shown that an ecological Marxism can find grounding in Marx, and this is surely important” (J. J. Cobb 2014). For John Foster, the most well-known ecological Marxist in China, Marx “explicitly defined socialism in terms consistent with the devel-

opment of an ecological society or civilization” (J. B. Foster 2016).

Many Chinese Marxists recognize the affinities between organic Marxism and ecological Marxism. Some of them argue that there is an inherent relationship between the two. In Zanmei Cui’s words, “As organic Marxism and ecological Marxism as movements share the same ecological concerns and appeared in succession; there is a kind of inherent relationship in thought and content” (Cui, From Ecological Marxism to Organic Marxism: A Developmental Trajectory 2019). Some scholars point out that “Ecological Marxism is one theoretical source of organic Marxism” (Secretary Department of the Philosophy Department of the Social Sciences Commission of the Ministry of Education of the People’s Republic of China 2018). Yupeng Wang and Yanli Feng, for example, argue that “Based on the inheritance of the ecological Marxism represented by Foster, organic Marxism eventually formed a new paradigm of Marxist studies abroad by drawing lessons from the wisdom of China’s Confucianism, Buddhism and Daoism” (Wang and Feng 2016).

Some scholars discovered the commonalities between organic Marxism and ecological Marxism. According to Zhihe Wang and Tao Yang, “Organic Marxism has a deep convergence with ecological Marxism. Since organic Marxism is a deep ecological theory, it has shared many insights with the ecological Marxism represented by Foster: such as criticizing capitalism, challenging imperialism, calling for an ecological revolution and an ecological enlightenment” (Wang and Yang, Organic Marxism and Its Contemporary Meaning 2015). Both ecological Marxism and organic Marxism have characteristics of non-Western centrism and reject both radical anthropocentrism and radical ecocentrism. “Both of them clearly oppose modern anthropocentrism and have respectively developed an ecological thinking that concerns the long-term future of humanity and society” (Han and Wu 2017). For Lianfu Yan and Fangfang Xie of the Marxism School at Xi’an Jiaotong University, “Based on Marxist perspective, both ecological Marxism and organic Marxism profoundly explore the root causes of the contemporary ecological crisis. In spite of their different approaches, their aim is the same: to find a way to solve the contradiction between human sustainable development and the ecological crisis. Their exploration has provided important inspirations in the development of Marxist theory and the building of a socialist ecological civilization” (Yan and Xie 2016).

III. Challenges Facing Organic Marxism in China

Although organic Marxism has attracted significant attention in China, its fate remains unpredictable because of severe obstacles such as: dogmatic Marxism, deep-seated anthropocentrism, prevailing developmentalism, overwhelming consumerism, and a deep prejudice against religion. If organic Marxism is to take root and blossom in China, it must overcome these forms of resistance. Among these, the biggest obstacle comes from within Marxism, namely from dogmatic Marxists. To some extent all of the obstacles above are related directly or indirectly to dogmatic Marxism. With regard to religious prejudice, dogmatic Marxists continue to adhere to Marx's famous dictum that religion is "the opium of the people" and regard that statement as "the cornerstone of the whole Marxist worldview of the religious question." Accordingly, they became selectively blind to the positive functions of religion or spirituality, such as providing social cohesion to help maintain social solidarity (David Durkheim), "stretching individual interest beyond its self-defeating particularity" (Whitehead, *Process and Reality: An Essay in Cosmology* 1978), expanding our love for others, including other living beings in nature, etc. It is obvious that religion can play an important role in combating excessive consumerism and radical hedonism, sometimes described in Chinese as "amusing ourselves to death." If we condemn religion to the trash heap as dogmatic Marxists have done, we will lose a valuable resource. It is nothing less than throwing the baby out with the bathwater. Due to space limitations and its central role in opposing organic Marxism, the following discussion will focus on dogmatic Marxism.

Dogmatic Marxism is a variety of fundamentalist Marxism that believes "there is only one Marxism." In the words of Xincheng Zhou, a senior professor of Marxism at Renmin University of China, "Marxism reveals the universal development rule of the natural world, human society and thinking. It is a one-size-fits-all universal truth that does not become outdated when changes occur as times change, nor lose efficacy due to different national conditions. Therefore, there is only one Marxism in the world, not different kinds of Marxism" (Zhou 2018). From such a fundamentalist standpoint, he considers both organic and ecological Marxism as "non-Marxism" or "anti-Marxism." In the eyes of Rongzheng Mei, a chief expert in the history of Marxism at the Central Marxism Project, "The varieties of Marxism with a

Western background, such as ecological Marxism, organic Marxism and feminist Marxism, etc., confuse people about what Marxism actually is. The concept of Marxism became infinitely extended. The intention is to negate the proletarian position and worldview of Marxism and make Marxism into a Marxism favored by all classes in order to make Marxism classless, empty, and non-revolutionary" (Mei 2016).

For these fundamentalist Marxists, the only truth is found in the foundational books of Marx and Engels. They are vehemently opposed to any kind of Marxism that differs from classical Marxism. You are not allowed to say anything that Marx did not say or do anything that Marx did not do. Otherwise, you are distorting Marxism. As Xia Qi stated, "There are a lot of weird so-called 'Marxisms' such as organic Marxism, ecological Marxism, Confucian Marxism, Western Marxism and New Marxism, etc. The essence of these 'Marxisms' is far from the Marxism as the guideline of our party. They are falsely named and a distortion of Marxism" (Qiu 2018).

What these dogmatic Marxists forget is that Marx himself never treated his theory as unchanging truth. Engels once said, "All Marx's worldview is not a doctrine, but a method [sic]", which gives "not ready-made dogmas, but starting points for further research and a method for this research" (Alpidovskaya and Popkova 2019).

As a matter of fact, in their lifetime Marx and Engels constantly adjusted their perspectives. They showed with practical action that "what they bequeathed was not some bible or even a finished work" (Bolton 2017). Since Marx himself did not believe in unchanging essences it is therefore not possible to ask what the true essence of his thought was, or to decide which branch of Marxism is the true one. In short, "Marxism is fluid and changing" (C. Cobb 2018).

Ironically, one of the main reasons why the CCP was successful in the Chinese revolution was because under Mao's leadership the Party kept breaking down dogmas of classical Marxism. The Party never forgot the painful lessons of the dogmatism of Li Lisan and Wang Ming in the Party's early years. As senior leaders of the CCP, both Li and Wang had abided by Communist dogma and strictly adhered to Soviet or Stalinist Marxism by neglecting the "concrete realities" of the Chinese revolution. They gave priority to the seizure of large cities and repudiated Mao's strategy which better reflected

China's conditions: "The key to China's social revolution lay in mobilizing the peasantry and establishing secure rural base areas" (Joseph 1984). Because of their dogmatism, the Chinese revolution suffered large losses and was nearly destroyed. That was a profound lesson for the young CCP. Unfortunately, in later years Mao violated the principle of seeking truth from facts and almost repeated the same mistake by strictly adhering to the classical Marxist theory of class struggle, which reached its climax during the Great Cultural Revolution. This "led to domestic turmoil and brought catastrophe to the Party, the State and the entire people," and brought China's national economy "to the edge of collapse" (Grenville 2005). As John Cobb pointed out, "Marxism in its Leninist and Stalinist forms did not work and will not work" (J. J. Cobb 2014).

Although it's been many years since the Great Cultural Revolution, dogmatism is still an important force. The attack of the dogmatists against organic Marxism reflects its influence. Fighting against dogmatism, therefore, will require significant time and effort. But if China wants to continue to open its doors to the world and take the lead towards an ecological civilization, it must abandon such obsolete binary thinking because "creating an ecological civilization requires the collective effort of different civilizations, different religions, and different ideologies" (Pan2018). To achieve this goal, Chinese Marxism must not only be open to various kinds of Marxism, including organic Marxism and ecological Marxism, but also be open to different religious traditions. It is time therefore, to reflect on atheistic fundamentalism and to re-examine the function of religion in the face of the rapid developments that are taking place. In Yue Pan's words, the "Marxist view of religion must keep up with the times" (Pan 2001). The adherence to atheism has the negative effect of encouraging consumerism, which is threatening the future of humanity on the planet. Whitehead once observed that "it has been remarked that a system of philosophy is never refuted; it is only abandoned" (Whitehead, *Process and Reality: An Essay in Cosmology* 1978). This claim may also be applied to fundamentalist Marxism. Deng Xiaoping, who launched China's reform and its opening-up policy, once admitted, "We've accumulated decades of experience engaged in Socialism. What is Socialism? What is Marxism? To date we've never clearly carried it out" (Deng 1993).

As the new leader of the 90-million member CCP, Xi Jinping himself is actually on guard against

various kinds of dogmatism. He is opposed to treating Marxism as a set of fixed dogmas and always encourages Chinese Marxists to keep an open mind. At the Ceremony Commemorating the Bicentenary of the Birth of Marx, he emphasized, "China's great social transformation is not a master plate from which we simply continue our history and culture, nor a pattern from which we mechanically apply the ideas of classic Marxist authors, nor a reprint of the practice of socialism in other countries, nor a duplicate of modernization from abroad. There is no orthodox, immutable version of socialism. It is only by closely linking the basic principles of scientific socialism with a country's specific realities, history, cultural traditions, and contemporary needs, and by continually conducting inquiries and reviews in the practice of socialism, that a blueprint can become a bright reality" (Xi, Speech at the Ceremony Commemorating the Bicentenary of the Birth of Marx 2018). Treating Marxism dogmatically, especially by garbling quotes out of context, not only discredits Marxism's reputation, but "is the inner cause of the setbacks the practice of socialism has experienced" (Nie 2020).

From the perspective of organic Marxism, the biggest problem of fundamentalist Marxism is that it separates theory from practice. Dogmatic Marxists either indulge in quotations and pedantry, randomly selected from the writings of Marx, Engels or Lenin, or direct their fire exclusively at Western capitalism. This has resulted in a failure to remain grounded by getting lost in theory and neglecting practice. On a theoretical basis they committed what Whitehead called "the fallacy of misplaced concreteness," an error of "mistaking the abstract for the concrete" (Whitehead, *Science and the Modern World* 1967). Some Chinese scholars have discovered a huge gap between Marx's (and Engels') political philosophy and contemporary China's reality. It is this gap that has blocked the emergence of Marxist political philosophy in the context of Chinese culture. This is manifested by the fundamentalist Marxists' unrelenting emphasis on how correct their political philosophy is, and how important it is to modern China. At the same time, they criticize Western scholars for distorting Marx's political philosophy. "In the end, they are wavering and flickering around the reality of the Chinese society without going deeply into the critical issues and never confronting China's concrete reality. Classic Marx's political philosophy, therefore, becomes irrelevant to China's reality. Both face each other across the river" (Ye 2020). In

this sense, we can regard these fundamentalist Marxists as “dogmatic Marxists”. To them, “elucidating immediate experience, as suffered and enjoyed by human beings and other living beings, is the primary justification for human thought” (Clayton and Heinzekehr, *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe* 2014). Ecological civilization not only aims at the dynamic harmony between humans and nature, “but also aims at the dynamic harmony among people” (Xue 2017). The most damaging consequence of the adherence of fundamentalist Marxists to dogma is that many people no longer have faith in Marxism.

The world has changed, and fundamentalist Marxists, unfortunately, have not. Fundamentalist Marxists fail to recognize realistic problems such as the hardships of the people, despite claiming that they are “defending the interests of nation and people” (X. Wang 2017). They disregard the pressing ecological crisis facing China and ignore “the basic contradiction between the great superstructure and the overburdened economic base” (Qian 2018). According to the “Comparative Table of Sino-US Institutions at the County Level” released at the Beijing Forum, the US has 19 county-level institutions; China has 196. A survey by Yuling Ren, an advisor to the central government showed that the “ratio between government officials and civilians was 1:26” (Ren 2005). To Liu Xirong, a member of The National People’s Congress (NPC), Vice Chairman of the NPC Law Committee, and former Deputy Secretary of the CCP’s Central Commission for Discipline Inspection, “No matter how hard the people work, they will not be able to afford so many public servants” (Liu 2012). It is hard to expect such a huge bureaucracy to serve people efficiently, and despite President Xi Jinping’s centralized anti-corruption efforts, it is hard to avoid corruption. Did these fundamentalist Marxists propose solutions addressing this big issue? Did they say anything critical about the rigid urban-rural structure in China? While the Central government repeatedly stressed reviving the countryside, did they offer any constructive suggestions to eliminate or reform this structure? Unfortunately, the well-being of more than 600 million farmers does not appear to be part of their studies.

In addition, these fundamentalist Marxists regularly turn a blind eye to capitalism and capitalism-generated exploitation and corruption occurring at the local level in China. After a series of worker suicides that were caused by numerous labor abuses took place at Foxconn, the world’s largest electronics

manufacturer, few dogmatic Marxists spoke out in support of workers. Likewise, almost no fundamentalist Marxists publicly questioned Jack Ma, the co-founder and former executive chairman of Alibaba Group, when he stressed that it is the Alibaba Group – not the people – that feeds the people, and that workers who work from 9a.m. to 9p.m., 6 days a week should be grateful to Alibaba for offering them jobs. Fortunately, some Chinese youths responded to Ma using Marx’s labor theory of value. They asserted that it is human labor that creates value; it is the people who feed the Alibaba Group, not the reverse (Yin 2020). It is to be hoped that more Chinese youths – with the help of ecological Marxism, organic Marxism, and other ecological movements – will realize the danger and harm of both capitalism and dogmatism, and will commit themselves to creating an ecological civilization, the greatest challenge of the Anthropocene, in order to save our beautiful planet as well as humanity itself.

Whitehead stated, “a clash of doctrines is not a disaster—it is an opportunity” (Whitehead, *Science and the Modern World* 1967). The adventure of organic Marxism in China has convinced us that continuing to follow the same paths and limiting oneself is a dead end. Organic Marxism as an emerging theory needs to open itself to criticism, and enrich itself by absorbing new ideas in China. According to Desheng Zhu, former Chairperson of the Philosophy Department at Peking University, Marxism was based on traditional Western culture and was formed by studying the practical problems in the West. “If it wants to take root, germinate and bloom in China, it must combine Chinese traditional culture with China’s reality. Politically, this combination has advanced, but philosophically the exploration has just begun” (Lin 2011). There is little doubt that organic Marxism can play an important role in this exploration, and in developing Marxism with Chinese characteristics that creates an ecological civilization. It doesn’t actually matter whether it is called “organic Marxism” or not. In the words of Yunfei Zhang, a noted Marxist professor at Renmin University of China, “Only when traditional Chinese wisdom, Western process philosophy, and Marxist theory become organically integrated, can ecological civilization be realized” (Zhang 2016).

Despite the early trials and tribulations surrounding its introduction, organic Marxism has become a tremendous ideological force in the field of ideological discourse and debate in China. Although organic Marxism has temporarily fallen by the way-

side due to the attacks from dogmatic and orthodox Marxists, we are convinced that organic Marxism has a bright future in China because of the fresh, holistic perspective it provides as China faces development into a modern socialist nation. The rigid materialism often characteristic of orthodox Marxism prevents us from seeing the advantages of alternative development paths along with the disadvantages of deterministic economic development paths. The phenomenon of “GDPism,” which emerged as a by product of China’s recent development model, is an example of the latter. The perspective of organic Marxism does not *replace* the focus on economic growth and development per se, but rather supplements it and tempers it by emphasizing the relation between economic growth and other important factors that are inextricably linked with it, such as environmental degradation. As China continues to fully mature into a moderately prosperous society in all respects, a stated goal of the Party to be reached by the Party’s 100th anniversary in 2021, such additional factors cannot be ignored, lest the goal of moderate prosperity *in all respects* remain un-reached. President Xi Jinping himself has made this clear in a speech given at the 19th National Congress of the CPC on October 18, 2017, in which he stated, “We must put the people’s interests above all else, see that the gains of reform and development benefit all our people in a fair way, and strive to achieve shared prosperity for everyone” (Xi, Report at the 19th National Congress of the Communist Party of China 2017). Likewise, in a speech given at a national commendation conference in Beijing on February 25, 2021, President Xi urged the Party “to adhere to a people-centered development to achieve common prosperity.” Thus, economic growth and development, while undoubtedly crucial to the Party’s mission of the rejuvenation of the Chinese nation, cannot be the Party’s sole focus. A truly people-centered development must take into account all of the issues and concerns of the people, be they related to economic growth or otherwise. In contrast to many of the other forms and flavors of Marxism that have emerged in academia and Marxist governments alike, the philosophy of organic Marxism has already made a demonstrable impact on the ideology, policies, and planning pursued by the Communist Party of China. As China enjoys an increasingly pristine and healthy environment going forward into the future, organic Marxism will likewise enjoy greater success and appreciation for the invaluable contributions it has made towards this end. The

many positive developments in China to which organic Marxism has contributed may not have been realized had the intense criticism from dogmatic and orthodox Marxists succeeded in stifling its development in its infancy; this illustrates the danger posed by ideological dogmatism in general towards any philosophy or ideology. Marxism, like all ideologies, is not a static, immutable doctrine from which no new innovations or schools of thought can arise out of fear of compromising its ideological purity. We must be open-minded and willing to adapt Marxism to the ever-changing material and social conditions faced by China or any socialist nation.

From its humble beginnings as a heavily scrutinized variant of an ideology that itself attracted controversy, organic Marxism has stood out as a solution to the ecological issues facing China. It is hoped that the trend towards an ecological civilization to which organic Marxism has contributed will continue and that in the future this philosophy can address the increasingly-pressing environmental concerns faced not just by China, but the world as a whole.

References

- Alpidovskaya M L, Popkova E G (2019) *Marx and Modernity*. Charlotte, NC: Information Age Publishing.
- Bolton S (2017) Marxism is not a dogma. *Socialist-Alliance*. 22 February. <https://socialist-alliance.org/what-marxism/marxism-not-dogma>.
- Clayton P (2014) Preface to Chinese Edition. In *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, by Philip Clayton and Justin Heinzekehr, 7. Claremont, CA: Process Century Press.
- Clayton P, Heinzekehr J (2014) *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*. Claremont, CA: Process Century Press.
- Cobb C (2018) Organic Marxism: A Social and Environmental Philosophy for the 21st Century. *Practice and Theory of SEZs* 2: 41–50.
- Cobb J B, Vltchek A (2019) *China and Ecological Civilization*. Indonesia: BADAK MERAH SEMESTA.
- Cobb J (2010) The Hope of Ecological Civilization Lies in China. In *Environmental Remedies: Sheri Liao’s Talks with Eastern & Western Thinkers*, by Sheri Liao, 258. Beijing: Sanchen Press.
- Cobb J Jr (2014) Foreword. In *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, by Philip Clayton and Justin

- Heinzekehr, i-ii. Claremont, CA: Process Century Press.
- Cui Z (2019) A Summary of Overseas and Domestic Research Status on Organic Marxism. *Journal of Northeast Agricultural University* 5: 66–72.
- Cui Z (2019) From Ecological Marxism to Organic Marxism: A Developmental Trajectory. *Journal of Shanghai University* 5: 123–130.
- Cui Z, Meng X (2018) The Inner Derivative Logic of Organic Marxism: Origin, Development, and Evaluation. *Guangxi Social Sciences* 10: 141–145.
- Dang S (2017) Some Fair Comments on ‘Organic Marxism’. *Academic Research* 4: 156–164.
- Deng X (1993) *Selected Works of Deng Xiaoping Vol.3*. Beijing: The People’s Press.
- Feng, Y, Meng X (2015) Organic Marxism: A New Paradigm of Integrating Traditional Chinese wisdom, Western Process Philosophy, and Marxist theory. *Social Scientists* 11: 20–24.
- Foster J B (2016) Marxism, Ecological Civilization, and China. *MRZine*. 23 June. <http://climateandcapitalism.com/2016/06/23/two-views-on-marxist-ecology-and-jason-w-moore/>.
- Foster J B (2017) The Earth-System Crisis and Ecological Civilization: A Marxian View. *International Critical Thought* 4: 439–458.
- Gare A (2012) China and the Struggle for Ecological Civilization. *Capitalism Nature Socialism* 23: 10–26.
- Grenville J A S (2005) *A History of the World from the 20th to the 21st Century*. Routledge.
- Griffin D R (2008) Preface. In *Ecological Civilization and Marxism*, by Huibin Li, Xiaoyuan Xue and Zhihe Wang, 9. Beijing: Central Compilation and Translation Press.
- Guan X (2019) Treating Organic Marxism Kindly. *China Process Studies* 5: 157–170.
- Han P, Wu Q (2017) From Opposition to a Comparative Study of Ecological Marxism and Organic Marxism. *Guizhou Social Sciences* 12: 25–30.
- He G (2016) Organic Marxism and China’s Construction of Ecological Civilization. *People’s Tribune* 11: 205–207.
- Huan Q, He J (2017) Organic Marxism Studies in China in 2016: Advance and Evaluation. *Journal of Yunmeng* 4: 15–24.
- Huang M, Lu X (2016) A New Paradigm of Contemporary Marxism Abroad—Reading Organic Marxism. *Jianghai Academic Journal* 3: 44–50.
- Huang Y (2017) Response to Pengpai Reporter’s Interview on ‘Yi’s article event’. *Tsinghua Western Philosophy Studies Official Accounts*. 22 February. https://www.sohu.com/a/126890336_488780.
- James W (1981) *Pragmatism--A New Name for Some Old Ways of Thinking*. Hackett Publishing.
- Joseph W A (1984) *The Critique of Ultra-Leftism in China, 1958–1981*. San Francisco, CA: Stanford University Press.
- Li C (2016) On the Origin, Evolution, Theoretical Claims and Meaning of Organic Marxism. *Journal of the Party College of CPC Hefei Municipal Committee* 4: 45–51.
- Li C (2016) Organic Marxism: A New Paradigm with Chinese Elements. *Journal of the Party School of the Taiyuan’s Committee of the C.P.C.* 5: 69–72.
- Li H (2015) Organic Marxism is a New Innovation of Marxism in New Era. *Contemporary China Marxist Philosophy Studies* 1: 175–182.
- Liu X (2012) Too Many Government Officials. *City Express*. 11 March. https://hzdaily.hangzhou.com.cn/dskb/html/2012-03/11/content_1234636.htm.
- McDaniel J (2008) The Greening of China: The Constructive Postmodern Movement in Contemporary China. *Worldviews* 12(2/3): 270–290.
- Mei R (2016) How to Respond the Erroneous Anti-Marxism Movement? *China Social Sciences Network*. 30 March. <http://www.szhgh.com/Article/opinion/xuezhe/2016-03-28/110215.html>.
- Murray L A (2017) Organic Marxism and the Marxist Tradition. In *Socialism in Process*, by Philip Clayton and Justin Heinzekehr, 73. Anoka, MN: Process Century Press.
- Nie J (2020) Understanding Marx is still an Important Issue of our Times. *China Reading Weekly*, 11 June.
- Qian H (2018) How to Step out of ‘the Traps in the Middle of Transformation? *Economic Important References* 38: 22–27.
- Qiang N (2014) Endorsement. In *Organic Marxism: An Alternative to Capitalism and Ecological Catastrophe*, by Philip Clayton and Justin Heinzekehr. Claremont, CA: Process Century Press.
- Qiu X (2018) Beware of Some Covert Misunderstandings About Marxism. *Red Flag Manuscript* 7: 10–12.
- Ren P, Clayton P (2016) A Marxism in the Era of Ecological Disaster: A Framework for Saving the Earth—A Dialogue on Organic Marxism. *Jianghai Academic Journal* 3: 12–19.

Ren Y (2005) The Dilemma of Supporting an Official by 26 People. *Decision-Making* 4.

Secretary Department of the Philosophy Department of the Social Sciences Commission of the Ministry of Education of the People's Republic of China (2018) Investigative Report on Organic Marxism Studies in China in Recent Years. In *Philosopher* 2017: 3–16. Beijing: The People's Press.

Shen R, Cao S (2020) *Modernization of Government Governance in China*. Singapore: Springer Nature Singapore.

Wang X (2017) Another Kind of People Does Exist, Another Kind of Civilization is Possible—A Witness's Response to the Article 'Theological Swindlers Have Deceived over 50 Universities in China'. *Culture Communication* 74(3/4): 4–5.

Wang Y (2015) An Analysis and Comment on Organic Marxist View of Ecological Civilization. *Studies on Marxism* 12: 80–90.

Wang Y, Feng Y (2016) Organic Marxism: Issues and Essence. *Chinese Social Sciences Today*, 28 April.

Wang Z (2012) Ecological Marxism in China. *Monthly Review* 63(9): 36–44.

Wang Z, Yang T (2015) Organic Marxism and Its Contemporary Meaning. *Marxism and Reality* 1: 84–92.

Wang Z, Gao K, Fan M (2016) Organic Marxism Is a Marxism with Dao. *Jianghai Academic Journal* 3: 30–38.

Whitehead A N (1978) *Process and Reality: An Essay in Cosmology*. New York: Free Press.

Whitehead A N (1967) *Science and the Modern World*. New York: Free Press.

Xi J (2019) Pushing China's Development of an Ecological Civilization to a New Stage. *Qiushi Journal* 3: 4–19.

Xi J (2017) Report at the 19th National Congress of the Communist Party of China. 27 October. http://www.gov.cn/zhuanti/2017-10/27/content_5234876.htm.

Xi J (2018) Speech at the Ceremony Commemorating the Bicentenary of the Birth of Marx. *Qiushi Journal* 3.

Xi J (2021) Speech at the National Conference to Mark China's Poverty Alleviation Accomplishments and Honor Model Poverty Fighters. 25 Feb. http://www.gov.cn/gongbao/content/2021/content_5591398.htm.

Xi J (2021) Speech at the National Conference to Mark China's Poverty Alleviation Accomplishments and Honor Model Poverty Fighters. 25 Feb. http://www.gov.cn/gongbao/content/2021/content_5591398.htm.

Xue Y (2017) They Make Me Feel the Power of Hope. *Culture Communication* 74: 2–3.

Yan L, Xie F (2016) Organic Marxism and Ecological Marxism: A Comparison of Two Ecological Visions and its Inspirations. *Zhejiang Social Sciences* 9: 96–102.

Yang Z (2015) Exploring Organic Marxism from the Chinese Angle. *Fujian Daily*, 28 December.

Yang Z (2015) What is Organic Marxism? *Marxism and Reality* 1: 78–83.

Ye X (2020) Crossing the Chasm between Marxian Political Philosophy and Contemporary China's Reality. *Academics* 3: 44–55.

Yin G (2020) The Criticism of Ma Yun from the Young People in Bilibili is a Sound of Thunder as a Major Turning Point of Social Movement in China. *KKNews*. 11 May. <https://kknews.cc/news/g48pvrn.html>.

Yu S (2017) Theoretic Comparison and Enlightenment of Organic Marxism and Ecological Marxism. *Journal of Shihezi University* 5: 51–59.

Yue P (2018) Ecological Civilization Gives Impetus to Build a Community of Shared Future for Mankind. *People's Daily Online*. 18 October. <http://theory.people.com.cn/n1/2018/1018/c40531-30349251.html>.

Yue P (2010) Finding a Way to Civilization with Wisdom of the East. In *Environmental Remedies: Sheri Liao's Talks with Eastern & Western Thinkers*, by Sheri Liao, 3–4. Beijing: Sanchen Press.

Yue P (n.d.) Marxist View of Religion Must Keep up with the Times. *Shenzhen Special Zone Daily*.

Zhang Y (2016) The Main Note of the Chinese Ecological Movement in 2015. *People's Tribune* 3: 60–61.

Zhou X (2018) There is Only One Marxism in the World, No Several Different Kinds of Marxism. *World Socialism Studies* 5: 27–32.

THE MUSIC SENT BY GOD

Bogdana Todorova

Institute for Philosophy and Sociology, Bulgarian Academy of Sciences,
13A Moskovska Str., Sofia 1000, Bulgaria
e-mail: bonytodorova@gmail.com

Abstract:

Mugham is deeply rooted in Azerbaijan's history as it is undoubtedly depicted as the pearl of Azerbaijani musical art. *Mugham* (Azerb. *Muğam*) (God sent music) is one of the main genres in traditional Azerbaijani music, part of the musical-poetic art of Azerbaijan's nation. The *Mugham* embodies philosophical poetry including the philosophy of music as a complement to the harmony of being. In 2008, UNESCO proclaimed the Azerbaijani *Mugham* as one of the masterpieces of verbal and intangible cultural heritage. This music must be understood in its two dimensions – as an example of an art and as a way of thinking, in which Sufism and Mysticism are two lines that intersect. The aim of the article is to show the unity of Azerbaijan's spiritual culture and the synthesis of music and religion. Special attention is focused on *Mugham* as a type of connection with God, through mystical love and spiritual experience. This perspective differs from that of common research and discussions of *Mugham*, which view it principally as a unique type of poetic-musical communication between performers and a devoted audience. The post-Soviet period allowed Western scholars to become acquainted with the musical works of Azerbaijani masters of *Mugham* and to compare their musical-aesthetic features with those of German Romanticism. In this paper, we move beyond such considerations to claim that *Mugham* ought to be recognized 'as a spiritual process preserving the dynamism of thinking'. The report will conclude with the concomitant claim that *Mugham* represents an intercultural philosophy.

Key words: *Mugham*, philosophy of religion, Sufism, a way of thinking.

Introduction

Mugham is a part of Azerbaijan's cultural and spiritual heritage. Apart from being lyrical music, it

is a state of mind, a way of achieving fusion with the world, and a sort of cosmic philosophy. It is originally known as the "music sent by God" (UNESCO, 1971).

As a genre, it was formed during the period of the so-called Muslim Renaissance (the 12th c. – 13th c.), when poetry writing was in ascendance. There are different views on *Mugham*'s origin. Konul Bunyadzade, for example, describes it as a synthesis of Eastern and Western thought (Bunyadzade, 2016:283). It is an extremely sophisticated art mode based on classic poetry and musical improvisation with specific local rhythms. The poetic forms *Ghazals* (an oriental lyric form) and poetic verses of later works formed the basis of *Mugham*. From then on, the establishment of musical schools of *Mugham* in the cities of Baku, Shamakhi, Nakhchivan and Karabakh with the prominent *Karabakh Shikestesi* (Karabakh sanctuary) began (Azerbaijan State News..., 2019). Their aim, and an aim that continues today, is to popularize Azerbaijan's *Mugham* in the contemporary world, attracting an increasing number of creators and fans of this ancient and everlasting musical art.

*Mugham*¹ incorporates a complex system known as "dastgah", which can be understood in the following way:

It has its own beginning, culmination point and end. There are seven main modes of

¹The term "Mugham" is generally used to describe a kind of vocal-instrumental folk music which originates from Azerbaijan. The first attempts to introduce *mugham* as a genre of professional music incorporated the work of Hadjibeyov, and the tradition was passed onto future generations. An important contribution in this regard was made by Fikret Amirov with the creation of the Symphonic *Mugham* genre (1948).

Mugham and each of them is the expression of some feeling or state of the soul. Rast is the expression of bravery, Shur of the lyrical senses, Segah – of love, Shushter – of deep sadness, Chahargah – of excitement and passion etc., each mode of *Mugham* requires an appropriate *ghazal* to match its music (Bunyadzade, 2016: 293).

During the 1970s, UNESCO started to popularise this kind of traditional music not only in Europe, but also in America, Canada and Japan. The 21st century brought another revival of *Mugham*; for example, in 2003 the Azerbaijan *Mugham* was declared a supreme form of intangible oral cultural heritage, and in 2008 it was formally enshrined in the UNESCO world intangible cultural heritage list. *Mugham* is usually performed by three musicians – the performer playing *Tar*, the performer playing *Kemenche* and the *Khanande* (singer), who directs the main theme, enriching it with improvisations and emotional nuances. Given the importance of spontaneity and authenticity to this genre of music, from my point of view, *Mugham* is not only a specific form of national music, but a philosophical and mystical way of thinking.

Mugham is integral to the regional musical culture of the 14th–15th century. It proliferated and developed into new forms or ‘national varieties’ throughout separate nations of the Near East and Middle East. Certain of these forms are associated with the philosophical poetry and history of medieval philosophy of Azerbaijan.

This musical genre is an important part of Azerbaijan’s culture, and its recognition on an international scale enhances national self-confidence. Still, it is not a popular musical genre, or one that is by any means associated with contemporary popular culture. *Mugham* encodes an authentic Self deeply in the consciousness of a performer. This music represents a light that dispels darkness from the heart, illuminating it and revealing what lies hidden in its depths. When experienced, it can be said to resemble a realistic dream full of powerful emotions, but it is also based on and driven by genuine knowledge. In other words, the *Mugham* melody is itself a finished product of this knowledge.

Among performances of *Mugham* music, the means are different, but the end is the same. This is because, at bottom, *Mugham* music is an independent worldview – one in which sound is comparable to a spiritual experience. God is the author and the musicians and their hands are just tools that reveal the Absolute to an audience. *Mugham* includes all

the potential of human thought – it contains objective knowledge from the divine world that is exhibited through the subjective lens of both performance and listener, leading every participant in the experience along their own path to the truth (Bunyadzade, 2016:300).

In *Mugham*, there are three types of music:

1) The first type is associated with the definition of the main principles of music – the trajectory of music and definition of new ideas. Only initiated individuals can take a real pleasure in this music.

2) The second type is associated with the researchers of this musical genre and their studies, articles and books. Paradoxically, our knowledge of this genre proceeds from the studies of Western researchers and a shift from the East to the West is seen.

3) The third type is associated with the philosophical and *Sufi* treatises that are devoted to the composition of music and related to the “philosophy of *Mugham*”.

Melody may take one of two forms – the first is inner, consisting of imagining the tune intended; the second is the skill of producing that tune through the hand or through the mouth. The composition of a melody for this type of musical art can be associated with a “poetical instinct” related to the human need to free oneself from stress and relax. Hence, listening to this type of music should not be regarded as a time interval but as a time flow – like a translating possibility. It is a translation from the dense and compact time of the “sensory world” through a “non-detectable time” (the time of an “imaginary world”), where a person is free from an accompanying anxiety, to the “super-non-detectable time”, which is the world of clear reason. All creatures have a *quantum* of their own time or an embodied time, which can be modelled. This quantum of time that is set as a spiritual individuality is able to envelop the infinity of being, which it has in the present, past and future. The pleasure of music does not necessarily require a practical participation, a view which is supported by the ancient philosophers (Ptolemaeus, Aristotle) (Ibid:102). The pleasure taken from this melody is an analogue to sensual perceptions, which are always accompanied with the feeling of pleasure. Thus, according to such a philosophical view, we find an opposition to the Pythagorean idea that pleasure is a result of celestial spheres (Ibid:54).

For the performers of *Mugham*, the aim of music is similar to that of poetry – the achievement of ultimate human happiness. Indeed, the forms of poetry direct reflection towards happiness, glorify di-

vine matters and goods, and represent the virtues as the noble (*al Fārābī*, 1971:64). To accomplish a perfect musical composition, first one needs to understand the intended use of poetry and its numerous forms. Then, the use of the two arts, music and poetry, becomes applicable to two fields of philosophical interest: logic and politics. Poetic discourse falls short of apodictic certainty of truth and falsity with which syllogistic reasoning is concerned and could not for that reason be included in the logical corpus. Poetry is more akin to philosophy as its statements are of the nature of the universal, while music belongs to a 'poetic art', the 'art of melodies' (*alhan*). The correlation between poetry and melody has a central role in the 'philosophy of *Mugham*', and melodies represent a complex effect of perception, similar to visual decorative objects. The use of simple and pleasant images and verbal expressions create a poetic effect that expresses genuine wisdom in a way that pompous terms and concepts cannot achieve. The function of the player of *Mugham* is to direct actions and reflections toward happiness and glorify divine matters. Thus, this music has a moral function.

Based on the above discussion, *Mugham* can be defined "as a kind of a multiform systemic musical thinking or a tradition, which 'canonizes to a degree the structure of musical expression and the attainment of a philosophical harmony and the unity of being'" (Quluzade, 2009a:56). It does not include the opposition between the material and ideal, the unity and multitude, the Creator and creation and the rational and irrational (mystic). Its aim is to improve people's moral attitudes and conduct by attuning them to the values of humanism and tolerance. Originally, *Mugham* was an effort of the people to *realize* their place as part of the unity of being and not only an effort to *achieve* this unity. It is a practice in which one views oneself as united with the Absolute through the heart and completes the cycle of return to one's primary origin, in which prayer is a tool to return to the lost paradise, where Man is with God.

The sound of *Mugham* and the light of Sufism are individual manifestations of God, revealing the human aspiration of achieving harmony through the universal Sound.

Based on objective reasons (geographical position, natural resources), Azerbaijan is politically, economically and culturally closely linked with various countries and peoples and their cultural customs, as the former is developed in direct connection with the latter and primarily with their spiritual aspects. Using the Latin, Ancient Greek, Persian and Arabic writing systems also contributed to the ad-

vance of Azerbaijan's spiritual culture, based on the inherited ancient *Kura-Araxes* culture. The diversity of ethnicities that contributed to the formation of the Azerbaijan nation, along with belief systems including Zoroastrianism, Islam, Christianity and shamanism that previously existed within its territory, is largely responsible for the flourishing culture of tolerance – the tolerant attitude to different ethnicities, freethinking reflected in the ideologies of numerous non-orthodox sects associated with various religions. One spiritual system that reflects these values is Sufism, which originated during the 10th century. It became an ideological-theoretical – and specifically practical – sociocultural stream defining the development of Azerbaijan's spiritual culture, philosophy, theology and theosophy, ethics and aesthetics, literature, philosophical poetry, music, arts and architecture.

Azerbaijani thinkers played a large role in the formation of Sufism not only locally but also throughout the entire Caucasus region. In his treatises, Ayn al-Quzat Miyaneji demonstrated the pantheistic system of Sufism. Abu al-Najib Suhrawardi and Abu Hafs Umar Suhrawardi explored the philosophical and ethical dimensions of Sufism and established the famous *Sufi* order *As-Suhrawardia* in Baghdad. (Its branches are seen in different countries of the Orient, as it became particularly popular in India during the 8th c. – 9th c. Initially, it was supported by the Caliphs and ruling Islamic elites, but later adopted the ideas of pantheism and freethinking, and based on this, streams and sects such as *Bahaism* and *Pir Jamailiya* were created.)

Almost all the Azerbaijani Sufi and their orders and teachings were widespread across the region. In addition, they attracted the representatives of other religions. The ideology and movement of the *Qazalbash* is an example of this. Sufi thinkers delivered their doctrines through both prosaic treatises and philosophical poetry (e.g., the heritage of Baba Kuhi, Shabustari, Owadi Marhagei, Nesimi, S. Tabrizi). Sufism, as the most powerful philosophical-pantheistic and philosophical-theosophical school of thought in the Near and the Middle East during the Middle Ages, had an important effect on the works of Nizami and Fuzûlî. The principle doctrine of Sufism, which maintains that communion with God is attained through love, and the Sufi-inspired usage of mystical symbols in artistic images soon influenced and became fundamental to numerous aspects of Azerbaijan's cultural and spiritual heritage (e.g., ontology, gnoseology, and ethics). These concepts were embraced by both representatives of the region's elite, such as the Shah Ismail

Hatai, and by popular movements which aimed at the restoration of social justice. The ideas of Sufism were reflected in courtly poetry (Hatran Tabrizi, Shirwani) and the philosophical poetry of the Azerbaijani romanticists M. Hadi and G. Javid. Those exposed to Sufism were inspired to develop new philosophical systems and spiritual practices, or to harmonize Sufi ideas with those of other major religious and philosophical movements which, in some cases, were originally opposed to Sufi thought. When viewed through a theological lens, Sufi thought was readily incorporated into the orthodox theosophy of Islam (the Ghazali heritage); yet it also merged with the ideas of Ismailism and Oriental Peripatetism, especially in terms of its gnoseological notions.

Both Mugham and Sufism endorse the idea of union with the mystical (mysticism) as a means of attaining God and truth (Suvarnalata Rao, 2011). A series of Azerbaijani philosophers define mysticism as a universal phenomenon of spiritual culture, in which understanding goes beyond the limits of rational knowledge to satisfy the psychological need for human self-affirmation. Mysticism adopts various practical and theoretical forms – from magic to pantheistic theosophical-philosophical concepts (Quluzade, 2009b:29), where it finds its ultimate expression. It is part of the Oriental spiritual culture, in which it is viewed as Irfan (the knowledge of mysticism), unlike in the West, where it is merely part of the history of philosophy. In the Orient, mysticism has developed with relative continuity and regularity over time. In the West, during periods of “radical rationalism”, mysticism has been associated with irrationalism and intuitivism, and thus cast aside in favor of rationalistic philosophy. In Azerbaijan, mysticism is typically considered to be either synonymous with Islamic philosophy or merely a cultural expression of pan-Islamic unity. This derives from an effort to demonstrate the intrinsic consistency and integrity of Azerbaijan’s spiritual culture, including its musical and religious traditions.

The theoreticians of Sufism view the relation between Man and God in a fundamentally mystical light, which manifests itself in the recognition of the limits of human reason in gaining divine knowledge. For this reason, they emphasize intuitive knowledge, illumination, and ecstasy, or commitment to particular religious practices. This includes specific dances or the repetition of religious mantras with the aim of achieving “direct” confluence of the human being with God.

Through the mystical love the believer has for God, the believer comes to know God, and in doing so, finds transcendental dissolution within God – that is, the attainment of eternity within the absolute. This pillar of Sufi belief is related to all of its teachings. For example, the 9th century Egyptian Dhul-Nun al-Misri and the Iraqi Abu Abdullah al-Muhasibi, who were some of the earliest Sufi thinkers, emphasized the importance of self-knowledge (e.g. observing one’s own behavior and becoming aware of one’s latent motivations and intentions), as a way of establishing supreme sincerity before God.

At its core, Sufism is concerned with universality and the harmony of all human values and hopes. It attempts to uncover the hidden secrets of being, facilitate unity with God, illuminate the illusory aspects of Selfhood, and promote social harmony and justice through self-refinement and spiritual growth. Mugham is the expression of what humanity has found valuable throughout history, manifested in the form of music. However, it is not just artistic expression, but an earnest attempt to understand the influence of historically and culturally relevant events on the inner worlds of human beings (Bunyadzade 2016:296). Mugham is a type of relationship with God, through the mystical love and spiritual experience that connects human beings to being itself and to one another.

Mugham is associated with the esoteric origin of the ‘light of Pleroma’ and its descents through the seventy thousand Veils to this world, which are the archetype of the cycle of *Walayah* (guardianship). Mugham correlates with *Muğamat*, which represents a collection of *Makams* (stations of elevation). (In Sufism, this refers to degrees on the path to union with God, which symbolizes the path to perfection.) Sufism proposes several degrees on the path to perfection (Sharia, Tariqa, Maarifat, Haqiqa), or the route toward an esoteric spirit of religion. A *Sufi* embraces the comprehension of this religious esoteric route and the achievement of the mysteries of creation and Creator with openness. This route is associated with the refusal of earthly pleasures, evil, hypocrisy, and violence. Moral refinement is accompanied by the improvement of intellect and knowledge as a step in attaining the things unknown to reason – the secrets of creation. At the level of justice, *Sufis* pursue these truths not only for themselves and for their own spiritual growth, but for the world, for God, and for others and the relationships that they share. Using the symbols of Sufism, this unity is presented as the unity of the loving and the lover, the micro- and macrocosm, the part and the total, the ‘mandatorily existing’ (the Creator) and the

‘eventually existing’ (the creation). At this stage, the majority of *Sufi* acknowledge their own divinity – God is within them and there is no God outside them. The last step is the so-called dissipation and unity – *Ana al-Haq* (I am God), which practically negates God and cannot be aligned with the concept of creationism, in which the Creator and the creation are divided.

On the one hand, *Mugham* is associated with the intrinsic union of the exoteric and the esoteric and the possibility for the interpretation and specificity of its evolution in different nations and their musical cultures. On the other hand, each performance is influenced by the interpreter’s ideological and philosophical commitments, by the moral sensitivity of audience and performer, and by the skill-level of audience and performer in perceiving and comprehending both the external (exoteric) and internal (esoteric) beauty of music. The latter can detach the audience and performer from the surrounding world and the Self and merge them as a whole with the music, thereby allowing them to dissolve the Self and forget the past, present and future. The body itself seems to fade away leaving only spirit, and when the last chord is hushed, the Self returns, as do the perceptions of time and space. This complexity of the *Mugham* may in part explain why its exoteric side is continuously ignored in the musical education of the Orient.

Despite its relationship to Sufism, *Mugham* is not identical to it. The teaching that the unity of being is based on love as a philosophical category, is characteristic of the spiritual culture of the Islamic region and non-orthodox teachings as a whole, and not only of the philosophy of Sufism. *Mugham* can be compared to the musical aesthetics of Romanticism and the overmastering philosophy of love (pining for the beloved and the aspiration to return to one’s primary origin). Across all ages it functions as a tool of spiritual improvement, influencing memory and consciousness and allowing the performer and audience to achieve a trance-like state that facilitates the phenomenological experience of sinking and dissipating into unbounded harmony and complete unity. The *Mugham* is more akin to philosophy than history, as it speaks to the universal, rather than particular, elements of experience.

Conclusion

One of the tasks of contemporary Azerbaijani philosophers is to analyze and promote the musical culture of *Mugham* (analyze the objectivity of its essence and the reasons for its sustainability); the other is to preserve the pattern of *Mugham* (its main

categories and philosophical components)(Quluzade, 2009). *Mugham* is associated with the esoteric origin of the ‘light of Pleroma’ and its descents through the seventy thousand Veils to this world, which are the archetype of the cycle of *Walayah* (guardianship). Its ideological-philosophical content is regarded as a way of unveiling and triggering a hidden esoteric reality, generating an evolution of philosophical ideas, and resurrecting the *Hikmah Ilahia* (God’s Wisdom) and the gnosis (*Irfan*). The philosophy of *Mugham* is an act of understanding through God and an inspiration, in which God is a subject, object and end; it is music that goes beyond the Veil.

For the development and appreciation of regional and ethno-national musical cultures, it is very important to examine the contents of *Mugham*. The forms conditioning the uniqueness of the Azerbaijani *Mugham*, which qualitatively differentiate it from other national *Mughams* of this region, ought to be the object of profound study. It is a complex phenomenon, a carrier of beauty, wisdom, and philosophical insight, and a significant contribution to global musical culture.

Mugham is deeply rooted in Azerbaijan’s history and it is often considered the pearl of the Azerbaijani musical art. When studying and discussing *Mugham*, it must be understood in its two dimensions – as an example of an art and as a way of thinking. *Mugham* resembles *Sufi* music and is as important to the history and spiritual culture of the region as mysticism and Sufism. One could even define it as the ‘soft power’ of Azerbaijan in the context of a foreign-policy strategy that views cultural flourishing and self-respect as key strengths. For a small country like Azerbaijan, the preservation of local culture is rather more important than its dissolution in foreign cultures. As a musical genre, *Mugham* expresses the universal, while as a philosophical concept manifests in specific ways of thinking that are reflected in ontology, gnoseology and ethics. (To fully describe these connections would, of course, include further scholarship that exceeds the scope of this discussion.)

Mugham includes subjective philosophical and poetic thoughts; consequently it is often an individual and deeply personal work, which differs from group performances. However, through the lens of a performance, the audience can reach the truth and connect with the Absolute. The idea of *Mugham* as an intercultural philosophy must be resurrected, especially in the time of modern social and spiritual crisis.

References

- Abdullazade Q (1983) *Filosofskaya sušnost muqama*. Baku.
- Affifi A (1939) *The Mystical Philosophy of Ibn-Arabi*. Cambridge, University Press.
- al-Farabi (1971) *The Experts* [Fusul Muntaza'ab, ed. F.Najjar, Beirut]
- Agaeva S (2012) *Entsiklopediya Azerbaydzhan-skogo mugama, "Sharg-Garb"*, Baku. (Encyclopedia of Azerbaijani Mugham).
- Arberry A J (1952) *Le Soufisme. Introduction*, trad. franc de J. Gouillard, Paris.
- Azerbaijan State News Agency (2019) Mugham – national heritage of Azerbaijan, pearl of world music art. Available at: <https://bit.ly/3de02id> (accessed 24 June 2019).
- Bunyazdzade K (2014) *Wahdat Al-Wujud and Logos of Life: The Philosophical Comparison In: Phenomenology of Space and Time: The Forces of the Cosmos and the Ontopoietic Genesis of Life: Book Two*, 135–147.
- Bunyadzade K (2016) Mugham as the synthesis of the Eastern and Western thought In: *Proceedings of the 9th International Congress of the Asian Philosophical Association (ICAPA), Common values, education, arts & humanities and higher education leadership in the Asian community*, 20th–24th July 2016, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia, 286–300.
- Corben A (2000) *Istoriya na islyamskata filosofiya (History of Islamic philosophy)*. Sofia, Fondatsiya "Maulana-Dzhalaluddin".
- Daniz R (2020) *Era, padishah nauki Nasiraddin Tusi: Islam i nauka w średniowieczu* (Polish Edition), Wydawnictwo Bezkresy Wiedzy.
- Farhadova S (2018) *Istoricheskiye korni Azerbaydzhanskogo mugam-dastgyakha*, Baku. (Historical roots of Azerbaijani mugham-dastgah).
- Farhadova S (2001) *Muga – monodiya kak tip myshleniya, „Elm“*, Baku. (Muga-monade as a type of thinking).
- Kivy P (1990) *Music Alone: Philosophical Reflections on the Purely Musical Experience*. Ithaca, NY: Cornell University Press.
- Massignon L (1929) *Recueil de textes inedits concernant l'histoire de la mystique en pays d'Islam*, Paris; Tarika, El, vol. IV; Tasawwuf, El, vol. IV.
- Naroditskaya I (2003) *Song from the Land of Fire. Continuity and Change in Azerbaijanian Mugham*. New York & London, <https://books.google.az/books?id=yP6Gz0>
- Nicholson R A (1914) *The mystics of Islam*, London.
- Nicholson R A (1923) *The idea of personality in Sufism*, Cambridge.
- Quluzade Z (2009a) *Kontseptual'nyye problemy issledovaniya sotsiokul'turnogo razvitiya*, t. 1 (The conceptual problems of research on sociocultural development. Vol. 1). Baku
- Quluzade Z (2009b) *Mistika i panteizm kak universal'nyye fenomeny dukhovnoy kul'tury* (Mystics and pantheism as universal phenomena of spiritual culture). Baku.
- Rose HA (1927) *The Darvishes*, Oxford.
- Shehadi F (1995) *Philosophies of Music in Medieval Islam*. Leiden: E.J. Brill.
- Stock K (ed.) (2007) *Philosophers on Music: Experience, Meaning, and Work*, Oxford: Oxford University Press.
- Suvarnalata R (2011) *Sufi music: The song of the soul*. The Economic Times https://economictimes.indiatimes.com/sufi-music-the-song-of-the-soul/articleshow/7840662.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst (accessed 1 April 2011).
- Thom P (2007) *The Musician as Interpreter*, University Park, PA: Pennsylvania State University Press.
- The Matnawi-ye Ma'nawi of Jalaluddin Rumi, Translated by Ibrahim Gamard (yahhigroups.com) 1/25/01, www.dar-al-masnavi.org/n.a-1720.html; by R.A Nicholson, vol.1-8, Leyden 1926-1940 (Farsi and English)
- Todorova B (2009) *Philosophy and Sufism*, ed. IPhR-BAS, S.
- Turner R (2014) *New Approaches to Performance and the Practical Application of Techniques from Non-Western and Electro-acoustic Musics in Compositions for Solo Cello since 1950: A Personal Approach and Two Case Studies*, PhD in Music (Performance Practice), Department of Music, Goldsmiths College, University of London.
- Ziai H (1990) *Knowledge and Illumination: A study of Suhrawardi's Hikmat al-Ishraq*, Atlanta.
- UNESCO – Collection of Traditional Music of the World, described it as a “God sent music”, <http://unesco.preslib.az/en/>
- UNESCO – Musical Anthology of the Orient: Vol. 24, Azerbaijan I. By: Mark Slobin.
- Asian Music Vol. 2, No. 1 (1971) University of Texas Press, 43–45.

THE RATIONALITY OF WISDOM-INQUIRY AND REDEFINING THE TASKS OF UNIVERSITIES

Peeter Mürsepp, Maria Jakubik***

*Tallinn University of Technology
Akadeemia tee 3, 12618 Tallinn, Estonia
e-mail: peeter.muursepp@taltech.ee

**University of Pécs
80 Rákóczi út, Pécs, HU-7622, Hungary
e-mail: jakubik.maria@pte.hu
Ronin Institute
127 Haddon Pl, Montclair, NJ 07043, USA
e-mail: maria.jakubik@ronininstitute.org

Abstract:

The article addresses the two sides of the work of Nicholas Maxwell – his criticism of science and his call to bring about a revolution in academia encouraging it to become much more effective in tackling the real problems humanity is facing. I would use: It focuses on the connection of these two aspects of Maxwell's work and provides a critical analysis of Maxwell's conceptual framework. It is argued here that the two sides of Maxwell's whole conception are not necessarily connected, and do not have to be. Academia can be more effectively organized even without a change in our understanding of science. Maxwell has argued that academia has to aim at making wisdom rather than knowledge its goal. The knowledge-inquiry framework that currently prevails should be exchanged for wisdom-inquiry. Maxwell has explained his understanding of wisdom in several publications, while not being fully consistent in his explanations of what wisdom-inquiry has to embrace. In addition, Maxwell's original approach to rationality goes against traditional attitudes. Maxwell is definitely critical of the Enlightenment but his attitude to Romanticism remains unclear. Related to these, the article addresses the future tasks of universities.

Key words: Nicholas Maxwell, knowledge, wisdom, knowledge-inquiry, wisdom-inquiry, rationality, tasks of universities.

1. Introduction

For many decades, Nicholas Maxwell has been promoting a revolution in academia, encouraging it to address – much more efficiently than scientists have done so far – the most serious problems humanity is facing. Maxwell believes that the success of the revolution can be built on a reconsideration of the current understanding of scientific inquiry, especially its foundation and aims. The real aim of academia should be wisdom rather than knowledge. According to Maxwell, the aim of the revolution can be successfully achieved by exchanging knowledge-inquiry for wisdom-inquiry. We shall address this task below with an emphasis on the latter.

Prima facie Maxwell's general idea of achieving a better, more civilized, wise world easily garners support. It is not, however, clear whether the methodological foundation for the successful achievement of this goal is a necessary or an appropriate one. Do we really need a substantial change in our understanding of the aims of science or in the organization of academia? Science is making wonderful progress as it is, as Maxwell himself admits, and even emphasizes. It may be that the core of the matter, that is, the failure to

effectively address real world problems, does not lie with science itself but beyond its borders. Still, if the problem does indeed rest with science,, a structural rearrangement of academia in order to eliminate disciplinary boundaries and enable full-fledged interdisciplinary (and transdisciplinary and multidisciplinary) inquiry would be a reasonable endeavor. However, there is evidence that this movement is already present in academia today, and yet the deeper goal of wisdom-inquiry has failed to take root. Or, it may also be possible that wisdom-inquiry has begun to emerge in academic, , although not in its perfect Maxwellian form.

One of the authors has discussed Nicholas Maxwell's work in several previous publications (Mürsepp, 2011, 2013, 2017). This article, however, addresses the work of Maxwell from a new perspective, as described above. On the one hand, Maxwell is known for his criticism of the current understanding of science, which he calls standard empiricism (SE), arguing for the need to exchange this for aim-oriented empiricism (AOE). While in the latter case, metaphysical assumptions are acknowledged in science, this is not acceptable in SE. Here, nothing that is independent of empirical evidence is permitted to inform scientific thinking. On the other hand, Maxwell is famous for his long-lasting selfless fight for the rearrangement of academia in order to address the most acute problems of living, including global problems, more efficiently than has been done so far. It may seem that Maxwell holds the view that changing the approach to science would provide for the theoretical foundation of a structural revolution in academia. In contrast to this perspective, the main thesis of the current paper is that there is no need to look at these two main themes of Maxwell's work in conjunction, as Maxwell himself did not do so. We do not need to adopt AOE in order to reorganize and improve the aims of academia. Maxwell's intention has not been to make these two topics interdependent. However, while trying to summarize the general idea of Maxwell's contribution, one is easily left with the impression that the shift from SE to AOE is quite necessary for creating a solid methodological foundation for the revolutionary change not just in the understanding of science but in the organization of academia.

Much of Maxwell's work is built upon a fundamental criticism of the dominance of Enlightenment thought in academia. In support of our main thesis we shall argue that the Enlightenment *phi-*

losophes did not blunder, at least not in the way Maxwell sees it. Applying the scientific method to society has helped immeasurably in developing knowledge about society. But there is a limit. As Maxwell recognizes, addressing social issues directly cannot occur if discussion is limited to generalization regarding the methods of classical science. It is true that we need a social methodology rather than social science in the conventional sense in order to address social issues directly on that basis. However, we need a different foundation for this methodology – one that is not directly derived from the methods of classical natural science. It may be that so-called post-non-classical science would be fit for the purpose.

In terms of the criticism of science and analyzing the need to exchange SE for AOE, the analysis of Maxwell's views here will be mainly based on his book *The Comprehensibility of the Universe* (Maxwell, 1998). In terms of analyzing the proper role of universities and the fundamental role of wisdom-inquiry for solving global problems, the main ideas can be found in a concise form in a more recent publication (Maxwell, 2014). Regarding the criticism of the Enlightenment and analysis of the essence of wisdom-inquiry, Maxwell's most recent book as of today (Maxwell, 2021a) will be used as the main source. Maxwell has addressed the same issues (offering slightly different details) in a number of other publications throughout about half of a century. His most recent book (Maxwell, 2021a) includes a more or less thorough bibliography of his academic contributions as well as a truly impressive array of documents testifying to a life's work dedicated to a noble cause.

2. The Essence of Maxwell's Criticism of Science

Maxwell's main idea concerning science is that scientists constantly make metaphysical assumptions, first by considering the universe to be comprehensible, and also by preferring unified theories to disunified ones and simple theories to more complex ones. Meanwhile, there is a large, perhaps even an infinite, number of competing theories available that are empirically more successful. All three of the metaphysical assumptions just listed are not empirically testable. However, it is normally argued that science must not include anything independent of empirical evidence. Therefore, the typical understanding of science is not consistent or

it is untenable, as Maxwell claims. Maxwell calls the current approach standard empiricism (SE). His claim is that the existence of metaphysical assumptions in science has to be recognized and the corresponding approach has to be called aim-oriented empiricism (AOE). According to Maxwell, by accepting metaphysical assumptions in science, AOE would facilitate an improvement in the assumptions implicit in the methods of physics (Maxwell, 2021a, p. 65). This is a significant development of Karl Popper's critical rationalist approach.

It is important to understand that Maxwell is not arguing for the need to recognize metaphysics as part of philosophy in order to make it a foundation of science that remains outside of science itself. Maxwell's point is that the role of metaphysical assumptions within science needs to be recognized as inherent components. However, these three metaphysical assumptions that Maxwell has pointed out can also be viewed as methodological principles. This option has been analyzed in detail by F. A. Muller (2008). In a way, it would be even more consistent to regard the general assumptions that scientists need as methodological rules. Science has its methodology and could not possibly exist without it. It could be even said that each discipline follows its own methodology. At the same time, methodological principles are not empirically testable. Philosophical considerations stand above methodological principles but they are not part of science. Philosophy does not even need to be part of the philosophy of science (or science studies), as proponents of the (radically) naturalist approach have shown. Metaphysics does not necessarily enter science, as Maxwell claims, or if it does, then it does so in its deflationary version.

In more general terms, however, it can be agreed that introducing the concept of AOE is an important development in the philosophy of science that has been noticed and recognized by quite a few prominent authors in the field. Maxwell generalizes his approach by observing that the currently prevailing idea of the purpose of science, both natural and social, is the pursuit of knowledge. Therefore, scientific research can also be called knowledge-inquiry. However, according to Maxwell, what we really need is not knowledge but wisdom. This is an important tipping point in Maxwell's philosophy. By no means can anyone reasonably claim that Maxwell's idea of promoting the pursuit of wisdom and wisdom-inquiry is wrong, not reasonable, not useful, not ethical. However, it may well prove to

be too big of a task for science. The concept of science is limited and has to be such. Science works well by making highly visible progress within its limits. It has to provide us with orderly and justified knowledge that can be improved constantly. The leap to wisdom may mean expanding beyond the well-defined limits of science, asking of the scientific method something it cannot possibly provide. Maxwell points out that "the transition from knowledge- to wisdom-inquiry involves a dramatic change in the nature of physics, and the natural sciences more generally" (Maxwell, 2021a, p. 124). What we get as a result might be a return to Aristotelian qualitative physics or something similar to the considerations of existential philosophers like Martin Heidegger. As a matter of fact, this may really be what is needed – especially the former, and not just the qualitative aspect but also the four causes framework of Aristotle's teleology. Modern science has neglected this important aspect of making the world comprehensible. Wisdom is a broad mental capacity and mental condition, transcending perhaps even the reach of the realm of philosophy. Science in the traditional sense may not need wisdom as such altogether but the latter could remain the aim of human intellectual activity in a broader sense. Normally, appropriate and skillful application of the method of science and reasonable interpretation of its results is enough. Science and other forms of inquiry occurring in academia may fail to be fully objective, but these must remain a rational endeavor. This is an important cornerstone of Maxwell's approach as well. Maxwell prepares his argument by proposing an original approach to rationality. Let us take a look at what it involves.

3. Maxwell's Understanding of Rationality

The next step in the development of Maxwell's philosophy is generalizing AOE into aim-oriented rationality (AOR). However, let us start by explaining Maxwell's understanding of rationality. Normally, rationality means that we maintain rational decisions, the ones derived directly from reason, *ratio*, as the primary source of human cognitive power. According to the classical approach, we would say that for a rationalist there exists *a priori* knowledge, knowledge that is independent of empirical experience. We can remind ourselves of René Descartes' method here, his belief in innate principles not requiring an empirical source. Quite often it is believed that the greater the degree of

rationality applied in decision-making, the more trustworthy a person. Thus, rationality has clearly obtained a strongly positive connotation. However, this is not necessarily the case with the classical rationalism of early Modernity.

We could expect Maxwell to be critical of rationality as he appears to give preference to the empiricist tradition, given the conceptual framework he is working within. While he does offer critique, he does not discount the important contributions of reason. Maxwell proposes his own approach to rationality – one which is quite unconventional, and in fact raises the question of whether it is rationality at all.

The very core of Maxwell's approach, however, is an improved version of critical rationalism. His problem-solving rationality consists of four rules:

(1) Articulate, and improve the articulation of, the problem to be solved.

(2) Propose and critically assess possible solutions.

(3) When confronted by a recalcitrant problem, break it up into specialized, preliminary problems.

(4) Interconnect fundamental and specialized problem solving, so that each influences the other (Maxwell, 2021a, p. 45).

Maxwell explains that Karl Popper has alluded to the first two of the rules. In addition, one can easily observe that the third rule is present in René Descartes' method as Rule 2. In addition, one could claim that all four of the rules are essentially the same as the four rules of Descartes' method. Although Descartes' Rule 4, "To make enumerations so complete, and reviews so general that I might be assured that nothing was omitted", does not correspond to Maxwell's rule (4) word for word, we dare to claim that the idea proposed by Maxwell is exactly the same as that proposed by Descartes. As it becomes clear, both Descartes and Maxwell are interested not merely in solving problems but in gaining the most knowledge possible from the solution of any problem.

As the next step, Maxwell adds a further dimension to the rules. Emphasizing the need to promote human welfare, he rephrases his four rules using 'problems of living' instead of just 'problems' (Maxwell, 2021a, p. 46). Maxwell claims that academia today, dominated by the quest for new pieces of scientific knowledge (knowledge-inquiry), puts into effect only rule (3) of the rules listed above while largely ignoring the other three

rules. It is quite difficult to agree with such a claim. Maxwell's own position is not consistent here either. In fact, he admits that rules (1), (2) and (4) are not neglected. They are just not prioritized strongly enough (Maxwell, 2021a, p. 47). Maxwell's claim is that, for the universities today, focus is placed on problems of knowledge rather than on problems of living. If this is so, then, what exactly is the difference between these two types of problems? Aren't problems of knowledge part of problems of living, and aren't the solutions to the former needed to serve as the foundation of the latter?

Still, Maxwell is right in claiming that getting bogged down with just the problems of knowledge and not proceeding to addressing the problems of living is a major problem in academic research today. Most importantly, Maxwell claims that adding rules (1), (2) and (4) to the core of the academic approach would bring wisdom-inquiry instead of knowledge-inquiry into the focus. It is not as if all four of the rules are not followed in academia already, although elaboration in the sense of understanding the need to follow the four rules is no doubt possible and necessary.

We can certainly agree with Maxwell that rationality should never be meant in the radical sense, excluding any kind of human emotion. Referring to a novel by Yevgeny Zamyatin, Maxwell describes the radically rational society as follows: "Citizens have numbers for names, and reason dominates life. For entertainment, citizens link arms and march down the streets singing patriotic songs. The rational society is the ultimate nightmare" (Maxwell, 2021a, p. 26). Obviously, this is not what Maxwell himself has to offer, although, according to him, reason is relevant to almost every new thing that we come face-to-face with, as he specifies: "Reason becomes relevant when we get into difficulties, and face problems we do not know how to solve" (Maxwell, 2021a, p. 27). Maxwell claims that it is not irrational to act instinctively or spontaneously if we are not facing a problem. Rather, he argues that a person who cannot act instinctively or spontaneously and always has to deliberate before action should be called irrational (Maxwell, 2021a, pp. 27-28). Such a person could be called hesitant – but is the word 'irrationality' appropriate in this context? Is it possible to look at irrationality in the way Maxwell does?

Maxwell has a specific view of irrationality in mind. If we follow Maxwell here, we are setting ourselves the task of having to be able to distin-

guish both between rational instincts and spontaneity and irrational instincts and spontaneity, as well as rational deliberation and irrational deliberation, because hardly any example of deliberation can be taken as irrational. At the same time, there is no instance in which spontaneity or following instincts can be taken as rational, even if we are not really facing a problem. As becomes clear, it would be quite challenging to develop this situation into a consistent theory.

4. Science – A Failing Success Story?

Hardly anyone can say that science does not make progress and that this progress has not been impressive. Without the progress of science, it would not have been possible to successfully fight diseases that killed people in large numbers for centuries or to put a man on the moon. On the other hand, without the progress of science we would not have nuclear weapons or be able to contribute significantly to global warming. So, in a way, the progress of science has been a failing success story, even dangerously so. This holds particularly true in regard to social issues. Applying the method of science to social problems has helped us to obtain knowledge about various developments in society. However, there has been no considerable progress in solving the real and pressing problems society and individual human beings are facing. Maxwell has stressed this unfortunate situation in many of his publications, and given the magnitude of evidence, there is little point in disagreeing with him. What we shall assess critically, however, is Maxwell's proposed solution to this dead end. To put it briefly, the solution envisaged by Maxwell should be based on a successful generalization of the scientific method. What does that mean?

In order to respond to the above question we need to look into Maxwell's interpretation of the main ideas of the Enlightenment. According to Maxwell, there are three crucial steps that need to be correctly implemented:

- (1) First, the progress-achieving methods of science need to be correctly identified.
- (2) Next, these methods need to be correctly generalized so that they become relevant and fruitfully applicable to any worthwhile human endeavor with problematic aims – whatever these aims may be – and not just applicable to the endeavor of improving knowledge.

- (3) Finally, these correctly generalized progress-achieving methods then need to be exploited correctly in the great human endeavor of trying to make social progress toward the immensely problematic aim of an enlightened, civilized, wise world (Maxwell, 2021a, p. 37).

Maxwell believes that the *philosophes* of the Enlightenment erred in all three steps. What exactly went wrong according to Maxwell? First, there is the issue of ensuring that nothing is accepted as part of science independently of evidence. Here, Maxwell is right as scientists indeed regularly rely on non-testable assumptions as explained above. In addition, Maxwell insists that science has to improve its fundamental aim as it proceeds and he argues that AOE provides a meta-methodology that facilitates this improvement.

Second, the *philosophes* generalized their approach so that it could be applied to social science. Here, we must take a closer look. On the one hand, if the first wrong step really happened then obviously there should be no generalizing from the methods of science at all. Why generalize something that is not correct, not properly understood. On the other hand, we know that even this untenable attitude to science has allowed us to achieve progress in terms of obtaining valuable and applicable knowledge about the natural world. Why, in that case, would science not create the same kind of success as far as society is concerned? As a matter of fact, it has – but to a significantly lesser extent than in terms of nature.

If someone were to ask what the evidence of the lower success rate was then the answer would be found by means of comparing the predictive power. We often get quite exact predictions of the flow of different kinds of natural processes by means of applying the scientific method. This is not often the case in studying social issues. For instance, economists still face major problems with crisis prediction. Still, economics allows us to use mathematics more rigorously than most of the social sciences. Thus, economics should be the branch of the social sciences that benefits directly and clearly from the chance to apply the method of mathematized, exact science. The economists have identified their method, but success that would be comparable to that of the natural sciences has not been achieved. If the first blunder of the *philosophes* really did happen, how can it be that the scientific method introduced by Galileo and endorsed by

the very same Enlightenment *philosophes* is good, almost perfect, for making progress in obtaining knowledge about nature, but fails when applied to society? One possibility is that the scientific method has been applied in an overly straightforward manner in economics, such that proper generalization has not been made. But what would a proper generalization mean here? Abandoning mathematics?

Maxwell insists on proper generalization of the progress-achieving methods in order to make social progress. However, are we not treading on thin ice here? Why extrapolate from generalizations that are enabling us to achieve progress in their real domain, nature, to an area where they are quite obviously less successful or might not work at all? We have no guarantee that such generalization, if even possible, would not end up in a double failure. The result may be that we mess up what we had in the case of natural science and still do not achieve any progress toward a better organized social world.

Fortunately, as far as natural science is concerned the option to return to the traditional approach will remain, although this may create some confusion regarding social issues. Regardless, owing to various successes in applying the scientific method, we understand a lot about the composition of society and many typical dynamics and processes within it. We may also claim that we have a good idea about what a better situation in a society would look like. What we do not know, however, is how to reach this better condition that Maxwell calls a civilized world. But again, how could a generalization of the wrongly interpreted methods of classical natural science be the basis of moving towards that desirable condition? Of course, we could try to correct the erroneous interpretation in the realm of science before extending it to society, but even this does not guarantee the success of methods applied beyond their realm.

As shown above, it may be that generalization of the progress-achieving methods of science is not necessarily a solution for social matters. Nevertheless, one can agree with Maxwell that the *philosophes* blundered while trying to generalize the conception of the methods of natural science and apply them to social science as such. This kind of straightforward generalization does not work, or rather, it does not work well enough.

There is still the third blunder of the *philosophes* that Maxwell calls the most damaging one (Maxwell, 2021a, p. 38). This is the faulty idea of

developing social science alongside natural science. But what is wrong with that?, one might ask. *Prima facie*, the idea itself looks progressive, even noble. According to Maxwell, the reason for calling this a blunder derives from the fact that academia, under the influence of the Enlightenment, has been and continues to be devoted to the pursuit of knowledge (Maxwell, 2021a, p. 38). But, again, what is wrong with academia pursuing knowledge? Is this not what needs to be done at universities and research centers? Of course, we may aim higher, that is, toward wisdom. But this raises the question, is the scientific method, even in its generalized version, fit for such a high task?

Maxwell distinguishes between making progress in knowledge about the social world and making progress in the social world itself. Obviously, the real end goal is the latter. The task of achieving this, however, cannot be left to academia alone. It is not an academic issue, but an issue of governance. This does not mean that academia cannot contribute here. It can, but changing its structure is not required for it to efficiently contribute to the improvement of social life. The mindset of the people involved in academia has to be shifted. Thus, the task may be even more complicated than Maxwell has suggested – it may prove to be a psychological rather than a methodological or an organizational one.

5. Science of Knowledge or Science of Wisdom

Nicholas Maxwell usually refers to contemporary science as knowledge-inquiry for the obvious reason that science manages to provide us with pieces of knowledge, namely scientific knowledge. This ability has enabled us to solve the first great problem of learning – i.e., learning about the universe and about ourselves and other forms of life as a part of the universe (Maxwell, 2021a, p. 6). However, according to Maxwell, this great achievement, a creation of modern science, is not what makes us civilized. We have learned to solve problems but also to create them, and in fact, the latter trend tends to prevail over the former. Failure to resolve these self-inflicted problems could, at worst, mean the end of the human race.

As knowledge-inquiry has failed to make us civilized, or to create a wise world, we need a new type of approach – wisdom-inquiry. Introducing the term ‘wisdom-inquiry’ presumes that we know or

at least have a commonly accepted idea of what wisdom is. But is it in fact the case that we know what this concept entails? In the case of knowledge, we have at least Plato's classical definition: "Knowledge is justified true belief". Although Edmund Gettier has shown that we can have justified true belief that is not knowledge, Plato's definition still remains applicable. We do not have anything like this concerning wisdom in the sense of general acceptance. What we have is a general recognition that wisdom is a complex concept that even transcends philosophical inquiry (Jakubik, Mürsepp, 2021). Maxwell has made it clear that he takes up 'wisdom' as a technical term denoting something much larger. His suggestion may become the basis for a better understanding of what wisdom is. According to Maxwell, wisdom actually happens in science. His long definition of the concept reads as follows:

[wisdom is] the desire, the active endeavor, and the capacity to discover and achieve what is desirable and of value in life, both for oneself and for others. Wisdom includes knowledge and understanding but goes beyond them in also including: the desire and active striving for what is of value, the ability to see what is of value, actually and potentially, in the circumstances of life, the ability to experience value, the capacity to use and develop knowledge, technology and understanding as needed for the realization of value. Wisdom, like knowledge, can be conceived of, not only in personal terms, but also in institutional or social terms. We can thus interpret [wisdom-inquiry] as asserting: the basic task of rational inquiry is to help us develop wiser ways of living, wiser institutions, customs and social relations, a wiser world (Maxwell, 1984, p. 79).

Maxwell's definition can be taken as a kind of instrumental understanding of what the technical term 'wisdom' involves. The key appears to be recognizing what is of value in human life, in personal, social, and institutional terms. Obviously, this does not really provide a definition but rather a kind of explanation of what wisdom could mean and include. The explanation provides a direction for moving toward, as Maxwell says, wiser ways of living.

Still, in Maxwell's definition, there is seemingly nothing connecting wisdom to anything but a

common-sense realization of which aims should be pursued. For instance, in Estonia, the home country of one of the authors, we would call this kind of attitude peasant rationale or peasant reason. Certainly, there are similar approaches in many other cultures as well. It is true, however, that Maxwell has managed to present an approach that connects a kind of folk rationality to academic excellence in a concise discursive instrumental form. Science seems not to be in the focus of Maxwell's definition of wisdom. In his intellectual autobiography (Maxwell, 2012), however, he connects his approach to wisdom to science. Maxwell specifies that he did discover the methodological key to wisdom. In addition, he remarks that the key he discovered has been hidden in science: "I have discovered a recipe for creating a kind of organized inquiry rationally designed and devoted to helping humanity learn wisdom, learn to create a more enlightened world" (Maxwell, 2012, p. 663). This means that we should learn from the progress of science and apply this to the task of fostering social progress for a better world. Needless to say, this would represent an important contribution. However, accepting Maxwell's views on the nature of wisdom does not mean that the direction Maxwell has marked out will be followed in academia or in politics. (Bear in mind, the latter is perhaps even more crucial in the world today.) Science will continue to make progress. There is no reason to doubt this. Thus, the key to harnessing scientific knowledge for social progress is to achieve efficient communication between academia and practical governance.

As we already know, according to Maxwell, there are two general ways of approaching science. Science can be pursued either within knowledge-inquiry or wisdom-inquiry. The former makes it possible for, or at least does not prevent, science to make enormous progress as far as the natural world is concerned. At the same time, it is a menace that has caused global problems and put the entire human race under existential threat. Maxwell's dream is that implementing wisdom-inquiry would enable us to move on with the progress, perhaps even speed it up, but at the same time, prevent all the negative developments. The fundamental difference between the two approaches, however, is that, according to Maxwell himself, knowledge-inquiry is our long-lasting reality as wisdom-inquiry still exists only in Maxwell's thought. The risk here is that we do not really know whether the develop-

ment towards wisdom-inquiry would allow the progress of science to continue. As it would be a whole new approach, we cannot take the continuing progress for granted. And as we still do not have wisdom-inquiry, we also cannot be sure that it would actually protect us from the kind of negative consequences that knowledge-inquiry has caused. The dilemma is analogous to the one concerning rationality as described above.

An important concept in Maxwell's definition of wisdom is value. Different cultures and different individual human beings strongly, sometimes even dramatically, disagree on their priorities concerning what they consider as being of value in life. Can we humans reach an agreement here? And if we do, would not that mean abandoning the diversity of human cultures? These are very serious issues that require special attention.

Maxwell, of course, has addressed this. True, applying AOR correctly would allow us to deal with such conflicts. But attempts at adjudicating between competing values have been continually made before. While it may be the case that AOR is a better methodology for dealing with questions of conflicting values, nonetheless, this relies on rationality (although in the special Maxwellian sense), and unfortunately there are still influential ideologies in the world which can hardly be called rational in any accepted sense.

Can we make wisdom-inquiry a reality? Can we implement it? No one has an answer to that yet. There remains a major controversy about this task, which involves a very well-known dichotomy in history – that of the traditions of the Enlightenment and Romanticism. Knowledge-inquiry follows the tradition of the Enlightenment, the tradition based on rationality in the conventional sense. Wisdom-inquiry obviously adds the Romanticist flavor. This move would make science a mixture of objectivity and subjectivity, an interplay of the mind and heart. Perhaps the latter is exactly what we need. As we know from what was discussed above, adding the subjective side to the story does not mean becoming irrational, according to Maxwell. What we get is rather a new kind of rationality. However, Maxwell is not consistent about these issues in his works.

In 2012, Maxwell wrote:

Wisdom-inquiry embodies a synthesis of traditional Rationalism and Romanticism. It includes elements from both, and it improves on both. It incorporates Romantic ideals of

integrity, having to do with motivational and emotional honesty, honesty about desires and aims; and at the same time, it incorporates traditional Rationalist ideals of integrity, having to do with respect for objective fact, knowledge, and valid argument. Traditional Rationalism takes its inspiration from science and method; Romanticism takes its inspiration from art, from imagination, and from passion (Maxwell, 2012, p. 670).

Given this observation, it is quite difficult, almost impossible, to see wisdom-inquiry as fully rational. Perhaps it can be rational in Maxwell's sense, as discussed above. However, we may now ask why we would need a new conception of Rationalism if we can achieve that by synthesizing traditional Rationalism and Romanticism. On the one hand, it looks as if Maxwell's aim is to keep the pursuit of science within wisdom-inquiry fully rational. As this does not work in the sense of traditional Rationalism, a new conception of rationality is needed and, as shown above, Maxwell has provided us with that. On the other hand, the above citation attests to the fact that wisdom-inquiry need not be fully rational. Quite the opposite is the case. Nonrational, if not irrational, elements have to be included. If nothing else, passion is definitely one of these elements. Maxwell insists that we need to attend explicitly to emotion and desire and that denying feeling and desire undermines rationality. No rational thinker has denied that humans have feelings and desires. However, rationality means the ability to recognize feelings and desires and to act in accordance with objective rules and not subjective preferences.

In his latest book Maxwell observes: "Academic inquiry today is by and large an uneasy, confused mixture of what we have inherited from the Traditional Enlightenment – knowledge-inquiry as I shall call it – and from Romanticism, the Counter-Enlightenment and postmodernism" (Maxwell, 2021a, p. 33). If academic inquiry is already a mixture of Traditional Enlightenment thought, and therefore rationality and Romanticism, then wisdom-inquiry is in place already, at least in the most general terms. Maxwell would probably argue that as it is such inquiry is overly concerned with Counter-Enlightenment and postmodern thought, which are subjects of critique in his work. It remains unclear, however, what he actually means by postmodernism in this context. Possibly, for him, anything postmodern in the context of science is irra-

tional rather than rational. On the other hand, it may well be that it is exactly the postmodern type of natural science, as it sometimes has been called, that works as a generalization of the scientific method so that the latter becomes a methodology that is directly applicable to addressing social issues that Maxwell strongly advocates. Perhaps we should look to the so-called post-non-classical science – chaos theory, synergetics, self-organization theory – as the basis of the generalized scientific method Maxwell is looking for. It may be that the kind of science which is based on recognizing the irreversibility of all processes happening in reality is at least a step toward wisdom-inquiry. This, however, is not wisdom-inquiry, as even post-non-classical science does not include subjectivity. Even the key concept of irreversibility fails to introduce a subjective dimension, since it is merely a fundamental theoretical fact that can be derived from the second law of thermodynamics (Näpinen, Mürsepp, 2002, p. 469). Wisdom-inquiry seems to be out of reach for this kind of science as well.

The following section will pursue the question of wisdom-inquiry from a different angle.

6. Redefining the Tasks of Universities

For several decades Nicholas Maxwell has argued that academia needs to be revolutionized – fundamentally changed to focus more on wisdom than on knowledge. Maxwell's point is that, instead of knowledge-inquiry, wisdom-inquiry should be the primary task of universities because this would be a better way to address global problems. In his recent paper, Maxwell (2021b) argues that universities have betrayed reason and humanity. He writes:

The basic task of the University needs to be to put forward and critically assess possible solutions to our problems of living, possible actions, policies, political programs, ways of living, philosophies of life. A basic task needs to be intelligently conducted public education about what our problems are and what we need to do about them. The University needs to devote itself to helping people achieve what is genuinely of value in life. The pursuit of knowledge and technological know-how is, of course, vital, but it needs to be conducted as a secondary matter, not the primary pursuit of the University (Maxwell, 2021b, p. 2).

Maxwell distinguishes 'knowledge-inquiry' (i.e., pure rational inquiry in the traditional sense) from 'wisdom-inquiry' (i.e., an inquiry involving human values and aspirations). According to Barnett, for Maxwell,

On the one hand, knowledge inquiry is dominated by a conception of science, in which values, emotions, human considerations and philosophies of life are expunged from the approved methods. On the other hand, values, emotions, human considerations and philosophies of life become part of the totality of *wisdom inquiry*. One temptation might be to think that while knowledge inquiry (that is, science as traditionally conceived) is somewhat narrow, at least it is rigorous; wisdom inquiry, in contrast, sounds somewhat ill-disciplined. On the contrary, Maxwell contends that it is wisdom inquiry that has the greater rigour: feelings and desires are not to be taken at their face value but rather, being now part of the inquiry, "feelings, desires and values need to be subjected to critical scrutiny" (Barnett, 2011, p. 146).

Maxwell's approach to understanding the tasks of universities is based on 'wisdom'. However, Barnett (2011, pp. 65-67) contends that there are several other views (i.e., 'inquiry', 'virtue', 'dissensus') about what a university is and what it might be. Barnett sees two difficulties with Maxwell's standpoint, including the question of what value life holds, and of what constitutes wise thoughts and wise actions.

On both points, it is unclear as to how wisdom-inquiry as such could ever gain a foothold, given that the university is an institution characterised by never-ending critical debate. All this is tantamount to saying that it is part of the purposes of the university to provide a space in which the search for ever more refined understandings can be continued and it is a well-populated space (Barnett, 2011, p. 66).

However, at the same time, Barnett (2011, p. 147) admits that Maxwell's view has three important implications: (1) on the relationship between the different forms of knowledge, i.e., "Are science and the humanities utterly separate forms of inquiry or might they be understood as different aspects of a unified inquiry...?"; (2) on the ecology of knowledge, the importance of forms of academic

inquiries, i.e., “Why is wisdom inquiry more important than knowledge inquiry?”; and (3) on the relationship between real life and academic inquiry. Barnett does not distinguish between forms of knowledge and prioritizing one academic inquiry over some other important academic inquiry. He argues that “an ecology of knowledge perspective encourages us to see academic inquiry as *part of* the world, bringing in values, sentiments, and hopes of the world, albeit subjecting them to critical scrutiny” (Barnett, 2011, p. 147).

The question of what a university is can be approached from different perspectives. Barnett examines what a university is through the philosophical concepts of being and becoming, space and time, culture and anarchy, and authenticity and responsibility (Barnett, 2011, pp. 59-105) and discusses the fluid university, the therapeutic university, the authentic university, and the emerging ecological university as possible and feasible future forms of the university (Barnett, 2011, pp. 107-151). He advocates the ecological university as a feasible future form of the university: “The ecological university is necessary, feasible and desirable” (Barnett, 2011, p. 151).

The educational tasks of the university need to be redefined in a complex environment to allow learning for an unknown future (Barnett, 2015). The main tasks are: “preparing students for a complex world, for a world in which incomplete judgements or decisions have to be made” and empowering students so that they “can prosper in a situation, of multiple interpretations. Whereas some minimal form of security is available in the first situation, here, in this second situation, no security is available at all; that is its essential character” (Barnett, 2015, p. 223). It is important that students learn that they can question everything (e.g., data, information, fake news, knowledge) in their attempts to understand the world around them. Barnett argues that

the educational task is, in principle, not an epistemological task; it is not one of knowledge or even knowing per se. It is not even one of action, of right and effective interventions in the world. For what is to count as a right or an effective intervention in the world? Amid supercomplexity, the educational task is primarily an ontological task (Barnett, 2015, p. 224).

Concurring with this perspective, Allan pro-

poses that the educators’ primary task “should be to nurture neither learned scientists nor talented artists and artisans, but good citizens” (Allan, 2018, p. 119). Auxier also has an agenda for educators and says that

Students must be assigned tasks to carry out and to bring back the results. [...] They must be interviewed closely as to how they carried out these tasks within the general framework provided. They must be encouraged to think about alternative paths for the completion of tasks. These tasks must encourage initiative, experimentation with resources, and creativity—as well as patience, critical reflection, and thoroughness. Students must be taught the art and techniques of good judgment (Auxier, 2018, p. 253).

In brief, universities should redefine their educational tasks. Knowledge needs to be seen as an ecology of knowledges where there are different knowledges and there is no primacy of academic inquiries. The ecological standpoint of knowledge requires that universities rethink their main educational tasks and focus on enabling students to flourish and be prosperous, successful, good citizens.

7. Conclusions

In conclusion, we state the following. Nicholas Maxwell has contributed significantly to the philosophy of science, pointing at the inconsistencies in the currently prevailing approach to science. His call for the change from SE to AOE is reasonable. Implementing AOE would be an important contribution to the methodological foundation of science. Generalizing AOE to AOR is more problematic. Maxwell’s understanding of rationality is quite different from the traditional account. Not everyone would agree that his account could legitimately be labelled as rational.

There are similar problems with the change from knowledge-inquiry to wisdom-inquiry. As we know, Maxwell’s claim is that the real aim of academia should be the pursuit of wisdom rather than just striving for knowledge. Maxwell has spelled out his understanding of wisdom in several publications, using the term namely for referring to his novel approach to rationality. His approach is acceptable, though not very widely known, and can hardly be called a generally accepted view. It is

rather an instrumental type of explanation similar to folk rationale that can be found among many cultures in different formulations. Still, creating value in human life, the key concept of the approach, is a significant contribution.

Maxwell's explanation of wisdom-inquiry is not consistent throughout his works. Maxwell is clearly critical of the rationalist approach of the Enlightenment *philosophes* which is strongly embedded in the scientific method. His attitude to Romanticism, however, is not clear. Maxwell explains wisdom-inquiry as a well-organized blend of Enlightenment thought and Romanticism. But he also calls the Romanticist critique of the Enlightenment irrational and therefore inadmissible.

Most importantly, we do not believe that Maxwell's critical development of the understanding of science, i.e., his philosophy of science, and his call for a revolution in academia by means of structurally redesigning the universities, should be taken in conjunction with each other. In a way, these are two sides of the same coin. Still, they are different issues. We as authors rather side with Ronald Barnett's views. Also, it is not clear to us how wisdom-inquiry could be implemented and whether there is even a need for that. Science is making progress. At least the top research universities are doing a very good job in developing scientific research. We agree that disciplinary as well as institutional boundaries often hinder the effective achievement of valuable results but many universities are dealing with the issue already. An important point is engaging the whole intellectual capacity of the universities, including that of students. Sometimes a fresh look is needed and it can provide wonderful results when combined with professional experience. Better academic (and not only academic) governance and more efficient dissemination of research results is definitely needed but no revolution is necessary to achieve this. Revolutionizing the situation should rather be avoided as the possible outcomes are difficult to assess in advance.

Last but not least, we do not agree with Maxwell that proper generalization of the methods of classical science would help to build a new social methodology that allows one to directly address practical social issues. Our view is that instead of the methods of classical science, the so-called post-non-classical science might provide us with the

universal methodology that would work for both natural and social science, thus fulfilling the dream of the *philosophes* of the Enlightenment on a new level and laying the foundation for a New Enlightenment.

Acknowledgement: Peeter Mürsepp's work on the paper was supported by the Estonian Research Council grant number PRG462.

References

- Allan, G (2018) The Conversation of a University. In *Contemporary Philosophical Proposals for the University: Toward a Philosophy of Higher Education A*, eds Stoller and E. Kramer, 103–121. Cham, Switzerland: Palgrave, MacMillan, Springer Nature.
- Auxier R (2018) The coming revolution in (higher) education: Process, time, and singularity. In *Contemporary Philosophical Proposals for the University: Toward a Philosophy of Higher Education*, eds A. Stoller and E. Kramer, 217–260. Cham, Switzerland: Palgrave, MacMillan, Springer Nature.
- Barnett R (2011). *Being a University*. London: Routledge.
- Barnett R (2015) Learning for an unknown future. In *Thinking and Rethinking of University, The Selected Works of Ronald Barnett*, ed. R. Barnett, 219–234. London: Routledge Taylor & Francis Group.
- Jakubik M, Mürsepp P (2021) From Knowledge to Wisdom: Will Wisdom Management Replace Knowledge Management? *European Journal of Management and Business Economics*. <http://dx.doi.org/10.1108/EJMBE-07-2021-0219>.
- Maxwell N (1984) *From Knowledge to Wisdom: A Revolution in the Aims and Methods of Science*. Blackwell, Oxford: Blackwell.
- Maxwell N (1998) *The Comprehensibility of the Universe: A New Conception of Science*. Oxford: Oxford University Press.
- Maxwell, N. (2012). Arguing for Wisdom at the University: An Intellectual Autobiography. *Philosophia*, 40(4), 663–704.
- Maxwell N (2014) *How Universities Can Help Create a Wiser World: The Urgent Need for an Academic Revolution*. Exeter: Imprint Academic.
- Maxwell N (2021a) *The World Crisis – And*

What to do About It. A Revolution for Thought and Action. New Jersey, London, Singapore, Beijing, Shanghai, Hong Kong, Taipei, Chennai, Tokyo: World Scientific.

Maxwell N (2021b). How Universities Have Betrayed Reason and Humanity—And What's to Be Done About It. *Front. Sustain*, 2, 1–11; doi:10.3389/frsus.2021.631631.

Muller F A (2008) In Defence of Constructive Empiricism: Maxwell's Master Argument and Aberrant Theories. *Journal for General Philosophy of Science* 39: 131–156.

Mürsepp P (2011) Knowledge in Science and on-Science. *Baltic Journal of European Studies* 1(1): 61–73.

Mürsepp P (2013) The Aim of Science – Knowledge or Wisdom. *Problemos* 84: 72–83.

Mürsepp P (2017) Metaphysics: Inside or Outside of Science? *Studia Philosophica Estonia*, 45–61.

Näpinen L, Mürsepp P (2002) The Concept of Chaos in Contemporary Science: On Jean Bricmont's Critique of Ilya Prigogine's Ideas. *Foundations of Science* 7: 465–479.

ON CLOSING THE GAP: OR HOW TO CHALLENGE YOUR STUDENTS TO ENGAGE IN PHILOSOPHISING

Madelaine Angelova-Elchinova

Sofia University, Faculty of Philosophy
e-mail: m.angelova-elchinova@phls.uni-sofia.bg

Abstract:

In the following paper, I address the worry that there is an increasing gap between the way the world is perceived by students and by their professors and teachers respectively. I argue that even if there is indeed a huge difference between our two generations, ‘the gap’ becomes irrelevant when we engage in philosophising. I will attempt to provide three short proposals on how to eradicate the gap when teaching philosophy. My hope is to show that, if we really want to make an attempt to eliminate the lack of understanding between the students and us, there are four basic rules that we could apply to our educational method. My argument makes use of the concepts of truth-value, consensus and epistemic normativity.

Key words: Philosophy of Education, Methodology, Understanding, Epistemic Normativity, Intrinsic Value.

In my argument, I consider the option that if the shared goal of a philosophical inquiry conducted by two different generations is to reach the truth, the gap can be eradicated. In order for this to work, the participants should share one simple initial belief – truth has (at least some) epistemic value¹. Apart

from this shared premise, every other piece of information communicated between the two groups should be examined by them as neutral ground. Finally, I will provide an example from my teaching experience of how one can incorporate in her methodology and practice a strategy built around the value of truth as a central point of agreement, and try to draw some conclusions.

1. What is involved in teaching philosophy?

All of us, as practitioners and educators in the field of philosophy, try to adopt an adaptive individualistic approach that would best fit our methodological goals. How we go about our craft would probably depend on our audience and the extent of their interest in the topic we present to them. As a high school teacher, I am familiar with the setting where the public has no initial presumption about what philosophy is concerned with and sometimes (even) no particular interest in finding out. During my short period of teaching at the university, there were also cases in which the students chose my course from a

¹ Such a requirement is not so difficult to satisfy – even on minimalist accounts of truth the obtaining of truth conditions for a sentence can have *some* value (Burgess,

1997), or on contextualist accounts of knowledge where knowledge attributions may be context dependent; however, they are context dependent exactly in regards of their truth or falsehood (compare for example: Cohen, 1986).

list of alternatives. That can be regarded as a signal for at least a small amount of interest regarding the topic of said course. However, the students were not particularly acquainted with the main topic of the course. In this paper, I would like to build up a more general methodological proposal that is hopefully applicable to both of these scenarios and a variety of others as well. The validity of my argument, as always, will partially depend on the acceptance of some initial assumptions.

First, I believe that the task of teaching philosophy should be somehow related to the concept of Epistemic Normativity (EN) delineated by Kornblith as the claim that epistemic norms are to be regarded as universal imperatives (Kornblith, 1993, p. 357). According to EN, those beliefs that promote or bring about some intrinsic epistemic value² are epistemically superior to others (Grimm, 2009, p. 243). Analogously, I shall assume that there are practices of teaching philosophy which bring about some intrinsic epistemic value and also, that such practices are preferable compared to others and that an educator should aim to adopt and develop said practices. One could reject this proposal on the grounds that it is too vague; indeed, one can argue that there are many different kinds of intrinsic values, so the question arises – which of them exactly are addressed in this paper? My answer would be that I am mainly interested in the intrinsic value of knowledge and justified belief³ and, therefore, in those best *practices* which bring about their realization in students.

In this day and age, there are a lot of pragmatic concerns in regards to education: Would the studying of a particular subject make the student more efficient and competitive in a future working environment?; Would the enrolment in a particular course bring some kind of benefits to one's profes-

sional growth and development?, etc. In the case of philosophical education such concerns should be irrelevant. That is not to say that a philosophy student cannot find a competitive working environment or accomplish professional growth in her field. However, *studying philosophy should not be determined by such goals*. Rather, I suggest, studying philosophy is about providing intrinsic epistemic value (in the form of knowledge and/or justified beliefs) for the person that engages in philosophizing⁴.

The second thing I will assume in this paper is that philosophy is concerned with truth, or at least with searching for the best hypothesis that possesses explanatory likelihood or explanatory loveliness (understood as “a guide to likeliness” that expresses posterior probability (Lipton, 2004, p. 115)). That is to say that philosophy is an abductive enterprise. In the course of teaching philosophy, one should provide her or his students with the opportunity to raise different hypotheses, to propose counterclaims and to discuss their likelihood openly. All this means that without understanding amongst the inquirers, the truth is less likely to be unearthed. Philosophy was never a solitary enterprise. It always requires critical discussion, and when disagreements emerge (as they often do) one should make sure that they are disagreements that arise from an argument and not merely from a difference of arbitrary opinions.

Finally, I will presume that philosophy requires epistemic resilience or what was most recently analyzed as ‘grit’ (Paul and Morton, 2018). We should not let the idea of a generational gap consume us and lead to despair; we ought to seek ways to build a bridge over the chasm of differences by finding a common purpose of inquiry and setting clear and apprehensible starting points. Thus, in the case of teaching philosophy, I assume that grit and perseverance are indeed rational and can be beneficial, as is suggested by Paul and Morton (ibid).

² It may not be obvious why the idea that beliefs promoting intrinsic epistemic values are superior to others is entailed by the concept of normativity. Let me expand upon this point a little further. Introducing epistemic duties by using epistemic directives would only make sense if knowledge or justified belief has some intrinsic value. Otherwise, I am unable to see any motivation behind EN in the first place. On the other hand, normativity itself permits the introduction of epistemic evaluations and thus, a distinction amongst beliefs that promote intrinsic values and such that fail to do so (for more on the matter see Grimm, 2009).

³ That should not be surprising, insofar as I have already mentioned the intrinsic value of truth and, thus, it should be expected that beliefs which are more likely to be truth-tracking are also intrinsically valuable.

⁴ I would like to thank an anonymous reviewer who pointed out that “this is a very heavyweight assumption”. Philosophy can, of course, possess some “downstream value” for the life of the student – nobody is denying that; however, such downstream value is simply not a good enough motivation to choose philosophy. Why do I think this to be the case? My main argument would be comparative – the contrast between a degree in Philosophy and a degree in Law, for example, is that if a student should choose between them based solely on “downstream value” and career opportunities, they would most likely prefer a Law degree.

2. Three short proposals on how to eradicate the gap

Assuming there is a gap between an educator *x* and her or his students, it is not necessarily the case that there is no simple explanation. Let's imagine that *x* is teaching philosophy by reconstructing and reenacting different theories in the same way that *x* was taught philosophy when *x* was a student. It seems obvious why such an approach can strike one as being problematic. First, it raises the question: Did *x* herself understand the theories in question or was *x* just an assiduous student who carefully studied their reconstructions and remembered them? Maybe she did in fact understand them, let's grant her that. However, is it not possible that some of her students are not satisfied with mere reconstructions, and their curiosity requires something more? Maybe one of them would like to question an argument's premise or, even more daringly – the way an argument is constructed? In such cases there can be a simple explanation for the existing gap – while on the one hand there is an authoritative reading of the theory (theories) in question, on the other there is a refusal to grant the theory (theories) the status of a sacred cow. Another option is that a student might fail to understand *x*'s explanation on why such theory was constructed in the first place.

In my view the first step over the gap (especially when it comes to students just starting their quest into philosophical inquiry) is to help your students to understand that philosophy is about method. As an educator, you should show them that philosophy goes beyond any particular theory but is rather a strategy for analysis in regards to any problem that they can encounter. You can even ask for their suggestions and compose a list of questions and puzzles that are of interest to them. Then, you can simply point out how the same methodology can be used to address a large number of cases. Let the students find the theories you want to teach them and then point out their deficiencies together. The important thing is to procure a starting point about which they already possess knowledge or understanding, albeit limited.

Thus, the second stage in eradicating the gap would be to try and listen to what your students have to say. Philosophy concentrates on abstract problems. Sometimes, these problems become so abstract that there is no way to explain them without going back to a concrete example. That is why my proposal here would be to move from experience to theory and not vice versa. Let your students provide

contextually sensitive examples that are seemingly compatible with their own social environment and understanding. If there is indeed a gap, one way to build the bridge upon it is to know what's on the other side and how much distance separates you from there. Let's provide a trivial example: Maybe one of *x*'s students is worried that her social status is undermined by a Facebook post that depicts her or him in a bad light. To make the challenge harder, let's suppose that *x* does not know much about social networks and never had a Facebook account. However, when the student explains the problem that she or he is facing, *x* can draw the conclusion that her student is addressing the disposition of other agents to disperse false claims about one's character. Thus, it would be easy for *x* to provide another contextually sensitive example, that is, a different manifestation of the same disposition that is in turn in accordance with *x*'s beliefs and judgments. Then, the only thing that *x* has to do in order to transform this exchange of examples into a philosophical discussion is to point out what the general problem behind these two examples is, or what the abstract question that connects them is. In the above example, it would probably be an ethical question about the consequences of immoral actions. However, the same pedagogical procedure can be followed to address a large set of philosophical problems. It does not matter how different one generation is from the other, as long as they face the same abstract problems. When grounded in experience, the abstract dilemma can be used to build an explanatory relation between seemingly unrelated examples.

Finally, the gap might as well have something to do with the possession of different concepts. This remark goes especially for cases of first year philosophy students and pupils that have not had any previous experience with philosophical terminology. As with any other discipline, philosophy possesses a complicated terminological apparatus that requires explanation and has to be carefully studied in order to be grasped. The difference is that our terminology is borrowed from natural language and can sometimes be quite ambiguous⁵. It is easy to see why the

⁵ Just one example is the notorious usage of the notion "intuition" in various contexts by philosophers themselves – 'intuition' and 'intuitive' can even be found in incoherent usages – from a usage that is in service of a Nietzsche reconstruction contra rationalism, to its contemporary usage in papers arguing for a priori justification via 'rational intuitions' (e.g. Thurow, 2013). As Herman Cappelan has recently suggested – philosophers

notion of a ‘phenomenon’ can create some difficulties for understanding when the first association that comes to a student’s mind is ‘Ronaldo’. The same goes for ‘Cartesian substance dualism’ and ‘substance’ as a chemical component. Therefore, my third suggestion has something to do with finding neutral grounds for inquiry. My proposal is that one *should* find a common language with her students but that *should not* be done either by trying to adapt to their language game or by trying to impose incomprehensible philosophical definitions on the students. The proper way to do this, in order to bridge the gap, is rather to introduce philosophical terms as a neutral ground that both the educator and the students will try to define together by means of a discussion.

As philosophers, we compose definitions and we make changes to them all the time (see again the example regarding intuitions). Therefore, one would do well to build the terminology one is going to use from scratch and together with one’s students.

3. Methodology and practice

What is left is to examine how these three proposals can be incorporated in teaching methodology and practice. I propose four ground rules that can be used to implement the strategy I outlined in order to bridge the gap⁶.

The first rule concerns the drawing of conclusions after a philosophical discussion. According to my proposal, reaching a conclusion with regards to an abstract problem would require that there is an agreement between the educator and students on the acceptance of a proposition *p*. If both parties are able to agree to *p*, then at least some portion of mutual understanding is achieved. However, it is important to remember that each conclusion should be open to revision during further discussion. Thus, the first lesson one conveys during the process of teaching philosophy is that we are not infallible. New evidence and/or argumentation can always emerge, forcing us to reconsider our conclusions. Thus, while reaching consensus is not a once and for all accom-

plishment, it surely is a sign that we are narrowing the gap. Furthermore, it is crucial for the educator to expect that consensus might come even in the form of admission that there is a particular problem that has to be addressed in future inquiry. The rule regarding conclusions and consensuses (CC) can be summarized as follows:

- i) CC: If *a*, *b* and *c* agree on a conclusion, then a provisional consensus is reached. The reaching of consensus promotes the increase of understanding⁷ between *a*, *b* and *c*.

The second rule I want to outline is concerned with the educator’s privileged position in regard to knowledge and truth. I do not pretend to have conducted a survey in order to be able to provide information about the percentage of educators who believe that they are in an authoritative or privileged epistemic position in regard to their students. My only claim is that it is reasonable to suppose that there are some educators that would uphold such a belief. Thus, the rule that I am proposing is related to such convictions. Let’s call it the non-transitive principle of authority (NPA):

- ii) NPA: Academic authority does not necessarily imply epistemic authority.

As humans, albeit educators, we do not possess impeccable skills for navigating to the truth and retaining knowledge. Our claims can be just as erroneous as those of our students and a refusal to treat them this way could ‘widen the gap’ even further. Therefore, as a consequence of the acceptance of NPA one should also accept that the search for independent evidence for a proposition *p* should always be encouraged. Feedback should work both ways in order for a philosophical discussion to transpire.

The warrant for the third rule is provided by the need to find grounds for abstract problems in con-

themselves are using intuition-terminology “too promiscuously” (Cappelen, 2012, p. 18).

⁶ Here the distinction between proposals and rules is used to express the difference between observations based on my pedagogical experience and some general conclusions based on such an experience. Therefore, the issues and solutions which were discussed in the three proposals can be regarded as grounding tools for the four rules proposed later on in the paper.

⁷ For the purpose of this paper I will not go into detailed analysis of what understanding should designate. I will just point out that when I talk about understanding between *a* and *b*, I mean the ability of *a* to correctly grasp the propositional content of judgments expressed by *b*. I will also presume that there are various degrees of understanding which depend on multiple questions, such as: To what extent is *a* grasping the proposition expressed by *b*?; If there are multiple propositions expressed by *b*, how many of them can we claim are grasped by *a*? etc. A comprehensive account of understanding in communication settings would require a lot of additional clarifications. However, they are irrelevant for the validity of CC, which seems to work for every account of understanding that allows for degrees of understanding.

crete experiences, which was already discussed. If what I have proposed has the potential to be a successful methodical strategy, then each theoretical discussion should be grounded (if and when possible) on particular examples. The same reasoning can also be applied vice versa – each general definition should be tested against particular examples and counterexamples. In philosophy, such an approach is usually called Reflective Equilibrium (RE). My suggestion here is that RE can work both as a method of inquiry⁸ and as a pedagogical tool. Thus, in education, the role of RE is to provide a) a common starting point for educator and students; b) a methodological device for engaging in philosophical inquiry⁹. To summarize, the rule regarding the use of RE in education (REE) goes as follows:

- iii) REE: One's education in philosophy has to start with concrete judgments and examples and then move to abstract questions and general principles. Each general conclusion should in turn be tested against concrete judgments held by the educator and the students¹⁰.

The final rule is implied by everything that I argue for in this paper. When it comes to problem-solving, I maintain that in order for a philosophical problem to find a respectable solution, the latter should not be the result of a solitary effort. My claim is based on the premise that philosophy is an abductive enterprise in conjunction with the admission that none of us are infallible. Thus, the solution to a problem proposed by a may be brilliant and logically solid and yet it may not be the best one. However, the only way to become aware of that is via the process of discussion. This fourth rule succinctly presents the interactive nature of philosophical education (IPE):

- iv) IPE: The skill of philosophizing is born via dialogue and discussion.

4. A contextual-based counter argument and conclusions

If the methodological rules proposed here are indeed effective, one important implication would be that philosophical inquiry goes beyond generations, interests, individual beliefs, and other contextual features of one's social environment. Such an admission permits one to draw the conclusion that the gap between generations can gradually become irrelevant as we engage in philosophizing. However, it can be objected that such a conclusion is naïve and furthermore, invalid, because there are examples of philosophical movements that are clearly influenced by and even grounded in the social context in which they emerged. It can even be presumed that there are recognizable *trends* in philosophy that can be attributed to the period and social circles in which particular inquirers received their philosophy education and interacted with one another (e.g.: Oxford philosophy) (See Ferguson, 2001, p. 325). To those who support such an argument I respond that this objection misses the point. What I have tried to show in my analysis is that raising a hypothesis as a result of interaction between different individuals in fixed environmental conditions has nothing to do with the actual truth value of that hypothesis. Therefore, a more general conclusion here would be that philosophy is a normative discipline in the sense that it requires its claims to go beyond cultural relativity and personal interests. It is natural that one's interactions with her peers in a fixed environment would bring up the disposition to assert a certain set of judgments. That is why the gap problem transpires in the first place – representatives of different generations share different beliefs and have different dispositions. However, when they do philosophy, that simply does not matter. All that is important is which of their judgments are truth-tracking and possess some kind of intrinsic epistemic value, and which do not.

References

- Baderin A (2017) Reflective Equilibrium. *Social Theory and Practice* 43(1): 1–28.
- Burgess J (1997) What is Minimalism about Truth? *Analysis* 57(4): 259–267.
- Cappelen H (2012) *Philosophy without Intuitions*. Oxford: Oxford University Press.
- Cohen S (1986) Knowledge and Context. *The Journal of Philosophy* 83: 574–583.

⁸ I argue for the methodological advantages of RE in a forthcoming paper so I will not discuss them at length here.

⁹ I confess that the idea of RE in education can seem strange at first glance. Of course, the suggestion I make here requires a lot of work and is to be delivered in a more detailed account in the future. However, proposals of versions of RE that are not concentrated on individual judgments and principles, but rather on public ones, have already been made (e.g. Baderin, 2017, p. 3; p. 18).

¹⁰ It should be noted that the following use of REE can be regarded as a condition for fulfilling CC.

Forguson L (2001) Oxford and the “Epidemic” of Ordinary Language Philosophy. *The Monist* 84(3): 325–345.

Georgiev O (2021) The Academic Curriculum in between “the Dogma” and “the Canon”. In *Problems and Perspectives of Philosophy Education in Bulgaria. Part II*, eds V. Kaneva, D. Elchinov, E. Vardziyska, 8–23. Sofia: UP “St. Kliment Ohridski”

Grimm S (2009). Epistemic Normativity. In *Epistemic Value*, eds A. Haddock, A. Millar and D. Pritchard, 243–264. Oxford: Oxford University Press.

Kornblith H (1993) Epistemic Normativity. *Synthese* 94(3): 357–376.

Lipton P (2004) *Inference to the Best Explanation*, 2nd ed. London: Routledge.

Paul S, Morton J (2018) Grit. *Ethics* 129(2): 175–203.

Thurrow J (2013) Intuition Theory of the A Priori, with Implications for Experimental Philosophy. In *The A priori in Philosophy*, eds A. Casullo and J. Thurrow, 67–91. Oxford: Oxford University Press.

Todorov D (2021) Dehumanization and Education. ”. In *Problems and Perspectives of Philosophy Education in Bulgaria. Part II*, eds V. Kaneva, D. Elchinov, E. Vardziyska, 122–130. Sofia: UP “St. Kliment Ohridski”.

Zimmerman T et al. (2014) Narrowing the Gap between Students and Instructors: A Study of Expectation. *Transformative Dialogues: Teaching & Learning Journal* 7(1): 1–18.

CONTEMPORARY SUBJECT'S IDENTITY: BUILDING THE SYSTEM'S MODEL

Evgeniya V. Kuznetsova

National Academy of Sciences of Belarus, Institute of Philosophy,
Belarus, Minsk

e-mail: kuznetzova.evgeniya2012@yandex.ru

Abstract:

The paper is devoted to the problem of investigating the identity of a personality in contemporary philosophy. The author states that some factors (intensification of cultural and communicative exchange, population migration, information technologies) have led to a significant transformation of the phenomenon of identity at the civilizational stage. The presented points of view and approaches of contemporary philosophers (representatives of psychoanalysis, existentialism, etc.) that the author relies on indicate a crisis of identity. The author of the paper describes creativity, communication, reflection, value-semantic sphere, cultural and symbolic environment as the criteria of identity. The author also constructs her own model of the identity system based on the famous Russian researcher, G.P. Shchedrovitsky's concept of the system, as the way to avoid a crisis of identity. The author comes to the conclusion that the identity of a modern person is wholly constructed, in contrast to the phenomenon of pseudo-identity. The results of the paper can be applied in sociology, cultural studies, psychology in the context of the problem of personal and collective identity.

Key words: the identity of a personality, communication; reflection; cultural and symbolic environment; value-semantic sphere; creativity.

1. Introduction

1.1. Actuality of Research. Methods and Purpose of Research

Growth of information technologies, intensification of cultural and communicative practices, destruction of traditional spiritual and moral guidelines, and increase of population migration have radically transformed the phenomenon of identity over time. As a consequence of these processes we deal with an unclear concept of identity, and it has become necessary to investigate it once more. It is evident that the attention of many scientists and representatives of contemporary humanities disciplines, e.g. philosophers, culturologists, sociologists, and psychologists is aimed at this problem. At the same time, the perspectives they bring all represent different interpretations of identity. In my opinion, an adequate definition requires the correct choice of the exact criteria that determine identity, as our reality puts forward constantly changing requirements for a modern subject, forcing him to be always in search of his "I".

The correct selection of these criteria as grounds for constructing a model of personal identity determines the problematic field of our research. The purpose of this paper is to apply a historical lens to contemporary philosophical studies in order to demonstrate the crisis of the concept of identity and,

with the help of constructivist and system approaches, to build our own model of the identity system. These approaches reveal the complexity of the problem and help to overcome some fragmentation in its presentation.

1.2. Historical Review

Researchers at different historical stages study various aspects of human nature when they devote their attention to identity. To begin, let's examine the concept of "identity". Here we see two Latin terms of different origin: "idem" and "ipse". The first term "idem" means "identical" and is synonymous with "similar". The term "ipse" is associated with the concept of "selfhood" [12; p. 19]. I focus in particular on the second term in the paper. A famous English philosopher, J. Locke, believes that the concept of "ipse-identity" refers only to a person possessing consciousness [11, p.45]. This form of identity initially presupposes the abilities of self-referencing and self-identification. From this point of view, a person has a special ability to produce reflexive knowledge turned upon himself. So, Locke defines the identity of the personality as a reflexive self-correlation. Accordingly, identity is not only rational, but also relational. Since humans are born with the ability to reason, they must create their own identity and be responsible for it. That's why J.J. Rousseau presents social identity as a product of some historical era. This French philosopher formulates his own interpretation of identity.

A person can find himself in other people, that is, find his true identity. In order to find himself, he must first abandon himself [13, p.92]. I. Herder emphasizes a similar idea. He writes that identity is a biological collective reality. It's a desire to be recognized as a member of some social group, and therefore, tied to other people [9, p.123].

So, if we pay attention to the history of the concept of identity, we notice that in Modernity identity is interpreted as the result of socialization and personal responsibility. It's demonstrated in concepts of J. Locke, I. Herder, J. J. Rousseau. In the post-classical philosophy of the twentieth century the interpretation of identity is associated with individualization of a person. As a result, we deal with such notions as: "pseudo-identity", "confusion of identity", "herd identity".

All these notions are actively used, first of all, in psychoanalysis by followers of S. Freud. The concept of "confusion of identity" is introduced by E. Erickson. It is a feeling that the roots of identity

are absent [6, p.76]. E. Erickson also introduces the term "pseudo-identity". It refers to the lack of integrity or wholeness of the self and the impossibility of realizing this integrity [6, 238]. E. Fromm discusses the development of a new herd identity, when a sense of identity is based on a sense of belonging to the crowd, where an individual doesn't want to differ from the others.

Repressiveness, aggressiveness, and consumerism dominate in the definitions of a person and his place in society in the philosophy of the existentialists in the 20th century. S. Kierkegaard, K. Jaspers, M. Heidegger, and A. Camus write about the person's loneliness, his suppression by different social institutions created by man himself, and the attempt to get rid of this pressure.

1.3. Identity's Plurality

The determination of identity's essence depends on the aspects which different researchers distinguish in this phenomenon's investigation. E. Erickson puts forward the idea of identity's plurality [6, p.143]. From his point of view, personal and social identities make up the structure of identity. The idea of multiple identities is also introduced by J. Turner and R. Brown. Many researchers have subsequently paid attention in their works to various modifications (types) of identity that constitute this multiplicity. Each of the modifications determines ideals, norms and rules of behavior, value orientations underlying the image of "I". And each of these aspects or "dimensions" requires its separate consideration. So, we can say that identity has its own hierarchical structure (pointed out by E. Erickson), but, as T.G. Stefanenko has justifiably remarked, this hierarchical structure has not been described yet [18].

2. Criteria of Identity

2.1. Criteria of Identity and Approaches to the Problem's Investigation

N. Dering notes that identity is always demonstrated in the process of individuals' interaction [5, p.87]. We can define it as a process of communication. Through communication, a person can get an outside perspective – to find himself and his place in life. Here again we are confronted with the notion of reflection. The environment of a contemporary subject has a cultural and symbolic nature, and the value-semantic sphere reveals the true essence of a personality. We can represent creativity as a process constituting the system of identity because a con-

temporary man always tries to find himself and his essence.

Therefore, these criteria can be regarded as grounds of the model of the identity system. The constructivist approach contributes to the presentation of identity in the form of a complex multidimensional system. We use the system approach to reveal the integrity of identity as an object and to show the connection of all its elements. Based on the concept of the system of a famous Russian methodologist, G.P. Shchedrovitsky, we will try to construct our model of the identity system.

2.2. The Category of System

First of all we'll analyze the meaning of the category of system according to G.P. Shchedrovitsky [16, p.25]. According to G.P. Shchedrovitsky, any object of research as a system should include the following five features: 1) the process constituting the system; 2) a set of external functions of the system; 3) a set of internal connections of the system; 4) organization of the material that ensures processes of the system; 5) an actual material on which the system builds itself.

2.3. Creativity as the Process Constituting the System

So, we put into the center of our model of the identity system the image of "I" as a representative of Homo sapiens. The process constituting this system is creative activity as we have already noted above. Identity is in essence creativity because it is "created" and "constructed".

The problem of "selfhood" as the manifestation of the creative essence is presented in psychoanalysis. It is developed by G.S. Sullivan and then by C. Jung. In C. Jung's concept, "selfhood" is wider than consciousness – it is a "microcosm of a man" and an archetype of the collective unconscious. The identity of "selfhood" goes back to an inner image of God in the soul [10, p. 143]. For existentialists (S. Kierkegaard, M. Heidegger, A. Camus, J.P. Sartre) "selfhood" is connected with existence – it's an acquisition of oneself by means of crisis states (rebellion, suicide), and it's a creation of one's life. "Selfhood" is revealed by consciousness by means of an awareness of one's own existence in critical moments of life. Moreover, the crisis of personal consciousness is a significant impulse for a person's transformation – it actualizes the meaning of his existence and it contributes to the achievement of true identity. "Selfhood" is a synonym for formation and disclo-

sure of personality from the existentialists' point of view.

2.4. Communication

External functions of the system are expressed by communication. Communicative interchange is a process whereby a person better understands and realizes himself by means of a dialogue. Communication with its internal vectors (understanding and argumentation) is the existence of a researcher. That's why we'll analyze the role of communication in the formation of identity in some philosophers' views.

As J. Habermas writes, identity is constructed on the border of two opposite states: consensus and confrontation [8, p.110]. Consensus unites one person with the others and makes him look like the others. Confrontation represents the opposite state; it presents features which characterize only this person and is thus responsible for individual specificity. Identity can be described as an attempt to balance between the phantom of normality („to be like everyone else”) and the phantom of uniqueness („not to be like everyone else”). Self-identity arises in the balance between personal identity and social identity. Personal identity forms a person's life history, and social identity helps him to play various roles in systems which he belongs to. "In the performance of these social roles, an individual gets not only his personal, biographical identity, but his certain place in the existing social categorization (social identity), and only by means of socialization he achieves his true identity."

For Russian researcher M. Bakhtin the most important concept here is that of dialogue. "Life is inherently dialogical. To live means to participate in a dialogue: to ask, to understand, to answer, to agree, to disagree, etc. A person participates during the whole life in this dialogue and he does it by means of all parts of himself: by eyes, by lips, by hands, by soul, by spirit. He puts himself into the word, and this word enters the dialogical fabric of a human life, the world of 'symposium'" [1, 295]. A person is fully aware of himself and realizes his personal, individual characteristics only by means of interaction with the environment, by means of communication with other people, by means of a dialogue.

Let's examine three main forms of dialogue according to M. Bakhtin. The first one is dialogue as the basis of human understanding. "Where consciousness begins, there a dialogue begins". The second form presents dialogue as the basis of speech

genres. "Genre is a historical memory crystallized in signs and meanings that have reached the level of automatism ... Genre is a representative of cultural and historical memory in the process of ideological activity expressed in chronicles, legal documents, scientific texts, orders, complaints, praises, etc." [1, p.326]. The third one is dialogue as a form of communication. "It's impossible to contemplate, analyze, define other people's consciousnesses as objects and things. You can only communicate with them dialogically ... and hear echoes of a great dialogue" [1, p.330]. For Bakhtin dialogue with oneself is necessary a man realizes himself by means of it and he is included into the universal space of culture, that is into a certain macro-dialogue.

Dialogue in M. Buber's books means that we can address ourselves to something and to somebody as *You*, as we address a personality, a friend. This somebody is the only one in the world and he is absolutely unique [4, p.127]. At the same time, *You* and *I* enter an ontological dialogue, and this world is different from the previous one. The identification of the person is realized only in dialogue, but not just by means of communication with another person, but when this "other person" becomes like you. Here, communication is similar to reflection.

2.5. Reflection

So, we come to the notion of reflection in our research. We define the internal structure of functions of the identity system as reflection because a subject structures himself by means of introspection of his actions and deeds.

G. P. Shchedrovitsky believes that self-determination is the most important act for every person in his life. "If circumstances develop in such a way that self-determination does not occur, then a person does not become" [15, p.58–59]. The most important thing in the implementation of self-determination for a person, as he notes, is the exit into reflection. The researcher distinguishes two levels of reflection. The first level of reflection is a person's consideration of the framework of his life as the action's object. When the individual enters a reflexive position, it seems that he is breaking with his social essence. And he occupies an unacceptable position. The second level of reflection is the individual's entrance into the position of a reflecting person toward himself already reflecting. Reflection is a mental process expressed in speech or communication. Communication for Shchedrovitsky is a

significant condition for the implementation of reflection and, consequently, self-determination.

Reflection acts as an internal mechanism of socio-cultural identification. We find this idea in many researchers' works. For example, Russian researchers V.I. Slobodchikov and E.I. Isaev contend that reflection is aimed at self-determination and caused by real practical situations of human social existence that allow individuals to develop the ability to interact with other people [17, p.95]. V.I. Slobodchikov and E.I. Isaev correlate the problem of reflection with the problem of lifestyle and distinguish two types of reflection: external and internal. External reflection forms a phenomenal layer of consciousness; internal reflection helps a person to overcome some limits, whereby he becomes a part of the universe or world culture.

2.6. Value-semantic Sphere

The organization of the material according to our model is a value-semantic sphere that ensures the flow of creative processes. Values are the central component of social representations, the focus of an individual's vital grounds (S. Moscovici, D. Jodle). Values demonstrate reasonable and social bases for an individual and determinate mechanisms of his adaptation and development in a society. According to a famous Russian psychologist and philosopher S. L. Rubinstein, value orientations, which can be scientific, philosophical, moral, and aesthetic, reveal the essence of a man [14, p.173]. They form a worldview as a system of generalized ideas about the world, other people, oneself and one's place in a society. "By means of values a man forms his attitude towards his life, and it allows him to understand the meaning of his life" [14, p.175]. Value-semantic orientations affect a person's choice of his professional activity, determine his spiritual ideals, fix his vital positions.

2.7. Cultural and Symbolic Environment

The material is a cultural and symbolic environment, from which an individual "gets" the grounds for his identity. The modern era, according to J. Baudrillard, is the era of symbols and hyperreality, the era of simulation and simulacrum. "Simulation is not a simulation of a territory, of essence or substance" [2, p.75]. It is the product of a reality's model without any reality or origin. It's a product of the hyperreal world. "The territory doesn't precede the map and doesn't survive it. Today the map precedes the territory" [2, p.97].

J. Baudrillard introduces the concept of simulacrum. Simulacrum is a sign isolated from those events and phenomena which it previously belonged to. According to the philosopher, there are different types of simulacra. In today's world, the simulation of simulacra can be based on information, models, imitation. It's extremely difficult to determine the true identity of people living in hyperreality, as they are essentially just performing a lot of social roles. And it seems that only a catastrophe can change this situation – only interference from the outside can break the world of signs, symbols, simulacra. But, in fact, an adequate reflection of identity on the internet is possible. But it's possible only by means of activity aimed not at the image of oneself, but at an external object, as well as by means of interaction with others.

I. Goffman's theory of frames can also be used in the context of the cultural and symbolic environment of a contemporary subject [7, p.76]. The frame offers the audience a certain fragment (textual, visual) in which a certain specific meaning is already laid, and this meaning must be "caught" by a reader (viewer, listener). Later he reproduces it as his own understanding in any actions, deeds. So, the frame determines the identity of the subject in a certain way.

In our opinion, such a model of the personality's identity system determines the grounds which are especially important for a contemporary subject.

3. Conclusion

We can present the structure of our personality's identity system as the following one. There are six links in it, and we imagine it as a circle. First, we put a man in the center of it, then introduce creativity as the main form of his activity. Then external functions of the system expressed by communication are added because communication organizes the activity. The man realizes himself and his inner essence by means of reflection. That's why we present reflection as the internal functional structure in the next stage. Values ensure the flow of the man's creative activity – they make it clear and replete – and we call this sphere the organization of the material. It's the fifth link of the model. As our modern man lives in a virtual reality and symbolic environment, this symbolic surrounding represents the vital ground for him or the material according to our model. It's the sixth link.

We use this model because it emphasizes the most significant attributes of our contemporary individual, and it demonstrates how these attributes are related to each other and why they are really essential for the person. If we mention some characteristic features of modern society we have to admit that the vital grounds of the modern person's identity differ from the grounds of people of previous civilizations. And our model is an attempt to highlight such differences.

It's obvious that a contemporary man doesn't have conditions that would provide him a full and correct perception and understanding of himself. Self-identity is being destroyed. Social interaction doesn't help a person in his self-realization, but rather introduces new difficulties. The reasons for this problem lie in the processes implemented in modern society.

One of these processes is the development of mass culture with its commercialization and consumerism. In a consumer society, culture is a product of consumption. The changes in its content are determined by the laws of the market. And when the usual boundaries are erased, cultural identity is destroyed. Mass culture offers people a so-called "selection of identities" (J. Baudrillard). "Once having passed on the other side of the mirror of alienation, structural differences quickly become a fashion," as the philosopher writes [3, p.243]. "Deconstruction of binarisms" (the term belongs to E. Goffman) or imitation of the idol, is one more characteristic feature of mass culture. It also doesn't contribute to the formation of a true identity of an individual. It exists as an imitation only.

Consumerism is also considered by P. Strawson as a factor capable of destroying personality. For P. Strawson personality is divided into many performances of social roles offered by a consumer society. "Personality is a 'goal in itself', it's a creature who has legal rights and obligations, a creature who plays certain social roles" [19, p.189]. In a consumer society, a subject reproduces himself as an object of economic demand, he undergoes fragmentation and sacralization. Instead of the desired constancy, the individual is forced into a social situation.

The subject's excessive openness to the world is one more cause of the current crisis of identity. The subject turns to his environment, and instead of real people, discovers various social roles they perform. Meanwhile, without social interaction, a person cannot realize his own uniqueness (see above).

The desire of a contemporary person to overcome the permissible and established order, the desire to live several lives in the virtual space, is fraught with the disintegration of the personality, and leads to a loss of unity. The identity-related crises facing individuals today are clear and require considerable efforts from those seeking internal self-renewal. At the same time, the cultural and symbolic environment continues to be the “habitat” of the subject, and that’s why cultural and communicative practices act as a criterion for the subject’s identity. It’s especially important for contemporary subjects to discover their identity by means of reflection and social interaction. As the modern individual tries to find himself, only creative activity can add cultural meaning to this process.

The subject’s desire to perform many social roles, the complication of cultural and historical experience, the rejection of traditional spiritual values have led to a crisis in identity, which may be expressed as depression, apathy, or the attempt to hide from real problems in the virtual space. We can avoid these processes only if we’re able to determine the grounds of identity and design a model of the identity system that better allows us to understand it. In modern research it is very important to take into account the fact that the identity of the individual must be really constructed. If we neglect this fact, we may be faced with the phenomenon of false identity or pseudo-identity. It’s also important to note that the cultural content of identity must retain its semantic meanings, otherwise we are dealing with a “person without characteristics” (R. Musil) or “parody of identity” (M. Foucault) in the world of simulacrum. At the same time, we cannot reduce the phenomenon of identity to cultural patterns only, as this would overlook such essential categories as “cognition” and “self-knowledge”.

References

- Bakhtin M M (1990) *Literary-critical Articles*. Moscow: Russian Language.
- Baudrillard J (2013) *Simulacrum and Simulation*. Tula: Tula State University.
- Baudrillard J (2006) *Transparency of Evil*. Moscow: Dobrosvet.
- Buber M (2003) *Two types of faith*. Syracuse, N.Y.: Syracuse University Press.
- Doering N (2003) *Sozialpsychologie des Internet*. Hogrefe Verlag.
- Erickson E (1996) *Childhood and Society*. St. Petersburg: St. Petersburg University.
- Goffman E (2000) *Representing Yourself to Others in Everyday Life*. Moscow, Kuchkovo Pole: Kanon-Press Center.
- Habermas I (2010) *Engagement of Another: Essays of Political Theory*. St. Petersburg: Aleteiya.
- Herder I (2013) *Ideas of the Philosophy of Human History*. Moscow: Russian Political Encyclopedia.
- Jung C (1995) *Present and Future. Analytical Psychology: Past and Present*. Moscow: High School.
- Locke J (???) *Experience about human understanding*.
<https://www.litmir.me/br/?b=235206&p=1>
- Ricker P (2008) *I'm like the other one*. Moscow: Aleteiya.
- Rousseau J-J (2008) *Discussion about the origin and grounds of inequality between people*. Moscow: Academic Project.
- Rubinstein, S.L. (2006). *Basics of General Psychology*. Moscow, Science.
- Shchedrovitskii G P (2004) *On the Boards. Public Lectures on Philosophy*. Moscow: Way.
- Shchedrovitskii G P (2000) *Organization. Guide. Management*. Moscow: AST.
- Slobodchikov V I, Isaev E I (2005) *Basics of Psychological Anthropology*. Moscow: School-Press.
- Stefanenko T G (2001) *Study of Identification Processes in Psychology and Related Sciences*. Moscow: Moscow Public Scientific Stock.
- Stroson P F (2009) *Individuals. Experience of deceptive metaphysics*. Moscow: AST.

COMPLICATIONS (COMPLEXITY) BETWEEN NORMATIVE AND DESCRIPTIVE. A CHALLENGE FOR CLARITY

Florian Çullhaj

European University of Tirana, Department of Applied Social Sciences,
Tirana, Albania

e-mails: florian.cullhaj@uet.edu.al, florianscullhaj@gmail.com

ORCID ID: <https://orcid.org/0000-0002-8321-1609>

Abstract:

This article will address descriptive and normative concepts vis-à-vis their inferential value and epistemic evolution within the social sciences. The analysis focuses mainly on the normative concept, which arises in the intersection between various disciplines of the social sciences, blending within itself a dialectic between the subjective and the objective, between the individual and the social. The descriptive concept – which acts as a link between logos *qua* language and the empirical reality – will have less elaborated analysis.

The article's purpose is convenient for readers acquainted with the field in question as well as those for whom the topic is less known. Indeed, the article is intended to address the above concepts from the point of view of the political scholar. However, during the research process, it was considered appropriate that these conceptions have an interdisciplinary heuristic reflection in order to be of value and interest to scholars of political science, philosophy, and law.

As a first step, we will present in classical form the meaning and explanation of the concepts in question, based on linguistic and philosophical dictionaries. The article also focuses on the solid definition given to the concept of normativity – understood in legal terms – by Hans Kelsen through his idea of a *Base Norm* (*Grundnorm*) and his critique of Max Weber's sociological conception of norms. Secondly, we will outline the dichotomy between the concepts of "is" and "ought" – the former analyzed by Kant as a hypothetical imperative, as a determinant of goals and actions based on desires and, the latter considered as a categorical

imperative, as a normative determinant based on reason. Another dimension of normativity is seen from the perspective of analytical jurisprudence, the dialectic created between formalists and anti-formalists in the treatment of morality, both in subjective and social terms. Finally, the emphasis will be placed on normativity in politics and in spoken language, dimensions that define the normative approach.

Key words: normative, descriptive, interdisciplinary heuristic studies, social science.

1. Clearing up the ordinary meaning of the concepts

According to the Oxford Dictionary (OD) (Hornby, 1995, pp. 788, 912), the *descriptive* explains *an idea through words; to describe something, especially expressing neither feelings nor judgments*. So, the *descriptive* is mainly related to the identical description of a solitary case. This description is of no value and is not intended to change the object under consideration.

The *descriptive* analysis of empirical facts is recorded at once or at various times to give a more objective explanation of the study in question. There are few variations that this concept assumes as a cognitive tool, a prerequisite that leads to the relative exhaustion of its conceptual isolation.

Further attention, in this case, requires the concept of normativity, which according to the OD is *defined as the setting of standards or linguistic*

rules, as well as of behavior, which *ought to be followed*; for example, a normative argument, a normative grammar. Another synonym of the normative concept is the *prescriptive one* (Bealy, 1999 p. 227), defined as follows: *it decides what must be done; establishes rules or gives instructions; for example, a prescriptive approach/judgment/role*. Linguistically, *it shows how people should use the language, such as Albanian's prescriptive [binding] grammar*.

From the definitions above, we gain a basic understanding of how people commonly use these words (see Murphy and Coleman (1984) regarding the use of dictionaries); therefore, the above concept requires further interpretation.

2. Law as a structure of norms

In the following, Hans Kelsen (1967) offers one of the most influential analyses of the notion of the normative. Stephen P. Turner, in his article *Explaining Normativity*, points out that Kelsen's explanatory power derives from the use of the transcendental¹ (Tebbit, 2005 p. 38; Turner 2007; Rouse 2007) argument about legal validity: describing the law as a law – as a real law – rather than as something understood as a law. In this case, a re-examination of the question of the “real law” is necessary. Whether the law is a real law is itself a normative question that ought to be decided by legal judgments that are also normative in themselves. For Kelsen, the line of reasoning ends like this: only law can validate the law as law, and therefore the validation of law requires a *Base Norm* (*Grundnorm*), which is the guarantor of legal validity. The reasoning, in this case, is transcendental in the sense that if someone pretends that there exists something called law, then one must accept the (normative) notion of legal validity. However, for there to be validity, there must be a validity-determinant which is itself a norm.

¹It is interesting to clarify this concept because many meanings circulate about it. Kant was the one who distinguished himself from other authors by defining it as follows: the term transcendental wants to be in stark contrast to the other two terms, that is, “immanent”. Something is immanent to some limit or goal if it is within them. Something is “transcendent” if it is beyond those boundaries or goals. Something is “transcendental” if it is neither inside nor outside those borders, but rather, it is just a question of the nature of the essence of those boundaries. “I call transcendental,” says Kant, “any knowledge that studies not the objects, but how our knowledge knows objects; this kind of knowledge we have is possible *a priori*. Hence, such concepts should be called transcendental philosophy”.

However, the chain of value determinants must end somewhere; this place where the chain of value determinants ends is the *Base Norm* (Turner, 2007, p. 59; Rouse 2007).

Therefore, the *Base Norm* is the more general norm taken as the norm behind the final authority, to which all the other separate norms can be attributed. This norm cannot be questioned or evaluated. Accordingly, its validity is tacitly implicit in any legal activity. It should be clarified that it is not the current Constitution of Albania, the United States, Germany, or any other country that should be the empirical object of study for *political science*. However, according to Kelsen, the *Base Norm* is a logical designation, understood as a binding formulation which the Constitution itself “must obey”. Kelsen insists that the *Base Norm* can only be an act of thought and, as such, we cannot refer to it as a norm of positive law (Kelsen 1954; Tebbit, 2005, pp. 38–39).

According to Turner, the weakness of this reasoning lies in the separation created between argument and causal fact about the existence of law – this consists in the fact that if people do not accept something as a law, then it is not a law at all. Kelsen insisted that what is considered law is also legitimate in a society, which was a normative quest for him. In this vein, Kelsen asks the question: “What is the legal status of the revolutionary order?” If the revolutionaries were in charge and proclaimed something, they called this ‘law’ and obeyed it as such. Was this a law? According to this theory, the objective clarity of the so-called *legal order* created by the revolutionaries was not sufficient. They did not include in the complementary components of validity all material that makes the law binding on legal subjects; the law of revolutionaries was not a real law. However, Kelsen himself assessed a minimum of effectiveness for the law to be considered valid. In this case, history opposed the courts that decreed that the order of the French revolutionaries was not legal. Even the most fanatical courts recognized that the former monarch's ruling had gone once and for all. This anticipation raises another question, that is, whether the law is nothing more than mere belief.

Kelsen raises a controversy against Weber, who gives a “sociological” definition of the legal order by adding the element of the degree of credibility without giving a normative judgment on the correctness of faith in the system's legitimacy. In short, Kelsen challenges the treatment of law in sociological terms rather than normative judgments. Accepting this (naturalist) definition, according to Kelsen,

means not only abandoning the philosophy of law but also giving up the law itself. This is because, in the absence of legal validity, that is, in the absence of obligation, there is no more room to discuss the law, but only the real order established by a gang of robbers. He also opts to abandon the sociology of “law” because, as he claims, sociologists have always used the normative conception of law. However, we remain stuck in the normativity of law, which becomes an inevitable challenge for Kelsen and constitutes the argument of standard regulation. He focuses on the description problem because if the normative description is the only accurate description, then no naturalistic description can apply to the “example” under consideration. However, there is also the problem of the alternative description. Weber (1954) separated the descriptive terms from juridical reasoning as “dogmatic” in his sociology (Kronman, 1983, p. 6-7). Whether the law of the French Revolution was law is a dogmatic and paradigmatic one. However, Kelsen does not believe that sociology has any reason to address these issues and clarifies this idea by arguing as follows:

The state is that order of human behavior that we call the legal order, the order to which certain types of actions are oriented, the idea to which individuals adapt their behavior. If the behavior is introduced to this order, it constitutes the object of sociology; consequently, its object is not the state. There is no sociological concept of the state beyond the legal idea. This dual concept of state is logically impossible because there cannot be more than one concept for the same object. There is only one legal concept for the state: the state as a centralized legal order. The sociological concept of current behavior, oriented to the legal order, is not a concept of the state but hypothesizes the concept of the state, which is a juridical concept (Turner, 2007, p. 60).

Kelsen never abandoned the pretensions of the preceding paragraph – the transcendental argument of the normative – but later in life, he tried to reinterpret his idea of a Base Norm radically. The idea is that *the Normativity of the legal order derives from a Base Norm of what gives validity to the legal system, making it normative*. This idea is the culmination of this analysis; the element of validity of the fundamental rule is an added element that distinguishes between law and simple order that people consider lawful.

However, Kelsen realized this could not work, not because the *Base Norm* was not needed to create the normative legal system, but because *Grundnorm* was an impossible object. Kelsen argued that legislation was necessarily a question of origin/ancestry, so the idea of the base rule, a self-existing [immanent] base rule, was inconsistent. In the end, one may wonder, “What do you value the *Base Norm* for?” If the answer is a non-normative fact, such as the simple fact of accepting the fundamental norm, the chain of reasoning leads to naturalism. If not, then it is a regression, a setback, or in any case, a closed circle, in the sense that “the *Base Norm* is that applied by legally accepted courts” (Turner, 2007, p. 60; Rouse 2007).

Kelsen concludes the analysis by arguing that the *Base Norm* is a *fiction* – a fabrication necessary in calculating legal Normativity, but a fabrication nonetheless. Kelsen realized a problem with the *explanans*, but he did not give up on the idea that the *explanandum* should be explained in normative terms. By turning the *Base Norm* into fiction, Kelsen managed to preserve this argument: fiction or not, it still is normative.

Kelsen’s theory has been criticized for emphasizing the rule of law, thus excluding political, moral, and justice issues. At the same time, he has been accused of engaging in a “logical exercise, not based on real-life,” and his theory has been portrayed as a useless mechanism in terms of the complexity of the law and legal systems. However, it has also been said that the Kelsen doctrine has a particular value. It helps us focus on the current dynamics of legal obligation and the fact that, ultimately, the officials decide how and in what way the extension of the law can affect the lives of ordinary people. Finally, we must clarify that finding the *Base Norm* in any company is a challenging task. If the *Base Norm* has no specific content and if it is, in the first place, an assumption, its role in evaluating the hierarchy of other norms can be fraught with ambiguity. Since *Grundnorm* plays a central role in assessing different norms in the system, the problems that may arise in identifying and explaining it can affect the consistency of its definition and the consistency of the hierarchy of norms — causing the removal of the concept of a legal order from its foundations (Chinhengo, 2000, pp. 43–44).

3. The dichotomy is and ought to be from a Kantian point of view

Suppose we assume, based on metaphysical naturalism, that nothing exists beyond the worldview

of the concept of “is”, which is open to empirical research. In that case, this leads to the idea that the normative concept of “ought” can also be reduced to a simple descriptive form, or this term may have no real meaning. Here a problem arises because the phenomenology of our experiences suggests that normative facts – for example, “do not lie!” – are completely different from descriptive facts – for example, “water has no color”. However, this is because the concept of “ought” is a subcategory of the concept of “is”, which separates it from the other subcategories; if we were to define it with an example, we would say: the whale is a mammal, but of a completely different nature than, say, the cat.

Once again, the dilemma is still where the notion of *prescriptiveness/obligation comes from*. The most straightforward approach to this question is to avoid the moral dimension for a moment, treating the “ought” as a hypothetical imperative. The answer to the question mentioned above rests in people’s desires. The assumption “You ought to do A if you want B”, or more precisely, “You ought to leave the house now if you want to go to the seminar on time”, does not necessarily demand a moral treatment. The words are descriptive. In this case, our *prescription* to this proposal is the source of our set of desires.

In this case, we deal with the widely accepted theory of human action or belief-desire psychology. The core of this theory lies in the fact that people satisfy their desires of the moment based on their beliefs about the best way to achieve them. So, if we are convinced of a new belief regarding the best way to satisfy our current desire, we will act (foolishly, perhaps) based on that belief. The purpose of all human actions is the fulfillment of our desires. We use the concept of “ought” to draw attention to our actions’ possible directions, which are believed to help achieve our goal. The desires are real, the goals are real, and the “ought” relationship is real. This image is so inherently attributed to nature that prescriptivity only comes together when human nature is added to this equation. Our wish list is precisely the prescriptive list that governs our actions. Therefore, “ought”, treated as prudence, is part of the meaning of the real world, the world that “is” and can be described simply in terms of desires and actions. In short, “one (prudently) ought to act A” is the functional equivalent of the truth. “Act A is equivalent to satisfying the desires in question”.

Mill has supplied a well-known “proof” of utilitarianism in this regard, which seems to simplify the confusion created between facts and norms. Mill’s

argument was an attempt to show that happiness is “the only desirable condition” as the ultimate goal in the interest of utilitarianism. However, the “proof” draws its conclusion from the factual premise that people want happiness. Here, the problem is that we cannot say that something is desirable because it would require us to affirm that we ought to desire it. This very brief commentary demonstrates how Mill passes from facts to values illegitimately (Colin 2006, p. 58).

However, what can we say here regarding the role of morality in the concept of “ought”, given that in this case, the obligation of individuals does not take into account personal desires? This view becomes particularly challenging when the treatment is done from a moral perspective. According to Kant (Rachels, 2004; Rachels, 2009, pp. 104-110; Murphy, 1970), the form of moral responsibility is not, “If you want this and that, then you have this and that”. On the contrary, moral requirements are categorical, and they take the form, “One has this and that other duty”. As demonstrated above, the hypothetical imperative is easy to understand. It requires one to acquire the necessary tools to achieve the goals we set ourselves. On the other hand, the categorical imperative, “you have a duty x ...” remains mysterious.

How can we be obliged to behave in a certain way, regardless of the goals we want to achieve? Kant answers this question by arguing that just as hypothetical imperatives are possible because we have desires, categorical imperatives are possible because we have reason. Categorical imperatives bind rational actors simply because they are rational. Why does this happen? Kant argues that categorical imperatives derive from the principle that any rational person can accept: the Categorical Imperative.

In his work *The philosophy of right*, Kant (2004) (Murphy, 1970) defines the categorical imperative in this way: *Act only according to the maxim that you may wish, at the same time, to transform it into universal law*². Kant argues that “if duty is a concept with meaning and real jurisdiction over our actions, this cannot be expressed in any way by hy-

² For Kant, the categorical imperative is an abstract a priori law, which guides the moral values of the maxim from which we operate. The maxims, in turn, determine the moral value of the actions themselves. Therefore, an action is morally good if it is done for the sake of a morally good maxim; and a maxim is morally good if it conforms to the categorical imperative. Kant defines three of these maxims and, according to him, they decide the concrete cases and how we should act in such cases.

pothetical imperatives, but only by categorical imperatives, the essence of which must contain the principle of every task (if present)” (Bell, 2002, pp. 735–736). In this way, the primary function of moral principles, which Kant believed to have a binding force, is to regulate and evaluate behavior. However, Kant’s critics think that Kantian ethics as a whole can be discredited because the “universality test”³ does not give the correct result for some maxims. At the same time, his defenders try to devise an interpretation of the criterion of universality, which enables them to serve as a universal method of moral reasoning and derive the correct result for challenging cases.

As Kant uses it, this universality test is nothing more than a kind of acceptable test for the formulation of maxims. It cannot be exercised as a basis for positive moral orders or any moral duty. This test shows that committing suicide or making false promises based on the maxim specific to the situation is wrong. That being said, we cannot say that there are no other maxims that pass the test of universality, including suicide, making false promises, and so on. Using this test, we say that suicide and false promise are generally wrong actions. Therefore, we must state that there is no possible maxim to include these facts, which may be desired as a universal law. Kant did not try to do this as there is no way such a thing can be done (Wood, 2006, pp. 292–293; Murphy, 1970).

To make the prescriptiveness of morality as straightforward as possible – in terms of normative jurisprudence – an elaborated analysis of the tension raised between formalists and anti-formalists follows.

4. The nature of morality and its application to the law

For formalist thinkers, morality is more a question of a person’s attitude toward a problem than a question of a characteristic of the problem itself. R. M. Hare states that we can identify the moral judg-

ment quite independently of the content of that judgment, that is, independently of its object (Murphy and Coleman 1984, p. 83).

According to Hare, a particular person can be said to have given a moral judgment on a question if that moral judgment manifests three formal (i.e., neutral in content) characteristics: 1) it commands – that is, makes a recommendation to himself and others as to how they should act; 2) it is generalizable – that is, it is intended to apply not only to the case for which it was given, but also to similar cases; and 3) it is dominant – that is, it takes precedence over all other processes in cases of conflict. So, let us examine the judgment “that there is a mixture of red and green in the world”. Our judgment, although unnatural, is part of our morality (and not just our aesthetic preferences) if we call it dominant over other values (e.g., we justify the slaughter of people on lawns to achieve the desired red-green effect). It is also part of our morality if we agree to the condition of universality – for example, one is willing to support the slaughter even if he is himself the victim, or someone else he cares about is. Of course, this is not a strong, beautiful, or welcome morality, but it is one’s morality as long as the formal conditions set out are met. This theory provoked a solid critical reaction from anti-formalist author GJ Warnock, who argued that Hare’s characterization of morality turns it into a highly personal and subjective matter and fails to grasp morality’s essence as a social institution.

Warnock and other critics of formalism interpret morality as a social product that was developed to address recurring problems caused by the existence of the human race – problems that acquire an actual moral content. According to Warnock, we are selfish, vulnerable, limited beings, living in a hostile world with many shortcomings; we must face this truth in order to survive in our society. In short, the techniques we use to ensure our coexistence as human beings constitute our morality, or at least that part of it which has a social dimension.

The moral problem for Warnock is that problem which implies, in a meaningful way, those vital interests and concerns that human beings have (or should have) as social beings. In contrast, moral reason is that reason which binds an action or a practice of interests and concerns. Therefore, in such a theory, the claim that “a balance of red and green will be created” cannot be a moral reason for slaughtering people in the meadow, since the creation of that aesthetic effect is not – at least as human beings are now built – a step forward in favor of the inter-

³ Although considered a universal eligibility criterion for any disguise, the universalization test is systematically subject to counterexamples – not only for positively false maxims (maxims that appear to be morally incorrect but have the ability to pass the test), but also for false negative maxims (maxims which are morally acceptable but which cannot pass the test). Negatively false maxims are devised when the formulation in which each turns into universal law is without any internal contradiction, but it clearly does not break any universal moral law constructed in the most reasonable way imaginable.

ests of human beings, as social beings. However, the fact that “this would cause people pain, kill and terrorize them” is a reason that proscribes the massacre of people within this theory. Therefore, for our purposes, we can temporarily accept the following: Moral principles are principles that are concerned with establishing and maintaining the necessary social bonds between people, related to problems or interests that are vital to these people (for example, life and death) (Murphy and Coleman 1984, pp. 83).

However, some concern arises because within one culture and across cultures, one of the most salient features of moralism has been diversity rather than unanimity. Any support for a specific value, such as freedom, can meet equally convincing and robust support for another competing value, such as tradition or social stability. It is not clear whether there is a simple proof of resolution for numerous debates of this nature. In short, due to the seemingly unsolvable nature of moral disputes and controversies, moral demands can easily give us the impression that they lack objectivity and are nothing more than the imperatives of personal, cultural, or class bias (Murphy and Coleman 1984, pp. 84–85).

In the following, we will address the normative dimension of political reality and the normative meaning of politics.

5. The normative trend in political science

Since its inception, the normative dimension of politics has been the subject of political science, particularly in political philosophy and normative political theories. The characteristic of this understanding is that politics is the activity for realizing values and norms given from the outside and determining them. Regulatory ideas, social self-reflection concerning the social and political order, are seen as the normative dimension of political reality. Fundamental values, such as freedom and justice, are included among the regulatory ideas and human imagination, which becomes the criterion for evaluating the political order.

People create an image of what “is” and what “ought to be” the political order in any society. Consequently, normative ideas express what should be politically respected and how society and political order should function. Furthermore, regulatory ideas emerge as the legitimizing basis of the political order by providing guidelines for political practice – the task facing the political order – and the creation of the conditions for the “full realization of man”. In short, politics is precisely the human activity for maintaining good social order, which makes possible

the full realization of man. However, even though the normative sense of political morality occupies a central place, this does not mean that political morals do not allow the breaking of any moral rule. The infringement of a moral rule is permissible only for the sake of a higher moral order.

This view shows a *sui generis* formulation of normativity in politics, compared to the forms described above. The applicability of normativity to politics is no longer based on categorical universalist grounds, but rather on hypothetical situational ones. For example, a politician who understands politics in a normative way can lie, but only for the sake of a higher value than telling the truth – given the circumstances of a particular concrete case. In this case, political reason outweighs moral reason, and in certain situations, political reason takes precedence over moral reason and argument. In short, political actions can be seen as legitimate from a “political” point of view even when they may be “morally” illegitimate (Feraj, 2000, p.81).

We have reached the last section, which will focus on normativity in language and how the latter modifies our behaviors. To illustrate this aspect as objectively as possible, some authors use as an explanatory element the observation of the behavior of animals (or, as it is otherwise known, behaviorism and the experimental psychology of animals).⁴

6. Language as a condition of normative behavior

Each of us who has visited a zoo or watched a television show has seen monkeys vocalize and other monkeys respond by paying particular attention to vocalism, offering help in the form of pest elimination, or helping in times of aggression. That usually occurs between family members in several animals, so the learning problem is rooted in many other mechanisms. Studies have found that the relationship between giving and receiving help between family members was zero, while for members out-

⁴ In addressing the behavioral approach to political science, Feraj uses Edward's experimental psychology as a paradigm. L. Thorndike's. behaviorism required the development of a psychology constructed like the natural sciences i.e. an “objective psychology” that is limited to empirically observable, physically quantifiable behaviors. The aim of this approach was to search for smaller units of behavior or “molecular behavior”, preferably under laboratory conditions. Behavior was conceived as a learning process according to the stimuli-response (S-R) scheme and was closely related to conditioned reflexes in animals, studied by Ivan Pavlov.

side the family, there was the possibility of learning and reciprocity. “The monkey would increase his sympathy for another monkey outside his family circle if the latter behaved socially towards it and responded by asking for help in the recent past” (Turner, 2007 pp. 62–64; Rouse 2007). In short, monkeys record these behaviors for non-family members and treat them equally. Here we have a set of behaviors such as control, vocalization, and support in the case of aggression, so it seems that the connection between them lies in registering these needs. The penalty for failure to provide such aid falls on those who do not return the support.

We have spoken here about all kinds of behavior – but not at all about normative language unless a normative interpretation is given to the vocalizations of monkeys. However, it does not seem necessary to invoke any additional concept of normativity; it is essential to place things correctly in a causal sense. Monkeys need to “understand” in order to respond correctly to vocalisms and to learn them. If one monkey does not respond to the request for help, others will not learn to respond to its request for help, which can also be registered as reciprocity.

So far, nothing shows that causality has been overcome. Everything has been explained regarding who will come to the rescue in response to someone’s actions. Concerning this example, normative thinkers believe that actual behavior is not enough; it is necessary to establish a normative relationship. The mere connection to causal actions and punishment of people for accidentally doing the wrong thing when they fail to behave correctly is not aligned with a principle of fairness because fairness is based on more than just the observation of behavior.

Non-normative thinkers have a different point of view, and the example of monkeys is the most straightforward case. For them, something that happens causally allows us to choose to describe it normatively. However, it is also true that whenever something normative happens, something else occurs causally; that is, something happens in the constructed world of causal interactions that corresponds more or less to “normative” facts or explained facts. These facts pertain to actual human interactions. Winking is different from merely closing the eye because the individual has the eyelid under control; promises differ from expectations because the promising person does something that turns the expectation into a commitment. Courts usually rule on facts that justify a claim that a promise has been kept. However, from the non-normative

perspective, it is practical knowledge in the sense that we know what usually happens in everyday life when the usual order of events is disrupted. For example, we can take action based on this practical knowledge when a promise is not kept.

The idea that everything “normative” has to be learned comes into play. In attempting to deconstruct this idea, Joseph Rouse (2007) argues that learning to act, even “correctly,” is inevitably a socialized behavior in the causal world – something learned as a regularity, a complex regularity, sometimes with a high degree of causal probability and always with exceptions that lead to other consequences. These exceptions – for example, when things go wrong – correspond to the problem of “correctness”. Legitimacy is also an activity that must be learned; it must be understood in more or less predictable expectations about legal actions. If justification includes a notion of normativity, then a kind of transition is required from a pre-normative to a normative state. As in the case of the transition from the prelinguistic to the linguistic, this shift consists of learning in the pre-normative state. Thus, what is taught must also consist of pre-normative facts. That is why Wittgenstein introduced the concept of natural indicators concerning intentions and errors: natural indicators are pre-normative and allow for “normative” learning.

Conclusion

In conclusion, the heuristic value and inferential load of the descriptive concept in its use in the social sciences remain unchanged. In contrast, in terms of normative concepts, we see a variety of uses between the social sciences and beyond. For example, it is normal for people to wake up in the morning and sleep in the evening, so the phenomenon that statistically occurs most often is the norm. For sociologists, the norm is a cultural phenomenon. They establish a link between social behavior and its consequences while at the same time recognizing a normative character in these cultural norms. As a result, different societies may have different norms and different reasons for not adapting to them. However, Kelsen outlined the law as a framework of norms, distinguishing between appropriate and inadequate norms of conduct.

Furthermore, we have seen how Kant supported the obligation to carry out the task based on reason rather than desire. In political science, political theorists formulate normative judgments, assuming the best order and the highest values. However, after Machiavelli, morality in politics came to the fore,

with political reason prevailing over moral reason. Eventually, Josef Rouse saw language as the way we, in the pre-normative state, learn to behave in a normative way in a completely causal world.

To sum up, it is clear that discovering the moral basis of laws and norms is a complex task that becomes more complicated when we consider the meaning and implications of the concept of normativity. The possibility of dividing the normative and descriptive order, especially in practice, also remains challenging. Many intervening variables position the norm in every human activity (see above examples). We believe that the regulation of such activity is determined partly by the strength of logic and partly by the intricate web of human behavior in society. As provocative as the analyses of norms in jurisprudential terms must be, a sort of alliance that arises between facts and values cannot be avoided. Accordingly, there cannot be facts without meaning, and these facts cannot have meaning without practical commitments, which require norms to govern our behavior. So, while the normative and descriptive dimensions of experience are often held in stark contrast, this dichotomy is illusory. There are not two separate orders, normative and descriptive; rather, facts and values invariably interact with each other in a complex way.

References

- Bealy F (1999) *The Blackwell Dictionary of Political Science. A User's Guide to Its Term*, Great Britain, Blackwell Publishers
- Bell D (2002) *I. Kant. The Blackwell Companion to Philosophy*, 2nd. Ed, United Kingdom: Blackwell Publishing.
- Bix H B (2018) Kelsen, Hart, And Legal Normativity, *Revus* 34. <https://doi.org/10.4000/revus.3984>
- Chinhengo A M (2000) *Essential Jurisprudence*, 2ed. Cavendish Publishing Limited.
- Colin B (2006) *An Introduction to Political Philosophy*. Cambridge: Cambridge University Press.
- Feraj H (2004) *Shkenca Politike*. (Një Hyrje), Tiranë, Pegi.
- Hart H L A (1961) *The Concept of Law*. Oxford: Clarendon Press.
- Hornby A S (1995) *Advanced Learner's Dictionary*, Oxford, Oxford University Press.
- <http://Pos.Sagepub.Com/Cgi/Content/Abstract/37/1/57>
- Kant I (2004) *Themelimi i Zakoneve Shoqërore*, Përkth. Shqip A. Koka, Tiranë, Dritan Tirana.
- Kelsen H (1967) *Pure Theory of Law*. Lawbook Exchange.
- Kronman A T (1983). *Max Weber*, Jurists: Profile in Legal Theory, Campus Juridico.
- Luban D (2001) Natural law as professional ethics: A reading of fuller, *Social Philosophy and Policy* 18(1):176–205.
- Mërfi Xh G, Koleman Xh L (1992). *Filozofia e së Drejtës*, Përkth. Shqip R. Hysa, Tiranë, Lura.
- Murphy J G (1970) *Kant: the philosophy of right*. London: Macmillan.
- Murphy J G, Coleman J L (1984) *The philosophy of law: An introduction to jurisprudence*. Totowa, NJ: Rowman & Allanheld.
- Murray J. E Jr (1965) *Introduction to The Morality of Law*, 10 Vill. L. Rev. 624. <https://digitalcommons.law.villanova.edu/vlr/vol10/iss4/2>
- Rachels J, Rachels S (2009) *Elementët E Filozofisë Morale*, Përkth. Shqip E. Hoxholli, B. Shehu, Dita 2000, Tiranë.
- Rouse J (2007) *Social Practices and Normativity*. *Philosophy of the Social Sciences* 37(1):46–56.
- Singer P (1963). *Hart's Concept of Law*, 60 J. of Philosophy 197: 210
- Tebbit M (2005) *Philosophy of Law. An Introduction*, 2nd Edition, London and New York: Routledge Taylor & Francis Group.
- Turner S P (2007) *Explaining Normativity, Philosophy Of The Social Science*, Sage Publisher, <http://Pos.Sagepub.Com/Cgi/Content/Abstract/37/1/57>
- Turner S P (2007) *Explaining Normativity, Philosophy of the Social Science*, SAGE Publisher
- Waldron J (1994) *Why Law – Efficacy, Freedom or Fidelity?*, *Law and Philosophy* 13: 259–284.
- Weber M (1954). *Max Weber on Law in Economy and Society*. Cambridge: Harvard University Press.
- Weber M (1954). *Max Weber on Law in Economy and Society*. Cambridge: Harvard University Press.
- Wood W (2006) *Kant's Formulations of The Moral Law*, In G. A. Bird, *Companion to Kant*, Cit., Blackwell Publishing Ltd.

CASES OF MISUNDERSTANDING: REASONS WHY CONVERSATIONAL IMPLICATURES MIGHT FAIL

Elena Teofilova Tsvetkova

Institute of philosophy and sociology, BAS
Sofia, Bulgaria
e-mail: elenattsvetkova@gmail.com

Abstract:

The article reviews cases of unsuccessful implicatures and possible reasons for misunderstanding the speaker's meaning. The focus is on explaining misunderstanding with the graded salience hypothesis. Under review are examples of cases where the conventional meaning and intended meaning differ thus resulting in a misunderstanding. The graded salience hypothesis offers an explanation of how we understand expressions based on personal preference priority, so the main argument made is that in cases of misunderstanding the speaker and the listener prioritize different meanings attributed to the same expression due to differences in knowledge, personal background, familiarity with the expression in particular usage, etc. There are also cases of scalar implicatures where the inference meaning is not always the same. In such cases, the speaker's meaning could be misunderstood if the listener considers a different meaning of the scalar expression as more salient than the one the speaker wishes to convey.

Key words: conversational implicature, pragmatics, misunderstanding, Grice, graded salience hypothesis.

1. Grice's theory about conversational implicatures is based on one very important prerequisite – the cooperative principle¹, meaning that

according to him, interlocutors are intentionally cooperative to ensure successful communication. Yet, miscommunication sometimes happens. A miscommunicated message is wrongly perceived by the listeners, as they could not interpret the actual meaning of the speaker; thus a miscommunication might occur in everyday situations, not only in philosophical debates, as I will demonstrate in the following text. There are several reasons for miscommunication, but here I will focus on misunderstanding conversational implicatures.

What Grice calls conversational implicature is an instance of someone saying something different than what they actually intend the hearer to understand. In most cases, participants in discourse do not find it difficult to understand each other. Even though the speaker could utter something totally irrelevant to the current conversation, the hearer would still understand the assertion and the flow of the conversation would continue uninterrupted. Here I will review cases of a failed implicature in an effort to list possible reasons for misunderstanding the speaker's intended meaning. The main argument I will present is that in cases of misunderstanding the speaker and the listener prioritize different meanings attributed to the same expression due to differences in knowledge, personal background, familiarity with the expression in particular usage, etc. I will use the graded salience hypothesis to explain this relation,

hearer to infer the meaning behind his or her words" (Yoshida, 2014, p. 51).

¹ "The Cooperative Principle states that speakers generally assume that their conversation partners will be cooperative: truthful, relevant, succinct, and clear. When a speaker violates one or more of the four maxims (quantity, quality, relation and manner), the speaker is inviting the

emphasizing the fact that people understand expressions based on personal preference priority. Following Grice's definition of a speaker's meaning, I will present three reasons for a failed implicature that results in a misunderstanding, and illustrate the point with a couple of examples.²

We could understand what every single word in a sentence means and still misunderstand what the speaker wishes to say with that sentence. The expressions that are used could be understood differently: two native speakers could consider different meanings of a word more salient, and thus the use of this word could result in misunderstanding. The graded salience hypothesis offers an explanation of how we understand expressions based on personal preference priority. The salient meaning of an expression is the most obvious one. It may lead us to grasp the meaning of a phrase independently of context – but that doesn't mean that it's entirely context-free. The most salient meaning is determined by how often we encounter that usage of the expression. However, misunderstanding may occur when conversation partners have different experiences with the same expression. Our previous experience in a similar linguistic situation or social situation affects how we understand an expression, and it is true that not only the consistency but also the recency of the encounter with the expression has something to do with the way we interpret that particular discourse. Such situations can occur with words or phrases that have multiple salient meanings. A misunderstanding refers to differences in meaning that one statement may have for two interlocutors i.e., for a speaker and for a hearer. Levinson believes that "mutual knowledge" of the world between interlocutors is necessary for their communication to take place successfully, that is, to reach the "common" meaning of the statement – or, in other words, the listener correctly understands the meaning of the speaker's statement (1983: 16; Janković-Paus, 2017, p. 30). For the purposes of this paper, it is irrelevant to discuss cases of misunderstanding where interlocutors experience difficulty hearing each other properly or speak different languages, etc. However, other things can factor in misunderstanding – ambiguity,

equivocality, usage of idioms, novel metaphors, etc. Both interlocutors must have some common knowledge or shared beliefs for successful communication to occur; but even when this condition is met, two speakers could consider different meanings of an expression more salient.

The difference between not understanding and misunderstanding should be addressed (Hirst et al., 1994, p. 215). Participants bring to a conversation different goals and beliefs, which affects how they interpret each other's utterances. This may lead to not understanding or to misunderstanding. By not understanding, we mean a participant's failure to find any complete and unique interpretation of an utterance: either the hearer can find no acceptable interpretation or has found several and is unable to decide which one is applicable, but in either case, the hearer is aware that s/he does not understand. As for misunderstanding, at least initially, the participants in the conversation may not be aware that it has occurred. In the case of a misunderstanding, the participant reaches an interpretation that she believes is complete and correct, but which is, however, not the one that the other speaker intended her to reach. It is possible that a misunderstanding will remain unnoticed in a conversation and the participants will continue to talk at cross-purposes. The alternative is for them to notice the misunderstanding and address it, such that the conversation may continue in a single direction.

2. Successful communication relies on hearers inferring speakers' intended meanings. Miscommunication occurs when a hearer fails to recognize a speaker's communicative intention. "Conversational implicatures require the hearer's pragmatic competence to recognize the speaker's true intention" (Yoshida, 2014, p. 51). Grice's definition (or rather an explanation) of meaning could be used to pinpoint the conditions for understanding an expression in his theory. What Grice calls speaker's meaning is captured in the following example: when one utters the sentence 'I am blue' one means 'I am sad.' Grice suggests that "by uttering 'I am blue' one means that one is sad if one utters 'I am blue,' intending:

- 1) that the audience believe that the speaker is sad;
- 2) that the audience recognize the intention in (1) – to share their feelings with the listener;
- 3) that this recognition be part of the audience's reason for believing that one is said" (Grice, 2001, p. 5).

² Here, I focus on cases of miscommunication that can be resolved (and in some cases, be resolved quickly in the current flow of the dialogue), and I will not look into cases of deeper misunderstanding – that is, cases that are "not only difficult, but even impossible, because there is not, and cannot be, any common platform where all the involved parties can meet..." (Haugh, 2008, p. 220).

So here are the key components or conditions that need to be fulfilled for a sentence to be correctly understood by the listener. In addition, this shows us three stages where miscommunication might occur – the audience may not understand the meaning of the idiom, and therefore fail to grasp the meaning of ‘I’m blue’; the audience may mistakenly believe that the speaker wishes to convey this message in a literal way (this particular utterance has a very salient idiomatic meaning, but not all metaphors are as strong, which we will discuss in a bit); if the audience fails to grasp the idiomatic meaning of the utterance, the listener will not have any grounds for believing that the speaker is sad (i.e., if I think that the speaker does not want to tell me that they are sad by uttering ‘I’m blue’, I have failed to recognize the intention behind the utterance; therefore, I will not have a reason to believe that the speaker is feeling sad).

Grice’s distinction between natural and non-natural meaning [mean_{NN}] (Grice, 1989, p. 215) may be used to distinguish between implicatures that could potentially be misunderstood and those that most likely will be understood correctly. Here is an example to illustrate this: in the sentence, “He got mad and he saw red”, the phrase ‘he saw red’ is clearly used in an idiomatic sense, but in the sentence, “He saw red and he stopped the car”, the audience can never be sure if the phrase is used in a literal sense (maybe he saw a red light) or in an idiomatic sense – he got angry and decided to stop the car. If we are unsure of the effect that the speaker wishes to produce with their utterance, then we are talking about a non-natural meaning. For someone to mean something by an utterance, they must intend to produce a certain effect in the listener and this effect needs to be recognized by the listener (Grice, 1989, p. 220). The difference between natural and non-natural meaning is that non-natural meaning may be understood in two different ways. Basically, the intended effect is, “in some sense” as Grice puts it, controllable by the audience. The listener may accept or refuse to do what the speaker intends – believe in something, go somewhere, etc.

3. Yus recognizes two different types of misunderstanding that we can compare to Grice’s distinction between natural and non-natural meaning: “puzzled understanding”, caused by the lack of necessary contextual assumptions, and “an alternate understanding”, caused by the erroneous use of alternative contextual assumptions as well as the hear-

er considering it unnecessary to search for a meaning other than the explicit one (Yus, 1999, p. 511). He presents an example of a *missing implicature* where the listener can understand that there is some implicit meaning that the speaker wishes to convey with their utterance, but is not familiar with it, and therefore cannot grasp the speaker’s meaning. Here is the example he gives (Yus, 1999, p. 512):

- A. Nice cat! Is it male or female?
 B. It’s three-colored.
 A. So what?
 B. Never mind. It’s female, actually.
 (Implicature) All three-colored cats are female.

Sometimes when an ironic statement is understood literally, it could be because the hearer chooses not to continue searching for the implicit meaning of the utterance, as they believe that the explicit meaning is relevant to the conversation. Here is the example, given by Yus (Yus, 1999, p. 512):

- [passengers A and B sitting together on a train. After a while, they strike up a conversation. A is reading a paper and makes a comment on one of the headlines]
 A. Listen, it says here that sixty percent of women are still unemployed in this country!
 B. Yeah! Keep them in the kitchen where they belong!
 A. Do you think all women should be housewives?
 B. Of course not! I was only joking, for God’s sake!

Since the tone of B’s voice does not necessarily indicate that this statement might be uttered ironically, A understands (mistakenly) that B means this literally. This is also due to the fact that many people believe women should be housewives, which could apply to this situation, since A does not know B all that well. A meaning of a word or an expression is considered salient if it can be retrieved directly from the mental lexicon. According to the graded salience hypothesis, when processing irony, the salient meaning is initially processed and then (when it is judged that it does not match the context) the less salient ironic meaning is activated. In the example, the listener (A) stops at processing the literal meaning of the statement without considering that it might be used in the ironic sense because the context does not provide any clue that this could be the case, and

therefore, the speaker's pragmatic presupposition that most men believe women should be housewives provides a context of interpretation.

4. If we do not share the speaker's pragmatic presuppositions (the assumptions he or she takes for granted in speaking) (Stalnaker [18], [19]), we might misunderstand him or her (Sbisa, 1999). Other types of misunderstanding are caused by the lack of understanding of the pragmatic function of an expression. For example, when one responds to a request by saying, "It will be difficult to achieve this result", sometimes 'difficult' means that additional effort should be put in, but in other cases this word is used as a way to refuse the request.

If we consider this example, we could create a parallel to Horn's theory about scales and the possibility of scales overlapping (Horn, 1969, p. 102). Here is the example he gives to illustrate this point:

- a. Brigitte Bardot is only pretty,
- b. (...she isn't beautiful.)
- c. (...she isn't intelligent.)

His claim is that the two possible continuations indicated in the example define a "true ambiguity in (a), rather than merely a vagueness of the only clause."³ Such ambiguous expression is difficult in a sense if we consider the fact that the literal meaning and the idiomatic meaning are equally salient. So, two scales could be considered <difficult, easy> or <difficult, willing>. The context could help to process the meaning of difficult, but this is not always the case, because sometimes the speaker's intention may be to refuse the request, but the hearer could be hopeful that the result will be achieved and fail to grasp the speaker's meaning. Here is another example of such an expression, only in this case it is not a single word, but a combination of words that has two salient meanings.

1) The last thing I want to do this week is to go to the grocery store.

- (a) The thing I want to do last before the week ends is to go grocery shopping.
- (b) The thing that I do not want to do this week is to go grocery shopping.

Let's review an example with scalar implicatures to illustrate the effect the discourse context has upon understanding the speaker's meaning. There are cases where a certain expression might be interpreted in two ways, which would lead to different interpretations of the entire utterance. For example, "You shouldn't be too upset about failing some of your exams; it's much better than failing the whole lot." If the phrase 'some' is understood as 'some, but not all and certainly not many', this statement would be considered reassuring. But suppose this conversation started with something like: "I failed some of my exams", and the speaker here means to say 'quite a few actually'. In that situation, the listener did not interpret the phrase 'some' properly, and his sentence actually may cause more anxiety in the speaker. In this case, miscommunication is caused entirely by the speaker's intent – it could be called a pragmatic strategy not to disclose the complete information and put herself in an awkward position. There are other examples with such ambiguous expressions that could be given to illustrate how the graded salience hypothesis could be applied to explain this phenomenon. Let's review the following dialogue:

A: What is the weather like over there?

B: We still have some cold days.

[implicature option 1] B: Mostly it is warm outside.

[implicature option 2] B: Actually, most of the days it is still cold.

Depending on the context, the expression could mean two different things. If the speaker and the hearer are used to different types of climate, they could consider this sentence to mean either one of the two possible implicatures, so depending on personal experience with this expression, they could grasp one of the two meanings as more salient than the other.

5. The graded salience hypothesis does not consider the salient meaning to be defined by context. An expression has a salient meaning in one's mental lexicon, and in a specific context a word or phrase with more than one salient meaning can be processed according to the context. These two processes run parallel to one another. Salient meanings are

³ Horn uses the term "vague" about the "only clause" in the sense that the meaning of the only clause can be established depending on the position of the expression in the sentence. For example, there is a difference in the meaning of "Only Muriel voted for her husband" (which could be completed with '...no one else voted for him.') and "Muriel voted only for her husband" (which could be completed with '...she didn't campaign for him.') or with '... she didn't do the laundry'. In the example, it is evident that if it is not clear what the range of the clause is, there is a vagueness about the meaning of the word (Horn, 1969, pp. 101-102).

processed automatically, irrespective of the contextual information and strength of bias. Although context effects may be fast, they run parallel and do not interact with lexical processes initially.⁴ In the previous example, “He got mad and he saw red”, the phrase “He got mad” provides a context that helps to process the meaning of “He saw red” as a synonym for “He got angry”, rather than in the sense that “He saw a red object”. Both meanings might be equally salient, but the context helps to run a parallel process and grasp the proper meaning of the expression.

Disambiguation is given as an example of a possible misunderstanding. Padilla Cruz gives the following example: ‘They are hunting dogs.’: [They are [hunting dogs] vs. [They are hunting] [dogs] (Padilla Cruz, 2017, p. 22). The reason behind such misunderstanding, as he puts it, is “speakers’ egocentrism, which prevents them from taking into account hearers’ perspectives and, hence, how they might interpret what is said”. The speaker is relying on personal knowledge and beliefs when making a statement without considering that the listener may accept the different meaning of the expression as more accessible and applicable in the context. The graded salience hypothesis explains this phenomenon very well. Different speakers have different “history” with an expression and how it has been used in previous situations, so for this reason they consider one meaning more salient than the other.

Hearers follow the path of least effort and maximum benefit and stop upon finding interpretative hypotheses satisfying their expectations of relevance (Wilson 1999; Wilson and Sperber 2002, 2004). This procedure is an example of naïve optimism (Sperber 1994), a simple and commonsense processing strategy that is almost automatically deployed (Padilla Cruz 2012). A naïvely optimistic hearer presupposes not only the speaker’s benevolence and competence, but also his own competence as an interpreter. Unfortunately, naïve optimism may not lead to the actual informative intention (Padilla Cruz, 2017, p. 31).

⁴ “For instance, a prior occurrence of a word semantically related to an immediately following word may affect ease of processing of that word. Thus, in ‘I needed money, so I went to the bank’, the prior occurrence of the word money may speed up activation of the financial institution meaning of bank. In ‘Standing on the riverbank, I saw some fish’, the word river may facilitate activation of the riverside meaning of bank. This kind of facilitation is usually referred to as priming. It is attributed to the automatic spread of activation between related meanings in the lexicon” (Giora, 2003, p. 24).

Rachel Giora explains how implicatures are processed based on the salience of the words. The compositional meaning of a sentence would not be salient, since it has not been lexicalized. Following the principle of compositionality, Giora suggests that a sentence would be processed more easily if the constituents of that sentence have salient meanings. “Although the sum of the components’ meanings is not listed in the mental lexicon as a discrete unit, when integrated into a sentence, this compositional meaning will be more accessible than is the compositional meaning of an equivalent sentence whose intended meaning hinges on the less salient meanings of its lexical entries” (Giora, 2003, p. 20). For this reason, in ironic contexts, for example, the salient meaning of the sentence gets activated initially and the ironic meaning is processed only after the listener has determined that the literal meaning would not be relevant to the context of the situation. The same argument is to be made for other kinds of conversational implicatures, not just ironies. There are, however, some implicatures that have become conventionalized, and are, therefore, salient (e.g. kick the bucket; tell me about it). Levinson in the spirit of Austin suggests that we should talk about three layers/levels of meaning with regard to one sentence: the sentence-meaning (to be explicated by the theory of grammar in the larger sense); the level of speaker-meaning (to be explicated by a theory of pragmatics, perhaps centrally employing Grice’s notion of *meaningnn*); and a medium layer of utterance-meaning that is formed by the conventions of language use/ habits of use, etc. (Levinson, 2000, pp. 22-23). This utterance-meaning layer is a part of the reason why such expressions like *Good luck*, *Bless you*, *See you later* convey their literal meaning and also simultaneously perform habitual everyday rituals. It appears that the salient meaning of such conventionalized implicatures is related to the idea of utterance-meaning. In that case, a misunderstanding might occur on the level of speaker-meaning, but not on the level of utterance-meaning, since it is a convention. If an expression of that sort is used in another way (for example, in a literal way rather than in terms of its idiomatic meaning, which is more salient) a misunderstanding might occur – but this will be a matter of speaker-meaning.

According to the graded salience hypothesis, processing an utterance such as “What a lovely day for a picnic” should activate its salient, literal meaning (‘nice day’) initially, not only in a context that predisposes one to assume its literal meaning (e.g.,

sunny day), but also in the context the predisposes one to assume the ironic meaning (e.g., stormy day). However, in the literally biasing context, it should be the only one activated. In contrast, conventional ironies whose ironic as well as literal meanings are coded in the lexicon should activate both their meanings initially and in both types of biasing contexts (Giora, 1999, p. 924).

In cases where the hearer is naively optimistic as Padilla Cruz calls it, he/she could judge that the speaker is being sincere and not process the ironic meaning at all. For example, some people might consider the phrase “What a lovely day for a picnic” to be meant literally regardless, for example, of the strong wind because they themselves do not mind having a picnic in a windy spot.

6. Miscommunication of implicatures arises when the hearer does not correctly infer the speaker’s intention. Several reasons for this have been reviewed here: misinterpreting ironic or metaphorical expressions; naïve optimism or a speakers’ egocentrism; missing implicature; puzzled understanding; alternate understandings; uncertainty of the effect the speaker wishes to produce with their statement. As listeners, we often unconsciously add our own context and experience to the meaning of the sentence the speaker utters. The meaning we give to words is a product of our environment and our experience with that word. In those cases, misunderstanding is caused by prioritizing different meanings as more salient by the speaker and the listener. Such discrepancy is caused by personal preference priority as the graded salience hypothesis explains it.

References

- Cruz M P (2017) Interlocutors-Related and Hearer-Specific Causes of Misunderstanding: Processing Strategy, Confirmation Bias and Weak Vigilance. *Research in Language* 15(1): 11–36.
- Giora R (1999) On the priority of salient meanings: Studies of literal and figurative language. *Journal of Pragmatics* 31: 919–929.
- Giora R (2003) *On Our Mind: Salience, Context, and Figurative Language*. Oxford, New York: Oxford University Press.
- Giora R, Fein O (1999) On understanding familiar and less-familiar figurative language. *Journal of Pragmatics* 31(12): 1601–1618.
- Grice P (1989) *Studies in the Way of Words*. Cambridge, Massachusetts: Harvard University Press.
- Grice P (2001) *Aspects of Reason*. Oxford: Clarendon Press.
- Haugh M (2008) Intention and diverging interpretations of implicature in the “uncovered meat” sermon. *Intercultural Pragmatics* 5: 201–228.
- Hirst G et al. (1994) Repairing conversational misunderstandings and non-understandings. *Speech Communication* 15(3–4): 213–229.
- Horn L R (1969) A presuppositional analysis of only and even. *CLS*, 5: 98–107.
- Janković-Paus S (2017) Misunderstandings in Communication: Maxims of Conversation and Intercultural Differences between Interlocutors. *Colloquium: New Philologies*, 2(2): 28–42.
- Kecskes I (2006) On my mind: thoughts about salience, context and figurative language from a second language perspective. *Second Language Research* 22(2): 1–19.
- Levinson S C (2000) *Presumptive Meanings: The Theory of Generalized Conversational Implicature Language, Speech, and Communication*. Cambridge: The MIT Press.
- Sbisa M (1999) *Presupposition, Implicature and Context in Text Understanding*. Proceedings CONTEXT’99, Trento, Italy. DOI:10.1007/3-540-48315-2_25
- Yoshida M (2014) Why Do Second-Language Learners Misunderstand Conversational Implicatures?. *The Japanese Journal of Language in Society*, 50–65.
- Yus F (1999) Misunderstandings And Explicit/Implicit Communication. *Pragmatic*, 9(4): 487–517.

Book reviews

Brian G. Henning, Joseph Petek, and George Lucas (eds.) *The Harvard Lectures of Alfred North Whitehead, 1925–1927: General Metaphysical Problems of Science*. Edinburgh: Edinburgh University Press

[Reviewed by Rosen Lutskanov, Institute of Philosophy and Sociology, Bulgarian Academy of Science; e-mail: rosen.lutskanov@gmail.com]

This is the second volume of the Edinburgh critical edition of the complete works of Alfred North Whitehead. It was published in 2021 and was preceded by the first volume (“Philosophical Presuppositions of Science”), published in 2017 under the editorship of Paul A. Bogaard and Jason Bell. As with the previous one, this is a beautifully crafted book, encompassing student notes from the lectures that Whitehead delivered in Harvard, along with his “seminaries” and guest lectures. Many different sets of notes were compiled and meticulously compared in order to provide the fullest and most comprehensible narrative. This is a formidable task, because almost all of the student notes turn out to be incomplete, containing occasional slips and insertions. Moreover, the editors provide extensive references that cover the historical and conceptual context of the lectures and facilitate the understanding of the provided material.

You can gather from the notes themselves that listening to Whitehead’s lectures was not a pleasant experience. The lectures of Whitehead did not follow a clearly delineated plan but followed the twists and turns of his thinking, which was soon to culminate in his *magnum opus* “Process and Reality” (1929). Whitehead was not lecturing; he was struggling to construct a completely new metaphysical system that diverges in some key respects from some of the most deeply entrenched patterns of thought in European culture. He discussed not just typical philosophical topics, e.g. Aristotle’s categories, Descartes’ *cogito*, or Kant’s views on the *a priori*, but also topics in physics and cosmology, geometry and even set theory. According to the recollections of one of the students that was taking extensive notes covering a significant part of Whitehead’s lectures,

(It was) not that his lectures were organized – he rambled, (repeated) and seemed to pay little heed to his subject, (least of) all to the formidable mathematical machinery of *Principia*. One day, referring to his treatment of some (abstruse) subject, one of the students said ‘I’m glad Whitehead said that over four times; the first three times, I didn’t get it.’ His panpsychism (he told me once that he didn’t object to being called a panpsychist) made him confuse the physical and the psychical. One day in his lecture he jumped from or skidded from something physical into a statement about value. ... Before the next lecture someone – it may have been I, I have forgotten – asked him about it. In the next lecture he said, calmly – ‘last time when I used the word ‘value’, I should have said ‘intensity’” (Appendix III, Diary entry of George Conger on Whitehead, p. 435).

This sublation of the fundamental divisions that form the core of traditional philosophy marked his path towards the metaphysical outlook that he used to identify as the “philosophy of organism” and now forms the backbone of process philosophy.

A really invaluable feature of the text is that it lets us get a glimpse of Whitehead’s philosophical method at work, and in particular of the way he viewed his relationship with the philosophers of the past. I think it was succinctly captured by the following dictum: “You never disagree with a philosopher unless you almost agree with him – otherwise you neglect him” (p. 200). Let us see where the most notable disagreements rest:

(1) Aristotle: Whitehead expressly professed that one of his goals is “to force metaphysics thor-

oughly from subject-predicate complex” (p. 207), i.e. to destroy Aristotle’s subject-predicate analysis of propositions by substituting predicates with relations. In my view here Whitehead is much closer to common sense than Aristotle: according to him, statements like “Jones is mortal” cannot be analyzed as assigning a predicate (“is mortal”) to a subject (“Jones”). They say something about the universe: that there is a moment of time where Jones is no longer part of it. The superiority of Whitehead’s analysis becomes evident in more complicated cases like “Even Caesar is mortal”: here what is characterized is the relationship between Caesarity and mortality, not Caesar (p. 202, 362, 364);

(2) Descartes: The lectures can be seen as a running commentary on the relationship of the received doctrines of Descartes and the still developing ideas of Whitehead. Descartes was credited with the proper realization of the true role of space and time in metaphysics; what Whitehead added was the realization that they have a common core that was marked by the concept of a “community of extensiveness” (p. 150). Moreover, the “medieval notion of substance”, along with the correlative notion of endurance, were dismantled in Whitehead’s event-based metaphysics, which recognizes only one form of sameness: “sameness of universals which apply” (p. 361). Last but not least, the starting point for Whitehead, the “complete all-embracing community, as from the limited stand-point here, now” was seen as a structural substitute for the *cogito* (p. 12);

(3) Kant: First and foremost, Whitehead was busy dismantling Kant’s doctrine of the *a priori*, as associated with the definitional marks of universality and necessity. For Whitehead, the so-called *a priori* statements are always made “with regard to what this occasion is, i.e. with regard to that community of occasions which are implicated in unity of immediate occasion” (p. 8). Consequently, time and space are not forms of the pure intuition, but of the “prehension perception” which expose the “general fact of the internality of physical relationships” (p. 263). The doctrine of “internality” implies that those relationships are not imposed by cognition on a chaotic material of sense-perception but are discerned in the “physical given in the world as perceptively organized” (p. 32, 166).

On the basis of his criticism of the philosophy of the past Whitehead was gradually building a novel way of thinking that he identified as a “Communitistic Point of View” (p. 145). It emphasized the fact that “[e]very entity is social” (p. 120), that “[t]here’s

nothing in isolation” (p. 160). The metaphysical credo of Whitehead was spelled out in the form of six fundamental metaphysical principles that can be seen as operative for the construction of his process metaphysics (p. 213, *passim*): 1. Principle of solidarity (“Every actual entity requires all other entities, actual or ideal, in order to exist”); 2. Principle of creative individuality (“Every actual entity is a process which in its own result”); 3. Principle of efficient causation (“Every actual entity contributes to the character of processes which are actual entities superseding itself”); 4. The ontological principle (“Every creature is a creative character”); 5. Principle of aesthetic individuality (“Every actual entity is an end in itself for itself”); 6. Principle of ideal comparison (“Every creature involves in its own constitution an ideal reference to ideal creatures”). Every singular entity is a mirror in which the whole of the world can be seen.

Another topic that looms large through the lectures is the relationship between experience and imagination. The “most concrete” according to Whitehead is the “joint” of experient and imaginal (p. 17), of the physical and the mental side of actual occasions. That is why “[u]ltimately the most concrete occasion is dipolar. ... One pole is the primary, purely synthetic side of the actual occasion. Call that pole the physical – describe in purely synthetic terms, coming together, physical perceptivity. The other is the secondary, supervening, analytical side – the mental occasion” (p. 197). Just as the physical is inseparable from the mental, imaginative philosophy is inseparable from empirical science: “Philosophy acts as critic of current abstractions. It has passed to higher generalities and gained vision of alternative potential incompatible generalizations. ... Philosophy filtering through a civilization should give it an imaginative tinge. Philosophy is one way of preserving a freshness and novelty of imagination” (p. 175). The “imaginative tinge” lets you make the “imaginative leap” that leads to the “adventurous truth” which “works out as far as you can see, but which probably leaves some rough edges” (p. 292).

I hope that these short remarks provide sufficient reasons to claim that this volume is destined to be an invaluable tool, not just for the exponents of the process-philosophical tradition, but also for students of the history of philosophy. It provides not just answers to some vexing interpretative issues, but something more important: questions that can cast you on the open-ended journey that Whitehead was most fond of: his beloved “adventures of ideas”.