STUDIA WHITEHEADIANA

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Pod redakcją
Bogdana Ogrodnika i Wojciecha Kleofasa Gródka OFM

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SŁOWO WSTĘPNE

Szanowni Państwo,

Piąty tom serii *Studia Whiteheadiana* dokumentuje prace naukowe Towarzystwa Metafizycznego im. A.N. Whiteheada prowadzone w 2011 roku.

Pierwsza część tomu zawiera artykuły inspirowane wystąpieniami na VIII konferencji zorganizowanej przez Towarzystwo jak co roku w gościnnych murach Wyższego Seminarium Duchownego Braci Mniejszych w Katowicach-Panewnikach w maju 2011 roku. Konferencja ta była organizowana wspólnie z Towarzystwem im. Nicolai Hartmanna, którego założycielem i przewodniczącym jest znany filozof włoski Roberto Poli. Pierwszy artykuł autorstwa Helmuta Maassena ma charakter propedeutyczny, wprowadzający w złożoną materię filozofii procesu. Pierwotnie był skierowany do tych uczestników konferencji, którzy specjalizując się w badaniach związanych z filozofią N. Hartmanna, zarazem poszukiwali możliwości podjęcia merytorycznej dyskusji z procesualizmem A.N. Whiteheada. Drugą część tomu otwiera artykuł o. Kleofasa Wojciecha Gródka OFM stanowiący kontrapunkt w badaniach nad współczesnym rozumieniem procesu. Porusza on niezwykle ważną dla myślenia procesowego problematykę „psychologiczną", tj. budowę wzajemnej relacji i funkcji poszczególnych instancji psychicznych w ujęciu Heraklita, którego być może powinniśmy uznać za „ojca" filozofii procesu. Godny polecenia jest artykuł polemiczny pióra Michela Webera – znanego filozofa procesu, redaktora kilku dużych serii wydawniczych. Dyskusję na temat ostrych tez Webera zamieścimy w następnym numerze *Studiów Whiteheadiana*. Część merytoryczną *Studiów*

zamyka przekład drugiego rozdziału znanej pracy A.N. Whiteheada *The Concept of Nature* dokonany przez Piotra Leśniaka.

Obecny piąty tom serii *Studia Whiteheadiana* kończy garść informacji związanych z wydarzeniami oraz zapowiedziami dotyczącymi aktywności Towarzystwa. Najważniejszą z nich jest decyzja International Process Network powierzająca Towarzystwu Metafizycznemu organizację IX Kongresu Filozofii Procesu. Jest to największe przedsięwzięcie środowisk filozoficznych zajmujących się współczesnym procesualizmem. Decyzja IPN potwierdza międzynarodowe znaczenia, jakie w ciągu dziewięciu lat swojej działalności wypracowało środowisko filozofów związane z Towarzystwem Metafizycznym im. A.N. Whiteheada.

Owocnej lektury życzą redaktorzy

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Prolegomena

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Helmut Maassen
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ALFRED NORTH WHITEHEAD. CATEGOREAL SCHEME, MODES OF EXISTENCE, TYPES OF ORDERS, NEXUS, VALUES

1. Problem Setting

Whitehead was dealing with a philosophical challenge, for which Descartes might suffice as its main representative. In his third meditation, he distinguishes between two notions of the sun and their adequacy;

'And, in fine, although I should grant that they proceeded from those objects, it is not a necessary consequence that they must be like them. On the contrary, I have observed, in a number of instances, that there was a great difference between the object and its idea. Thus, for example, I find in my mind two wholly diverse ideas of the sun; the one, by which it appears to me extremely small draws its origin from the senses, and should be placed in the class of adventitious ideas; the other, by which it seems to be many times larger than the whole earth, is taken up on astronomical grounds, that is, elicited from certain notions born with me, or is framed by myself in some other manner. These two ideas cannot certainly both resemble the same sun; and reason teaches me that the one which seems to have immediately emanated from it is the most unlike.' (3. Med Sec 11)

It seems as if the idea of the sun, which we see with our eyes, is less eloquent than the notion of astronomy. Hobbes was among

the first to argue against this notion, saying that these notions are not exactly two different ideas of the sun, but rather different judgements. Both judgements are based on observations which are exact, but differently so.

Let me start with Sir Walter Eddington, who was Whitehead's predecessor for the Gifford lectures at Edinburgh. One of Eddington topics were his 'tables'. Let me elaborate this: What does the every day experience and appearance of a table have in common with the physical description of a multitude of atoms or molecules etc etc.? Or, let us assume, that we look at a table through a microscope. All these experiences and appearances are quite different and still we assume that they refer to something which we call a table. What allows us to take these very different descriptions as referring to one and the same object? There have been several attempts to solve the problem of Eddington's tables:

1. The first possible solution to the problem could be called the theory of emergence: the picture of the every day experience of the table emerges from the atomistic/molecular object. It explains the different forms of a table by claiming the validity of the most comprehensive description of it, the common experience of the table. On the other hand, only a very special aspect of a table is described in physics.

2. Instrumentalism claims that the everyday experience is the basic experience of what we call a table. Microparticles of physics are only fictions or, if you like, parts of scientific imagination.

3. Scientific realism simply claims that the only accurate description of a table, is that of physics, that is, a table is a conglomerate of elementary particles.

4. The fourth strategy would be a kind of underdetermined theory of alternative empirical theories. It means, it is as much a table of our everyday experience as it is a table of physics, meaning it is a conglomerate of micro-particles. This has been claimed by Quine.

5. A fifth possible solution could be that of perspectives: different perspectives on what we call a table are those of everyday

experience those of the microscope etc. This is, basically, a weaker form of the fourth strategy.

All of these solutions are problematic. The last one is a variety of the distinction of primary and secondary quality. The same applies to the fourth one. One would have to clarify, for example, that every everyday experience is part of an empirical theory and it would have to construct the hypothesis in which brown, fragrant etc are features of the hypothesis table, which is empirically underdetermined and is not itself an empirical statement. Scientific realism would have to explain how it could happen, that, in a world without secondary qualities, they are subjects which experience secondary qualities. The first theory, the theory of emergence, would have to show how out of colourless, odorless parts a colorful object like a table could emerge.[1]

Several attempts of metaphysics in the 20th century, for example social theory (Talcott Parsons system theory), analytic metaphysics, topology et al have, to some extent, been made possible by Alfred North Whitehead's metaphysics. But this development, interesting as it may be, is not the subject of this paper. Quite the other way round: after outlining the above two exemplary problems,[2] we can use them as the philosophical setting of Whitehead's metaphysics.

It was Whitehead's explicit attempt to construct a unifying theory, in which all forms of human experience could be included. At the outset of PR, he wrote:

'Speculative Philosophy is the endeavour to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted. By this notion of 'interpretation' I mean that everything of which we are conscious, as enjoyed, perceived, willed, or thought, shall have the character of a particular instance of the general scheme. Thus the philosophical scheme should be coherent, logical, and' in respect

[1] See Hampe. Michael, Die Wahrnehmungen der Organismen, Göttingen 1989, p. 39–46.

[2] The problem of the substance concept could be added etc.

to its interpretation, applicable and adequate. Here 'applicable' means that some items of experience are thus interpretable, and 'adequate' means that there are no items incapable of such interpretation.' (PR 5)

It should be stressed that Whitehead is referring to experience as the basis of his system and stating that all experience should be open to interpretation and to be included in his general scheme. For Whitehead metaphysics means the framing of a coherent, logical, necessary system of general ideas, in whose terms every element of our experience can interpreted. It is apparent that this is a very daring, challenging and comprehensive notion.

2. Some epistemological remarks

It might be surprising to some that a former physicist and mathematician like Whitehead should claim that vagueness has to play a major role in logic and metaphysics. Of course the notion of vagueness has its own history. With reference to the American background, it was Charles Sanders Peirce who developed the notion of vagueness and even wrote a paper on the logic of vagueness.[3]

[3] See CP and in a letter to Ms Welby. I must first point out the distinction between a Fact and what in other connexions, is often called an…Occurrence. An Occurrence, which Thought analyzes into Things and Happenings, is necessarily Real; but it can never be known or even imagined in all its infinite detail. A Fact, on the other hand is so much of the real Universe as can be represented in a Proposition, and instead of being, like an Occurrence, a slice of the Universe, it is rather to be compared to a chemical principle extracted therefrom by the power of Thought; and though it is, or may be Real, yet, in its Real existence it is inseparably combined with an infinite swarm of circumstances, which make no part of the Fact itself. It is impossible to thread our way through the Logical intricacies of being unless we keep these two things, the Occurrence and the Real Fact, sharply separate in our Thoughts.

To put it in Whitehead's words:

"In its advance, philosophy must involve obscurity of expression, and novel phrases. In human experience, the philosophic question can receive no final answer. Human knowledge is a process of approximation. There are always questions left over. The problem is to discriminate exactly those things which we know only vaguely". (ESP 93)

This is not the place to discuss the function of vagueness according to Whitehead with regard to logic and mathematics. Obviously, he claims that it would be as important as for all other areas of his metaphysics. If we apply the logician's alternative true or false to any scheme of philosophic categories as one complex assertion, the answer must be, according to Whitehead, 'that the scheme is false' (PR 8).

In his famous *Portraits from Memory* Bertrand Russell acknowledges Whitehead's major influence on him about the starting point of metaphysics:

"It was Whitehead who was the serpent in this paradise of Mediterranean clarity. He said to me once: 'You think the world is what it looks like in fine weather at noon day; I think it is what it seems like in the early morning when one first wakes from deep sleep.' I thought his remark horrid, but could not see how to prove that my bias was any better than his. At last he showed me how to apply the technique of mathematical logic to his vague and higgledy-piggledy world, and dress it up in Sunday clothes that the mathematician could view without being shocked. This technique which I learned from him delighted me, and I no longer demanded that the naked truth should be as good as the truth in its mathematical Sunday best."[4]

As if this were not enough of a challenge for metaphysics, Whitehead adds the notion that everything is connected with everything or, to put it in a Whiteheadian way: every event or occasion is connected to every other occasion. This is an idea which

[4] Bertrand Russell, "Beliefs: Discarded and Retained", in Portraits from Memory, pp. 40–2.

one can find already in William James. He has been very explicit in this regard as the following quote will illustrate:

"Out of my experience, such as it is (and it is limited enough) one fixed conclusion dogmatically emerges, and that is this, that we with our lives are like islands in the sea, or like trees in the forest. The maple and the pine may whisper to each other with their leaves, and Connecticut and Newport hear each other's fog-horns. But the trees also comingle their roots in the darkness underground, and the islands also hang together through the ocean's bottom. Just so there is a continuum of cosmic consciousness, against which our individuality builds but accidental fences, and into which our several minds plunge as into a mother-sea or reservoir."[5]

3. Whitehead and the Philosophical Tradition

One of the best-known quotations from Whitehead is the so-called footnote – thesis. Unfortunately, most of the time, it is not quoted accurately. Therefore let us have closer look at Whitehead's own text. He says:

"The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato. I do not mean the systematic scheme of thought which scholars have doubtfully extracted from his writings. I allude to the wealth of general ideas scattered through them." (PR 39)

Despite the fact that this could be understood in a derogatory sense, Whitehead still lays stress on the philosophical tradition. The philosophical tradition since Plato has a red thread, which runs through it. According to my interpretation, this is the main focus of Whitehead's remark. Particularly considering the manner in which Whitehead refers to different philosophical authors, he is generous rather than derogatory. As a telling example, one

[5] End of chapter VIII, William James, *Memories and Studies (1911).*

could take the way he deals with Descartes. He strongly objects to Descartes' distinction of res vera and res cogitans. For Whitehead, it is a remarkable instance of what he calls the bifurcation of nature. Still he shows how remarkably close his system is to that of Descartes:

"But this doctrine fully accepts Descartes' discovery that subjective experiencing is the primary metaphysical situation which is presented to metaphysics for analysis. This doctrine is the 'reformed subjective principle' mentioned earlier in this chapter. Accordingly, the notion 'this stone as grey' is a derivative abstraction, necessary indeed as an element in the description of the fundamental experiential feeling, but delusive as a metaphysical starting point. This derivative abstraction is called an 'objectification." (Pr 244)

He goes on to show the parallels between his system and that of Descartes. In each instance where Whitehead refers to philosophical tradition, it is critical and extremely positive at the same time. Therefore, he can state:

"The cosmology explained in these lectures has been framed in accordance with this reliance on the positive value of the philosophical tradition." PR XIV

It is important for Whitehead to show his indebtedness to philosophical tradition and I would claim that he did not want a Paradigm Shift (Kuhn) but rather a new and imaginative re-interpretation of philosophical tradition. Since every scientist has implicit assumptions, it is the task of philosophy to make them explicit and check their adequacy for experience; it should also check the coherence of the implicit metaphysical assumptions.

4. The Gifford Lectures

Whitehead himself summarises his Gifford lectures thus:

"In these lectures I have endeavoured to compress the material derived from years of meditation. In putting out these results, four strong impressions dominate my mind: First, that the move-

ment of historical, and philosophical, criticism of detached questions, which on the whole has dominated the last two centuries, has done its work, and requires to be supplemented by a more sustained effort of constructive thought. Secondly, that the true method of philosophical construction is to frame a scheme of ideas, the best that one can, and unflinchingly to explore the interpretation of experience in terms of that scheme. Thirdly, that all constructive thought, on the various special topics of scientific interest, is dominated by some such scheme, unacknowledged, but no less influential in guiding the imagination. The importance of philosophy lies in its sustained effort to make such schemes explicit, and thereby capable of criticism and improvement." ibid

Before going into a more detailed analysis of these Gifford lectures let me cite a few remarks concerning their origin. Lord Gifford in his will of 1885 said:

"…I having been for many years deeply and firmly convinced that the true knowledge of God, that is, of the being, nature, and attributes of the infinite, of the order, or the first and only cause, that is, the one and the only substance and being, and the true and felt knowledge (not mere nominal knowledge) of the relations of man and of the universe to him, and of the true foundations of all ethics and morals, been, I say, convinced that this knowledge, when really felt and acted on, is the means of man's highest well-being, and the security of his upword progress, I have resolved, from the 'residue' of my estate as aforesaid, to institute and found, in connection, if possible, with the Scottish universities, lectureships or classes for the promotion of the study of said subjects…"[6]

The list of Gifford lecturers is of illustrious 20th century thinkers.[7] To the Whitehead scholars present here, it is known that the

[6] See, Jaki, Lord Gifford and His Lectures, A Centenary Retrospect,Edinburgh 1986, p.71/72.

[7] For a complete list, see Jaki p. 63–65: Caird, Fraser, Pfleiderr, Bradley, Ward, Bergson, Alexander,Inge, Stout, Haldane, Taylor, Schweitzer, Niebuhr, Bohr, Bultmann, Heisenberg, Findlay, Eccles, Smart, Nasr, Pannikkar, Swinburne et al.

actual performance of the lectures was a disaster.[8] Let me give you a suggestion: One should actually start reading Process and Reality from Part Three, 'The Theory of Prehensions'. To check the definition of the terms used in it, one should go back and look at the first part. And if you want to relate Whiteheads system to other scientists and philosophers, the easiest way to do so is to look at Part Two, where he relates his own thinking to earlier thinkers in science and philosophy.

5. The Categorial Scheme

How did Whitehead attempt to overcome the above mentioned problems, in particular the bifurcations of nature? How can one get to a unified theory, which does not distinguish subjective experience and objectives things? In his book *Analyses of Matter* (1927), Bertrand Russell already deals with similar problems and states: it was Alfred North Whitehead who taught us to use the concept of event and not matter anymore.[9] In Process and Reality, Whitehead calls this the ONTOLOGICAL PRINCIPLE. What he called event in his early writings, as in *Concept of Nature,* he later calls actual entity or actual occasion.(PR29) These

[8] For a detailed description, see Victor Lowe, Volume 2 pages 219 to 252. See especially page 229: this procedure was like that of a mathematician who states all his undefined terms and axioms before applying any part of this apparatus to any topic. And on page 249–250: J.M. Whitaker.. Wrote me, that the 1927 Gifford lecturer, Eddington, 'was a marvellous popular lecturer who had enthralled audience of 600 for his entire course. The same audience turned up to Whitehead's first lecture but it was completely unintelligible, not merely to the world at large but to the elect. My father remarked to me afterwards that if he had not known Whitehead well he would have suspected that it was an imposter making it up as he went along (this had actually happened in a lecture in psychology at Oxford shortly before). The audience at subsequent lectures was only about half a dozen in all, so I am told, for I fear that I myself was one of the backsliders.

[9] *Analysis of Matter*, Bertrand Russell, p. 15.

actual entities are analysable in an indefinite number of ways. "The analysis of an actual entity into prehensions is in that mode of analysis which exhibits the most concrete elements in the nature of actual entities." (PR 30)

Prehensions are the processes by which actual entities are related to each other. These prehensions are real, individual, and particular. Any particular fact of togetherness of actual entities is called a nexus. Each actual entity is in the process of becoming. It starts with its mental pole and ends with its physical pole. The process of becoming is called concrescense by Whitehead. The forms these processes of concrescence adopt are given through eternal objects. They are provided by other actual entities and by the actual entity God. In this way, each actual entity is to some extent linked to the whole universe past, present and future. This is very similar to the notion of Leibniz in his monadology. The eternal objects, the forms, similar to Platonic ideas, are the potentials for each process of becoming. ANW summarises these categories of existence in the following way:

"There are eight Categories of Existence: (I) Actual Entities (also termed Actual Occasions), or Final Realities, or Res Verae. (II) Prehensions, or Concrete Facts of Relatedness. (III) Nexus (plural of Nexus), or Public Matters of Fact. (IV) Subjective Forms, or Private Matters of Fact. (V) Eternal Objects, or Pure Potentials for the Specific Determination of Fact, or Forms of Definiteness. (VI) Propositions, or Matters of Fact in Potential [33] Determination, or Impure Potentials for the Specific Determination of Matters of Fact, or Theories. (VII) Multiplicities, or Pure Disjunctions of Diverse Entities. (VIII) Contrasts, or Modes of Synthesis of Entities in one Prehension, or Patterned Entities." (PR 22)

After this rather abbreviated description of the process of becoming I think it could be easier to understand what Whitehead calls the CATEGORY OF THE ULTIMATE. The CATEGORY OF THE ULTIMATE (PR21 et al) shows what underlies all these processes of becoming. Creativity, many, one are the notions of this category, underlying all processes of becoming. Creativity is the principal of novelty. Each process is never just a repeti-

tion of what has been or what will be, but more or less something new. The notion 'one' and 'many' explain how the many actual entities become one and how the reality of actual entities is increased by one. Whitehead remarks that the CATEGORY OF THE ULTIMATE replaces Aristotle's category of primary substance. Thus the production of novel togetherness is the ultimate notion embodied in the term 'concrescence'.

6. Forms of Process – Feeling

As I mentioned earlier, the key section to understand the internal process of the becoming of an actual entity is in Part Three of Process and Reality. Although the third part is called the Theory of Prehensions, the first four chapters explicitly deal with feelings and only the fifth chapter is called the Higher Phases of Experience. The fifth chapter first deals with feelings and then with the more complex ones which lead to consciousness. I will not go into the details of this section, but I can give you an outline of Whitehead's is argument for his philosophy of organism.

"The philosophy of organism is a cell-theory of actuality. Each ultimate unit of fact is a cell-complex, not analysable into components with equivalent completeness of actuality.

The cell can be considered genetically and morphologically. The genetic theory is considered in this part; [335] the morphological theory is considered in Part IV, under the title of the 'extensive analysis' of an actual entity." (PR 219)

I will concentrate on the third part of PR: the genetic analysis. The morphological theory, is considered in Part Four. For the latter, I recommend the papers which were read here last year by Randall Auxier and by Vesselin Petrov.

Whitehead distinguishes between positive and negative prehensions. While actual entities are positively prehended, certain eternal objects (forms) can be excluded from the process of concrescence. Whitehead calls the latter 'negative prehension'.

"Each actual entity is 'divisible' in an indefinite number of ways, and each way of 'division' yields its definite quota of prehensions. A prehension reproduces in itself the general characteristics of an actual entity: it is referent to an external world, and in this sense will be said to have a 'vector character'; it involves emotion, and purpose, and valuation, and causation. In fact, any characteristic of an actual entity is reproduced (29) in a prehension. (PR 19)"

The end of the process of concrescence, meaning the end of the actual entity, is called satisfaction. This way the atomic nature of an actual entity is 'preserved.' After it has reached satisfaction, it becomes a factor in the concrescence of another actual entity. Positive prehensions are called feelings. This will, of course, be important, when we later consider a possible ethical grounding within Whiteheads metaphysics.

"A feeling i.e., a positive prehension is essentially a transition effecting a concrescence. Its complex constitution is analysable into five factors which express what that transition consists of, and effects. The factors are: (I) the 'subject' which feels, (II) the 'initial [338] data' which are to be felt, (III) the 'elimination' in virtue of negative prehensions, (IV) the 'objective datum' which is felt, (V) the 'subjective form' which is how that subject feels that objective datum."(PR 223)

Whitehead uses an interesting image to explain what is happening here. He compares it with a *Barrier Reef*. 'On one side there is wreckage, and beyond it harbourage and safety.' (ibid)

How does the process of concrescence begin? It starts with what Whitehead calls an initial aim, which is its mental pole. The provider of this initial aim is derived from God who is the realm of forms, very similar to the notion of the hypodochy in Plato's Timaios.[10] After the initial aim, the self-

[10] See my article: REVELATION, MYTH AND METAPHYSICS: THREE TRADITIONAL CONCEPTS OF GOD AND WHITEHEAD'S DIPOLAR GOD, Process Studies, V 23, N 1 (SPRING 1994) p. 1–9…In addition to the two ontological principles of the sphere of ideas (model, form)and

creating process forms and shapes the the actual entity, its nature, so to speak of, which is very similar to Spinoza's causa sui. This process of self-creation necessarily implies freedom, otherwise it would not make sense to speak of sense creation or causa sui.

Let me add an additional term, which Whitehead introduces in the analysis of feeling: subject – superject:

"In the analysis of a feeling, whatever presents itself as also *ante rem* is a datum, whatever presents itself as [356] exclusively *in re* is subjective form, whatever presents itself *in re* and *post rem* is 'subject-superject.' This doctrine of 'feeling' is the central doctrine concerning the becoming of an actual entity. In a feeling the actual world, selectively appropriated, is the presupposed datum, not formless but with its own realized form selectively germane, in other words 'objectified.' The subjective form is the ingression of novel form peculiar to the new particular fact, and with its peculiar mode of fusion with the objective datum." (PR 233) The actual entity therefore never **is** (an object) but is in the process of becoming. It is an object only for those actual entities which prehend it in their process of becoming.

In the free self creating process of concrescence lies the chance of determining the goal of the process 'upwards or downwards'. This is where moral considerations occur.

"The point to be noticed is that the actual entity, in a state of process during which it is not fully definite, determines its own ultimate definiteness. This is the whole point of moral responsibility. Such responsibility is conditioned by the limits of the data, and by the categoreal conditions of concrescence." (PR 255)

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the copies, the Eternal Being and the Becoming, there is the third one, the Chora (χώρα), the Space: the Wherein, the receptacle (ὑποδοή) of everything, the nurse, so to speak, of all becoming (49a6ff; all three ontological key terms are later more specifically related: 50b5-e1; they are called ἀρχή in 28b-c).

7. Good and Evil in Whitehead's Relational Value – Ethics

Whitehead did not want his metaphysical endeavor to be biased by religious or ethical interests, as he thought had happened with Aristotle. Only a dispassionate examination of metaphysical topics makes sense. (SMW 215) On the other hand, Whitehead does not deny the legitimacy of developing an ethics within metaphysics, only it should not be allowed to distort metaphysical thinking.

The conflict which every epoch faces is the desire to cling to its achievements.[11] What may look like stability, is in fact, a slow process of atrophy. (FR 82) Both good and evil are positive elements in the process of experiencing. The difference between them lies in their relation to their surroundings. 'Evil is positive and destructive; what is good is positive and creative.' (RM 83)

Good and evil can be distinguished with respect to their formal aspects, their objective side. They can be judged by an aesthetic standard in such a way that the synthesizing of different elements becomes more beautiful, the more the elements are apart or drifting apart. The irreconcilability of different elements is the character of evil.[2]

An internal process, one of feeling is, correlated to this external process. It is the subjective side of experience. The more contrasting the elements are which enter into the occasion, the stronger is the intensity of satisfaction of the actual entities involved.

The highest form of contrast, which includes any possible form of good and evil, happens in the actual entity, God.

God's ubiquity makes it possible for every actual entity to grasp the highest form of beauty, i.e. the good, as well as its opposite, evil, in its highest intensity of satisfaction, which means, that each actual entity has always criteria to judge ethical values in its subjective as well as its objective aspect.

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[11] MT, p.119: the essence of life is to be found in the frustrations of established order. The universe refuses the deadening influence of complete conformity. And yet in its refusal, it passes tours novel order as a primary requisite for important experience.

Each actual entity and each person, for that matter, does not start from nothing (E. Bloch, Tübinger Einleitung in die Philosophie: Wir fangen nicht leer). Historical memory mediates forms, to which ethical predicates are attributed, e.g. the virtues, or structures of society, which are supposed to enable people with different interests to live together.[3] Each agent has, in principle, the possibility of judging each value with the standard, with which each was necessarily provided. This standard is not only in God, but in every actual entity. Past actual entities reveal which values had lead to a synthesis, to contrasts or to the disintegration of a culture.

The highest standard concerning its objective as well as its subjective side is in God.

In the process of concrescense, each actual entity anticipates its subjective aim, related to its surroundings, rooted in past actual entities. Thus it develops itself in relation to its past und to its future universe. In this, God grants the plentitude of the past and the vision of the future.

The values, relationally determined, guide the processes of the actual entities.

They emerge in the interplay of God's ideal vision and the self-determination of the actual entities. In the macrocosmic and the microcosmic processes, values can be judged by a general standard. Importance suffices objective as well as subjective criteria for their distinction. Good, therefore, is **not** only definable in its own terms. (in contrast to G.E. Moore's claim in Principia Ethica)

Along with the abstract definition of values by contrast and intensity, one can also find concrete historical definitions of good and evil.[4] In analogy to Whitehead's evaluation and critique of leading ideas in civilisation (in AI), one could undertake the same task for virtues. For virtues would be valid what Kant already claimed that they "... never become customary, but always spring anew and originally out of thinking".[12]

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[12] Kant, Anthropologie in pragmatischer Absicht, Weischedel ed., Bd 10, p.437

The boundaries between animals and human beings, eradicated by Whitehead, could nevertheless prove useful for ethical purposes of a historical consideration of justice, virtue etc., without denying the appropriateness of Whitehead's intention.

Every element in human experience should be accounted for in a metaphysical system according to Whitehead. One major flaw of different systems of the past is problem solving by exclusion of facts.

"Whatever is found in 'practice' must lie within the scope of the metaphysical description. When the description fails to include the 'practice,' the metaphysics is inadequate and requires revision. There can be no appeal to practice to supplement metaphysics, so long as we remain contented with our metaphysical doctrines. Metaphysics is nothing but the description of the generalities which apply to all the details of practice. No metaphysical system can hope entirely to satisfy these pragmatic tests." (PR 19)

The importance of religious intuition should not be overestimated. Although it might reveal 'wholeness' (as it happens in mystical experience), Whitehead himself in *Process and Reality* limited the importance of religious feelings: "The concept of God is certainly one essential element in religious feeling. But the converse is not true; the concept of religious feeling is not an essential element in the concept of God's function in the universe." (PR207)

8. Concluding remarks

I hope my brief description of Whitehead's metaphysical system was lucid and complex enough to avoid the 'fallacy of misplaced concreteness'. Whitehead himself noted in CN:

"I agree that the view of Nature which I have maintained in these lectures is not a simple one. Nature appears as a complex system whose factors are dimly discerned by us. But, as I ask you, Is not this the very truth? Should we not distrust the jaunty assurance with which every age prides itself that it at last has hit

upon the ultimate concepts in which all that happens can be formulated? The aim of science is to seek the simplest explanations of complex facts. We are apt to fall into the error of thinking that the facts are simple because simplicity is the goal of our quest. The guiding motto in the life of every natural philosopher should be, seek simplicity and distrust it." (CN 163)

The Dynamical Ontologies of A.N. Whitehead and N. Hartmann

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THE CONCEPT OF ANTICIPATION IN WHITEHEAD'S MATURE WORKS

Abstract: The paper is devoted to the investigation of the many aspectness of the concept of anticipation in Whitehead's works from the metaphysical period of his philosophical development. First it is traced in Whitehead's magnum opus *Process and Reality* (1929), then in his later works *Adventures of Ideas* (1933) and *Modes of Thought* (1938), and finally in his last public lecture *Immortality* (1941). A comparison is made of Whitehead's thoughts on anticipation with St. Augustine's and Hartmann's views of anticipation. The meaning of anticipation in Whitehead's metaphysical system is outlined and his role as one of the pioneers of the contemporary development of the concept of anticipation is stressed on.
Key words: metaphysics, anticipation, Whitehead, St. Augustine, N. Hartmann

1. Introduction

Let me first explain why I have chosen to write about anticipation. The question naturally arises when the contemporary

notion of anticipation has originated in philosophy and – what is much more interesting for us – if it appears with Whitehead.

Anticipation is one of Whitehead's important concepts. However, it has to be explained what is the meaning of anticipation for Whitehead, how this idea has been developed in his mature metaphysical writings and what is its place in his metaphysical system. The aim of the paper is namely to give answers to all these questions. In a previous paper I tried to say some words about anticipation from the point of view of the philosophy of organism[1], but it is not a detailed investigation on that topic. In the present paper I shall follow Whitehead's notion of anticipation first in *Process and Reality* (1929), then in *Adventures of Ideas* (1933) and in *Modes of Thought* (1938), and finally in one of his last works *Immortality* (1941). All these works are characteristic for the metaphysical period of the development of Whitehead's philosophical ideas. Some comparisons of Whitehead's thoughts on anticipation with St. Augustine's and Hartmann's views of anticipation also will be made.

A number of authors have pointed in the last few years to the relevance of anticipation for process philosophy and for Whitehead's thought. For example, Mihai Nadin says that "… as a specific concept, anticipation insinuates itself in the language of science in the writings of Whitehead, Burgers, Bennet, Feynman, Svoboda, Rosen, Nadin and Dubois, i.e. since 1929."[2] The famous Australian process philosopher Aran Gare also points that "it is necessary to draw on the tradition of natural philosophy going back to the work of Herder, Goethe and Schelling. … It is the tradition of process metaphysics and includes Charles Sanders Peirce, Henri Bergson, Alfred North Whitehead and Ludwig von

[1] Petrov, Vesselin. (2010), "Dynamic ontology as an ontological framework of anticipatory systems", *Foresight*, Emerald Group Publishing Limited, Vol. 12, No 3, pp. 38–49, especially pp. 43–44.

[2] Nadin, Mihai. (2010), "Anticipation and dynamics: Rosen's anticipation in the perspective of time", *International Journal of General Systems*, 1563–5104, Vol. 39, Issue 1, 2010, pp. 3–33.

Bertalanffy"[3] and adds that "Robert Rosen … also aligned himself with von Bertalanffy."[4] The precise historical analysis will display that the origin of the contemporary ideas of anticipation lie much deeper in the history of philosophy and my further exposition will give some examples in this regard.

On the other hand, the above quotations show that there is a generic connection between Whitehead's ideas of anticipation and the developments of the notion of anticipation in contemporary science. Recently the notion of anticipation has received a great importance especially after the appearance of Robert Rosen's books since 1985 and in connection with the investigations on system theory, in particular on complex systems. Rosen's idea of anticipation is displayed in his definition of anticipatory system as "a system containing a predicative model of itself and/or of its environment, which allows it to change state at an instant in accord with the model's prediction pertaining to a later instant".[5] Later this idea has been developed by many other philosophers and scientists. Let me mention only Daniel Dubois' distinction between weak and strong anticipation according to which a strong anticipation takes place when the system uses itself as a model for the construction of its future states. In this case anticipation is no longer similar to prediction.[6]

However, I will not enumerate here all the authors that have spoken recently about anticipation. My task in the paper is different: it is limited only to the investigation of Whitehead's understanding of anticipation.

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[3] Gare, Aran. (2008), "Approaches to the question 'What is life?': reconciling theoretical biology with philosophical biology", *Cosmos and History: The Journal of Natural and Social Philosophy*, Vol. 4, No 1–2.

[4] Ibid.

[5] Rosen, R. (1985), *Anticipatory Systems – Philosophical, Mathematical and Methodological Foundations*, Pergamon Press.

[6] Leydesdorff, L., and Dubois, D. (2004), "Anticipation in Social Systems", *International Journal of Computing Anticipatory Systems*, Vol. 14, pp. 203–6.

2. The notion of anticipation in *Process and Reality*

In fact, Whitehead mentions anticipation even in his earlier writings as *Concept of Nature* (1920) and *Science and the Modern World* (1925). For example, in *Science and the Modern World* he says: "Thus an event has anticipation:

> 'The prophetic soul
> Of the wide world dreaming on things to come.'

These conclusions are essential for any form of realism."[7]

I will not analyze these early appearances of the concept of anticipation; in fact, they are only an allusion of anticipation. The real notion of anticipation appears not until Whitehead's mature metaphysical system developed in *Process and Reality*. Several aspects of his analysis of anticipation in this work can be outlined.

First, anticipation definitely plays a role in Whitehead's criticism of Cartesian substance-philosophy. As Whitehead himself has put it "The anticipations are devoid of meaning apart from the definite cosmic order which they presuppose. Also survival requires order, and to presuppose survival, apart from the type of order which that type of survival requires, is a contradiction. It is at this point that the organic philosophy differs from any form of Cartesian 'substance-philosophy.' For if a substance requires nothing but itself in order to exist, its survival can tell no tale as to the survival of order in its environment. Thus no conclusion can be drawn respecting the external relationships of the surviving substance to its future environment. For the organic philosophy, anticipations as to the future of a piece of rock presuppose an environment with the type of order which that piece of rock requires."[8]

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[7] Whitehead, A.N. (1967), *Science and the Modern World*, New York: The Free Press, pp. 72–73.

[8] Whitehead, A.N. (1878), *Process and Reality* (corrected edition), New York: The Free Press, pp. 204–205. In the next quotations it will be used the abbreviation PR.

Another aspect displays the connection between anticipation and the subjective aim. Answering the question what the meaning of anticipation in *Process and Reality* is, Whitehead says: "The subjective aim, whereby there is origination of conceptual feeling, is at intensity of feeling (a) in the immediate subject, and (b) in the relevant future. This double aim – at the *immediate* present and the *relevant* future – is less divided than appears on the surface. For the determination of the *relevant* future, and the *anticipatory* feeling respecting provision for its grade of intensity, are elements affecting the immediate complex of feeling. The greater part of morality hinges on the determination of relevance in the future. The relevant future consists of those elements in the anticipated future which are felt with effective intensity by the present subject by reason of the real potentiality for them to be derived from itself." (PR 27) He continues the explanation of his thought saying that "Thus so far as the immediate present subject is concerned, the origination of conceptual valuation according to Category IV is devoted to such a disposition of emphasis as to maximize the integral intensity derivable from the most favourable balance. The subjective aim is the selection of the balance amid the given materials. But one element in the immediate feelings of the concrescent subject is comprised of the anticipatory feelings of the transcendent future in its relation to immediate fact. This is the feeling of the objective immortality inherent in the nature of actuality. Such anticipatory feelings involve realization of the relevance of eternal objects as decided in the primordial nature of God." (PR 278)

A third aspect of treating anticipation is connected with Whitehead's thoughts about the species of process and the future's objective reality. He says: "There are two species of process, macroscopic process, and microscopic process. The macroscopic process is the transition from attained actuality to actuality in attainment; while the microscopic process is the conversion of conditions which are merely real into determinate actuality. The former process effects the transition from

the 'actual' to the 'merely real'; and the latter process effects the growth from the real to the actual. The former process is efficient; the latter process is teleological. The future is merely real, without being actual; whereas the past is a nexus of actualities." (PR 214–215) Next Whitehead continues: "the future has objective reality in the present, but no formal actuality. For it is inherent in the constitution of the immediate, present actuality that a future will supersede it. Also conditions to which that future must conform, including real relationships to the present, are really objective in the immediate actuality. Thus each actual entity, although complete so far as concerns its microscopic process, is yet incomplete by reason of its objective inclusion of the macroscopic process. It really experiences a future which must be actual, although the completed actualities of that future are undetermined. In this sense, each actual occasion experiences its own objective immortality." (PR 215) Here Whitehead does not uses the concept of anticipation itself, but in fact he speaks about the notion of anticipation.

Yet another aspect of anticipation is discovered in Whitehead's views about living and non-living societies. In the contemporary literature devoted to anticipation it is characterized usually as a property of living systems. However, many authors give examples for anticipation in non-living systems and argue that in respect to the property of anticipation there is a small difference between living and non-living systems. Whitehead's thoughts in *Process and Reality* about life and living societies also give some food for thinking in that direction. He says: "Structured societies in which the second mode of solution has importance are termed 'living'. It is obvious that a structured society may have more or less 'life', and that there is no absolute gap between 'living' and 'non-living' societies." (PR 102) And next he concludes that "In a sense, the difference between a living organism and the inorganic environment is only a question of degree; but it is a difference of degree which makes all the difference – in effect, it is a difference of quality." (PR 179)

3. Anticipation as expressed in *Adventures of Ideas* and *Modes of Thought*

These two books do not contain great changes in Whitehead's notion of anticipation. But they explain in greater details this notion and in that sense they push forward the development of the ideas connected with anticipation. Let me begin with *Adventures of Ideas*.

3.1. Anticipation in *Adventures of Ideas*

What is new here is Whitehead's pointing on the functioning of anticipation as a way for fusion of appearance with reality and on the connection between anticipation and novelty: "When the higher functionings of mentality are socially stabilized in an organism, appearance merges into reality. … more generally dropping the special case of personality, the objective reality of the past, as it now functions in the present, in its day was appearance. They may be strengthened in emphasis, embroidered upon, and otherwise modified by the novel appearances of the new occasion. *In this way, there is an intimate, inextricable fusion of appearance with reality, and of accomplished fact with anticipation.* In truth, we have been describing the exact situation which human experience presents for philosophic analysis. We are apt to think of this fusion from the point of view of the higher grades of human beings. *But it is a fusion proceeding throughout nature. It is essential mode in which novelty enters into the functionings of the world*."[9]

On the other hand, *Adventures of Ideas* continues Whitehead's argument in *Process and Reality* that there is no gap between living and non-living: "Another gap is that between lifeless bodies and living bodies. Yet the living bodies can be pursued down to the edge of lifelessness. Also the functionings of inorganic matter remain intact amid the functionings of living matter. … In the case

[9] Whitehead, A.N. (1867), *Adventures of Ideas*, New York: The Free Press, p. 212. Italics mine. Next it will be pointed as AI.

of living bodies the coordination intervenes, and the average effect of these intimate functionings has to be taken into account. Those activities in the self-formation of actual occasions which, if coordinated, yield living societies are the intermediate mental functionings *transforming the initial phase of reception into the final phase of anticipation*. In so far as the mental spontaneities of occasions do not thwart each other, but are directed to a common objective amid varying circumstances, there is life. The essence of life is the teleological introduction of novelty, with some conformation of objectives." (AI 207. Italics mine) Here he speaks also about the phases of anticipation (as is seen from my italics).

Another important line of a more detailed explanation of the notion of anticipation in *Adventures of Ideas* is connected with the "presence" of the future in the present. Whitehead says: "But the sense in which the future can be said to be immanent in occasions antecedent to itself, and the sense in which contemporary occasions are immanent in each other, are not so evident in terms of the doctrine of the subject-object structure of experience. It will be simpler first to concentrate upon the relation of the future to the present. … Cut away the future, and the present collapses, emptied of its proper content. Immediate existence requires the insertion of the future in the crannies of the present." (AI 191)

Here the concept of anticipation is not mentioned explicitly, but the only way in which future is possible to be present is through anticipation. And indeed, Whitehead continues: "…the future is not nothing. It lives actively in its antecedent world. … In the present, the future occasions, as individual realities with their measure of absolute completeness, are non-existent. Thus the future must be immanent in the present in some different sense to the objective immortality of the individual occasions of the past. In the present there are no individual occasions belonging to the future. The present contains the utmost verge of such realized individuality. The whole doctrine of the future is to be understood in terms of the account of the process of self-completion of each individual actual occasion. This process can be shortly characterized as a passage from re-enaction to anticipation. The intermediate

stage in this transition is constituted by the acquisition of novel content, which is the individual contribution of the immediate subject for the re-shaping of its primary phase of re-enaction into its final phase of anticipation. This final phase is otherwise termed 'satisfaction', since it marks the exhaustion of the creative urge for that individuality." (AI 192)

And again: "The future is immanent in the present by reason of the fact that the present bears in its own essence the relationships which it will have to the future. It thereby includes in its essence the necessities to which the future must conform. The future is there in the present, as a general fact belonging to the nature of things. … Thus the future is to the present as an object for a subject." (AI 194) Thus "the earlier will be immanent in the later according to the mode of anticipation, as explained above." (AI 197)

One of the inferences that we can draw from what is stated above is that future actual occasions are immanent in the present only by way of anticipation of the future by the present. Some authors think this means that "Anticipation yields only a weak sense of immanence. The future is immanent in the present only as a potentiality for becoming, to which the present activity is contributing limitations."[10] And also: "Among the feelings which compose A's satisfaction are anticipatory feelings. A anticipates that *some* actual occasions will supersede it and that these occasions will conform to it when they become actual. M is present in A only as a possible value for this variable. Only in this weak sense is the future immanent in the present."[11] If we assume this opinion, it will mean that Whitehead's understanding of anticipation is weaker than the contemporary strong sense of anticipation. I suggest it will be better not to take such decision in a hurry. Whitehead's thought is deeper that sometimes it looks like.

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[10] Christian, William. (1955), *An Interpretation of Whitehead's Metaphysics*, New Haven: Yale Univ. Press, p. 124.

[11] Ibid.

Now, as an inference of the analysis of the concept of anticipation as expressed in *Process and Reality* and in *Adventures of Ideas* I can agree with Wolfhart Panenberg's remark that "Already in *Process and Reality* Whitehead himself spoke occasionally of anticipatory feelings with respect to subjective aim (PR 278/428f.; cf. 214f./327f.). He did so above all in *Adventures of Ideas* (AI 250f.). … Whitehead does not … describe the significance of anticipation for the formation of the subject, as constituting its subjectivity out of a future which already determines the present by way of anticipation. Rather in Whitehead, anticipation means that the subject, constituting itself in the present, includes also its future relevance for others (its "objective immortality") in the act of its self-constitution. Whitehead did not exhaust the theoretical potential of the element of anticipation implied in the concept of "subjective aim". … Although this resulted in turning the action of the future end upon the present becoming into the effectiveness of a living organism's seed with respect to its future end, he nevertheless spoke of an effect of the end upon the process of becoming. This does not happen in Whitehead, because he sees becoming in each of its stages as self-constitutive. That is why, despite his use of teleological language, the element of anticipation cannot really become constitutive in his interpretation of subjectivity."[12]

3.2. A comparison between Whitehead's and St. Augustine's ideas of anticipation

What is interesting in this regard is that Whitehead's idea of anticipation reminds us the St. Augustine's consideration of past, present and future (*Confessions*, Book 11, chapters 14–31).[13] In these chapters Augustine talks about time and its past, present and future. He uses several times the term "ex-

[12] Panenberg, Wolfhart. (1984), "Atom, Duration, Form: Difficulties with Process Philosophy", *Process Studies*, Vol. 14, No 1, p. 28.

[13] I am indebted to prof. Francois Beets from the University of Liege, Belgium, for taking my attention to the above pointed comparison.

pectation" (in Latin "expectatio"). Let me give some quotations: "The time present of things past is memory; the time present of things present is direct experience; the time present of things future is *expectation*." (*Confessions*, Book 11, chapter 20, italics mine[14]). Further Augustine says: "But how is the future diminished or consumed when it does not yet exist? … For the mind *expects*, it attends, and it remembers; so that what it *expects* passes into what it remembers by way of what it attends to. Who denies that future things do not exist as yet? But still there is already in the mind the *expectation* of things still future. … Therefore, future time, which is nonexistent, is not long; but "a long future" is "a long *expectation* of the future". … The span of my action is divided between my memory, which contains what I have repeated, and my *expectation*, which contains what I am about to repeat." (*Confessions*, Book 11, chapter 28; italics mine). And Augustine continues: "For it is not as the feelings of the one singing familiar songs, or hearing a familiar song in which, because of his *expectation* of words still to come and his remembrance of those that are past, his feelings are varied and his senses are divided." (*Confessions*, Book 11, chapter 31; italics mine).

We see that Whitehead develops further Augustine's thoughts on "expectation" in the mature and elaborated contemporary metaphysical concept of anticipation. It is not strange, because Whitehead has thought that the transition from the pre-modern to the modern way of thinking is in fact a transition from rational to historical thinking. This does not mean that he goes back to the way of thinking that was dominant before the epoch of modernism. We know that Whitehead is a postmodern thinker (a constructive postmodernist), however his postmodernism gives back to us something of the rationality of the pre-modern epoch

[14] I use the following edition: St. Augustine. *Confessions* (newly translated and edited by Albert C. Outler). Grand Rapids, MI: Christian Classics Ethernal Library, 2000. (Print Basis: Philadelphia: Westminster Press [1955], Library of Christian Classics, Vol. 7).

that was rejected by the modern thinking[15], but at the same time Whitehead gives further and new postmodern development of that pre-modern elements of rationality. The above comparison with St. Augustine concerning the origin of the contemporary concept of anticipation is a good example in this regard.

3.3. Anticipation in *Modes of Thought*

In *Modes of Thought* anticipation is mentioned explicitly only twice. The first one is in connection with Descartes' philosophy: "There were other sides to Descartes' cosmology which might have led him to a greater emphasis on motion. For example, his doctrines of extension and vortices. But in fact, by anticipation, he drew the conclusion which fitted the Newtonian concepts."[16] The second one is in connection of the teleological aim. Here is the full quotation: "I find myself as essentially a unity of emotions, enjoyments, hopes, fears, regrets, valuations of alternatives, decisions – all of them subjective reactions to the environment as active in my nature. My unity – which is Descartes' "I am" – is my process of shaping this welter of material into a consistent pattern of feelings. The individual enjoyment is what I am in my role of a natural activity, as I shape the activities of the environment into a new creation, which is myself at this moment; and yet, as being myself, it is a continuation of the antecedent world. If we stress the role of the environment, this process is causation. If we stress the role of my immediate pattern of active enjoyment, this process is self-creation. *If we stress the role of the conceptual anticipation of the future whose existence is a necessity in the nature of the present, this process is the teleological aim at some ideal in the future.* This aim, however, is not really beyond the present

[15] For more detailed analysis see Cobb, John, Jr. (1993). Alfred North Whitehead. In: Griffin, D.R, Cobb, J., Jr., etc. (Eds.) (1993). *Founders of Constructive Postmodern Philosophy: Peirce, James, Bergson, Whitehead, and Hartshorn*. Albany: SUNY Press, pp. 167–170.

[16] Whitehead, A.N. (1968), *Modes of Thought*, New York: The Free Press, p. 145. Next will be quoted as MT.

process. For the aim at the future is an enjoyment in the present. It thus effectively conditions the immediate self-creation of the new creature." (MT 166. Italics mine.)

However, there are many passages that contain no explicit mentioning of the concept of anticipation, but in fact are closely connected with the idea of anticipation. It is valid especially of Chapter 8 in the book entitled "Nature alive" that has been published for the first time in 1934 as the second of the two lectures with the common title *Nature and Life* re-published in 1938 in *Modes of Thought*. All such passages treat the topic of life and explain further Whitehead's statement in *Process and Reality* that there is no gap between the living and the non-living. I shall point only to some of them. He says: "…this formulation of the problem in terms of minds and matter is unfortunate. It omits the lower forms of life, such as vegetation and the lower animal types. These forms touch upon human mentality at their highest, and upon inorganic nature at their lowest. … The doctrine that I am maintaining is that neither physical nature nor life can be understood unless we fuse them together as essential factors in the composition of 'really real' things" (MT 150) And next: "How do we add content to the notion of bare activity? This question can only be answered by fusing life with nature. In the first place, we must distinguish life from mentality. Mentality involves conceptual experience, and is only one variable ingredient in life. The sort of functioning here termed *conceptual experience* is the entertainment of possibilities for ideal realization in abstraction from any sheer physical realization. … Life lies below this grade of mentality. Life is the enjoyment of emotion, derived from the past and aimed at the future. It is the enjoyment of emotion which was then, which is now, and which will be then. This vector character is of the essence of such entertainment." (MT 166–167)

The conclusion from the last quotations that there is no such a big gap between the living and the non-living is in agreement with the conclusion of many contemporary philosophers

investigating anticipation that in respect to anticipation there is no gap between the living and the non-living. Let me give in this regard Whitehead's analysis of nature into four main types: "Thus in nature we find four types of aggregations of actualities: the lowest is the nonliving aggregation, in which mutual influence is predominantly of a formal character expressible in formal sciences, such as mathematics. The inorganic is dominated by the average. It lacks individual expression in its parts. … The vegetable grade exhibits a democracy of purposeful influences issuing from its parts. … The animal grade includes at least one central actuality, supported by the intricacy of bodily functioning. … The human grade of animal life immensely extends this concept, and thereby introduces novelty of functioning as essential for varieties of importance." (MT 27–28) In this way we see Whitehead's gradation of aggregations of actualities that argues that the distinction between the living and the non-living is a matter of degree.

4. Brief comparison between Whitehead's and Nikolai Hartmann's views of anticipation

Nikolai Hartmann's ontological theory has been developed in contradiction with the neo-Kantian and phenomenological movements. The same is valid to a great extent also for Whitehead's theory and in this regard there are many similarities between both thinkers. But this does not mean that their ideas are identical; there are specific differences between them. I shall point here only the similarity and differences in their teachings concerning the idea of anticipation especially with respect of the problem of time discovering in this way also some similarity between Hartmann's ideas of anticipation with the above discussed St. Augustine's ideas. In this discussion I shall rely on the existing recent interpretations of Hartmann's idea of anticipation.

If the past and the future with Hartmann were non-being, then "past and future cannot exert any influence over the present because non-being cannot influence being. … The only way out is to acknowledge that both past and future *are*."[17] It follows from here that anticipation is possible according to Hartmann, only if past and future are being. The difference between past, present and future is not a difference between being and non-being; the difference is that past is no longer actual and future is non-actual.[18] Talking about the future, Hartmann is referring to a representation of the future, an image or idea.[19] "This image … is always a 'real' being, a *present* anticipation of the future. … The future, as such, does not have an ontological consistency … [and] that 'vision' has a very complex structure"[20] connected with the analysis of the phenomenon of anticipation. Hartmann writes in his work *Teleologisches Denken* that "What will be realized only in the future can influence the present only if in some way it 'pre-exists' its realization; and on the other hand this is thinkable only if this pre-existing is intended as the reality of another way of being to which it has first to arrive. It should be also, through an inner strength, […] brought into presentness, but without already becoming real in the present."[21] According to Hartmann "the 'future' is only immanent to consciousness", that is why anticipation with Hartmann is only a mental processing.[22] The conclusion from here is that anticipation with Hartmann is what he calls "a transcendent act".[23]

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[17] Poli, Roberto. (2011). On the Ontological Nature of Time. A Forgotten Chapter form Hartmann's *Philosophy of Nature*, submitted. Italics in the original.
[18] Ibid.
[19] See Scognamiglio, Carlo. (2010). "Anticipation and the future vision in Nicolai Hartmann's ontology", *Foresight*, Vol. 12, No 3, 2010, p. 51.
[20] Ibid. Italics in the original.
[21] Hartmann, N. (1951). *Teleologisches Denken*, De Gruyter, Berlin. The quotation is according to Scognamiglio, Carlo. Op. cit., p. 51.
[22] Scognamiglio, Carlo. Op. cit., p. 51.
[23] Ibid.

5. Whitehead's thoughts on anticipation in *Immortality* (1941)

After the publication of his book *Modes of Thought* (1938) Whitehead did not stop thinking about anticipation and its place in our world and, respectively, the role of anticipation in his own metaphysical system. We can find in his last public lecture *Immortality* (1941) the result and the development of his final thoughts on anticipation.

In this lecture Whitehead speaks about anticipation several times. At the beginning of the lecture he says: "…the World of Origination: It is the Creative World. It creates the Present by transforming the Past, and by anticipating the Future."[24] Here he stresses on the importance of anticipation. Next in the lecture he again stresses on its importance and displays its connection with memory and from here with consciousness and life at all: "The discussion of this conclusion leads to the examination of the notions of Life, Consciousness, Memory, and Anticipation. Consciousness can vary in character. In its essence it requires emphasis on finitude, namely some recognition of 'this' and 'that'. It may also involve a varying extent of memory, or it may be restricted to the immediacy of the present, devoid of memory, or anticipation. Memory is very variable; and except for a few scraps of experience, the greater part of our feelings are enjoyed and pass. The same statement is true of anticipation." (Im 694)

The last mentioning of anticipation is the most important one: "…human experience can be described as a flood of self-enjoyment, diversified by a trickle of conscious memory and conscious anticipation. … When memory and anticipation are completely absent, there is complete conformity to the average influence of the immediate past. … When there is memory, however feeble and short-lived, the average influence of the immediate past, or future,

[24] Whitehead, A.N. (1951). "Immortality", Shilpp, P.A. (Ed.). (1951), *The Philosophy of Alfred North Whitehead*. The Library of Living Philosophers. Vol. III. (second edition). Open Court, 1951, pp. 682–700. Here p. 684. Next it will be quoted as Im.

ceases to dominate exclusively. There is then reaction against mere average material domination. Thus the universe is material in proportion to the restriction of memory and anticipation. According to this account of the World of Activity there is no need to postulate two essentially different types of Active Entities, namely, the purely material entities and the entities alive with various modes of experiencing. The latter type is sufficient to account for the characteristics of that World, when we allow for variety of recessiveness and dominance among the basic factors of experience, namely consciousness, memory, and anticipation. This conclusion has the advantage of indicating the possibility of the emergence of Life from the lifeless material of this planet – namely, by the gradual emergence of memory and anticipation." (Im 695)

We see here, first, that Whitehead puts anticipation amongst the basic factors of experience together with consciousness and memory, and second, Whitehead develops his earlier statement that there is no gap between living and non-living in the statement that Life has emerged from the lifeless by the gradual emergence of memory and anticipation. In this way, finally, anticipation receives its proper place in Whitehead's metaphysical system. There is something symbolic in the fact that Whitehead says his last word on anticipation namely in his last public lecture.

6. Conclusion

It can be definitely concluded from the above investigation that Whitehead is one of the 20th century philosophers that are pioneers in the development of the contemporary concept of anticipation. Anticipation plays an important role in Whitehead's metaphysical system and in a sense Whitehead's views on anticipation are further elaborations of some pre-modern "anticipations" on anticipation developed by him in a constructive post-modern way that displays the presentness of many aspects of this concept, a fact which points to the richness of the concept of anticipation with Whitehead.

On the other hand, the meaning of Whitehead's ideas on anticipation as pioneering the contemporary developments of this concept in science and philosophy (as elaborated for example in Robert Rosen's works) needs further investigation. It could be argued that Whitehead's views of anticipation correspond much more to the weak anticipation than to the strong one if we follow the contemporary Dubois' distinction between strong and weak anticipation[25]. But such detailed investigation will be a subject matter of a separate paper of mine.

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THE LOGIC OF RATIONALITY. TOWARDS THE MODAL VIEW OF MATHEMATICAL PLATONISM

1. The ontological status of mathematical entities in Whitehead's philosophy

Whitehead's ontology assumes that mathematical forms and formulae are eternal objects. This attitude postulates also that qualities of all possible sorts are eternal entities. This sphere of existence can be thought of as the domain of pure possibility for any specific facts. Every eternal object can be seen as a pure potential. It can be actualized in the process of concrescence in any becoming actual occasion[1]. In SMW[2] it can be read "[…] *the metaphysical status of an eternal object is that of a possibility for an actuality. Every actual occasion is defined as to its character by how these possibilities are actualised for that occasion. Thus actu-*

[1] John B. Cobb, Jr., *Whitehead Word Book* (Claremont: P&F Press, 2008), 23.

[2] The abbreviations TUA, SMW, PR, MT denote, respectively, the following Whitehead's books: *Treatise on Universal Algebra with Applications*, *Science and the Modern World*, *Process and Reality*, and *Modes of Thought*.

alisation is a selection among possibilities."[3] Consequently, it can be observed that according to Whitehead the realm of atemporal and abstract objects has a modal essence. It seems justifiable to claim that according to process philosophy eternal entities constitute the ontological basis for all actual events. Whitehead said that "[e]*very actual occasion* […] *is the solution of all modalities into actual categorical ingressions: truth and falsehood take the place of possibility*."[4]

2. The modal view of mathematical theories

It is commonly presumed that all known mathematical objects can be seen as sets. Numbers, functions, groups, topological spaces can be considered as possessing a set-theoretical nature. For instance, a function in a two-dimensional space can be identified with a collection of ordered pairs, a group is a set endowed with a binary operation having specific properties. Also natural numbers, rationals and reals, are constructed as sets. Consequently, it is ascertained that set theory (e.g. the *Zermelo-Fraenkel set theory* with the *axiom of choice* – ZFC) constitutes an ontological foundation for the rest of mathematics. This assertion is implied by the fact that every abstract mathematical object can be seen as set having certain properties. Therefore, it is commonly assumed that all known mathematics can be axiomatized in set theory. Mathematicians believe that the set-theoretical universe can serve as the universe for all mathematics. Sets constituted by hierarchies of atemporal objects accumulate transfinitely in order to shape the universe of all sets. This cumulative universe is understood as the domain of all mathematics. Identifying any theory formulated in the language of ZFC with a deductively closed collection

[3] Alfred N. Whitehead, *Science and the Modern World* (New York: Macmillan, 1925), 159–160.

[4] Whitehead, *Science and the Modern World*, 161.

of sentences it follows from the completeness theorem for the first-order logic that every theory determines its own model. Then it can be said that all mathematical entities live in some models of set theory.

Recall that in 1962 Paul Cohen introduced the method of forcing in order to prove the independence of the *Continuum Hypothesis* (CH) from the other axioms of ZFC. This method of building new models of set theory was subsequently used by other mathematicians to construct enormous varieties of models of ZFC. In ZFC it is assumed that the universe of all sets, denoted by V, is identified with the class of all hereditary well-founded sets. Then the so-called *forcing extension* V[G] of the ground model V is built by adding a new ideal object G to V.[5] It can be seen that the forcing extension V[G] adjoins this new ideal object G to V by closing under elementary set-building operations. Then every abstract entity in V[G] has its name in V and is built directly from this name and G. It can be proved that every generic extension V[G] satisfies the axioms of ZFC. Any statement of set theory φ is *possible* (or *forceable*) if φ holds in some forcing extension V[G] and φ is *necessary* if it is true in all generic extensions. The symbols $\Diamond\varphi$ and $\Box\varphi$ denote, respectively, that the sentence φ is possible or necessary. Suppose that a *modal assertion* is identified with a formula of propositional modal logic which is expressed using sentential variables x_i, Boolean connectives $\wedge$, $\vee$, $\neg$, $\rightarrow$, $\leftrightarrow$ and the above introduced modal operators $\Diamond$, $\Box$. Consequently, the following definition can be formulated: a modal statement $\varphi(x_0, \ldots, x_n)$ is a *valid principle of forcing* if for all sentences φ_i in the language of set theory, the assertion $\varphi(\varphi_0, \ldots, \varphi_n)$ is true under the forcing interpretation of $\Diamond$ and $\Box$. This means that $\varphi(x_0, \ldots, x_n)$ is a ZFC-provable principle of forcing if all such substitution instances $\varphi(\varphi_0, \ldots, \varphi_n)$ hold in the framework of ZFC. It was recently proved by that every statement

[5] The forcing extension V[G] is equivalently termed the *generic extension* or the *generic model*.

in the modal theory S4.2 is a ZFC-provable principle of forcing. The modal theory S4.2 consists of the following axioms:

K	$\Box(\varphi \to \phi) \to (\Box\varphi \to \Box\phi)$
Dual	$\neg\Diamond\varphi \leftrightarrow \Box\neg\varphi$
S	$\Box\varphi \to \varphi$
4	$\Box\varphi \to \Box\Box\varphi$
.2	$\Diamond\Box\varphi \to \Box\Diamond\varphi$

and is closed under modus ponens and the rule of necessitation (i.e., from φ it is possible to deduce $\Box\varphi$). It can be easily demonstrated that each axiom of S4.2 is a valid theorem of forcing.[6]

Summing up these considerations it seems reasonable to assume that set theory is about its different models. It is easily observed that every such model has its own mathematical truths. Also it turns out that every assertion formulated in the language of ZFC (and – consequently – every mathematical statement) is either *necessarily possibly necessary* (or the *negation* of this sentence) or *necessarily possible*. In our view of set theory it is believed that there are many different set-theoretical universes. All of these alternative universes (i.e., the models of ZFC) exist mind-independently. This means that all models of set theory exist in the realm of eternal objects. Then it seems obvious that this view of the foundations of mathematics can be termed *second order Platonism* or *modal realism*. From the Whiteheadian perspective it can be said that any model of set theory – understood as some collection of eternal entities – can be defined as a hierarchy of atemporal objects which can be simultaneously realized (or can be simultaneously prehended by a single actual occasion). Different and sometimes contrary sentences can hold in different hierarchies of abstract entities. Undoubtedly, eternal objects described

[6] Joel D. Hamkins, "Some Second Order Set Theory." In *Springer Lecture Notes in Artificial Intelligence* 5378, ed. by R. Ramanujan and S. Sarukkai (Berlin: Springer – Verlag, 2009), 36–50.

by two contrary sentences φ and $\neg\varphi$ can not be simultaneously prehended by a becoming actual occasion. Whitehead said in PR that "[t]*here is no character belonging to the actual apart from its exclusive determination by selected eternal objects. The definiteness of the actual arises from the exclusiveness of eternal objects in their function as determinants. If the actual entity be "this", then by the nature of the case it is not "that" or "that". The fact of incompatible alternatives is the ultimate fact in virtue of which there is definite character.*"[7] Thus it is justified to claim that the domain of all mathematics is identified with the atemporal multiverse. It can be postulated that this mathematical multiverse constitutes – from the epistemological point of view – the so-called *Field of Rationality*.[8] This eternal field embraces all abstract entities which are cognitively accessible for us. The Field of Rationality has a modal nature and is axiomatized in the framework of second order mathematical Platonism. This field can be seen as the realm of eternal Platonic forms.

From the theological point of view it turns out to be justified to ascertain that the Field of Rationality is the reminiscence of the biblical *Logos*. It consists of the domains of pure potentialities. Whitehead postulated that all actual *Being* can be considered as the result of *concretization* of some possibilities included in the realm of eternal forms.

3. The dual nature of mathematical objects

According to *structuralism* all mathematical theories describe not individual abstract objects but *structures*. Structures should be understood as consisting of places that occur in some mutual relations. Consequently, all mathematical theories characterize

[7] Alfred N. Whitehead, *Process and Reality. An Essay in Cosmology* (New York: Macmillan, 1925), 240.

[8] Józef M. Życiński, "The Rationality Field and the Laws of Nature" in *Wyzwania Racjonalności*, ed. by Stanisław Wszołek, and Robert Janusz (Kraków: Wydawnictwo WAM Ośrodek Badań Interdyscyplinarnych, 2006), 87–101.

places or positions in different structures. For example, according to structuralism the number 3 is not an independent object but is a place in the structure of all natural numbers. Michael Resnik explained that on this view "[…] *in mathematics the primary subject-matter is not the individual mathematical objects but rather the structures in which they are arranged*."[9] The so-called identity criteria for any mathematical entities must be formulated exclusively in terms of the relations holding between them. Contrary to this approach, Whitehead observed that every mathematical object has a dual nature.[10] Namely, suppose that A denotes any eternal object (e.g., a mathematical entity), then A "*considered as an abstract entity, cannot be divorced from its reference to other eternal objects* […]. *This principle is expressed by the statement that each eternal object has a "relational essence"*. […]. *In the essence of A there stands a determinateness as to the relationships of A to other eternal objects* […]. *Since the relationships of A to other eternal objects stands determinately in the essence of A, it follows that they are internal relations. I mean by this that these relationships are constitutive of A; for an entity which stands in internal relations has no being as an entity not in these relations.*"[11] From the fact that every mathematical object has its relational essence it is deducible that it occurs not independently but is arranged in structures. Consequently, Whitehead's approach to abstract mathematical entities can be considered as some kind of structuralism.

On the other hand, he insisted that – regardless of this relational essence – every abstract object exists independently in the realm of Platonic forms. Consequently, it follows that every eternal entity possesses not only its relational essence but also

[9] Michael Resnik, *Mathematics as a Science of Patterns* (Oxford: Oxford University Press, 1997), 201.

[10] This concept can not be confused with the stance that eternal entities have the dipolar (bipolar) character. Namely, according to this last view (proposed by Charles Hartshorne) every eternal object (e.g., mathematical entity) has the so-called conceptual as well as physical pole. Cobb, *Whitehead Word Book*, 23.

[11] Whitehead, *Science and the Modern World*, 160.

its unique individual nature. This individuality implies that all mathematical things exist in the realm of atemporal entities. Also this individual essence manifests itself in the fact that every eternal object maintains its individuality in all possible modes of ingression. Whitehead, in characterizing a individual essence, said: "*The first principle is that each eternal object is an individual which, in its own peculiar fashion, is what it is. This particular individuality is the individual essence of the object, and cannot be described otherwise that as being itself. Thus the individual essence is merely the eternal object considered as adding its own unique contribution to each actual occasion.*"[12] Therefore, some philosophers assume that mathematical entities can be seen as existing mind-independently. They constitute the realm of ideality.

Summing up these remarks, it can be postulated that every eternal object has the so-called dual nature. This dual character manifests itself in the fact that any abstract entity can be considered in its relational essence (i.e., with respect to its internal relations with other atemporal things) as well as in its individual essence (i.e., with respect to its own individuality which is changeless in all its realizations). Consequently, it can be claimed that Whitehead's view on the nature of mathematical entities can be considered as Platonic structuralism.

4. The access problem in Whitehead's philosophy of mathematics

Recall that the central epistemological issue in the philosophy of mathematics is sometimes termed the *access problem*. This problem derives from the so-called two-realm view, i.e., the assumption that the referents of mathematical singular terms exist in the sphere which is completely inaccessible for us. For instance, Paul Benacerraf claimed that our best theory of knowledge can be iden-

[12] Whitehead, *Science and the Modern World*, 159.

tified with the *causal theory of knowledge* and – consequently – if all mathematical entities exist in the Platonic realm, then they are causally inert. He observed that if we want "*a homogeneous semantical theory in which semantics for the propositions of mathematics parallel the semantics for the rest of the language,*"[13] then it is required that the truth of any mathematical sentence implies the existence of adequate mathematical objects to which singular terms of this sentence refer and over which its quantifiers range. On the other hand, he argues that we need "*the account of mathematical truth* [to] *mesh with a reasonable epistemology.*"[14] But according to him, "*a reasonable epistemology*" embraces some sort of causal theory of knowledge which implies a causal link between the knower and the known. Summing up these considerations, Benacerraf concludes that since mathematical entities are abstract and they inhabit the realm of eternal objects which is separated from us, then no such link would be possible. From the fact that all mathematical objects are causally inefficacious it follows that spatially and temporally localized mathematicians are unable to gain any cognitive access to these objects. It can be speculated that the history of philosophy can be partly identified with attempts to solve the aforementioned access problem. It is possible to try to solve this problem by postulating some special human ability to learn about these atemporal and abstract entities. This rationalist stance is adopted by, among many others Plato, Descartes, Gödel, Whitehead, Hartshorne, and Katz. Recall that according to Whiteheadian philosophy the definition of eternal objects can be alternatively formulated in the language of epistemology. Namely, in PR he said that "[a]*ny entity whose conceptual recognition does not involve a necessary reference to any definite actual entities of the temporal world is called an 'eternal object'.*"[15]

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[13] Paul Benacerraf. „Mathematical Truth," in *Philosophy of Mathematics*, Ed. Paul Benacerraf and Hilary Putnam (Cambridge: Cambridge University Press, 1983), 403.

[14] Benacerraf, "Mathematical Truth," 403.

[15] Whitehead, *Process and Reality*, 44.

This cognitive approach is very often seen as mysticism. In order to overcome the access problem Whitehead developed his *theory of prehension*. Recall that according to him any prehension is an operation in which an actual entity grasps another entity and makes that entity an object of its experience. Prehensions can be conceived as "*concrete facts of relatedness*."[16] Every prehension has a *subject* (i.e., the prehending actual entity), an *object* or *datum* that is prehended, and a *subjective form* (i.e., the singular way in which that subject prehends that object). Whitehead utters that conceptual prehensions are prehensions whose data involve eternal objects, e.g., mathematical entities. Consequently, prehensions are understood as the vehicles by which one actual entity is objectified by another or eternal objects obtain ingression into actual entities.[17] Whitehead said that they "*are* '*vectors*'; *for they feel what is* ***there*** *and transform it into what is* ***here.***"[18] It becomes obvious that Whitehead's mathematical Platonism – from the epistemological point of view – can be identified with some kind of empiricism. Such empiricism is very similar to Gödel's conceptual realism. This logician said that "[i]*t seems to me that the assumption of such* [eternal and abstract] *objects is quite as legitimate as the assumption of physical bodies and there is quite as much reason to believe in their existence*"[19] and "*despite their remoteness from sense experience, we do have something like a perception also of the objects of set theory, as is seen from the fact that the axioms force themselves upon us as being true. I don't see any reason why we should have less confidence in this kind of perception, i.e., in mathematical intuition, than in sense perception.*"[20]

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[16] Whitehead, *Process and Reality*, 32.

[17] Cobb, *Whitehead Word Book*, 31.

[18] Whitehead, *Process and Reality*, 105.

[19] Kurt Gödel, "Russell's Mathematical Logic," in *Kurt Gödel: Collected Works*. Volume 2, ed. by Solomon Feferman, John W. Dawson Jr., Stephen C. Kleene, Gregory H. Moore, Robert M. Solovay, and Jean van Heijenoort (New York: Oxford University Press, 1990), 128.

[20] Kurt Gödel, "What is Cantor's Continuum Problem ?," in *Kurt Gödel: Collected Works*. Volume 2, ed. by Solomon Feferman, John W. Dawson Jr., Stephen

It turns out that this human cognitive ability to gain access to the realm of eternal objects can be identified with the exemplification of Whitehead's rationalism. In SMW it can be read that "*mathematics is the science of the most complete abstractions to which the human mind can attain*." We can agree that the essence of Whitehead's view on rationality relies on the postulate that our cognitive faculties enable us to cogitate Platonic forms which exist mind-independently in the realm of atemporal objects. These forms are pure potentialities for every becoming actual occasion in the process of concrescence. In MT Whitehead claimed that "[m]*y final point is that mathematics is concerned with certain forms of process issuing into forms which are components for further process.* […]. *This discussion is a belated reminder to Plato that his eternal mathematical forms are essentially referent to process*. […]. *For him, in this mood, mathematics belonged to changeless eternity*"[21]. It is thus obvious that the actual world can be understood only as the realization of some eternal and abstract pattern. Our mind in the course of a rational thinking is able to obtain knowledge concerning abstract entities and their possible configurations.

5. Between ontology and theology: some metatheoretical reflections on Whitehead's philosophy of mathematics

In the *Book of Wisdom* it can be read: "*You, however, ordered all things by measure, number and weight*." Can we postulate that all actual reality is only the exemplification and realization of some eternal and atemporal pattern ? Is the actual world mathematical in its ultimate nature ? In SMW Whitehead asserted that "[t]*he Platonic world of ideas is the refined, revised form of the Pythagorean doctrine that number lies at the base of the real*

C. Kleene, Gregory H. Moore, Robert M. Solovay, and Jean van Heijenoort (New York: Oxford University Press, 1990), 268.

[21] Alfred North Whitehead, *Modes of Thought* (New York: Macmillan, 1938), 126.

world."[22] If our philosophical presuppositions stating that our spatially and temporally determined world is composed of actual occasions which – in turn – are identified with the realized eternal entities, then the following question should be posed: *How to justify these strong metaphysical claims* ? It seems reasonable to accept the position that the world's rationality is based on some theological claims. In SMW this view is expressed explicitly by postulating that "[God's] *nature is the ground of* [R] *ationality*."[23] Also analyzing in PR the realm of eternal entities, Whitehead observed that "[…] *eternal objects, as in God's primordial nature, constitute the Platonic world of ideas*."[24] I propose to modify Whitehead's view concerning the location of eternal objects and place them in God's consequent nature. This proposition is derivable from the fact that – in my opinion – God's primordial nature is completely unattainable to us. We do not possess any cognitive access to the primordial nature of God. This approach turns out to be in agreement with the tradition of monotheism. God in itself – whose biblical name is Yahweh – is too transcendent to be cogitated by any human being. It is possible to gain cognizance of God only *via* different mediators. The reminiscence of the biblical *Logos* in the form of the *Field of Rationality* can be studied by humans *via* mathematics (which deals with hierarchies of eternal objects) or empirical sciences[25]. Recall that, according to Whitehead, any regularities encountered in the actual world and described by the laws of nature reflect an order among eternal entities. In our view

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[22] In SMW Whitehead explicitly said: „*It is the foundation of metaphysical position which I am maintaining that the understanding of actuality requires a reference to ideality. The two realms are intrinsically inherent in the total metaphysical situation*." Whitehead, *Science and the Modern World*, 158–159.

[23] Whitehead, *Science and the Modern World*, 179.

[24] Whitehead, *Process and Reality*, 46.

[25] Józef M. Życiński, "The Rationality Field and the Laws of Nature," in *Wyzwania Racjonalności*, ed. by Stanisław Wszołek, and Robert Janusz (Kraków: Wydawnictwo WAM Ośrodek Badań Interdyscyplinarnych, 2006), 87–101.

these objects are ordered by God's consequent nature to gain greater value in our world. Then it seems that actual occasions prehend pure potentials in the form of eternal objects in order to realize some implicit order which is inherited from these pure Platonic forms. Undoubtedly, not all results of pure mathematics can be applied to actuality. Following Whitehead's hint from TUA, it turns out to be reasonable to accept the view that every empirical theory should be understood as a "[logical] *calculus only partially interpretable*."[26] It is said that a theory (understood as a deductively closed set of sentences) is partially interpretable if only some variables occurring in its sentences can be superseded by the names of actual things. Consequently, it can be immediately seen that mathematics – from an ontological as well as epistemological point of view – should be viewed as some kind of logical scaffold or the world's hidden matrix.[27] Therefore, all eternal objects stem from God as an *initial aim* at realizing what is possible in the actual world.[28] Summing up these remarks it can be said that God's ordering of eternal objects acts as the formal foundation of regularity and harmony in the actual world. Also it is claimed that in this approach God's consequent nature manifest itself as the source of purposiveness and novelty for all actual occasions. It is postulated that any adequate theistic treatment of God's relation to the world can be identified with some kind of panentheism. In this respect mathematics can be understood as a part of theology.

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[26] Alfred N. Whitehead, *A Treatise on Universal Algebra with Applications* (Cambridge: Cambridge University Press, 1898), 6.

[27] Józef M. Życiński, "The Rationality Field and the Laws of Nature," in *Wyzwania Racjonalności*, ed. by Stanisław Wszołek, and Robert Janusz, Kraków: Wydawnictwo WAM Ośrodek Badań Interdyscyplinarnych, 2006), 87–101.

[28] Cobb, *Whitehead Word Book*, 68.

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NICOLAI HARTMANN: THE FUNDAMENTAL CATEGORIES AND PAINTING. REGIONAL ONTOLOGY OF A PICTORIAL WORK OF ART

1. Introduction

In this article, I am going to present an application of some fundamental categories developed by Hartmann. These categories can be applied to the interpretation of a painting as a piece of art. At the beginning, the possibility of such an application will be considered, than I will discuss three categories – structure, dependence and unity and, at last, reveal their content. The fundamental categories as unity, multitude, form, matter, structure, dependence, modus etc. are kinds of categories, which might be applied to the whole universum as well as to the field of aesthetic objects. This is the basis of their ontological indifference. However, since an aesthetic object (especially a work of art) is not an extant – something which exists regardless of any subjective relations, its categories have different meanings (contents), distant from the meanings of those, which can be found in the real or ideal world[1]. It is right the content, that must be highlighted in order to recognise the phenomena of a painting.

[1] The difference is pointed out by Werkmeister. „Any change in the objectified spirit is always the work of living spirit. Despite of its dependence, however,

2. Fundamental (the most general) and modal categories. Some remarks on the categories and their functions

In the work *Der Aufbau der realen Welt* Hartmann finds out that the theory of the categories – as opposed to an analysis of a mode of being – is a content ontological proceeding[2]. From this point of view, the main task of the theory of the catagories is to explain a structure of an object, to show its major traits, the sorts of a unity etc. Therefore, the fundamental categories are the principles explaining *what* something is, but they do not clarify how something *exists* (its mode of being)[3]. They concern *Sosein des Seienden*[4]. This is their first feature.

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the objectified spirit has its own categorial independence, its own laws". William H. Werkmeister, *Nicolai Hartmann's New Ontology* (Florida, 1990), 190.

[2] „Im Gegensazt zu der grundlegenden Behandlung des Seienden als solchen und der Seinsweisen ist die Kategorienlehre die inhaltliche Durchführung der Ontologie". Nicolai Hartmann, *Der Aufbau der realen Welt. Grundriß der allgemeinen Kategorienlehre* (Berlin, 1940), 2. „In den Kategorien geht es nicht um die Seite des Daseins am Seienden, sonder um die Seite des Soseins. Das besagt, es geht hier nicht um die Seinsweisen – denn diese sind Weisen des Daseins, – sonder um Geformtheit, Struktur und Inhalt". Hartmann, *Der Aufbau*, 15. The theory of categories is a content ontological proceeding, not a mataphysical one. The difference between the ontological problems and metaphysical ones lies, first of all, in the possibility of cognition. „Byt, przedmiot naszego doświadczenia, posiada dwa oblicza: racjonalne i irracjonalne, dające się wyjaśnić i tajemnicze. Pierwszym aspektem zajmują się nauki szczegółowe i ontologia, drugim – metafizyka". Władysław Stróżewski, *Ontologia* (Kraków, 2003), 43.

[3] Consequetnly, the modal categories might not be a subject of the ontological proceeding (fundamental ontology). „Hartmann's Kategorienbegriff ist unscharf und nicht mehr eindeutig. Waren im *Möglichkeit und Wirklichkeit* die Modalbestimmungen selbst keine Kategorien, sonder deren Voraussetzungen sind – so werden in *Der Aufbau der realen Welt* auch die Modalprinzipien als Fundamentalkategorien ausgewiesen". Reinhold Breil, *Kritik und System. Die Grundproblematik der Ontologie Nicolai Hartmanns in transcendentalphilosophischer Sicht* (Würzburg, 1996), 218.

[4] „Das Sosein umfaßt alles, was das Seinde ist, die Gesamtheit seiner Bestimmungen; das Dasein meint hingegen das „Daß-sein", daß es überhaupt ist". Joachim B. Forsche, *Zur Philosophie Nicolai Hartmanns. Die Problematik von ka-*

The second trait is the generality of the categories, which consists in their application to all possible regions of being[5]. These are the principles, which explain both a real and an ideal extant and an unreal object, especially a work of art (for example a painting). As the most general, they cross every border: the border between an extant and an object, between reality, ideality and unreality. That is why they may be applied to such a kind of objects' region, into which a work of art belongs. It does not mean that a unity of a biological entity – one of the most important general categories – is the same as a unity of a work of art. It only means that the form of this unity in itself is the same, and is not in content.

However, Hartmann sometimes narrows this meaning of generality of categories to the ones, which describe only the real world. Such categories as time and process are of course general but might be applied only to the real world. They cross all levels of the real world. In the above–mentioned work, he writes: „Solche Kategorien sind gemeinsame Prinzipien aller Schichten des Realen; sie bilden die einheitliche Grundlage der gesamten realen Welt (...). Sie sollen in folgenden Fundamentalkategorien heißen. Sie machen den Gegenstand der „allgemeinen Kategorienlehre" im Unterschied von der „speziellen" aus."[6].

In my opinion, such a narrowing does not correspond to the main task of ontology, the ultimate goal of which is to work out the general principles of everything that *is*. Therefore, to retain

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tegorialer Schichtung und Realdetermination, Monografien zur Philosophischen Forschung, Band XLI (Meisenheim am Glan, 1965), 21.

[5] It must be underlined that the theory of the categories is directed towards being and its manifestations „As the most general category, being is indefinable and partially irreational. This doesn't imply, however, that is entirely irrational and indeterminable, for it can be determined indirectly through its manifestations (*Besonderungen*). If this is indeed the case, the proper method of ontology consists in careful and systematic categorial analysis of various manifestations of being". Predrag Cicovacki, „New Ways of Ontology – the Ways of Interaction", *Axiomathes* Volumne 12, Nos 3–4 (2001), edited by Roberto Poli. Special Issue: *The Legacy of Nicolai Hartmann (1982–1950)*: 162.

[6] Hartmann, *Der Aufbau*, 200.

the sense of generality of categories, they must be: 1. transregional; 2. transexistential. Such a comprehension of fundamental categories is one of the conditions of their possible application to works of arts, especially to paintings.

3. Modal categories

Unlike the fundamental categories, the modal categories do not explain attributes of an extant or an object but only their mode of being. Hartmann accepts Kant's statement that existence is neither an attribute nor a predicate at all. And even from this historical point of view, it is clear that the theory of the categories should be understood as a content ontological proceeding, which cannot be used as an explanation of the existence. This task belongs to the modal analysis, which considers possibility, necessity and contingency. In this way, we are able to find out how an object exists.

The difference between the fundamental categories and the modal ones corresponds to the difference between *Sosein* and *Dasein*. These are aspects or sides of being as being[7]. Those two aspects might be also found in an object that is not an extant, for instance, in a work of art (a painting). In the result, the subject of the futher investigation will be a structure of a painting and its mode of being.

4. A Painting and Category of Structure

A) A General Structure of a painting

In order to understand a structure of a painting we should first identify its place in the realm of extants and objects. Hartmann finds out that a painting is an exceptional kind of object.

[7] „*Dasei* and *Sosein* are two moments of the same being: the two terms can be logically differented but *Dasein* and *Sosein* cannot be ontologically separated". Cicovacki, „New Ways of Ontology", 162.

It is an objectivation (*Obiektivierung*) or an objectivated spirit (*obiektivierter Geist*)[8]. In other words, it is a spiritual content fixed to a physical matter[9]. A painting consists of two levels: the first one is called the foreground (*Vordergrund*) and the second one – the background *(Hintergrund)*.

Hartmann has diversified the terms of these levels. He uses the terms *a real level* and *an unreal level* to show the existential specificity of a painting which consists in the possibility of „meeting" two different modes of being in it. The terms *material level* and *spiritual level* are used to show the place of a painting in the range of objects, a unique place, since two other levels: the biological one and the psychical one are omitted. The opposition between *foreground and background* reveals that a foreground is a specific layer that makes the elements of a background visible. The last terms are especially valuable because they indicate the relation between two levels, the relation of appearance (*Erscheinungsverhältnis*), which is the essence of an aesthetic object. Before the relation is to be described, the examination of two main levels of a painting needs to be presented.

B) A Foreground of a Painting

A real two-dimensional scene with visible colours is the first level of a painting, its foreground. These are canvas, glass or other painting material and physically understood colourful spots that belong to this level. It is therefore a classical level of the real world. It is created from many physical things with their distinc-

[8] „Das ästhetische Objekt ist bestimmt durch die Struktur des objektivieren Geistes. Es besetzt demgemäß alle Predikate eines Objektivationsgebildes. Das zeigt am deutlichsten am Kunstwerk". Hariolf Oberer, *Vom Problem des objektivierten Geistes. Ein Beitrag zur Theorie der konkreten Subjektivität im Ausgang von Nicolai Hartmann* (Köln, 1965), 84.

[9] According to Oakeley, this fixing takes the spirit life. Hence, it is not real. „The third form of spirit is in Hartmann's view no longer living or real". H.D. Oakeley, „Professor Nicolai Hartmann's Concept of Objektive Spirit", *Mind* Vol. 44, No. 173 (1935): 43.

tive features, and it might be described by the physical categories, such as space, time, process, matter etc.

Although it is very hard to deny the existence of these things on the first level of a painting, it is the real (physical) mode of being that is questionable.

Firstly, a foreground of a painting seems not to be a real scene but the artistic one because it has different qualities, distant from the qualities of real things. The directional tensions, which appear on it, are not physical but already artistic. Subsequently, the colourful spots are not physical entities[10], but artistic signs, which create the intentional order (composition) of a painting. All those artistic phenomena will dissapear if we find this level real. From this point of view, this level loses its real categories. It is rather a kind of artistic colourful scene with its own categories.

Secondly, according to Hartmann, an artist uses physical things in his process of creation: a brush, wood, dyes etc. and in this way, he creates a foreground of a painting. It is very difficult to exclude the use of such things when observing everyday work of a painter. Moreover, this is the strong argument for reality of a foreground. However, the specificity of an artistic gaze is here omitted. It consists of: 1. an artist isolates the object of his gaze from many other objects. Then these objects lose their importance and even become totally inconspicuous; 2. he reduces attributes of an isolated object to these, which are useful in a creative process; 3. he ascribes the intentional attributes to the object, which have the source in his creative idea (conception, project). He does not form or create therefore the real scene but the artistic one[11].

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[10] „Farbe is also wesentlich mehr als bloß Dingbezeichnung, sie zum eigentlichen Inhalt der Malerei werden, so daß sie dann nicht mehr als bloß Vordergrundiges genommen werden dürfte". Wolfgang Lörcher, *Ästhetik als Ausfaltung der Ontologie* (Meisenheim am Glan, 1972), 35.

[11] „We only assume that the foreground stratum (...) changes its ontological status when the whole object is considered aesthetically". Eva Scharper, „The Asthetics of Harmann and Bense", *Review of Metaphisics* 10 (1956): 295.

Hartmann does not agree with this viewpoint. He supposes that a foreground of a painting is real and there is no difference between this level of painting and the physical level of reality. Hartmann however, might make a mistake of a categorial transfer when he applies the physical level of reality to a painting without assuring himself whether they have the same categories. If the theory of the categories is to be critical this verification should have been done.

This remark or even accusation does not comprise only the solution of the problem what a foreground of a painting is and how it exists. It also shows that the pure ontological investigations which have been carried out to explain a structure of a painting and its mode of being, and which have applied the traditional categories are not highly effective in the interpretation of a painting[12]. It would be better to take into account the phenomenological point of view, which deals with a constitution of sense. A foreground of a painting would not be then a physical thing, which really exists, but an artistic scene, which is unreal. Its elements: wood, glass, colourful spots would not be the real extants, but the artistic signs (since they have been formed by an artist)[13]. I think this viewpoint describes a painting and its levels more accurately. Of course, it does not mean that the ontology seen as the theory of the categories is useless. After all, a sense may be treated as one of the ontological categories. It merely means, that so-called "strict" categories, which have been worked out by ontology for ages, have limited validity.

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[12] Lörcher even thinks the asthetics falls victim to ontology. „Trotz aller anregenden Analysen und der grundlegenden Klärung vieler Systemirrtümer wird (...) das ästhetische Konzept Hartmanns also gerade deshalb fragwürdig, weil es nur als die Ausfaltung seiner Ontologie verstanden werden kann". Lörcher, *Ästhetik*, 169.

[13] „Durch diese Gestaltung ist ein Index für Subjektstätigkeit gegeben. In ihr kann nun etwas selbst nicht mehr Naturales erscheinen". Oberer, *Vom Problem*, 32.

C) The levels of a background

The level of a background is the second principal level of a painting. It is not homogeneous in itself but consists again of many levels. A pictorial constructed object (person, thing, landscape), light and space belongs to the first level of a background; and movement is the second one. The main subject of the third level is a biological life (vitality); the fourth one consists of human behaviour, emotions and psychological processes. The fifth level – some personal ideas (man's fate). The last one, which is the broadest, is the level of general ideas (metaphysical or religious ones). Hartmann distinguishes six level of a background, and therefore a painting is a complicated creation[14]. Even more complicated than the real world, as it has many levels of different sorts. Their mulitude and diversity lead to the question of the levels' criteria.

D) Some remarks on the levels of the real world and of a painting. The notion of a level

Hartmann diversifies a background in order to show the richness of meanings of a painting. This level contains many elements of different sorts: from the most simple ones (pictorially reconstructed things) to the most general ones – metaphysical

[14] „Es läßt sich dann folgendes zusammenstellen:

Den Vordergrund bildet die reale Ebene mit den sichtbaren Farbflecken.

Dahinter erscheint die dreidimensionale Räumlichkeit, die Dinge und das Licht im Bilde.

In dieser Dingsphäre erscheint weiter die Bewegtheit – anschaulich gemacht in der Bewegungspase oder –pose.

In der Bewegtheit erecheint die Lebendigkeit des Gestalten, stark unterstützt durch „lebensvolle" Farbe.

In der Lebendigkeit der Bewegung wiederum erscheint das menschlich Seelische, Innere; es erscheinen Bruchstücke der Situation, der Leidenschaften und Gesinnungen, der Handlung.

In seltenen Fällen erscheint auch etwas von individuellen Idee (in Porträtköpfen von besonderer Tiefe).

Und schließlich mancherlei ideehaft Allgemeines. Nicolai Hartmann, *Ästhetik*, zweite unveränderte Auflage (Berlin, 1966), 192.

ideas. If we examine them largely and compare with the levels of the real world, we may come to the following conclusions: 1. the main structure of a painting and the real world is similar. In both cases, the physical level is the least, and the spiritual level is the most elaborated. There are the biological and psychological levels between them. It cannot be differently because a work of art is a creation of the real person with all his/her attributes,[15] who lives in the world and takes part in it both physically, biologically, psychologically and spiritually[16]. 2. However the notion of level is changed. The classical level of the real world is defined by a specific set of categories, which are irreducible into others. They allow distinguishing between one level from another[17]. Each level has its own categories according to the categorial law, the law of *novum*, which are strictly tied together. The task of the theory of the categories is to work out the groups, which belong to the individual levels on the one hand, and on the other to establish the fundamental categories, which are common for all levels.

Nevertheless, Hartmann does not define a level of a painting in this way. He does not settle a set of categories but a set of ele-

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[15] „Why should the ontic strata of reality recur in the strata of works of art? The answer is: because all of the strata realised in man himself and his activities, they must recur in all representations of man in the art". Werkmeister, *Nicolai Hartmann's*, 239.

[16] „Denn die Schichten des ästhetischen Gegenstandes sind dieselben Schichten der einen realen Welt, in der das Niedere und Fundamentalere das Höhere bedingt". Reinhold Breil, *Kritik und System. Die Grundproblematik der Ontologie Nicolai Hartmanns in transcendentalphilosophischer Sicht* (Würzburg, 1996), 36. „Grundsätzlich ist festzustellen, daß der Begriff der Schicht in der Ästhetik derselbe ist wie im *Aufbau der realen Welt* (see *Ästhetik* p. 458). Die Hartmannische „Schicht" wird also im ästhetischen Bereich auch begründbar aus zwei Gesetzlichkeit im Aufbau der realen Welt: dem „Gesetz des kategorialen Novums" und dem „Gesetz der Dependenz". Lörcher, *Ästhetik*, 56.

[17] Kopciuch wirites „...decisive key have the categories, their set distinguishes both a definite level and an ontic creature". L. Kopciuch, *Człowiek i historia u Nicolaia Hartmanna* (Lublin, 2007), 30. See. also Roberto Poli, „Levels", *Axiomathes* Volumne 9, Nos 1–2 (1998): 197–211. H. Theisen, *Determination und Freiheit bei Nicolai Hartmann* (Köln, 1962), 52.

ments: objects, light, space, movement, idea etc. In addition, such a situation is possible, as only one element defines the whole level (the second level of a background is the level of movement). 3. The reason for this may be the thesis on the advantage of possibility over necessity in the artistic realm. An artist, who realizes his idea, has neither to obey the rules of the real world nor to comply with the categorial principles, which are valid for this world. Therefore, he can for instance "tear" the movement out of an object, in order to express an idea of movement in itself. Then the movement becomes the substance of the painting, not an incident. In fact, it is the essence of the artist's power and possibility (freedom). 4. Another reason for changing the meaning of a level, which may be accepted by Hartmann, is the order of appearance. The categories are not the most important in a painting because they are "behind". Depiction is the most important. That is why, the fate of a hero in the tragedy or the reliogous ideas in a sacred painting are presented in this way.

This difference in the levels' meanings is not accidental. Although the structures of a painting and the real world are stratified, their levels are different. This is very important for the regional ontology of a painting. Such ontology can, and even should use the results of the fundamental ontology and other regional ontology (in this case the regional ontology of the real world). However, it must not transfer automatically and directly the categories of one region into another one, even if the whole, called a work of art, is similar to the whole called the real world. In this way the next categories: unity and dependence will be treated.

5. A painting and the categories of unity and dependence

The question about the unity of a painting arises out of its multiplicity of levels and variety of elements, which it contains. This category is one of the fundamental categories and it is applicable to every object, regardless of its mode of being and content. If every object must have a define type of unity, the task of the

regional ontology will be to work out different kinds of a unity on the one side, and to catch the differences between them on the other. That is why, the regional ontology of a painting should undertake the problem how is the unity of a painting possible, and what consolidates its levels.

A) The existential dependence and the problem of unity of a painting

The first kind of dependence is the existential dependence. The physical level of a painting, its foreground, makes the material the basis of the spiritual level, the background. Without this assumption any higher level cannot exists[18]. There is a relation of "bearing and being borne" between them. This relation is not exclusive for the region of art, but also exists in the region of the real world. In this world, the physical level is the basis of the biological, psychological and spiritual level as well. In spite of the fact that there are many significant differences between real and artistic regions, the law of categorial dependence (the law of power and the law of indifference) seems to be relevant to both regions.

The existential condition of a painting's unity is therefore an existence of a real level. No unreal sense may be found in a painting without it. In addition to that, such a deep physical character of a basis ensures the stability and relative constancy of a painting as a whole. This basis is the condition of a painting's identity at the same time. That is why Hartmann underlines the reality of a foreground. It makes the other levels to be present, causes a painting to exist for ages, and to be accessible to many generations.

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[18] In this case the background is existentially, not categorially determined. The posibillity of such a determination is pointed out by Poli. „In fact, a level can be existentially or causally dependent on another level without being categorially dependent on it". Roberto Poli¸ „The Basic Problems of the Theory of Levels of Reality", *Axiomathes* Volume 12, Nos 3–4 (2001), edited by R. Poli. Special Issue: *The Legacy of Nicolai Hartmann (1982–1950)*: 278.

This kind of dependence shows also the existential gradation between the levels of a painting. The physical level is stronger and the spiritual one is weaker. Existential power and weakness however, cannot be mataphysically understood. Hartmann criticizes such an understanding of dependence, in which the depending object is merely 'a shadow' of the true existence. In ontological meaning the dependence is being treated only as a category, which indicates that an object, as a separated whole, requires the existence of another object[19].

The next step in explaining this kind of dependence is an analysis of its one-sidedness. Only the spiritual level is dependent while the physical one may exist without it. From the ontological point of view, its function of being the basis is simply accidental. I think however, the acceptance of this one-sided dependence has its source in the confusion of the two issues. The first one concerns the ontological status of a physical level understood as the lowest level of the real world, while the second one concerns a 'physical' level, understood as an element of a painting. The physical level as a level of the real world may successfully exist without anything else, what is based on it. However, a 'physical' level as the basis of unreal senses is directly connected with them. Colourful spots, which make bases of pictorially reconstructed objects (first unreal level), have meaning if they are used to create objects. As a result, there is a two-sided dependence between these levels.

We are coming back to the problems of existence of a painting's foreground. Hartmann's position is clear: this level is real and is independent from a background. Nevertheless, it may be acceptable that a foreground, as a material factor of a painting, is an artistic entity (a scene of a painting), which is essen-

[19] „Denn offenbar ist das Getragene um nichts weniger seiend als das Tragende, das Abhängige um nichts weniger als das Unabhängige. Anders wäre ja das ganze Verhältnis kein achtes Trageverhältnis, kein Abhängigkeitverhältnis". N. Hartmann. *Zur Grundlegung der Ontologie* (Berlin und Leipzig, 1935), 59.

tially connected with other elements on this scene. It is therefore depending on these elements.

The abovementioned deliberation may suggest that the function of an ontological basis may fullfil only the physical level of a painting. But in fact, it is not as such. If we take under consideration only the relation "bearing and being borne", we will find this relation among the levels of a background as well. The level of objects, light and space, as the first level of a background is carried by the physical level, but at the same time, it is the basis of the next, higher level of a background. It bears this level.

To sum up: 1. the final basis of a painting is the real level which does not exist outside of the painting. The existence of this level is the main condition for the painting's unity and identity. 2. The unreal levels depend on the real level. 3. This dependence is one-sided. 3. The dependence of levels does not deprive them of their autonomy. 4. The function of a basis may fulfil both the real and the unreal level.

The unity of a painting ensures not only an existential relation between its levels but also the content relation or the content dependence.

6. A Painting, categories of unity and content dependence

The existential dependence should be distinguished from the content dependence. Its essence consists in the fact, that the physical properties of a real foreground define the unreal attributes of elements, which belong to the levels of a background. A simple example, which shows that the dependence is a relation between physical, colourful spots and the colors, seen as the artistic signs. Their quality, brightness and saturation, so important for an aesthetic value of a painting, depend on the physical properties of the colourful spots. This is nothing unusual for painters, who intuitively take it into account, while painting. This kind of dependence links the levels very firmly together. They are almost inseparable, and only in theory may be marked off.

A unity of a painting is not only created by the dependence between existential and content levels. There are also two other factors which have a significant importance for this unity. The first one is artistic, known as a composition, and the second one, which is the relation of appearance.

7. An artistic unity of a painting – composition

The elements, which belong to the levels of a painting, are not a disordered set but they are tied together, and create a unique kind of unity. It is already visible in a foreground (a physical level), and this is a unity of colourful spots. That is why it may be called a pure colourful unity. The colourful spots are joined together and to make up a harmonious whole or a colourful system – composition[20].

The unity of the first level is primary because it concerns the lowest level. There is another kind of unity on higher level. It is composed of a pictorial object, light, space and their mutual relations. Hartmann has treated other levels of the painting in the same way. Each of them has its own kind of unity and makes up a coherent whole. What is more, each has been ordered according to its own artistic laws.

It does not mean they are completely separated. Apart from the horizontal composition (composition of each level), there is a vertical composition – composition of a painting as a whole. If we want to understand a painting's unity, these two artistic factors must be taken into consideration. This kind of a painting's unity heralds its next sort – the aesthetic unity.

[20] The presence of such a composition, which is some kind of intentional relation, is also an argument for the unreal mode of being of a painting's foreground because there are not any intentional colourful systems in the reality.

8. An aesthetic unity of a painting

There are two orders in a painting: the ontological one, which lies in the relation of "bearing and being borne", and the artistic one, which lies in the horizontal and vertical composition. There is one more order – order of appearance. If we take a look at a realistic painting, the objects in light and space are first to appear. The element of the next level – movement, appears through the objective level. In the futher order, biological and psychological processes appear, and so on. Generally, each of the painting's levels is constructed in order to disclose the elements of a higher level. If that appearance is harmonious, and its dynamic is not affected, a painting will be aesthetically valuable. That is why, the order of appearance is important for a unity of a painting. It ties together all the levels of a painting. This unity may be called the aesthetic one, because the relation of the appearance is the basis of the aesthetic values.

9. Conclusion

A painting may be treated as a unique object (not extant) which belongs to the aesthetic sphere. The fundamental categories lose their 'empty' meanings in this region and gain individual contents, which let them to be distinguished from one another. One of these categories is a unity. The insight into this category of a painting shows that it has been composed of three factors: the ontological, artistic and aesthetic one. Therefore, this kind of a unity is complex, and only investigation of the relations between these factors enable solving the riddle of a painting. The history and theory of art, which should cooperate with ontology, may help in the process of understanding a work of art. The second category is a structure of a painting. Although the one of the real world and one of a painting is formally very similar, as both are built by levels, there are significant differences in their contents. A level of a painting is not constituted by a set of categories,

but by a set of visible elements, as objects, movements, processes, ideas etc. In addition, it is possible that only one element will be distinguished in a level. The third category is dependence. The dependence of a painting is multi-sided: this piece of art depends on the individual aesthetic perception, on the objective spirit. A higher level is depending on the lower one. There are existentional and substantial dependence between them. These different kinds of dependence should be distinguished in order to reveal the ontological specificity of a painting.

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THE CONCEPTION OF THE MIND-BODY RELATIONSHIP IN A.N. WHITEHEAD AND N. HARTMANN

Summary: Both Alfred North Whitehead (1861 – 1947) and Nicolai Hartmann (1882 – 1950) developed an organic philosophy of nature. In his early writings, Whitehead took the view that nature may be considered as a system closed to mind. The role of sense-awareness and sense-perception is acknowledged by him throughout his entire work, but in the early panphysics the subjective component of our experience of nature is "bracketed in" by him in the interest of an objective natural science. A relation of mind and nature is declared possible but does not come into the focus of investigation.
In his mature works, however, Whitehead comes to the conclusion that there may be a certain affinity of mind and nature but he explores this possibility with extreme caution. A crucial step taken by later Whitehead is to be seen in a richer account of the driving forces of nature, summed up in the notion of a substantial activity or creativity. Nature for Whitehead is now impregnated with values. Moreover, there is a reciprocity of efficient and final causes that indicates a certain degree of integration of organism and environment and an internal relationship of the material and the mental factors which constitute its make-up. The introduction of final causes is only possible if the philosopher-scientist is allowed to look on the processes of the organism "from within".

For Hartmann, as for Whitehead, nature is a system of layers or levels, the lower levels bearing the higher ones, the higher levels being dependent from the lower ones. Moreover, the higher levels are characterized by specific categorical forms not to be found in the lower ones whereas certain basic features pertain to all levels. Hartmann's theory of modality, in itself a fine piece of philosophical thinking, leaves no room for propensities as driving forces of natural processes. Causality and determinism are unquestionable for him. Hartmann differs from Whitehead in that he maintains that nature in no way is dependent on mind. In a sense, the framework of nature is alien to our human intentions, especially in that there is no objective teleology in nature. The categorical structure of nature cannot be derived from the categorical structure of mind.

The conception of the mind-body relationship allows for a comparison of both thinkers. Whitehead proposes a field-theoretical account of mental processes: For him, man is an electro-dynamic event, and the psychological field is built up by the ubiquitous forces of Maxwellian electro-magnetism. From this assumption he construes what has been called the "psychical atom". It is a functioning unit with a certain spatio-temporal extension, but the spatial extension is rudimentary only. It allows for a non-sensuous perception of our immediate past and our bodily existence. The inner life of the organism is dominated by quality and intensity, and not by extension and quantity. Hartmann, in his turn, takes the view that the mind-body relationship may be *sui generis* and that we human beings have no possibility of forming an intuition or perception of it. In a sense, there is no mind-body relationship at all if the term "relationship" is taken seriously enough.

My contribution attempts at a discussion of the merits of both theoretical options. I come to the conclusion that Whitehead's and Hartmann's solutions of the problem of the mind-body relationship, in spite of certain differences, converge in most points of major importance.

1.

In his famous dialogue, the *Timaeus* 34 bc, Plato makes in passing the following remark: "There is in us too much of the casual and random, which shows itself in our speech; but the god made soul prior to body and more venerable in birth and excellence, to the body's mistress and governor."[1] We may say, all of us depend on the accidentals of life, and our philosophical discourses are somewhat confused. Plato gives us a hint that it is the business of philosophy to make the universe intelligible. Therefore, the first question to be asked regarding our problem is the following: What about the framework in which the problem of the mind-body relationship is to be discussed? Whitehead connected Plato's *Timaeus* with Newton's *Scholium* and conceived with their help what philosophers of the seventeenth century, the "century of genius", called the "order of nature" (Whitehead 1925: chap. III). The order of nature is the framework in which the mind-body relationship finds its proper place. Hartmann, in a similar vein, in an early essay derived his conclusions from the new paradigm of Darwinian and Neo-Darwinian biology; he places the problem in the very center of his theory of the cosmological and especially the organismic categories (Hartmann 1912).

In order to make possible a rather exact comparison of Whitehead and Hartmann, I want to remind you of the very contrasting views entertained by these thinkers about the affinity of mind and nature. It is not to be confused with the mind-body relationship, on the contrary; it is much more fundamental in itself, but it has a certain bearing on the mind-body relationship. In the phase of the so-called panphysics, especially in *The Concept of Nature* (1920), Whitehead defends the position that nature is a system self-enclosed; he maintains, however, this position as a methodological option only (Whitehead 1920: chap. I). In his later works on the philosophy of nature, e.g. *Science and*

[1] The quotation is from Plato, *Timaeus*, translated by Cornford (1959: 24)

the Modern World (1925), *Process and Reality* (1929), *Adventures of Ideas* (1933) and *Nature and Life* (1934), nature is gradually opened to mind.[2] According to Whitehead, however, there is still no strict identity of mind and nature because our "prehensions" depend on processes of appropriation of the preceeding experiences of the organism. Hartmann, in the fourth edition of his *Grundzüge einer Metaphysik der Erkenntnis*, makes the claim, "that the othering of the subject in the act of cognition is mysterious" (Hartmann 1949a: 61).[3] The contents of our consciousness are only private but our knowledge is understood to be knowledge of an outer reality. This tension between two basic phenomena is called by Hartmann the "aporia of knowledge" or of "consciousness in general" (*ibid.:* 61–76). For him, this problem is not only an epistemological one; rather, it belongs to a metaphysics of knowledge.

2.

Whitehead's philosophy of the organism developed from a close examination of classical and neo-classical physics, the physics of Newton, Huygens, Clerk-Maxwell and the earlier Einstein; the early phase of quantum physics has come under his examination, too. Descartes and Hobbes had extrapolated from the basic concepts of classical physics to a mechanistic world-picture, and Leibniz and Berkeley had analyzed and criticized its mathematical foundations. Whitehead (1920: chap. II) rejected the du-

[2] For the first work mentioned, *Science and the Modern World*, this my assertion may be called into question; *cf.* L.S. Ford: 1984. A very competent presentation and criticism of Whitehead's philosophy may be found in Hampe (1990).

[3] All quotations from works of N. Hartmann have been translated by the present author. The notion of "othering" in the above quotation is quite unfamiliar in this context; I have borrowed it from the works of P. Weiss who used it in reconstructing problems of a Hegelian, Husserlian or Hartmannian phenomenology.

alism of Descartes and Locke, and especially the distinction between primary and secondary qualities, that may be traced back to Galileo and even to the ancient thinker Democritus. For Whitehead (1925b: 8–11) the internal relation of the material object and the object-as-perceived was the paradigm of an organism. Further examples are the "prehensive unity" of space and time, as in classical physics, or of space-time, as in Einstein-Minkowski's (and his own) special theory of relativity (Whitehead 1925: 90; *cf.* Whitehead 1922). The notion (of a nucleus) of internal relations is later enlarged to the concept of a "substantial activity" (Whitehead 1925a: 152 and passim). And this concept converges with the even more general notion of "creativity", as exposed and explicated in the philosopher's *magnum opus* (Whitehead 1929a: 21–2).[4] Space and time, or the space-time of Einstein and his followers are no primordial realities of nature; rather, they are constituted by the formation of its most elementary organisms. In connection with his discussion of relativity physics and quantum physics, Whitehead (1925a: 185- 92) observes that there may be primary organisms, so-called "primates", whose composite structure permits no further analysis into their constitutive elements.

In a famous series of arguments in *Science and the Modern World* Whitehead recapitulates the history of post-medieval philosophy in the reverse order of its development (Whitehead 1925a: chap. III and chap. IV). The philosophy of the organism is in need of a conception of what is now called a "synthesis". Whitehead does not follow Kant, that is to say, he denies the latter's contention that the human intellect prescribes its laws to nature. Nor does he follow Hegel's construction of a dialectical movement of thought and of being itself. Whitehead (*ibid.*, 93–8) starts with Berkeley's divine Mind: In a sense, it is a comprehensive unity from which our human ideas are derived. Moreover, the philosophy of the organism has a marked affinity to Leibniz' universal perspectivism and Spinoza's inspired use

[4] Creativity for Whitehead is not restricted to nature; it is concerned with how the unity of being is reconciled with a plurality of beings.

of (the notions of) substance, attribute and mode: The infinity of the attributes of the infinite divine Mind has a modal, a finite presence in our human minds (*ibid.*: 98–9).[5] Descartes, in the very beginning of this process of conceptual differentiation, connects the "*realitas objectiva*" with the "*realitas formalis*" of an idea and refuses to separate the intra-mental sphere completely from the extra-mental sphere (*ibid.*, note to chap. IV).

Now, this is Whitehead's standpoint: *There are layers or levels of being; prehensions are the very stuff of nature; the composition of an organism or synthesis is a cosmic event; all organisms have latent proto-psychic or even proto-mental properties. The dualism of the "inner" and the "outer" sphere of an organism is explicitly rejected for the propositions or, more exactly, the "propositional feelings" are interwoven with the very processes of nature* (Whitehead 1929a: 22 and passim).[6]

The afore-mentioned idea of an order of nature, originating in the philosophy of the 17th century, must be commented on in a few words. There exists a basic "creative advance" of nature, to be distinguished from any one "time series" (Whitehead 1920: 178). A few years later the philosopher declares with noble resignation: "Let us grant that we cannot hope to be able to discern the laws of nature to be necessary." "But", he continues, "we can hope to see that it is necessary that there should be an order of nature. The concept of the order of nature is bound up with the concept of nature as the locus of organisms in process of development." (Whitehead 1925a: 104). According to Whitehead, it will forever remain mysterious to us, that there are laws of nature at all, and in this respect Plato's *Timaeus* gains the overhand over Newton's *Scholium* (Whitehead 1929a: 92–96). In *Adventures of Ideas* he cites Plato's contention that we mortal men must be satisfied with a likely story and contrasts it to the mod-

[5] Spinoza's superiority over many of his contemporaries is reflected in the fact that the modal presence of the divine Mind in our human minds is conceived as non-representational.

[6] The value-impregnatedness of nature is further pursued in Whitehead 1926.

ern "Cartesian apparatus of Deism, substantial materialism, and imposed law, in conjunction with the reduction of physical relations to the notion of correlated motions with mere spatio-temporal character", that "within three hundred years (…) has transformed human life, in its intimate thoughts, its technologies, its social behavior, and its ambitions" (Whitehead 1933: 145). In the traditional philosophy of science, as shaped e.g. by J. St. Mill, there is a thesis according to which every successful prediction commits a fallacy called the "fallacy of the consequent". One may say that Whitehead's criticism of classical, neo-classical and modern physics is a grand speculative counterpart of this thesis: The overwhelming success of the scientific endeavor of the last three centuries does not guarantee its ultimate truth.

For Whitehead (1929a: 35) "[…] the ultimate metaphysical truth is atomism." Since ancient times, physics has oscillated between an atomistic conception of the most elementary components of nature and a rival conception that may be called "continuitism". In *Science and the Modern World* there is an epochal, i. e. atomistic theory of time (Whitehead 1925a: 177), and in *Process and Reality* the philosopher has an additional notion of "cosmic" epochs (Whitehead 1929a: 91–2). Today, he thinks, we live in the epoch of electro-magnetism. An aphorism like this is not meant to say that Maxwellian electro-magnetism is the only leading physical theory of our time. The provisional truth of Maxwellian electro-magnetism depends on the fact that it is able to integrate minute episodes of natural processes into larger wholes. Moreover, Maxwell's theory may make it possible to us to give an elaborated account of the composition of the more complex organisms of physics and biology. Maxwellian electro-magnetism allows for a compromise between atomism and continuitism in that it lays an approximately equal stress on both conceptions, and we shall see that this feature for Whitehead is a clue to the structure of our inner life. We may discern discrete elements in it, but the prehensions are not atomic, therefore the stream of consciousness composed

by myriads of such prehensions is dominated not by extension and quantity, but by quality and intensity (*ibid.*: 235).[7]

The order of nature as conceived by Whitehead is marked by a certain reciprocity of effective and final causes. Final causes had been condemned by Fr. Bacon but no less a philosopher than Leibniz rehabilitated them (Henderson 1917: 25–6.) Henderson, physiologist and philosopher, reminded his colleagues of them, and Whitehead followed his hints (Whitehead 1929a: 89). From the standpoint of modern natural science, the efficacy of final causes depends on the existence of cosmic areas that resist to the entropic tendencies of the universe for a while: "[…] there is no true stability. What looks like stability is a relatively slow process of atrophied decay. The stable universe is slipping away from under us. Our aim is upwards" (Whitehead 1929b: 82). From a philosophical point of view, the inquirer must be allowed to see the organism not only as a detached observer, but (so to speak) "from within" and "in process".

There is a significant parallel to the constitution of higher organisms in that the latter must absorb energy from their surroundings; we may even say that organisms, and especially higher organisms, are patterns of energy distribution. This is even more evident in vital organisms: The phenomenon of "canalization" testifies to the fact that energy distribution is a central feature of the internal structure of the organism, too (Whitehead 1929a: 107–8). From this results the existence of so-called "hybrid prehensions" and the possibility of a "mental pole" of the organism: Life militates against the routines of nature impressed on it by the averages of statistical laws. According to Whitehead, the stability of the organism is accounted for by two types of continuity: Its physical existence is guaranteed by the inheritance of the character of the first member of a (structured) society of actual occasions by the other members of the society, a modern version of the substantial forms of Leibniz. The inner life of the

[7] In this point Whitehead's conception conforms to the speculations of H. Bergson, and of W. James and F.H. Bradley.

organism, on the other hand, is established by the interweaving of its prehensions, conformal or otherwise. Anyway, the existence of the prehensions themselves is a measure of the permeability of the universe by natural causes (effective and final) and therefore of its partial openness.[8]

I now want to give a close reading of some of Whitehead's remarks on the problem of the mind-body relationship. There are many lines of argumentation in Whitehead but I can take up only one of them. (For lack of space I will neglect the considerations in Whitehead (1926: chap. III); the comparison of body *vs.* spirit with body *vs.* mind is primarily important for a philosophy of religion only.) In the *Concept of Nature* the author comments on the notion of the "percipient event" (an early version of the notion of an organism): "This percipient event is roughly the bodily life of the incarnate mind. But this identification is only a rough one. For the functions of the body shade off into those of other events in nature [...]" (Whitehead 1920: 107). Again, in *Science and the Modern World*: "[I] have started from our own psychological field, as it stands for our cognition. I take it for what it claims to be: the self-knowledge of our bodily event" (Whitehead 1925a: 103). And in another connection: "I have […] sketched an alternative philosophy of science in which organism takes the place of matter. For this purpose, the mind involved in the materialistic theory dissolves into a function of organism. The psychological field then exhibits what an event is in itself. Our bodily event is an unusual complex type of organism and consequently includes cognition" (*ibid*.: 271).

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[8] The so-called "prehensions" are relations with mixed properties. They correspond in part to the concept of external relations, in part to the concept of internal relations. The paradigm case is memory because it appropriates past experiences; so it entertains an internal relation to them whereas the past occasions themselves remain external to it. Therefore, the Lockean paradox of memory is dissolved. Also, the modern anti-materialistic concept of memory, as developed in Gestalt psychology (Köhler 1929), can be illuminated by Whitehead's prehensions.

We are compelled to ask: Is it possible to link up the mind-body relationship with the (theory of) electro-magnetism as conceived by Whitehead? For him, the electro-magnetic particle and the electron, respectively, are only a condensation of the field or, in other words, they modify the field (Whitehead 1920: 158–9). Atomism and continuitism can be reconciled with one another, and even if there is a certain dualism of particle and field, there is no dualism of substances. H. Bergson, W. James and F.H. Bradley had given elaborate accounts of how the discrete elements of consciousness are embedded in a field-like background that exhibits the nature of the continuum, and R.W. Sellars, in one of his early publications, proposed a theory of the psychological "field" that assimilates "consciousness" to the "physical world" (Sellars 1916: chap. IV and chap. V).[9] In a similar vein, the "ego-object" (Whitehead 1925a: 211) is only a phenomenal self, not to be sharply distinguished from its phenomenal contents.[10] "In truth, the field of perception and the perceiving mind are abstractions which, in the concrete, combine into the successive bodily events" (*ibid.*: 282). In accordance with this thesis, the general characteristics of consciousness may be explained with the help of physical theories of the Maxwellian type if we are allowed to conjecture that there is something like a "psychical atom": a functioning unit with a certain spatio-temporal extension, and with proto--psychical or even proto-mental properties. The age-old controversy about the spatiality of the soul, initiated in the main by the empiristic critics of Descartes, is settled in this way: The soul or rather, the psychical processes of the organism, are spatially extended indeed, although only to a minimal extent.

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[9] Whitehead stood close to the so-called new realism of E.B. Holt *et al.*: 1912; nevertheless he seems to share some general conceptions with R.W. Sellars, the spokesman of a critical realism and dualism that Whitehead rejected, e.g. the notions of "togetherness" and of "enduring objects".

[10] The notion of "ego-object" is later superseded by the notion of a "subject-superject"; *cf.* Whitehead (1929a: 28–9 and passim).

Causality for Whitehead is an organic process in nature, a process that conforms to Lockean not to Humean standards (Whitehead 1927: chap. II). There is another famous passage or rather, another series of famous passages in Whitehead's later works: In *Adventures of Ideas* he explains his view by a confrontation of ancient and modern philosophy: The pronouncement of a sentence requires an enfolding of the logico-grammatical structures in the dimension of time but even before the speaker opens his mouth these structures must be "together" in his mind (Whitehead 1933: 233–5). Therefore, Hume's associationistic theory of human experience is a complete reversal of an original truth. Locke knew better, and Plato in his *Timaeus* gave the complete story. Plato's work is a cosmological myth and a masterpiece of ancient philosophical theology: It contains an account of the divine origin of the soul and it places the soul in the midst of the cosmic body. In Whitehead's reading of Plato the *"chora"* or *"receptaculum"* is a circumscription of the essential features of the human personality. Sentience, perceptivity, emotion and even thinking can then be traced back to nature. Mind and nature are not altogether alien to one another; mind is not a principle superimposed to nature; far from being that: – it originates with the "lure for feeling" (Whitehead 1929a: 18 and passim).[11]

The crucial notion of a "non-sensuous perception" is illustrated by our philosopher as follows: "In human experience, the most compelling example of non-sensuous perception is our knowledge of our own immediate past. […] Roughly speaking, it is that portion of our past lying between a tenth of a second

[11] One more remark from the standpoint of the history of ideas: Electricity and magnetism often have been associated with the basic facts of life, e.g. by some followers of German Idealism or romanticism of the early 19th century. But even when Clerk-Maxwell had given a thoroughly scientific theory of electromagnetism there was a certain flair around this phenomenon: In Great Britain and in the USA societies where founded that attempted at an empirical proof of the existence of spirits, and an eminent thinker as W. James tried to prove that we can communicate with them (*cf.* D. Blum 2007, *passim*). Whitehead's construction can be seen as a scientific antidote against these wild speculations.

and half a second. It is gone, and yet it is here. It is our indubitable self, the foundation of our present existence" (Whitehead 1933: 233–4). In his last collection of essays, the *Modes of Thought*, Whitehead is even more explicit. The awareness of our immediate past is of the same type as the awareness of our bodily existence: "[O]ur experience in the present discloses its own nature as with two sources of derivation, namely the body and the antecedent experiential functionings. […] There is only one ego, to claim the body and to claim the stream of experience (Whitehead 1938: 220). I may summarize these considerations in a few words: The Cartesian heritage of modern philosophy is responsible for our inability to give an adequate account of the mind-body relationship. But the community of mind and body must be commented on in most modest terms: There is a certain "withness of the body", as disclosed in the etheric nature of non--sensuous-perception. (Whitehead 1929a: 311–2).[12]

I want to close this part of my essay with three short remarks: The thesis that the animal body and especially the animal brain is an electro-magnetic apparatus has been propagated by some Gestaltists also (Köhler 1929: 7; *cf*. Koffka 1935). So does the famous neurophysiologist C.S. Sherrington (1947: xiv). An electrodynamic theory of life has been developed by a former disciple of Whitehead, namely F.S.C. Northrop (1947: 219–34). Of course, for Whitehead and his followers man *is not* an electro-magnetic body; rather, he *has* an electro-magnetic body that *is* an electrodynamic event.

3.

In an overall comparison of Whitehead and Hartmann, we make the following observations. For Whitehead, nature is impregnated

[12] The above citations lend themselves heavily to the theoretical possibility of panpsychism; *cf*. Hartshorne (1935: 21–39). The same author has developed the concept of panpsychism in Hartshorne 1934.

with aesthetic values. The philosophical work of Berkeley and the poetry of Wordsworth and Shelley give testimony to the fact that *nature in solido* is not to be identified with the mechanistic world-picture of classical physics (Whitehead 1925: chap. V). Values, however, are not originative with nature only; rather, there is a fusion of actuality with ideality (Whitehead 1925: chap. X and chap. XI). Moreover, natural processes often are goal-oriented as indicated by the "lure for feeling": the future is effective in the present state of the organism (Whitehead 1929a: 104). A theory of value is given in the end by Whitehead (1941).

Hartmann is opposed to this view in some detail: As for Whitehead, the existence of values is an objective one; they can be experientially grasped by emotion and cognitive intuition. (Hartmann 1965). Hartmann's theory of values is the background of two elaborated treatises on ethics and esthetics, published in 1925 and in 1953, respectively. In sharp contrast to this, the existence of goals for Hartmann is dependent on a human agency effective in setting the goals; therefore, all sorts of objective teleology are eliminated by him from nature, natural history and the history of man (Hartmann 1951). These overall divergences, due to a marked difference of philosophical temperament in Whitehead and Hartmann, will not be discussed in the present context.

Whereas Whitehead was a mathematician and a mathematical physicist, Hartmann may be criticized as an arm-chair philosopher. He defended causality and determinism, and he criticized relativity physics and quantum physics because they departed from the classical canon of the scientific method. Nevertheless, some modern critics see him as Whitehead's equal in questions of cosmology and natural philosophy, e.g. M. Bense (1951: 150) and H. Wein (1954: 5). It may be mentioned in passing that there are some striking parallels in Whitehead and Hartmann. Whitehead once insisted: "[…] that knowledge is ultimate", and he explained this astonishing thesis by his conviction "[…] that there can be no explanation of the 'why' of knowledge; we can only describe the 'what' of knowledge" (Whitehead 1920: 32). Strictly speaking, he subordinated epistemology to a system

of natural theology. Hartmann, in his turn, declared: "Our knowledge about the intelligibility of things follows our knowledge of things" (Hartmann 1958: 191).[13] Philosophical thinking is involved in an unavoidable circularity, and Hartmann wanted to do justice to this situation with the help of a phenomenology that precedes the metaphysics of knowledge.

Undoubtedly, there is a possible advantage in Hartmann's theory of categories over Whitehead's conception: The latter once remarked, "[O]ur problem is, in fact, to fit the world to our perceptions, and not our perceptions to the world" (Whitehead 1929c: 247), and in *Process and Reality* he turned this Berkeleyan conviction into the "ontological principle", a principle that is destined to guarantee the intelligibility of the world as a whole (Whitehead 1929a: 13 and passim). Hartmann, on the other hand, realized that there may be a gap between the forms of our thinking and the constitution of reality itself. The categories may be viewed either as forms of being or as forms of our consciousness; however, there is no cogent argument in favor of a parallelism of reality and knowledge of reality. Rather, there is a certain circularity: "Epistemology presupposes metaphysics, just as metaphysics presupposes epistemology" (Hartmann 1949a: 6). This remarkable insight has further consequences for it enables Hartmann to criticize certain mistakes that characterize most of traditional ontology, e.g. the "failure of homogeneity", or the (complementary) "failure of heterogeneity" (Hartmann 1958: 280–5). That is to say: Neither can the world be fully adapted to our consciousness, nor can our consciousness be fully adapted to the world. The

[13] Moreover, for both thinkers acts of cognition are real acts, named by Whitehead "prehensions" and by Hartmann "Erfassen" or "Erfassungen". It is no accident that Whitehead's notion is usually translated by this latter term. Whitehead's prehensions are conceived as an integral part of the actual world, and so are Hartmann's Erfassungen. I want to remind the reader of the fact that all quotations from Hartmann's works have been translated by the present author.

relation of epistemology and ontology is more sophisticated but also more problematical in Hartmann than in Whitehead.

I now want to discuss some special aspects of the philosophy of N. Hartmann, Whitehead`s younger contemporary. Hartmann, in opposition to neo-Kantianism and to Husserl's phenomenology, became the prominent spokesman of a movement that is known as the "new ontologies". In a series of articles (1914–1923) that have been re-published in 1958 he outlined the foundations of a renewed ontology. He attempted to go back to Aristotle for he conceived the categories primarily not as forms of consciousness but rather as forms of being. Hartmann rejected the possibility that the categories, *qua* forms of being, have to be the forms of consciousness, too. He also rejected the turn to subjectivity that had manifested itself in the work of Descartes, Locke and Kant, and especially Kant's Copernican revolution in epistemology but he accepted his standpoint that the conditions of experience are the conditions of the objects of experience, too. Even some of the Kantians of a later generation had explored the theoretical option that space and time should be conceived not only as forms of intuition but also as structures of the real world.

Hartmann departed from Kant mostly in that he entertained a radical revision of the transcendental arguments of the latter's "critical" philosophy: If there is an a priori foundation of knowledge, this foundation must be detected empirically, that is to say, by a careful analysis of our common-sense notions and our scientific theories (Hartmann 1958: 191–5). This empirical shift-back is implicit in Kant and explicit in the thoroughgoing realism of Hegel; Aristotle and Hegel for Hartmann are the masters of an empirical realism. There is a further affinity: With Hegel he conceived the totality of being as a hierarchical structure; on the other hand, he denied the dialectical movement of being and thought (Hartmann 1960: 375–417). For him, all forms of idealism are guilty of our human hubris; therefore he favoured a modest realism which revokes the central role which the human race has to play in traditional

philosophy. Consequently, he sharply criticized teleological thinking because of its anthropomorphic and anthropocentric bias (Hartmann 1951).[14]

It is not possible in this context to give a detailed account of Hartmann's theory of categories, his theory of modality or his ontology in general. Therefore, I may give a list of its most central tenets: *Hartmann attempts to link up ontology and epistemology; he analyzes being into essence and existence; every detailed analysis is destined to be an analysis of "modal" categories such as "possibility" and "reality", "necessity" and "contingency"* (Hartmann 1965; Hartmann 1966). *As for Whitehead, reality for Hartmann consists of a system of layers or levels; the lower levels bearing the higher ones, the higher levels being dependent from the lower ones. Certain categorcial features of the lower levels recur in the higher ones, but usually in a modified or even weakened form. On the other hand there are novel features in the higher levels not to be found in the lower ones or only vaguely anticipated in them. There are general or universal categories and special categories, and a philosophy of life must deal with the special categories, namely the cosmological and the organismic categories* (Hartmann 1950).

An early analysis of the mind-body relationship is to be found in a work under the title *Philosophische Grundfragen der Biologie*, originally published in 1912 (Hartmann 1958: 78 – 185).[15] The reader of this article will be surprised that Hartmann has a rather good knowledge of the biology of Darwin whose fundamental theses are accepted by him without reservations: "The theory of descent is by now no mere conjecture" (*ibid.*: 84). The formula of descent, however, does not exhaust the theoretical resources of Darwinism. Genetic variability and natural selection are the scientific means by which all phenomena of the natural history of living beings are to be explained. A central problem of Hartmann's *Grundfragen* and the later systematic work under the title *Philosophie der Natur* (1950) is the relation of ontogeny and phylogeny. In a sense, phy-

[14] A collection of essays is to be found in Heimsoeth / Heiss (eds.) 1952.

[15] The (relative) importance of Hartmann's work for (the philosophy of) biology is underlined by Morgenstern (1997: 72).

logeny is more important than ontogeny for the very possibility of the "morphogenetic processes" of ontogeny is causally dependent from phylogeny.

On the other hand, ontogeny may pose a problem that cannot be fully explained by genetic variability and natural selection, namely the problem of the stability of the living form during its life-cycle. Obviously, Hartmann knew some of the results of W. Roux and H. Driesch, the later opponent of the "Entwickelungsmechanik" of Roux and protagonist of neo-vitalism, who conceived of an "entelechy" or "psychoid" intervening into the spatially extended life-processes of the organism "from without". The above-mentioned causal dependency is not one-sided; rather, there is a certain circularity (Henderson 1917: chap VI). In order to give a satisfying account of this situation, Hartmann entertains a conjecture which is scientifically doubtful but has considerable philosophical depth: Whereas phylogeny possesses an open causal texture, the "dispositional system" of ontogeny (a nucleus of internal relations that tend to manifest themselves in spatio-temporal relations) is closed to external influences, at least to a certain extent (Hartmann 1950: 471–3; *cf.* Hartmann 1949d: 458–9). The apparent teleological character of the living organism may be "explained away" by a consideration like this. [16]

The evolutionary biology of Darwin and his followers accentuates the continuity of life on earth from its very origin to its present stage. Therefore, we will be inclined to assume that the questions posed by the existence of consciousness, especially the question of its evolutionary origin, are included in the methodological can-

[16] There are some modern biologists, mostly associated with or inspired by Whitehead, who have pursued this theoretical option; but they have not gained unqualified acceptance. Already in the 19th century Cl. Bernard coined the term "milieu interieur", and related ideas have been discussed by L. v. Bertalanffy, J. Needham, I.I. Schmalhausen, C.H. Waddington and P.A. Weiss. I cannot pursue this interesting subject-matter in the present context, therefore I may be excused for omitting all references to relevant literature. (The biologist P.A. Weiss is to be distinguished from the philosopher P. Weiss mentioned above).

ons of biology. But Hartmann dismisses this seemingly natural solution of the problem: For him, the afore-mentioned evolutionary continuity of life-forms does not guarantee the existence of a single coherent framework in which the fundamental tenets of biology and psychology can be dealt with in an uniform manner. The subject matter of the life sciences must be divided methodologically into two different areas: On the one hand, physiology and biology try to explain the functions of the living organism; on the other hand, the privacy of our human feelings and thoughts must be described by psychology or, better still, a phenomenology of consciousness.

Physiology, biology and psychology have certain problem fields in common; nevertheless, for Hartmann they diverge in their categorical structure. Although Hartmann is convinced that animal and human consciousness has biological roots and that it is adaptive, he denies the possibility that its contents can be explored by objective means only. Biology does not give us the characteristics of consciousness, the very privacy of its contents, and psychology does not give us the objective characteristics of the life-processes of the organisms themselves. Whitehead, following the elder Haldane, knew the conception of a "Psychological Physiology" (Whitehead 1929a: 103–5), but Hartmann states: "There is no transfer from psychology to physiology, or vice versa" (Hartmann 1958: 180). The author draws the consequence: "Biology does not make a specific contribution to psychology" (*ibid*.: 185). In the conception of a phenomenology of consciousness he remains a true disciple of Husserl.

In Hartmann's mature writings the mind-body relationship is not prominent, that is to say, its existence and problematic nature are diminished in a specific way. A first part of the problem is related by the philosopher to the "aporia of knowledge" or of "consciousness in general" (Hartmann 1949a: 61–2), a second part is related to the alleged fact that the central determination of the organism must be unknown to consciousness (Hartmann 1950: 471–3), and a third part is related to the thesis that the nature of man comprises all levels of being and finds its adequate expression in the works of culture (Hartmann 1949c: *passim*).

The definitive conclusion may be given in the following statement: The psychic sphere possesses a certain autonomy in relation to the organic sphere; in German philosophical literature this complex relation has become known as "Sphärenunterschied" or "Sphärenfremdheit". And, in the negative: "We have no organ of perception to represent [the organismic processes in our consciousness]" (Hartmann 1949b: 348). In a sympathetic criticism of Hartmann's *Grundzüge*, E. Cassirer (1929: 112–116) rightly insists on the fact that Hartmann gives no solution of the problem of the mind-body relationship but only a thoroughgoing description of the problem-situation itself.

The mind-body relationship cannot be made intelligible to our human intellect although there is no doubt that the processes of evolutionary biology are pertinent to it. In a scientific world-view the mind-body relationship will forever be unintelligible but it may be possible to gain some hints by an inspection of the proximate layers of being. In contradistinction to nearly all traditional approaches Hartmann's theory of the categories, his theory of modality and his ontology in general are suffused with real experience; therefore, he does not prejudge their questions. Hartmann was prepared that his explorations might lead to a prolonged modification of his fundamental categories and ontological tenets in the light of (reflective) experience.

May I say in passing that a great philosopher-scientist, H. Weyl (1949: 284), has given exactly the same description of the problem-situation as Hartmann. Also, some biologists of the elder generation, e.g. M. Hartmann, K.Z. Lorenz, P.A. Weiss and the spokesmen of a so-called evolutionary epistemology have partially confirmed the results of his philosophizing.

4.

I want to summarize my essay by a short confrontation of some central theses of A.N. Whitehead and N. Hartmann. Some years ago, A. Shimony (1993: 21 – 61, following Weiss 1938) took up the

phrase "to close the circle" and gave it a sharp contour. Closing the circle means to bridge the gap between ontology and epistemology, and Shimony demonstrated this by means of an investigation of the "causal theory of perception" (*ibid.*: 79 – 91). Whitehead had advocated this theory up to a point; individual perceptivity for him was the capacity to be causally influenced. The sensationalist theory of perception, on the other hand, maintains that all information about the world comes to us through certain channels, the our outer senses; so it equates "perception" with "sense-perception". Whitehead fought against this theory for a life's time; his system of philosophy depends on the impossibility of the identification of perception with sense-perception, that is to say, on the validity of the central thesis of the causal theory of perception. But even this thesis does not tell us the whole truth: Firstly, in all perception there is a projective component or "vector-character"; secondly, there is the non-sensuous perception, the awareness of our immediate past and our bodily existence. These features cannot be explained by a causal theory of perception.

Hartmann, in his turn, never took a solution like this into consideration. He knew some forms of passive experience reminiscent of Whitehead's thesis that our perceptions always have some affective tone, due to their bodily origin or sense of derivation; he called them "acts of emotional receptivity". But an elaborate construction such as Whitehead's is not to be found in Hartmann. When he says that we do not possess an "organ of perception" to represent the organismic processes in our consciousness, he seems to speak the language of Aristotle or rather, the language of a German morphological tradition but he does not comment on this notion. In a sense, he is more revolutionary than Whitehead for he prefers an aporetic style of philosophy unknown to his elder British contemporary and he realizes that it might be impossible to close the circle. But his philosophic position leads to considerable trouble in connection with the intelligibility of being. The decision whether Whitehead or Hartmann set the right course in the treatment of the mind-body relationship will depend on the question of how to manage these deeper philosophical questions.

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Z historii metafizyki i ontologii

STUDIA WHITEHEADIANA
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ROZUMIENIE ΝΟΥΣ U HERAKLITA
THE MEANING OF *NOUS* IN HERAKLIT

In the paper, the term *nous* is discussed as used by Heraclitus, who relies on the literary tradition, mostly on Homer and Xenophanes of whom the latter despite criticizing the former uses the term *nous* in the same meaning. All Homer's gods and humans are rational and possessing mind beings. That is how Ksenophanes sees one god (*heis theos*) when describing the way the god acts and shakes everything by his reason of mind (*nou phreni*), which for Homer is also a crucial factor in the god's activity, particularly Zeus's.

The meaning of *nous* in Heraklit's philosophy is interpreted, with the historical continuity assumed, despite his criticism. In the Ephesian's fragments (1, 2, 40, 45, 55, 104, 115), the notions of a key role to establish the term in question are examined. They are accordingly: *logos* – which comprises many in terms of speech in opposition to nous's perception; *polymathie* – polymathy; *mathesis* – cognition connected with multiplicity of sensational experience rather than knowledge of the reality; *phren* – the home for nous and *sui generis* the gate giving *nous* possibility to affect the reality.

These terms are connected with the meaning of the role *nous* plays in reasoning, thinking as well as perceiving the world around us. They are discussed in details with reference to other notions related to *nous*.

Termin νοῦς występuje u Heraklita bardzo rzadko[1]. Trudno więc na podstawie kilku zdań w sposób jednoznaczny opisać jego naturę. Można przypuszczać, że Heraklit odwołuje się do znaczenia tego terminu występującego w poprzedzającej go tradycji literackiej. Jednym z autorów, którzy posługiwali się terminem νοῦς, był Homer. Adam Krokiewicz komentując dzieła Homera, zwraca uwagę na fakt, że „każdy bóg posiada, podobnie jak każdy człowiek, rozumny *umysł* (νοῦς, φρήν) (…). Umysł myśli i objawia się w słowach…"[2]. Wydaje się, że w tym samym kontekście wypowiada się Ksenofanes. Opisując działanie jednego boga (εἷς θεός), zwraca uwagę na rolę νόου w słowach: ἀλλ᾽ ἀπάνευθε πόνοιο νόου φρενὶ πάντα κραδαίνει[3]. Można więc przypuszczać, że Ksenofanes pomimo krytyki Homera[4] posługuje się w takim samym rozumieniem terminu νοῦς, przypisując mu istotną rolę w działalności boga. To bowiem, co czyni wobec wszystkiego (πάντα) *rozumem umysłu* (νόου φρενί) *jeden bóg* (εἷς θεός) u Ksenofanesa, u Homera czyni w szczególności Zeus, który, jak pisze A. Krokiewicz, posiada „najdoskonalszy umysł"[5]. Umysł Zeusa (Διὸς νόος) jest zawsze mocniejszy (αἰεί κρείσσων) od ludzi (ἀνδρῶν)[6]. Ma on więc wpływ na to, co się z ludźmi dzieje. Umysł Zeusa budzi do życia (ἔγειρε)[7] lub też

[1] Por. H. Diels, W. Kranz, *Die Fragmente der Vorsokratiker*, Weidmann 1989, 22B 40; 22B 104; 22B 114.

[2] A. Krokiewicz, *Studia Orfickie. Moralność Homera i etyka Hezjoda*, Warszawa 2000, s. 128.

[3] H. Diels, W. Kranz, 21B 25: „Lecz daleko od mozołu, rozumem umysłu wszystko wstrząsa".

[4] Por. H. Diels, W. Kranz, 21B 11: πάντα θεοῖσ᾽ ἀνέθηκαν Ὅμηρός θ᾽ Ἡσίοδός τε, ὅσσα παρ᾽ ἀνθρώποισιν ὀνείδεα καὶ ψόγος ἐστίν, κλέπτειν μοιχεύειν τε καὶ ἀλλήλους ἀπατεύειν – „wszystko bogom przypisywali Homer i Hezjod, co u ludzi jest uważane za najbardziej nikczemne i haniebne: kradzież, cudzołóstwo i wzajemne oszustwa".

[5] A. Krokiewicz, *Studia Orfickie. Moralność Homera i etyka Hezjoda*, dz. cyt., s. 131.

[6] Por. *Homeri Ilias*, ed. W. Dindorf, C. Hentze, p. II, Lipsiae 1900, XVI 688: ἀλλ᾽ αἰεί τε Διὸς κρείσσων νόος ἠέ περ ἀνδρῶν.

[7] Por. Tamże, XV 242: ἐπεί μιν ἔγειρε Διὸς νόος αἰγιόχοιο.

pognębia (δάμνα)[8]. Z tych kilku zdań Homera oraz twierdzenia Ksenofanesa można wywnioskować, że νοῦς odgrywa istotną rolę w realizowaniu się rzeczywistości w taki a nie inny sposób. Jego doskonałość natomiast zależy od stopnia doskonałości właściciela. W przypadku Homera jest to Zeus, a u Ksenofanesa jeden bóg.

Czy Heraklit mógł rozumieć termin νοῦς w podobny sposób jak jego poprzednicy? Na pierwszy rzut oka należałoby przyjąć odpowiedź przeczącą. Wynika to z lektury niektórych zdań samego Heraklita. W zdaniu 42 wyraża on swoją niechęć do Homera jako poety, proponując przegnanie go z agonów (τῶν ἀγώνων)[9]. Być może uzasadnienie dla tak radykalnej oceny Homera jest zawarte w zdaniu B 56, gdzie Heraklit wykazuje, że Homer w poznaniu rzeczy myli się tak samo jak inni ludzie, stąd trudno mówić o nim, że jest mądrzejszy (σοφώτερος)[10]. Na podstawie tych zdań można więc przypuszczać, że Heraklit w sposób zdecydowany atakuje Homera[11]. Jego stosunek do Homera byłby więc zbieżny z krytyczną opinią Ksenofanesa, o którym wspomina w zdaniu 40, gdzie według Kazimierza Mrówki trafia pod ostrze krytyki Heraklita wraz Hezjodem, Pitagorasem i Hekatajosem[12]. Niezależnie jednak od stosunku, jaki miał He-

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[8] Por. Tamże, XVI 103: δάμνα μιν Ζηνός τε νόος καὶ Τρῶες ἀγαυοὶ βάλλοντες.

[9] H. Diels, W. Kranz, 22B 42: τόν τε Ὅμηρον ἄξιον ἐκ τῶν ἀγώνων ἐκβάλλεσθαι καὶ ῥαπίζεσθαι καὶ Ἀρχίλοχον ὁμοίως – „i Homer godny [jest, by] z agonów być wyrzuconym i biczowanym i Archilochos tak samo".

[10] H. Diels, W. Kranz, 22B 56: Ἐξηπάτηνται οἱ ἄνθρωποι πρὸς τὴν γνῶσιν τῶν φανερῶν παραπλησίως Ὁμήρῳ, ὅς ἐγένετο τῶν Ἑλλήνων σοφώτερος πάντων. ἐκεῖόν τε γὰρ παῖδες φθεῖρας κατακτείνοντες ἐξηπάτησαν εἰπόντες· ὅσα εἴδομεν καὶ ἐλάβομεν, ταῦτα ἀπολείπομεν, ὅσα δὲ οὔτε εἴδομεν οὔτ' ἐλάβομεν, ταῦτα φέρομεν. – „Wprowadzani są w błąd ludzie w stosunku do poznania [rzeczy] jawnych, podobnie [jak] Homer, który stał się [od] wszystkich Hellenów mądrzejszy. I tego bowiem chłopcy wszy zabijający oszukali powiedziawszy: ile zobaczyliśmy i chwyciliśmy, tyle zostawiamy, ile zaś ani [nie] zobaczyliśmy ani [nie] chwyciliśmy, tyle niesiemy".

[11] Por. *Heraclitus: Homeric Problems*, Edited and Translated by Donald A. Russell and David Konstan, Atlanta 2005, s. XIV.

[12] Por. K. Mrówka, *Heraklit*, Warszawa 2004, s. 135.

raklit do Homera i Ksenofanesa, w sposobie rozumienia terminu νοῦς mógł on odwoływać się do wspomnianych wyżej autorów. Opinia ta mogłaby mieć uzasadnienie w tezie K. Mrówki, który sugeruje, że „Niechęć do poetów, jak i do niektórych filozofów dowodzi – paradoksalnie – jak mocno Heraklit pozostaje z nimi związany”[13]. Nie znaczy to jednak, że przyjmuje bezkrytycznie ich sposób myślenia. Jeżeli więc przyjmie się założenie, że Heraklit podejmuje rozumienie terminu νοῦς od wspomnianych autorów, będąc jednocześnie ich krytykiem, to należy się zastanowić, jak funkcjonuje ten termin w kontekście jego filozofii? Wydaje się bowiem, że proponowane przez Heraklita rozumienie rzeczywistości może mieć wpływ na sposób myślenia o samym νοῦς. Chcąc więc uchwycić obraz νοῦς, jaki wyłania się ze zdań, w których jest on przez Heraklita użyty, należy przeprowadzić analizę poszczególnych zdań, uwzględniając przy tym, o ile będzie to konieczne, wspomnianą tradycję literacką.

1. Νοῦς w kontekście πολυμαθίη

W zdaniu 40 Heraklit pisze: πολυμαθίη νόον ἔχειν οὐ διδάσκει[14]. Ukazany jest tu stosunek νοῦς do πολυμαθίη w kontekście διδάσκειν. Termin πολυμαθίη, który tłumaczy się między innymi jako „uczoność”, składa się z przedrostka πολυ oraz członu μαθίη, którego znaczenie jest wyrażone w μάθησις i μανθάνω, czyli „uczenie się”, „wiedza”. Stąd też tłumaczenie zaproponowane przez Krzysztofa Nareckiego jako „wielowiedza” dobrze oddaje znaczenie tego terminu[15]. O πολυμαθίη Heraklit wspomina również w zda-

[13] Tamże, s. 139.

[14] H. Diels, W. Kranz, 22B 40.

[15] Por. K. Narecki, *Logos we wczesnej myśli greckiej*, Lublin 1999, s. 82. W tym samym duchu termin ten jest tłumaczony na język angielski jako „much learning” (*A Greek-English Lexicon*, compiled by Henry George Liddell and Robert Scott, Oxford 1996, s. 1440). Natomiast K. Mrówka tłumaczy πολυμαθίη jako „erudycja” (*Heraklit*, dz. cyt., s. 135).

niu 129. Opisując działalność Pitagorasa, wymienia πολυμαθίη wraz z uczynieniem sobie samemu mądrości (ἐποιήσατο ἑαυτοῦ σοφίην) oraz złą sztuką (κακοτεχνίην)[16]. Na podstawie tych określeń charakteryzujących działalność Pitagorasa można uznać, że Heraklit miał do niego negatywne nastawienie. Do Pitagorasa prawdopodobnie odnosi się jego zdanie: κοπίδων ἐστὶν ἀρχηγός[17]. Chcąc zrozumieć, dlaczego Heraklit przypisuje πολυμαθίη Pitagorasowi, warto odwołać się do podania Jamblicha zamieszczonego w dziele *O życiu pitagorejskim*. Zwraca on uwagę, że dla pitagorejczyków czynność uczenia się (μανθάνειν) była podporządkowana pamięci (τῆς μνήμης), którą namiętnie szanowali (ἐτίμων σφόδρα)[18]. Można przypuszczać, że ćwicząc pamięć za pomocą uczenia się (μανθάνειν) osiągali ową πολυμαθίη, która mogła być dla nich miarą posiadanej przez nich pamięci (τῆς μνήμης). Stąd również i πολυμαθίη mogła odgrywać u nich niezwykle ważną rolę. Chociaż na temat πολυμαθίη u Pitagorasa Heraklit wyrażał się negatywnie, to jednak samo μάθησις miało dla niego istotne znaczenie, co wyraził w zdaniu 55, gdzie wraz z μάθησις wymienia wzrok (ὄψις) i słuch (ἀκοή)[19]. Heraklit zdawał sobie jednak sprawę z tego, że μάθεσις nie rozwiązuje wszystkich problemów związanych z wiedzą na temat rzeczywistości. Jeżeli bowiem on sam przedkładał μάθεσις, to w zdaniu 50

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[16] Por. H. Diels, W. Kranz, 22B 129: Πυθαγόρης Μνησάρχου ἱστορίην ἤσκησεν ἀνθρώπων μάλιστα πάντων καὶ ἐκλεξάμενος ταύτας τὰς συγγραφὰς ἐποιήσατο ἑαυτοῦ σοφίην, πολυμαθίην, κακοτεχνίην. – „Pitagoras, syn Mnesarcha, badaniem zajmował się najwięcej ze wszystkich ludzi i wybierając te pisma uczynił sobie samemu mądrość, uczoność, złą sztukę".

[17] Por. H. Diels, W. Kranz, 22B 81: „kłamców jest przywódcą".

[18] Por. H. Diels, W. Kranz, 58D 1, (Iamblich V.P. 164): ἐτίμων γοῦν σφόδρα τὴν μνήμην καὶ πολλὴν αὐτῆς ἐποιοῦντο γυμνασίαν τε καὶ ἐπιμέλειαν, ἔν τε τῷ μανθάνειν οὐ πρότερον ἀφιέντες τὸ διδασκόμενον, ἕως περιλάβοιεν βεβαίως τὰ ἐπὶ τῆς πρώτης μαθήσεως. – „W wielkim poważaniu mieli więc pamięć i poświęcali jej wiele ćwiczeń i troski; w procesie uczenia się nie posuwali się dalej, zanim nie utrwalili sobie starannie pierwszych podstaw nauki" (tłum. J. Gajda-Krynicka).

[19] Por. H. Diels, W. Kranz, 22B 55: Ὅσων ὄψις ἀκοὴ μάθησις, ταῦτα ἐγὼ προτιμέω – „Z wszystkich wzrok słuch uczenie się, te ja przedkładam".

przeciwstawia siebie samego logosowi mówiąc: οὐκ ἐμοῦ, ἀλλὰ τοῦ λόγου ἀκούσαντα ὁμολογεῖν σοφόν ἐστιν ἓν πάντα εἶναι[20]. Efekt, jaki uzyskuje się, dając posłuch logosowi, jest diametralnie inny niż ten, jaki wynika z μάθησις, które, będąc związane ze wzrokiem i słuchem, skupione jest na wielorakości doznań. Albowiem wypowiedź logosu, którego naturą jest zbiorczość[21] pozwala na sformułowanie tezy ἓν πάντα εἶναι. Czy twierdzenie πολυμαθίη νόον ἔχειν οὐ διδάσκει ma podobny charakter? Istotnym dla uzyskania odpowiedzi na to pytanie będzie wyjaśnienie znaczenia czasownika διδάσκειν. Jego znaczenie można wyrazić przez polskie „uczyć kogoś". Uczenie w takim rozumieniu jest związane z przedstawianiem, przedkładaniem, zobrazowaniem czegoś przez tego, który uczy lub przedstawia. W przypadku analizowanego zdania tym uczącym lub przedstawiającym miałoby być πολυμαθίη. Jeżeli więc przyjmie się proponowaną wykładnię czasownika διδάσκω, to zdanie πολυμαθίη νόον ἔχειν οὐ διδάσκει należałoby opisowo przełożyć w następujący sposób: wielorakie badanie lub też ujmowanie rzeczywistości doznawanej receptorami nie przedstawia samego umysłu. Jeżeli więc πολυμαθίη nie przedstawia umysłu (νόον) to można wnioskować, że tym, co obrazuje umysł, powinno być coś przeciwnego. Sama

[20] H. Diels, W. Kranz, 22B 50: „Nie mnie, lecz logosu słuchając, zgodzić się mądrym jest, że jedno wszystko jest".

[21] W *A Greek-English Lexicon* λόγος tłumaczy się między innymi jako reckoning (dz. cyt. s. 1057). Λόγος jest słownym rzeczownikiem z λέγω, czyli: położyć, kłaść; zbierać τί; przedłożyć. Znaczenie λέγω analizuje K. Mrówka odwołując się do Homera: „Dla przykładu, w *Iliadzie* pojawiają się pojęcia λεγοίμεθα „gromadzenia się" przy okrętach najdzielniejszych [XIII, 276: τί σε χρὴ ταῦτα λέγεσθαι; εἰ γὰρ νῦν παρὰ νηυσὶ λεγοίμεθα πάντες ἄριστοι ἐς λόχον,], λέξασθαι „zbierania się" wokół miasta młodych i starych [VIII, 518, 519: παῖδας πρωθήβας πολιοκροτάφους τε γέροντας λέξασθαι περὶ ἄστυ θεοδμήτων ἐπὶ πύργων·], λέγομεν, λέγοντο „zbierania" kości Patroklosa i Hektora [XXIII, 239: αὐτὰρ ἔπειτα ὀστέα Πατρόκλοιο Μενοιτιάδαο λέγωμεν εὖ διαγιγνώσκοντες·]. Achilles ἐλέξατο „wybrał" z rzeki dwunastu młodzieńców [XXI, 27: ζωοὺς ἐκ ποταμοῖο δυώδεκα λέξατο κούρους], a w *Odysei* Proteusz λέκτο δ' ἀριθμόν „policzył" foki [IV, 451]. Dusza Agamemnona mówi, że ktoś λέξατο „wybrał" z miasta najlepszą młodzież [XXIV, 108: λέξαιτο κατὰ πτόλιν ἄνδρας ἀρίστους]" (K. Mrówka, *Heraklit*, dz. cyt. s. 23).

czynność μανθάνω, będąc powiązana ze wzrokiem i słuchem, w efekcie doprowadza do πολύ, co staje się jej charakterystyką. W ten sposób „*Wieloraka* wiedza nie prowadzi do jednej wiedzy, jeśli jej celem jest poznanie na poziomie πολυ-. Wtedy wiele staje się jeszcze więcej”[22]. Jeżeli więc μάθησις, daje obraz πολύ, to obrazem przeciwnym jest ἕν. Tym natomiast, co daje obraz ἕν, jest logos wspomniany w cytowanym zdaniu 50. Można więc przypuszczać, że to właśnie logos przedstawia umysł, lub inaczej, uczy umysłu (νόον). Jeżeli logos miałby być uznany za czynnik przedstawiający umysł, to można by na postawie informacji o logosie uzyskać charakterystykę umysłu w rozumieniu Heraklita.

2. Rozumienie νοῦς w kontekście λόγος

W zdaniu 115 Heraklit stwierdza: ψυχῆς ἐστι λόγος ἑωυτὸν αὔξων[23]. Heraklit ukazuje tutaj cechę logosu jaką jest to, że jest on sam siebie (ἑωυτόν) wspierający (αὔξων)[24]. Przyjmując więc założenie, że logos przedstawia umysł, określenie jakie przypisane jest logosowi mogłoby w pewien sposób charakteryzować sam umysł. Jeżeli czynnością umysłu jest νοεῖν, czyli „dostrzeganie”, „poznanie” lub „pojmowanie”, to sam umysł, będąc związanym z logosem, co sugeruje K. Mrówka, twierdząc, że „νόος jest zdolnością poznania λόγος”[25], przede wszystkim zwraca się do samego siebie. Cokolwiek bowiem jest wypowiedziane przez logos, jest dostrzegane (νοεῖν) jako samo w sobie. Taka możliwość jest tylko dzięki logosowi, albowiem nie jest przez nic innego wspierany i stąd jego wzrost i spotęgowanie się lub wzmacnianie wypływa z niego same-

[22] K. Mrówka, *Heraklit*, dz. cyt., s. 135.
[23] H. Diels, W. Kranz, 22B 115: „duszy jest logos sam siebie wspierający”.
[24] Czasownik αὔξω można też tłumaczyć jako spotęgować lub wzmocnić. W *A Greek-English Lexicon* przekłada się ten czasownik na increase, albo grow, co można by rozumieć jako wzrost, dz. cyt. s. 277.
[25] K. Mrówka, *Heraklit*, dz. cyt., s. 289.

go. Można na tej podstawie wnioskować, że umysł poprzez logos ma właściwość jednoczenia w jednym podmiocie wielu zdarzeń. O ile więc logos skupia wiele poprzez wypowiedź, o tyle umysł mógłby czynić to poprzez obejmowanie wynikające z funkcji dostrzegania (νοεῖν). Można zapytać, jaki jest zakres obejmowania umysłem, czy jest on czymś ograniczony, czy też nie? Odpowiedź może dać inne zdanie Heraklita dotyczące logosu. W zdaniu 45 pisze: ψυχῆς πείρατα ἰὼν οὐκ ἄν ἐξεύροιο πᾶσαν ἐπιπορευόμενος ὁδόν· οὕτω βαθὺν λόγον ἔχει[26]. Z powyższego zdania wynika, że brak granic (πείρατα) duszy (ψυχῆς) ma swoje uzasadnienie w βαθὺν, czyli w „głębi" lub „obfitości"[27] logosu. Wydaje się, że to, iż logos jest βαθύν, może wynikać z własności wyrażonej w ἑωυτὸν αὔξων. Jeżeli bowiem logos sam siebie wspiera (αὔξει), to tym samym nie ma żadnej podstawy. Nie mając zaś żadnej podstawy, jest on głęboki (βαθύν)[28]. Jeżeli zaś logos sam z siebie wzrasta (αὔξει), to jego wzrost nie posiada żadnego innego źródła. Dlatego można by powiedzieć, że jest on obfity (βαθύν). Jego obfitość bowiem nie posiadłaby żadnych zewnętrznych ograniczeń wynikających z uzależnienia od innego źródła. Jeżeli więc duszy jest logos i dusza poprzez ten logos się wyraża, to tym samym w swoim zakresie nie jest ona ograniczona. Czy tak samo można postrzegać νόος[29] Jeżeli więc, jak twierdzi Heraklit, duszy jest logos, a sam logos, jak wynika z przeprowadzonych analiz, przedstawia umysł, to również zakres

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[26] H. Diels, W. Kranz, 22B 45: „Duszy granic idąc nie odkryłbyś, całą przechodząc drogę: tak głęboki logos ma".

[27] W *A Greek-English Lexicon* przymiotnik βαθύς, εῖα, ύ jest tłumaczony między innymi jako deep i thick (dz. cyt., s. 302).

[28] Według K. Nareckiego to „iż dusza obdarzona jest «głębokim logosem»" jest najważniejszym sformułowaniem Heraklita. (*Logos we wczesnej myśli greckiej*, dz. cyt., s. 82.).

[29] Odpowiedź na to pytanie byłaby łatwiejsza do uzyskania, gdyby w stosunku do Heraklita była wyrażona opinia Aëtiosa komentującego poglądy Parmenidesa, Empedoklesa i Demokryta, sugerująca, że ταὐτὸν νοῦν καὶ ψυχήν – „tym samym jest umysł i dusza" (Por. H. Diels, W. Kranz, 28A 45 i 31A 96).

umysłu mógłby być nieograniczony. Umysł obejmowałby więc wszystko to, co zebrane jest przez logos, czyli wyznaczałby pewien zakres. W tym momencie można odwołać się do tradycji Homerowej. Jak wiadomo, Homer przypisywał bogom i ludziom νόος. Jednocześnie, jak sugeruje A. Krokiewicz, w bogach oprócz νόος działa Μοῖρα. „Wyraz μοῖρα pozostaje w związku z wyrazami μερίζειν – *dzielić* tudzież μείρεσθαι – *być podzielonym* albo *otrzymać w przydziale* i może oznaczać bądź podmiotową przyczynę, bądź też przedmiotowy skutek czy wynik owego *dzielenia* i *przydzielania*. (…)Według Homera aktualną rzeczywistość i razem z nią dolę lub dole ludzkie *przędą* (ἐπικλώθειν, ἐπινεῖν) bogowie i Μοῖρα (p. np. Iliada XX 127 n., XXIV 209 n., 525 n., Odyseja I 16 n., III 208 n., IV 207 n., VIII 579 n., XI 139, XVI 64, XX 195 n.)”[30]. Mając charakter niecielesny, sama niczego nie ziszcza, ale ma wpływ na umysły bogów i ludzi[31]. Można więc powiedzieć, że μοῖρά działając przez umysł, jest z nim ściśle związana. Terminem μοῖρα posługuje się również Heraklit w zdaniu 25 pisząc: μόροι γὰρ μέζονες μέζονας μοίρας λαγχάνουσι[32]. K. Mrówka komentując ten fragment, zwraca uwagę, że μόρος i μοῖρα wyrażają „zamysł Logosu ujęty w pojęciu «przeznaczenia»”[33]. Jeżeli więc, jak chce tego K. Mrówka, μοῖρα wyraża zamysł logosu, a logos, jak to zostało przyjęte wcześniej, miałby przedstawiać νόος, to można przyjąć wniosek, że νόος jest związany z μοῖρα i wyznacza zakres, czyli ma charakter ograniczający. Stąd wniosek, że czynność naznaczania (λαγχάνειν) jakiejś mojry jest operacją umysłu, który w wyniku zbierania przez logos obejmuje zakres zbierający. Jeżeli μοῖρα jest związana z naznaczaniem, to μόρος konsekwentnie jest czymś ostatecznie wyznaczonym

[30] A. Krokiewicz, *Studia Orfickie. Moralność Homera i etyka Hezjoda*, dz. cyt., s. 126.

[31] Por. tamże, s. 131.

[32] H. Diels, W. Kranz, 22B 25: „Działy bowiem większe dostają w udziale większe losy”.

[33] K. Mrówka, *Heraklit*, dz. cyt., s. 100.

lub naznaczonym, czyli skutkiem naznaczania mojrą. W kontekście dotychczasowych analiz wyłania się problem wzajemnej zależności logosu i umysłu. Czy logos zbiera i wyraża to, co umysł ogarnął, czy też raczej umysł ogarnia to, co logos zebrał i wyraził?

3. Zależność między νόος i λόγος

Chcąc mówić o relacji między νόος i λόγος można by odwołać się do cytowanego już twierdzenia K. Mrówki, że „νόος jest zdolnością poznania λόγος". Z tego na pierwszy rzut oka mogłoby wynikać, że to νόος jest zależny od λόγος, albowiem nie można mówić o poznaniu czegoś, czego nie ma. Jednocześnie można stwierdzić, że w poznaniu to λόγος zależy od νόος, gdyż bez właściwego aparatu poznawczego dana rzeczywistość nie może się ujawnić. Mogłyby to potwierdzać słowa tego samego autora, który pisze, że „Poznać λόγος można tylko poprzez myślenie, poprzez skupiającą w jedno myśl"[34]. Jednakże przy próbie opisania zależności między νόος i λόγος należy pamiętać o tym, że to logos sam siebie wspiera. Być może rozumienie relacji między νόος i λόγος ujawni się podczas analizy zdania 114, w którym Heraklit pisze: ξὺν νόῳ λέγοντας ἰσχυρίζεσθαι χρὴ τῷ ξυνῷ πάντων, ὅκωσπερ νόμῳ πόλις, καὶ πολὺ ἰσχυροτέρως[35]. K. Mrówka zwraca tu uwagę na grę słów, jaką tworzą ξὺν νόῳ z ξυνῷ[36]. Czy ma ona w ogóle jakieś znaczenie? Według Hansa-Georga Gadamera celem gry słownej Heraklita było wzmocnienie prawdy, która jest w tych słowach ukryta[37]. Jaki więc byłby sens tej gry słownej? Werner Jaeger wyjaśnia to w następujący sposób: „Mówić 'ro-

[34] Tamże, s. 145.

[35] H. Diels, W. Kranz, 22B 114: „wraz z umysłem mówiący opierać się powinni na tym, [co] wspólne wszystkim, tak jak na prawie miasto, i wiele silniej".

[36] Por. K. Mrówka, *Heraklit*, dz. cyt., s. 311.

[37] Por. Hans-Georg Gadamer, *The Beginning of Knowledge*, Translated by Rod Coltman, Continuum New York London, 2002, s. 46.

zumem' (ξὺν νῷ) znaczy dla Heraklita dokładnie tyle, co mówić 'tym, co wspólne' (ξυνῷ)"[38]. Zgadzając się z interpretacją W. Jaegera, można zauważyć, że opieranie się (ἰσχυρίζεσθαι) na tym, co wspólne wszystkim (τῷ ξυνῷ πάντων) nie zależy od samego mówienia (λέγειν) ale od mówienia wraz z umysłem (ξὺν νόῳ). Można więc przypuszczać, że to, co wspólne (τὸ ξυνόν), jest związane raczej z umysłem, a nie z logosem, co może potwierdzać przypuszczenie o funkcji obejmowania jako czegoś właściwego jedynie umysłowi. Zakres obejmowania może się różnić w zależności od stopnia uwspólnienia, na co wskazywałaby dalsza część omawianego zdania ὅκωσπερ νόμῳ πόλις, καὶ πολὺ ἰσχυροτέρως. W tym przypadku wspólnym dla miasta (πόλις) jest prawo (νόμος). Heraklit zwraca jednak uwagę, że chodzi mu o coś więcej, a mianowicie o to, co jest wspólne wszystkim. Albowiem jedynie taki zakres wyraża w sposób właściwy charakter umysłu, który nie będąc ograniczonym przez cokolwiek, obejmuje wszystko, odwołując się w konsekwencji do tego, co jest właśnie wspólne dla wszystkich (τὸ ξυνὸν πάντων). K. Mrówka analizując to zdanie, zwraca uwagę, że „wielu komentatorów pierwsze zdanie interpretuje w świetle powszechnego kosmicznego prawa. Od tego, co ogólne, przechodzi się do szczegółowego, przykładowego funkcjonowania powszechnego kosmicznego prawa-Logosu, jakim jest prawo *polis*"[39]. Co jest więc wspólne wszystkim? K. Narecki na podstawie zdania 2 Heraklita stwierdza, że tym, co jest powszechne (ξυνόν) jest Logos[40]. Jednak z początkowej części omawianego zdania wynikałoby, że oparcie się na logosie jako czymś, co jest wspólne wszystkim, możliwe jest jedynie w mowie wraz z umysłem (ξὺν νόῳ). Czy możliwa jest mowa

[38] W. Jaeger, *Teologia wczesnych filozofów grackich*, przekł. Jerzy Wocial, Kraków 2007, s. 181. Również H.G. Gadamer doszukuje się tutaj ścisłej zależności pisząc: "Not only is reason common to all things, but everything that is common is based on reason." (H.G. Gadamer, *The Beginning of Knowledge*, dz. cyt., s. 46).

[39] K. Mrówka, *Heraklit*, dz. cyt., s 311.

[40] Por. K. Narecki, *Logos we wczesnej myśli greckiej*, dz. cyt., s. 63.

bez umysłu? K. Mrówka sugeruje, by tych mówiących wraz z umysłem (ξὺν νόῳ λέγοντας) przeciwstawić ἀξύνετοι ἄνθρωποι ze zdania 1[41]. To przeciwstawienie mogłoby mieć uzasadnienie w propozycji K. Nareckiego, który sugeruje pewne skojarzenia wynikające z gry etymologicznej. Stwierdza on, że przymiotnik ἀξύνετοι może określać ludzi „pozbawionych kontaktu z rozumem: (ἀ-) ξὺν νόῳ"[42]. Można również przyjąć, że przymiotnik ten składa się z α prywacyjnego oraz z συνετός, którego czynnością jest συνίημι tłumaczone jako „zesłać", „sprowadzić do kupy", „zmiarkować", „zauważyć". Wtedy ἀξύνετοι oznaczałoby tych, którzy nie są w stanie sprowadzić do kupy lub też zmiarkować wtedy, kiedy nie słyszą logosu albo słuchają go po raz pierwszy[43]. Nie są więc w stanie zidentyfikować logosu jako tego, który gromadzi, zbiera, liczy. Aby więc uczestniczyć w mowie (λέγειν) logosu, czyli w jego czynności zbierania i wyrazu, należałoby właściwie go zidentyfikować, być może jest to możliwe poprzez umysł, dzięki czemu słuchający logosu stawaliby się ξυνετοί. To, że właściwe nastawienie do logosu jest niezwykle istotne, kiedy się go słucha, może sugerować stwierdzenie z cytowanego już zdania 50, że słuchając logosu „mądrym jest zgodzić się" (ὁμολογεῖν σοφόν ἐστιν). Jeżeli by więc zgoda (ὁμολογεῖν) nie nastąpiła, nie byłoby możliwe stwierdzenie, że „jedno wszystko jest" (ἓν πάντα εἶναι). Dostrzeżenie więc tego, co niesie ze sobą czynność logosu, jest możliwe jedynie poprzez umysł, który pozwala dostrzec to, co jest wspólne, wyrażone w postaci jednego (ἕν). Należy przy tym dodać, że umysł jest w stanie dostrzec to tylko dzięki logosowi. Albowiem będąc zawsze (ἀεί) jest również on „czymś powszechnym (ξυνόν)"[44]. W omawianym zdaniu pojawia się jednak jeszcze inny problem. Heraklit mówiąc o tych, którzy wyrażają się wraz z umysłem, stwierdza, że po-

[41] Por. K. Mrówka, *Heraklit*, dz. cyt., s. 311.
[42] K. Narecki, *Logos we wczesnej myśli greckiej*, dz. cyt., s. 63.
[43] Por. H. Diels, W. Kranz, 22B 1: Τοῦ δὲ λόγου τοῦδ' ἐόντος ἀεὶ ἀξύνετοι γίνονται ἄνθρωποι καὶ πρόσθεν ἢ ἀκοῦσαι καὶ ἀκούσαντες τὸ πρῶτον.
[44] W. Jaeger, *Teologia wczesnych filozofów grackich*, dz. cyt., s. 181.

winni (χρή) oprzeć się na tym, co wspólne wszystkim. Zastosowanie przez niego zwrotu o powinności mogłoby wskazywać na to, że tak zawsze nie jest. Człowiek posługujący się umysłem mógłby więc nie oprzeć się na tym, co wspólne. Czy jest to w ogóle możliwe i co mogłoby być przyczyną takiego stanu?

4. Związek νόος z φρήν

Wątpliwości co do stanu umysłu Heraklit wyraża w zdaniu 104 pisząc: τίς γὰρ αὐτῶν νόος ἢ φρήν; δήμων ἀοιδοῖσι πείθονται καὶ διδασκάλῳ χρείωνται ὁμίλῳ οὐκ εἰδότες ὅτι ‘οἱ πολλοὶ κακοί, ὀλίγοι δὲ ἀγαθοί’[45]. W pytaniu postawionym na początku zdania obok umysłu (νόος) jest wymienione φρήν Termin ten tłumaczy się jako „osierdzie", „siedlisko życia", „rozum". Na znaczenie tego terminu u Homera zwraca uwagę A. Krokiewicz, pisząc „Wyraz *phrenes* [Jest to liczba mnoga] oznacza 1) w sensie fizjologicznym bądź przeponę, bądź też łącznie z płucami i sercem, a 2) w sensie psychologicznym świadomość w ogóle, ponieważ przepona (regulująca oddech i oddzielająca płuca tudzież serce od dolnych wnętrzności) uchodziła za główne siedlisko umysłu (*nous*, *phren* sing.!), podobnie jak za główne siedlisko zapału (*thymos*, także *etor*, *menos*) uchodziło serce (*ker*, *kardie*)"[46]. Według K. Mrówki natomiast u Heraklita „φρήν wyraża przede wszystkim motyw pożądania, pragnienia"[47]. Należy zwrócić uwagę na sugestię A. Krokiewicza, że przepona (*phrenes*) jest głównym siedliskiem umysłu. Stąd u Homera i Ksenofanesa występuje zestawienie νόος φρήν. To zestawienie wskazuje, że νόος, aby mógł oddzia-

[45] H. Diels, W. Kranz, 22B 104: „Jaki bowiem [jest] ich umysł albo rozum? ludowym śpiewakom ufają i za nauczyciela traktują tłum nie widząc, że „liczni [są] źli, nieliczni zaś dobrzy".

[46] A. Krokiewicz, *Studia orfickie. Moralność Homera i etyka Hezjoda*, dz. cyt., s. 108.

[47] K. Mrówka, *Heraklit*, dz. cyt., s. 289.

ływać na rzeczywistość, musi posługiwać się φρήν. Potwierdza to między innymi wspomniany już fragment Ksenofanesa mówiący, że bóg wstrząsa (κραδαίνει) wszystkim (πάντα) rozumem umysłu (νόου φρενί). Można więc przypuszczać, że φρήν, które miałoby być siedliskiem νόου, staje się w pewnym sensie bramą, przez którą umysł ma możliwość oddziaływania na rzeczywistość. Ale też, jeżeli φρήν wyraża motyw pożądania i pragnienia, jest skłonne do wiązania się z tym, co jest na zewnątrz. Wydaje się, że o tym informuje Heraklit w omawianym zdaniu, twierdząc, że „ludowym śpiewakom ufają i za nauczyciela traktują tłum" (δήμων ἀοιδοῖσι πείθονται καὶ διδασκάλῳ χρείωνται ὁμίλῳ). Z tego fragmentu jasno wynika, że decyzja należy do tych, co posługują się swoim φρήν. Oni bowiem ufają (πείθονται) i traktują (χρείωνται). Heraklit wskazując, że ufność i uznanie za nauczyciela (διδασκάλῳ) są skierowane w stronę ludowych śpiewaków (δήμων ἀοιδοῖσι) i tłumu (ὁμίλῳ), zwraca uwagę na kierunek φρήν w stronę wielości, czyli czegoś przeciwnego w stosunku do natury νόος, dążącego do tego, co wspólne (ξυνόν). Napięcie pomiędzy tym, co wspólne i do czego dąży νόος, a pragnieniem φρήν, jest wyrażone w zdaniu 2: τοῦ λόγου δ' ἐόντος ξυνοῦ ζώουσιν οἱ πολλοὶ ὡς ἰδίαν ἔχοντες φρόνησιν[48]. K. Narecki w kontekście tego zdania stwierdza, że „φρόνησις jest trwającą przez całe życie czynnością zmysłowo-umysłowego przeżywania świata. W rezultacie ciągłego doświadczania bodźców zewnętrznych każdy człowiek kształtuje własny sąd o rzeczywistości, odpowiadający jego doraźnym celom i potrzebom, i dlatego w jego przekonaniu – słuszny"[49]. W wyniku takiego rozumowania (φρονεῖν) niemożliwe jest dostrzeżenie właściwego znaczenia logosu, który sam siebie wspierając, nie będąc związany z niczym, jest dla wszystkich wspólny (ξυνός). Rozumując bowiem, dostrzega się wielorakość, która determinuje mówienie, powodując osłabienie siły logosu. Jedynie posługując się umysłem

[48] H. Diels, W. Kranz, 22B 2: „Choć logos jest wspólny, żyją liczni jak własny mając rozum".
[49] K. Narecki, *Logos we wczesnej myśli greckiej*, dz. cyt., s. 67.

(νόῳ) można doprowadzić do właściwego zakresu logosu. Umysł, oddziałując na rzeczywistość poprzez φρήν, może wyznaczać (μερίζειν) właściwą mojrę, której logos będzie największy. A największy logos ujawnia się w tym, co jest wspólne i którego dział jest tym samym największy. Wydaje się więc, iż z tego właśnie powodu Heraklit mógł twierdzić, że liczni są źli, nieliczni dobrzy (ὅτι ʽοἱ πολλοὶ κακοί, ὀλίγοι δὲ ἀγαθοίʼ). Liczni bowiem skupiając się na tym, co jest ich własne, czynią między sobą różnicę i ograniczają swój dział. Ich wyraz jest mało znaczący, czyli siła ich logosu jest bardzo słaba. Jedynie nieliczni opierając się na tym, co wspólne, dzięki mówieniu wraz z umysłem powiększają swój dział, a ich logos jest o wiele mocniejszy. Heraklit daje temu wyraz w zdaniu 39, pisząc: ἐν Πριήνῃ Βίας ἐγένετο ὁ Τευτάμεω, οὗ πλείων λόγος ἢ τῶν ἄλλων[50]. Warto zwrócić uwagę na określenie przypisywane tutaj logosowi, czyli πλείων. Jest to stopień wyższy od przymiotnika πολύς, który tłumaczy się jako „liczny", „mnogi", „obszerny", „powszechny", „obfity". Z tego zaś wynikałoby, że termin ten wyraża obszar obejmujący pewną mnogość i wyczerpujący dany zakres. Natomiast stopień wyższy mógłby sugerować, że zakres ujmowanego obszaru jest większy w stosunku do innych. W tym kontekście więc πλείων λόγος być może wskazuje na to, że zakres wyrazu jest o wiele większy, co mogłoby być związane z większym obejmowaniem przez umysł powodującym μέζονας μοίρας, czyli „większe działy". Trzeba przypomnieć, że βαθύς, czyli głębia logosu, ze względu na to, iż wspiera on sam siebie, nie jest ograniczona przez cokolwiek. Natomiast obszar oddziaływania wydaje się zmienny w zależności od zakresu obejmowania przez umysł. Należy jednak przypomnieć, że umysł w swojej naturze jest przedstawiany (διδάσκειν) przez logos. Jeżeli więc daje się posłuch (ἀκούειν) logosowi, pomijając przy tym ograniczającą pożądliwość φρήν, to zakres obejmowania przez umysł wydaje się największy. Albowiem nie podlega on żadnym ograniczeniom.

[50] H. Diels, W. Kranz, 22B 39: „w Pirene Bias stał się, [syn] Teutamea, którego obfitszy [jest] logos niż innych".

Pomimo niewielu miejsc, w których Heraklit wspomina o νόος, z kontekstów, w których termin ten występuje, można uzyskać jego obraz. Odpowiednią wskazówką do osiągnięcia celu stało się zdanie πολυμαθίη νόον οὐ διδάσκει. Wykluczenie bowiem możliwości ukazania (διδάσκειν) umysłu (νόον) za pomocą πολυμαθίη sugeruje, by zwrócić się w stronę tego, co jest przeciwieństwem wielości. Okazało się, że przeciwieństwo wielości, czyli jedno, jest możliwe tylko dzięki posłuchowi danemu logosowi. Na podstawie takiego rozumowania można było założyć, że tym, co pokazuje czy też uczy umysł, jest właśnie logos. Odwołując się więc do natury logosu, można było ukazać prawdopodobną charakterystykę samego terminu νόος. Z przeprowadzonych analiz wynika więc, że najbardziej prawdopodobnymi własnościami umysłu (νόος) są odniesienie do samego siebie oraz obejmowanie, którego celem jest to, co wspólne.

Polemiki

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THE GENOCIDAL LOGIC OF CAPITALISM

This essay attempts to contextualize the current global systemic crisis and its capitalistic roots.

Contents

1. General Context: Global Systemic Crisis

The general contemporary state of affairs is properly depicted with the well-known US military slang acronym: "Fouled Up Be-

yond All Recognition." Five main critical areas can be identified but their evolution should be understood together. The fact that experts and mainstream medias shift their focus from one to the other, apparently randomly or according to an agenda that is not transparent, is irrelevant.

First, the energetic crisis is palpable since M. King Hubbert created the "peak oil" model in 1956 and accurately predicted that the United States oil production would peak between 1965 and 1970. In 2009, an expert of the International Energy Agency claimed that the production of conventional crude oil peaked in 2006. Whether this is the case or not (there is no consensus) does not really matter as international politics makes plain that all major actors are already behaving as if it had happened and are thus seeking to master the remaining resources (oil, of course, but also rare minerals and water). They most definitively act as if peak oil was *behind* us.

Second, the biospheric crisis is equally contemporary. The exhaustion of natural resources (biodiversity, minerals, water…) is not the only biospheric issue, *abrupt* climate change – and its correlate: chronic pollution – constitute also a major concern. In sum, scientists probe now the adequacy of the concept of "sixth mass extinction."

Third, the demographic crisis: in such a context, the Malthusian pressure is more problematic than ever, with the human population expected to surpass 9 billions by 2050 (a 50 pc increase, largely in developing nations, the U.N. predicts). From the perspective of Western imperialism, this also means that Whites will see their demographic weight plunge below 10 pc.

Fourth, pandemics and social unrest are expected, especially in countries without social security system: riots, famine and overpopulation wars are likely since speculation keeps an iron hand on the price of cereals while meat-consumption is not discouraged in first-world countries.

Last but not least, the political vacuum in which all these crises take place is staggering. Since politicians do not represent the citizens (or the proles or the denizens) anymore but themselves

and the corporatocracy (or inner party), each and every of these issues is aggravated by their complete lack of *common sense* and of visionary management.

In sum, all these crises represent various sides of one single catastrophe: capitalism *qua* political system, i.e., the oxymoronic "market democracy." It is because of the lust for power of a few thousands individuals worldwide that the social tissue (now being globalized) is corrupted and that the entire biosphere – starting with ourselves – will continue to be exploited until exhaustion or collapse. Interestingly, although there is *in the civil society and in academia* no consensus on these crises – let alone on their intrinsic correlation – , if you read the literature leaking (purposively or not) from *military and intelligence circles*, you find that all these issues – minus the political vacuum – have been a major concern for more than a dozen years.[1] Please also note that "terrorism," that seems the sole interest of politicians, seems basically of no real relevance for the intelligence community. The next step is self-evident: filling the political vacuum with "military intelligence"… There is, however, an alternative trajectory that is called degrowth and involves voluntary simplicity. Cuba, for instance, has showed until recently a remarkable economic resilience after that the collapse of the Soviet Union led her abruptly to embrace a post-carbon era. It should be underlined that, from the perspective of the comparison of the Human Development Index with the Ecological Footprint, Cuba's achievements are nothing less than amazing.

2. Standpoint: Process Whiteheadian

Although this state of affairs leads every critical observers to be radically pessimistic in their assessment of the future of (Western) civilization, the duty of Whiteheadian philosophers

[1] E.g., Mark Townsend and Paul Harris, "Now the Pentagon tells Bush: climate change will destroy us," *The Observer*, Sunday 22 February 2004.

is to remain optimistic, to bring out reasons to cultivate that optimism and practical ways of implementing it. Why so? Basically because the future is not written and because the problem is so to speak *only* political. On the one hand, each of us can make the difference, can *create* a better world. On the other hand, all the crises mentioned, being metastatic diseases of the same capitalistic cancer, could be cured by a bold political program. What is the process Whiteheadian standpoint and how does it impact politics and culture?

2.1. Radical Empiricism

First, one should be clear about the philosophical gesture that is adopted by Whitehead himself. It is made of a very straightforward cognitive thread that had been paced by William James before him.

Philosophy starts from experience – but what part of it? According to process thinkers, all experiences should be taken at face value and find a proper assessment in the philosophical framework. No experience should be rejected a priori: it makes no philosophical sense to refuse to take into account an experience, even if it is an unusual one, such as an hallucination. As soon as the philosopher adopts a perspective that leads to the rejection of some parts of his experience, s/he leaves the philosophical field and adopts, willy nilly, the standpoint of expertise. (This sharp distinction is as old as Parmenides's poem *On Nature*.)

Accepting all experiences lead of course the philosopher to be buried under data. And these data, that are representative only of past experiences, never entirely determine future experiences. New events happen all the time – indeed this is the most fundamental trait of our existence. James and Whitehead offer complementary methodological standpoints as to how the philosopher should deal with this wealth of data. The former insists on the *pragmatic* methodology that should be adopted and that basically involves to sort out relevant patterns with the help of their known or expected consequences. The latter underlies the importance of *imagination* to cope with a process universe, he as-

sumes the feasibility of systematization and consequently emphasizes the necessity to resort to imagination. To clarify: if one takes the idea of a process multiverse seriously, it becomes impossible for philosophy and science to work with the usual metaphor of the quest of the principle (or "archè"). There is no one single principle from which all processes come and none of the many principles involved is rationalizable. Hence James' advocating of a pragmatic method. Whitehead agrees but nevertheless argues that philosophy can obtain a speculative system that is precise enough to spur conceptual and practical consequences *and* loose enough not to determine future events.

If one applies imaginative pragmatism to all experiences, one obtains a philosophical vision that amounts to panpsychism or, in the Whiteheadian lexicon, to panexperientialism. Conscious experience cannot indeed be segregated from its fringes and these fringes are to be understood in continuity with our prehensions of the world. Sense-perception is only a refined form of sense-awareness and it amply testifies for the reality of internal and external relations.

2.2. Political Radicalism

When that general process standpoint is applied to politics, a new form of radicalism is disclosed. The basic idea is simple: the more you experience, the more you imagine and the more you think, the more you expand your social horizon and the more you shift to the left of the political spectrum. It is often claimed that our heart dictates compassion and a socialist outlook of sorts whereas reason lead us to realize, sooner or later and whether one likes it or not, that only healthy individualism allows to reach the best possible common world. Actually the exact opposite is the case: all human beings are born with a purely selfish drive towards self-preservation and self-enjoyment, i.e., the smallest social horizon – themselves – that even include their mother (see, e.g., J. Piaget and Daniel Stern). It is only very slowly that the social horizon grows and that concern for other

forms of life becomes actual. This maturation process takes place through direct experience, imagination, and thought.

Direct *experience* basically involves meeting other human beings. It is difficult to deny that cultural boundaries are promptly overcome when you meet people in a proper context. We all share the same humanity and only some "inner party" individuals or other sociopaths seek to make us believe that some human beings "hate us."[2] For instance, the proles never go to war light-heartedly: they have to be convinced of the evilness of the "Other;" the "ennemy" is basically a construct (see Arthur Ponsonby or Noam Chomsky[3]).

Imagination provides the link between past factual experiences and possible future ones. Imagination is crucial when we seek broader generalizations in a world that is everlastingly in the making. I do not need to meet all Iranians to realize that they are as peaceful as Belgians are. To claim the contrary would amount to plain racism anyway.

The activity of *thinking* involves the quest for the highest generalities. Here also, it amounts to reaching the "universals" that apply to most, if not all, of us and thus to bridge social and cultural gaps.

In sum, we obtain the following claim: the process of individual maturation necessarily leads us from selfishness to altruism and it takes a fair amount of ideology and propaganda to scare (actually: to infantilize) people enough that they accept to wage useless wars against their fellow humans. This schizogenetic process is however never completed and it requires an escalation of lies. Some fellows human are portrayed as the ultimate evil and an imminent threat to our survival. In light of the poor

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[2] In order to arouse a different political vision, I suggest to use Orwell's terminology rather than the usual lexicon.

[3] Lord Arthur Ponsonby, *Falsehood in War-Time: Propaganda Lies of the First World War*, London, George Allen and Unwin, 1928. The same stories of alledged atrocities are used not only to spring war but after the war has ended ("Vae victis").

success of recent imperial wars and especially in light of the psychological problems that occur in these armies, it is nevertheless doubtful that soldiers can be, in the long run, fooled so easily.

The main tool to think these issues is the concept of class; it unfolds in three stages.

First, the *opacity* of classes. It is wise to redefine the concept of class independently of the relations of production, a conceptual thread used by Marx when capitalism was basically industrial. There is a very concrete experience that is usually ignored outside sociological studies: the existence of a sociological horizon that corresponds to what Whitehead calls our "actual world" and von Uexküll (after von Baer but independently of Peirce) "Umwelt."[4] The *Umwelt* is similar to a soap bubble or a cobweb that would be animated by two virtues: on the one hand, the living organism in question is largely defined by its relational tissue; on the other hand, the horizon incorporates interferences between different worlds and accounts for the relativity of the perceptual community. Scale effects do of course matter: the world of the ant is not the one of the mole. The *Welt* is a mosaic of *Umwelten*.

Second, the *privacy* of class consciousness. The existence of social classes is thus a given, a *presentation* that is not necessarily *represented*. To use a metaphor: all human beings live in a bubble that is more or less extended, more or less transparent and more or less pervious to her fellows' whereabouts. However, because of personal circumstances not always purposely sought, some individuals become conscious of the existence of their own class and therefore pave the way for a new understanding of social intercourse.

Third, the class *struggle*. So far we have dealt with the statics of the system; we now have to understand its dynamics. Currently, Western and Westernized societies (the reality behind

[4] The concept of *Umwelt* has been instrumental in the development of a zoo- or bio-semiotics and its phenomenological blend (Husserl, Heidegger, Goffman, Merleau-Ponty and Deleuze)

the *politics* of "globalization" and its fancy literature) are ruled by the class struggle. Some class not only rules over the other classes, they seek to crush them. We actually get this straight from the horse's mouth: ""There's class warfare, all right," Mr. Buffett said, "but it's my class, the rich class, that's making war, and we're winning"."[5] Two reasons are commonly given: this is a natural law that leads the more capable to manage the destinies of all citizens; the "elite" rules because no-one else can or even wish to rule and it furthermore rules for the common good. This question bounces back in section 8.

2.3. Cultural Radicalism

An additional specification is important in order to understand how our communities have drifted into societies. The question is: what are the conditions of possibility of the authentic life and how are they bypassed in contemporary market democracies? The three cardinal conditions are easy to identify.

First, individuation. The individual is without doubt the basic social component – but it is neither a static nor an immortal one. Human life, from birth to death, is a growth process that can be depicted with the concept of individuation: through life, each and every one of us seeks, willy nilly, his or her own destiny. Autonomy or independence is the key-word here. It involves *creativity* and *freedom*. In market democracies, however, autonomy is replaced by conformism. Instead of seeking to individualize themselves, people nowadays have to content themselves with adopting a purely opinative worldview.

Second, socialization. Although it makes sense to understand community from the perspective of the interactive aggregation of individuals in the making, the argument can be made that community always comes first, that no individual was ever born in a social vacuum (but s/he can die of course in a social void of sorts). There is no pre-social individual but one can imagine

[5] Ben Stein, "In Class Warfare, Guess Which Class Is Winning," The New York Times, 26 nov 2006.

of course a pre-contractual one. Solidarity or heteronomy is what matters here, i.e., some form of *efficacy* and *determinism*. When solidarity breaks, as it is the case nowadays, it paves the way to atomism and individualism.

Third, the existence of a "Grand Narrative." The double tension between the individual and the community, between independence and interdependence, is at the root of the Jamesian pluralism: there are genuine individuals endowed with an existential trajectory incommensurable with any other and, yet, they all belong to the one same community that benefits from their idiosyncrasies, reinforces them *and* bends them toward the common interest. A strong community requires – and fosters – strong individuals. Dewey has seen this very clearly, e.g., in "Creative democracy: The task before us."[6]

The imaginary institution of society conditions personal growth so that it is likely to contribute to social growth – while the imaginary institution of individuals brings social progress. (Growth and progress are used here in their original existential meaning as inspired by their biological meaning. Econometrics is totally irrelevant.) There is, in other words, a *common sense* that inspires the best definition of culture: culture provides the grand narrative that allows the merging of the conditions of possibility of individuation *and* of socialization. As a result, in a community where a genuine culture prevails, all citizens are animated with a sense of social duty that takes the form of a sacerdotal citizenship: the personal spiritual quest and the enforcement of the common good do coincide. This was at the very least plain in Athenian participatory democracy. The Judeo-Christian creation narrative constitutes probably the best recent historical exemplification of Western culture. But France's Third Republic motto – liberté, égalité et fraternité – and the *Bildungsroman* offer, respectively, a global and a local instance that seems more likely to be universally adopted. The same dialectic can be founded

[6] J. Boydston (Ed.), *John Dewey: The later works, 1925–1953*, Carbondale, Southern Illinois University Press, volume 14, pp. 224–230.

with Whitehead's actual entities and nexûs or with his mental and physical "poles." It is also at work at a deeper level: "The individuality of entities is just as important as their community. The topic of religion is individuality in community." (RM 86)

Instead of communal growth, market democracies foster a clone war: all denizens seek the same consumption goods through conflict. Of special interest is the fact that there is now a chiasma or inversion between the two main poles: individuation is replaced by atomism whereas solidarity is replaced by solidarity. In other words, while people think they have some individuality, they are simply crippled by atomism, loneliness. They also believe they still enjoy some solidarity, but they are actually only soaked in conformal patterns of thought and behaviour. This is what we call deculturation.

Traditionally, the political "right" insists on the individual and the necessity to give as much elbow-room to free will as possible, whereas the "left" argues that community values should come first. This simplistic stance has not lost its validity but it gains applicability when it is properly defined with the help of the concept of social horizon that is used in the section 3.2 below in order to refresh the concepts of class, class consciousness and class struggle. When a philosophical school demands renunciation of common sense, it undermines solidarity; when it doubts sense-perception, it puts a damper on individuation; and when it claims scientificity by rejecting all forms of political concern, it paves the way to the unquestioned acceptance of a big narrative that is not worthy of that name anymore. Taken together, the three requirements seal the divorce between philosophy and life and lead the philosopher to compartmentalize his professional activities.

3. What is Capitalism?

Now that the general background of our discussion has been specified, it is necessary to circumscribe capitalism.

3.1. Total Exploitation

Capitalism necessarily involves *total exploitation* in order to maximize *private* profit. What does it mean?

First, everything and everyone are but commodities, i.e. available resources. All individuals are thus means – especially proles of course.

Second, this 360° commodification takes place everywhere: in public as well as private spheres. Total exploitation starts in the homeland but should be geographically expanded as much as possible: globalization is a matter of principle.[7]

Third, this nefarious process is synchronic and diachronic. All contemporarily available resources qualify for total exploitation but past and future resources should not be sheltered from insatiable greed. Oil and minerals, for instance, that took millions of year to settle, can be, without any doubt, exhausted in a couple of generation. Similarly, there is no need to try to preserve resources that would be essential for future generations. Whereas pre-industrial revolution common-sense used to require that all decisions take into account at least two future generations, simply because it was a graspable reality (an adult could get to know her children's children) and an existential imperative (there was an inter-generational support), nowadays the life of my children and of my children's children do not seem to be of any interest to most denizens! Perhaps that we get here a clear glimpse

[7] Trotskyism is just the specular image of capitalism but its logic is difficult to bypass (remember also Chomsky's "mafia principle"). James Connolly, for example, repeatedly underlined that the Irish will not get rid of the British yoke unless they establish a socialist Republic: if not, the military occupation will be simply replaced by a capitalistic one. This, he argued, is what happenened with the USA: "Not a Republic as in the United States, where the power of the purse has established a new tyranny under the forms of freedom; where, one hundred years after the feet of the last British red-coat polluted the streets of Boston, British landlords and financiers impose upon American citizens a servitude compared with which the tax of pre-Revolution days were merely a trifle." (James Connolly, *Selected Writings*. Ed. by P. Berresford Ellis [1973], Pluto Press, 1997)

of what deculturation – if not plain evil – is. When nobody cares about children anymore, the end is near.[8]

Total exploitation fosters thus two biocides: the title of this essay is rhetorical: a genocidal capitalism would leave nature untouched – something that is obviously not the case. Even positive externalities are usually ignored.[9]

3.2. Upstream Biocide

Upstream we find the instrumentalization of all forms of life, which generally amounts to their destruction. For the "business class," nature is just a big reservoir to plunder *and* a big dustbin. As Huxley remarked: the love of nature keeps no factory busy. There is so much pollution in some areas that the life expectancy starts now to decline while health is more and more handicaped by pathologies such as asthma, diabetes, cancer, mental disorders and genetic disorders.[10]

3.3. Downstream Biocide

Downstream, the transformation of nature into technical commoditities also means the substitution of artificial life for natural life. Nature is outmoded, sometimes criminal: nothing should be free. Animals or plants reproducing themselves without any human intervention whatsoever is the nightmare of the corporate world. According to Berlan, the biotechnology industry seeks the sterilization of all forms of life in order to substitute production for reproduction.[11] The conjunction of bio-technolo-

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[8] James F. Eder, Jr., *On the Road to Tribal Extinction. Depopulation, Deculturation, and Adaptive Well-Being Among the Batak of the Philippines*, Berkeley, University of California Press, 1987.

[9] Jean-Pierre Berlan speaks of "ecocide" ("L'écocide, ou l'assassinat de la vie").

[10] See S. Jay Olshansky *et al.*, "A potential decline in life expectancy in the US in the 21st century," *New England Journal of Medicine*, 352, 2005, pp. 1138–1145; Claude Aubert, *Espérance de vie, la fin des illusions*, Paris, Éditions Terre vivante, 2006.

[11] Jean-Pierre Berlan, "Les OGM, la faim et l'Académie des sciences," *L'Écologiste* N°7, Vol. 3, juin 2002, pp. 41–47.

gy with nano-technology and information technology irresistibly leads in the direction of the disappearance of the natural realm – for the entire benefit of multinationals. Interestingly, the technological consequences for human beings are debated only within techn-optimist circles such as the transhumanists. This is of tremendous philosophical relevance since it amounts to the obliteration of the contrast between nature ("physis") and art or artifice ("techne") that roots the entire Western culture. As far as I know, only Jean-Pierre Dupuy has worked on this philosophical conundrum.[12] Here is the surest sign of a total cultural – hence civilizational – collapse.

4. When Did It Start?

Two watersheds are essential to grasp the nature of contemporary capitalism – a technoscientific and an economical innovation – but they are so to speak the late thunder after the three following lightnings.

4.1. Three Openings

Primo, the spatial opening that started in the XVth century with the enclosures (mentioned already by Thomas More in 1516), was carried on with Columbus' "discovery" (1492) and crowned with the works of Cues, Copernicus and Bruno. The Greek given *kosmos*, that gave its premises to the Christian created *mundus*, was about to become a pluriverse and its finite hierarchy, infinite.

Secundo, the temporal opening found its origin in the transformation of the concepts of growth and progress, that used to be private matters, into public realities by the works spreading from

[12] Jean-Pierre Dupuy, *Pour un catastrophisme éclairé: quand l'impossible est certain*, Paris, Éditions du Seuil, La couleur des idées, 2002. Cf. European Commission. Community Health and Consumer Protection, *Nanotechnologies: A Preliminary Risk Analysis*, www, 2004.

Herder (1764) to Condorcet (1793). It was then carried on by the speculation around the biological theory of evolution by Spencer (Principles of Psychology, 1855), Wallace and Darwin.

Tertio, the consciential openings. Usually scholars mention only Freud's Traumdeutung (1900), but Freud dogmatized a broader (and deeper) conceptual and therapeutical revolution that goes back to Leibniz and Mesmer, the Nancy and Salpêtrière schools, and psychophysics. Political openings have to be mentioned as well (the Republiek der Zeven Verenigde Nederlanden, 1579–1632; the Bloodless Revolution, 1688; the Boston Tea Party, 1773; the French revolution, 1789), alongside religious reformation (Luther, 1517).

As a result of all these openings, the social model shifted from perpetual clockwork (Claude Lévi-Strauss' "société-horloge") to steam locomotive ("société-vapeur"). How, as deterritorializations, do the three openings relate to class struggle? Culture has been destroyed in so far as there is no big narrative providing the conditions of possibility of both independence and interdependence. There is no more culture – only some cultivated people.

4.2. Industrial Revolution, 1784

The most important technological innovation that allowed the transformation of an agrarian society into an industrial one is without a doubt the discovery of the steam engine and more particularly the operationalization of the steam locomotive by James Watt (1736–1819) in 1784. (Watt also invented the centrifugal governor in 1788.) The shift to oil production and combustion-engine is just a refinement of this technoscientific process.

4.3. Consumerism, 1929

The question of the totalitarian nature of technology should be addressed straightforwardly but, in the context of the present application of the Whiteheadian optimism and technophilia to the global systemic crisis, it is heuristically possible to distinguish technoscience from its managerial pole. Giving the pre-

sumption of innocence to technoscience amounts to accepting the possibility that technoscience could be piloted by a genuine political vision instead of an economical-speculative one and hence contribute to the common good instead of the wealth of 0,1 pc of the population. According to the late Huxley, it is not impossible after all that what Illich calls a convivial society (*Tools for conviviality*, 1973) is obtained through a synergy between technoscience and spirituality (*Island*, 1962).

Consumerism constitutes since the XXth century the very core of the capitalist agenda for the simple reason that it seemed to be the only solution to its chronic cycle of crises. Three points should be underlined: recurrent crises, programmed obsolescence and public relations.

Primo, capitalism has always already been in crisis: economists did not have to wait for Jean de Sismondi (1773–1842) or Karl Marx (1818–1883) to become aware of the following iron law: seeking profit at all costs periodically creates crises of overproduction (sometimes called "necessary market corrections"), usually aggravated by shameless speculation. To concentrate on the period that is relevant to our argument, let us remember that the "Great Depression" of 1929–1939 was actually preceded by another crisis: the "Depression" of 1920–1921. Interestingly enough, the successions of recessions and recoveries remained a nebulous problem if not a simple taboo… until the existence of a solution *respectful of the interest of the business class* allowed to formulate the issue clearly. This solution – forced consumption – had two poles: programmed obsolescence and advertising campaigns.

Secundo, the first manifestation of the politics of "planned obsolescence" seems to be the Phoebus cartel (1924–1939), created to control the manufacture and sale of light bulbs and especially aiming at the limitation of their life expectancy. The issue was clearly identified by Huxley in his *Brave New World* (1932) but the term itself, apparently coined by Bernard London (*Ending the Depression Through Planned Obsolescence*, 1932), got some public visibility only in the sixties with the work of Vance Packard (es-

pecially his *Waste Makers*, 1960). He argued that planned obsolescence can be divided into three sub categories: obsolescence of quality, obsolescence of function and obsolescence of desirability. Sometimes an existing product breaks down or wears out, sometimes a new product performing the function better is introduced, and sometimes it simply becomes less attractive ("psychological obsolescence").[13]

Tertio, in the years 1912–1929 a new field emerged – Psychology – and a new market sprang from it in the USA: Public Relations or "PR." Here lies the missing link between the unexpressed problem and its clarification. Five stages are remarkable:

"PR" raised into prominence in 1914 when Ivy Ledbetter Lee (1877–1934) was hired by John D. Rockefeller Jr to represent his family and company (the "Colorado Fuel & Iron Company," and later the "Standard Oil") after the "Ludlow Massacre," that basically saw strikers being machine-gunned by private militias in order to cure their lack of morality. It was not the first time that hundreds of armed guards were hired to break a strike (remember e.g., the 1892 Homestead Strike), but this time the bloodbath was too obvious. Lee promptly demonstrated that public opinion could be controlled through the press.

The second feat of arm of "PR" aficionados took place in the context of the work of the "Committee on Public Information" or "Creel Committee," created by Woodrow Wilson in 1917, just after the declaration of war, in order to introduce to the public the idea of a US military intervention in Europe. Its main craftsmen were Edward Bernays (1891–1995), who had opened an office as Public Relations Counselor in New York in 1919, and was bragging his familial ties with Freud,[14] and Walter Lippmann (1889–1974), who carved the expression "engineering of consent" already in 1922.

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[13] Vance Packard, *The Waste Makers*, New York, David McKay Compagny, Inc., 1960, pp. 55 sq.

[14] Edward Bernays, Propaganda (New York, Horace Liveright, 1928) and The Engineering of Consent (Norman, University of Oklahoma Press, 1947/1955).

Exactly, the first US departments of psychology were created in the years 1914–1917 in order to provide assessment protocols for the army, now recruiting for the continental operations (Congress declared war on 6 April 1917, but the matter was in the air since at least 1915, when the *Lusitania* was torpedoed), and to develop psychological warfare and other propaganda tools.

Goebbels had been a shrewd spectator of these developments (he kept copies of Bernays' writings in his own personal library); he enters the public scene around 1927 with the christening of *Der Angriff* newspaper.

One last important mile-stone is Bernays's "torches of freedom" campaign of 1929, that successfully transformed a habit associated with the life of a *lost* woman (usually prostitutes, artists at best) into the public sign of a *liberated* woman. The exact same pattern is used nowadays to urge "new Europe" to smoke…

To sum up: while economic crises were seemingly more and more frequent and appeared to have more lasting effects (1920–1921 then 1929–1939), a new market quickly imposed itself as the *sine qua non* condition of profitable business and smooth (profitable) politics (1912–1939). The epiphany took place in the years 1927–1929, when it occurred to the business class that the solution to overproduction does not have to be communism but can be *consumerism* instead. The idea was simply to create a "superb consumer" who is restless, wasteful, conforming, debt-ridden, permanently discontented ("with a "hunger for hard goods"[15]). The argument is brilliant: since technoscientific capitalism grows osmotically with gains in productivity, sooner or later, these gains in productivity allow an industry to saturate the market too fast – and perhaps definitively – : as the *New York Times* wrote in 1927, "it may be that the world's needs ultimately will be produced by three days' work a week."[16] Decadence, indulgence, materialism, cynicism, irresponsibility, selfishness and the like

[15] Vance Packard, *The Waste Makers*, *op. cit.*, p. 235.

[16] Quoted by Jeffrey Kaplan in "The Gospel of Consumption And the better future we left behind," *Orion Magazine*, May/June 2008.

are either accidental or irrelevant to the forced consumption system (Packard).

It seems then unavoidable to share the working time or at least to slow production down, but this would have two equally totally unacceptable results: first, profits would be decreasing; second, workers would have more time for themselves, for the pursuit of happiness and the creation of a dense tissue of solidarity. But why are these consequences scandalously unacceptable? Well, to advocate lower profits and degrowth is equivalent to stab capitalism in the heart. As a matter of principle, nothing should prevent the betterment of profits. Fair enough – but what about the pursuit of happiness? We find here the exact same rationale as the one that is behind military Keynesianism, which *de facto* constitutes the necessary condition of the contemporary blend of capitalism (cf. §7.3): if citizens are urged to cultivate themselves, if they are given the time and the means to become genuine individuals and to foster a solidarity worthy of that name – i.e., to fulfil the Greek ideal of direct democracy –, they simply become ungovernable by the oligarchy. But if we spend all our money, and more, on weapons that are socially totally useless, we keep people at work, ignorant, and in fear. How do you achieve that? How do you scare people to death and, more prosaically, how do you keep them dissatisfied with their life and the goods that they already own and consume? Advertising, supposedly a mild form of propaganda but actually its quintessential substance, allows this quite easily, as the last hundred years amply demonstrate.

What matters is that the link between gains in productivity and need saturation is not a recent epiphany that took place in post-1968 radical thinking: the business class was fully conscious of the stakes as early as 1926. John E. Edgerton, president of the National Association of Manufacturers, declared for instance: "I am for everything that will make work happier but against everything that will further subordinate its importance. The emphasis should be put on work – more work and better

work." "Nothing," he claimed, "breeds radicalism more than unhappiness unless it is leisure."[17]

More leisure and less production could foster citizenry but also radicalism. More production and less leisure guarantees conformism and atomism.

5. Who Runs It?

There is no easy answer to this question because of the limited horizon that defines everybody's social perspective. One should especially be aware of what Whitehead called the fallacy of misplaced concreteness: the pilots of the system are not big corporations or multinationals or even, as the story goes, a democratically elected parliament. The pilots are individuals who, at least in some point of their career, have chosen to follow the path of greed rather the one of solidarity. When we will ask "why" (in section 8), we will not incriminate the will of a conglomerate (there is no Leviathan) but the decisions of individuals.

This precision is important because if you choose to condemn such abstract entities, you pave the way for the devil's advocate, who will for sure claim that the responsibility and the freedom of choice that you seek in managerial matters does not really exist in so far as There Is No Alternative: the iron law of neoliberalism is as *natural* as gravitation is. The general sketch is simple:

Throughout recorded time, and probably since the end of the Neolithic Age, there have been three kinds of people in the world, the High, the Middle, and the Low. They have been subdivided in many ways, they have borne countless different names, and their relative numbers, as well as their attitude towards one another, have varied from age to age: but the essential structure of society has never altered. Even after enormous upheavals and seemingly irrevocable changes, the same pattern has always re-

[17] Gary S. Cross, *Time and Money. The Making of Consumer Culture*, London, Routledge, 1993.

asserted itself, just as a gyroscope will always return to equilibrium, however far it is pushed one way or the other. […] The aims of these three groups are entirely irreconcilable. The aim of the High is to remain where they are. The aim of the Middle is to change places with the High. The aim of the Low, when they have an aim – for it is an abiding characteristic of the Low that they are too much crushed by drudgery to be more than intermittently conscious of anything outside their daily lives – is to abolish all distinctions and create a society in which all men shall be equal. (*Nineteen Eighty-Four*, p. 231)

5.1. Inner Party

Orwell himself implicitly uses the idea of the social horizon to introduce the "first class:"

> a man named O'Brien, a member of the Inner Party and holder of some post so important and remote that Winston had only a dim idea of its nature. (*Nineteen Eighty-Four*, p. 13)

In France, between the two World Wars, there was also the idea that the country was driven by two hundred families ("les deux cents familles"). This was an allusion to the pre-Revolution time when the old nobility of knightly origin ruled over the Kingdom. Some things never change – nor are they meant to. Scholars speak now about 6000 people,[18] but there is no real need to quantify. What would matter really would be to name these individuals or, failing that, to try to understand the meaning and significance of their behaviours. Psychopathy (or sociopathy, i.e. DSM-IV-TR's "Antisocial Personality Disorder") is likely to be the main nosological category applicable. The inner party is where power is *exerted* for the sake of power. Its members usually do not seek the attention of the medias.

[18] Rothkopf, David, *Superclass. The Global Power Elite and the World They Are Making*, New York, Farrar, Straus and Giroux & Little, Brown, 2008.

5.2. Outer Party

The inner party, however, would be nothing without the outer party, with which it keeps conflicting relationships.

On the one hand, the outer party is the antechamber of the inner party; it is where promising members are selected or from where they arise. It is through them that the inner party exerts its power on the proles. But it is also the outer party that is subjected to the most pathological aspects of the worship of power. Proles are simply stupefied by poverty and frightened by everlasting wars; the outer party is the target of the mental destructiveness of the inner party. With that regard, it is worth remembering Orwell's definition of *doublethink*:

It is only by reconciling contradictions that power can be retained indefinitely. […] The prevailing mental condition must be controlled insanity.[19]

On the other hand, the outer party members are the only real threat to the inner party ("the aim of the Middle is to change places with the High") – hence another reason why they need to be closely monitored. As Orwell makes plain, this requires not only the manufacture of consent *but also the engineering of dissent*. This is the work done mostly by foundations created by the inner party members in order to pilot dissent and make it innocuous.

The outer party is where power is *sought* for the sake of power. Its members usually occupy the front scene in the media circus.

6. To Whom is it imposed?

Capitalism is imposed to 99 pc of the population that gets very little – if anything – from it: the "proles" in the Orwellian lexicon. Some of them have no doubt the vague desire to cultivate doublethought – but this would involve being "educated" and most are simply confined in nothought. The desire

[19] George Orwell, *Nineteen Eighty-Four*, p. 246.

for social change that the prole might have is indeed displaced by a desire for changes in commodities: political freedom is equated with consumer choice and political citizenship with mass consumption. The inner and outer party members cannot enjoy or afford rational thinking; they are stuck in double thought, the former by nature, the later by necessity. To refine this analysis, one would need to differentiate castes, classes and masses.

7. How Does It Operate?

Three complementary heuristic tools need to be mobilized to obtain a better picture.

7.1. Massification

Massification is so to speak the finished product of the process of capitalistic deculturation. It involves the tight symbolic web of conformization and atomization. Communities are long dead in our political landscape, but so are societies; it seems now as if a pure fluid dynamics could be applied to clone-like denizens. If there is still freedom of speech, it certainly does not entail or even presuppose freedom of thought.[20]

7.2. Speculation

The accumulation of goods and capital that is the core of the process of total exploitation and thus the engine of capitalism, necessarily leads to usury and speculation in resources and goods but also in currencies, bonds & shares and, eventually, in more and more abstruse derivative products. This leads to the financialization of economy, a virtual growth that can entail a real growth only if inflation is avoided. Here, private property means greed, cupidity.

[20] E. Bernays, N. Chomsky, Jean Ovide Bourdeau…

7.3. Military Keynesianism

History teaches us that capitalism cannot survive independently of military Keynesianism. Why? For economical, social and political reasons – all tight to the *imperium* of the inner party.

There is first a tissue of economical reasons: military Keynesianism allows internal growth and fosters high tech Research and Development: weapons – of mass destruction or otherwise – need heavy investments and secrecy to be developed and flourish thus in a closed market. The sales of new weaponry are guaranteed in the home land while lobbying seeks to obtain some market shares abroad. Since the weapon systems are getting more and more sophisticated, it is furthermore possible to make sure that they will never be turned against some nations (the case of avionics stands out, with the explicit possibility to ban any aggressive actions against some forces with the "Identification friend or foe" system).

Second, all the funds that are spent on socially useless programs prevent the distribution of wealth. Think for a second about the level of social care (education, health, culture…) that would be obtained in the USA if all its troopers were upgraded into social workers. I do not talk of course about military personnel pretending to operate humanitarian missions in battledress, but of a genuine reallocation of resources.

Third, it guarantees international hegemony. This is what is politely called the "gunboat diplomacy:" the opening of markets for pillage. The opium wars constitutes a good historical example, but all wars without exception do qualify. What Clausewitz wrote is still valid provided that one acknowledges that business imperatives has now entirely substituted for political intercourse: "war is simply a continuation of *economical* intercourse, with the addition of other means…. War in itself does not suspend *economical* intercourse or change it into something entirely different. In essentials, that intercourse continues irrespective of the means it employs."[21]

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[21] Carl Philip von Clausewitz (Hrsg. von Marie von Clausewitz), *Vom Kriege, Hinterlassenes Werk des Generals Carl von Clausewitz*, Bd. 1 – 3, Berlin, Ferdinand

Here, private property means security. In sum, industrial capitalism *qua* total exploitation benefits from the push of fascist capitalism (militarization) and the pull of financial capitalism (speculation). Between the years 1944–1989 and 2001–2008, the Pentagon and Neo-Conservatism ruled the game. Between 1989–2001 and 2009–2012, Wall Street and Neo-Liberalism took over. (I mean Neoliberalism as an economic policy agenda which began in Chile in 1973.) Hence two important last remarks. First, it is essential to carefully distinguish neo-conservatism and neo-liberalism and to notice that their respective agenda is contradictory: the former is made of fundamentalism, messianism, moralism, militarism, expansionism and patriotism while the latter embraces the perfect market, profitability, a-moral market, globalization, deregulation and entrepreneurial rationality. Second, they share enough interest to work, *in fine*, hand in hand. The most recent amazing proof being probably the smooth transition between Bush and Obama. It is a screen that hides the agenda of the inner part, even to the outer party.

8. Why?

We now understand better HOW capitalism works, but we still do not understand WHY it seeks the subservience if not the enslavement of 99 pc of the world population.[22] We often read that the greed of the business class is insatiable; that, for them, more is never enough. Why so? Why such a haughtiness (what Greeks called "hubris")?

8.1. Power for the Sake of Power

Here also, Orwell offers the answer. Whereas most people, even nowadays, still think that the inner party is ruling over

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Dümmler, 1832–1834, Book VIII.

[22] "I understand HOW, I do not understand WHY." (*Nineteen Eighty-Four*, pp. 91 & 300)

us for our own good – because there is no way people could manage their own lives by themselves – Orwell adamantly claims that the inner party actually seeks power entirely for its own sake while the outer party members are both mesmerized by the exercise of power and repelled by the effects they have to actually endure.[23]

Orwell replies here (probably purposively) to Huxley, whose *Brave New World* maintained that there is no other way than to let the most capable individuals (the "Alpha+" elite) rule over legions of more or less capable morons. According to Huxley's narrative, a society solely composed of Alphas has been proved indeed nothing less than suicidal.[24] Now, if the best minds cannot figure a way to live peacefully, neither would a society of betas and even less so a mixture of alphas, betas etc. Power is, in other words, entirely benevolent and pragmatic. Orwell makes a strong case for the contrary.

Interestingly, Huxley wrote to Orwell straight after the publication of *Nineteen Eighty-Four* in order to praise the book but also to underline that Orwellian totalitarianism is needlessly violent.[25] There was an incurable technophilia in Huxley.

8.2. Suffering

The quest of power for the sake of power necessarily translates into the motto of totalitarianism: terror is an end in itself.[26] Terror is not how you rule but why you rule. O'Brien is very straightforward about this when he lists the four ignoble truth of totalitarianism: power is not a means but an end; power

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[23] "You are ruling over us for our own good.[…] The Party seeks power entirely for its own sake." (*Nineteen Eighty-Four*, p. 301)

[24] "The Cyprus experiment was convincing." (*Brave New World*, p. 203).

[25] See Huxley's October 1949 letter, reprinted in the Appendix of his *Brave New World Revisited* [1958], New York, Harper & Row, Harper Perrenial Modern Classics, 2006.

[26] Arendt, *The Origins of Totalitarianism*, New York, Harcourt Brace & Co., 1951; enlarged 1958.

is collective, it is power over human beings; power seeks total control of the mind in order to totally control matter (and the body); power necessarily consists in the capacity to impose suffering and, ultimately, to torture. Let us Orwell speak for himself:

> 'How does one man assert his power over another, Winston?'
> Winston thought. 'By making him suffer,' he said.
> 'Exactly. By making him suffer. Obedience is not enough. Unless he is suffering, how can you be sure that he is obeying your will and not his own? Power is in inflicting pain and humiliation. Power is in tearing human minds to pieces and putting them together again in new shapes of your own choosing. Do you begin to see, then, what kind of world we are creating? It is the exact opposite of the stupid hedonistic Utopias that the old reformers imagined. A world of fear and treachery and torment, a world of trampling and being trampled upon, a world which will grow not less but *more* merciless as it refines itself. Progress in our world will be progress towards more pain. The old civilizations claimed that they were founded on love or justice. Ours is founded upon hatred. In our world there will be no emotions except fear, rage, triumph, and self-abasement. Everything else we shall destroy – everything. Already we are breaking down the habits of thought which have survived from before the Revolution. We have cut the links between child and parent, and between man and man, and between man and woman. No one dares trust a wife or a child or a friend any longer. But in the future there will be no wives and no friends. Children will be taken from their mothers at birth, as one takes eggs from a hen. The sex instinct will be eradicated. Procreation will be an annual formality like the renewal of a ration card. We shall abolish the orgasm. Our neurologists are at work upon it now. There will be no loyalty, except loyalty towards the Party. There will be no love, except the love of Big Brother. There will be no laughter, except the laugh of triumph over a defeated enemy. There will be no art, no literature, no science. When we are omnipotent we shall have no more need of science. There will be no distinction between beauty and ugliness. There will be no curiosity, no enjoyment of the process of life. All competing pleasures will be destroyed. But always – do not forget this,

> Winston – always there will be the intoxication of power, constantly increasing and constantly growing subtler. Always, at every moment, there will be the thrill of victory, the sensation of trampling on an enemy who is helpless. If you want a picture of the future, imagine a boot stamping on a human face – for ever.'[27]

The argument is unanswerable. The "mega-" or "filthy-" rich do not retire after their first couple of millions (something that would be possible and fully rational: they do not *need* more property or more wealth), they seek *more* because their goal is to exert power over other human beings. This abstract proposition could be understandable by the philosophically-inclined mind, but as soon as one acknowledges that this power *necessarily* amounts to the faculty to inflict suffering to others, one reach so to speak the bottomless truth that all of us actually sense but that none of us wishes to consciously confront because the implications for our lives are too staggering. If the inner party not only lies to us but actively seeks our suffering, we are doomed. Goya can help us to picture this.[28]

The most immediate conceptual tool comes from theology: evil, radical evil, lies here. From a philosophical perspective, evil is nevertheless only a form of power. Power, and the quest for power, are the only relevant concepts. To flesh them out a bit, one needs to consider the resources of nosology and to acknowledge that the pathology that is the quest of power is worthy of the name sociopathy or perversion. All this is perhaps already too abstract for most readers, so let us try to exemplify what happens when one gets addicted to power.

In everyday life, it is impossible to avoid power games. Life, as Whitehead says, necessarily involves to put ones own interests first; it is a *robbery* (PR 105). There are however two forms of power that are innocuous: the quest of power that seeks to endow one individual with the curative potentiali-

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[27] Orwell, *Nineteen Eighty-Four*, pp. 305–307.

[28] Goya, *Saturno devorando a un hijo*, 1819–1923.

ties required by therapy (especially psychotherapy – but it all started with shamanism); and the dance of power that takes place in a community where all individuals are co-developing cultural bounds.

The individual who realizes that his or her social status allows him or her to inflict suffering, in whatever way (mild humiliation, instrumentalization, infantilization, …) has beaten the bait of power. Depending on the circumstances, that person will, or will not, start the long journey that leads to become a priest (or a priestess) of power as Orwell says. It is difficult to obtain a picture that would match all idiosyncrasies, but the main pattern is easy to visualize with the help of the experience gained in psychotherapy. If you aim at more power, you seek to become able to inflict more suffering on living beings (a car or a watch does not suffer when misused). If you have little resources yourself, you will probably seek power only over animals and ill-treat them. Most scenarios involve however domestic violence over children and women. But some individuals cannot quench their thirst for power that way either. Raping women or men (undoubtedly a form of torture) could be the next step – but this is hardly the last one since the victim can still survive and usually make sure to keep appearances together. Then comes the epiphany of torture itself, that can still accommodate rape and finally necessitates murder. The cycle is nevertheless not complete until the power seeker attacks the weakest human beings: sometimes elderly, often children, and eventually infants or newborn.

The abduction, torture, rape and murder of children is the ultimate form of the quest of power. It is the truth of the inner party. It is the truth that Goya was trying to picture (and it is likely to be truth of his own tormented childhood). It is the very reality that proles cannot confront for obvious emotional and rational reasons. I do not claim that there is a satanic initiation of sorts that secures the membership in the inner party, nor that the most perverted human beings necessarily belong to the inner party – but they would certainly be at home there.

Let us finally remark that the anthropological premiss of the classical economists perfectly match the sociopathic rationality of the rulers and shakers – egotistical, aggressive, lacking empathy, ruthlessly greedy, amoral (because of a general lack of sense of responsibility) – but never really fit the behaviour of our fellows.

9. Likely Outcome

The perennial truth that is the quest of power has found new territories with the development of technoscience and especially with the subjugation of technoscience by the neoliberal economy. As soon as *Nineteen Eighty-Four* was published the question of the likely outcome of decadent democracies moulded by technoscience took for many the form of an alternative: the World State or Oceania, *Nineteen Eighty-Four* or *Brave New World*. Huxley himself promptly raised that very question.[29] In light of the recent historical and scientific developments, it seems likely that the West will get both worlds, one after the other.

To flesh out the present state of affairs and the possible futures ("futuribles") without becoming entangled in long ideological discussions, it is advisable to consider the question from a pragmatic standpoint informed by the most recent technological advances. Interestingly enough, the pragmatic use of available technologies and current R&D developments is a methodology used by think-tanks in order to bridle useless speculations and obtain heuristic tools.[30] The implicit premiss is Ellulian: everything that is technically possible is eventually necessarily implemented.[31]

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[29] Aldous Leonard Huxley, *Brave New World Revisited*, New York, Harper & Row, 1958.

[30] The Rockefeller Foundation, *Scenarios for the Future of Technology and International Development*, 2010.

[31] Jacques Ellul, *La Technique ou l'Enjeu du siècle*, Paris, Éditions Armand Colin, 1954.

The heuristic key will be the RFID technology.[32] To simplify, there are basically two types of RFID tags: passive RFID tags, which have no built-in power source and require an external electromagnetic field to initiate a signal transmission; and active RFID tags, which contain a battery and can transmit signals once an external source ("Interrogator") has been successfully identified. Some are "read-only" chips, other can be modified after implantation. In order to keep the argument tight, the following schematization of the technical possibilities is proposed: we will peruse, on the one hand, passive nanochips that can be widely used to tag commodities; on the other, active microchips that are developed in order to help specialized institutions to cope with some animal or some human beings. The thesis is that we are about to enter bigmotherhood and that, from there, Big Brother will arise. Please note that the impending merging of bio and nano technologies with IT offers actually a far gloomier picture than the one I sketch here, but it is also more difficult to envision pragmatically in the context of this short essay.

9.1. Big Mother: passive nanochip

Since the 1920s, public relations have allowed a very smooth form totalitarianism to take place. For Chomsky or Wolin, we live now in an *inverted* totalitarianism. Its generalized principle is nicely phrased by Keller (who writes however in a different context):

> When lacking an empowering world, or an inner relation to ourselves, women can all too readily act out of the archetypal "dark side of the feminine," seeking power by working a web of emotional ensnarement of others – especially men and children.[33]

[32] Some pioneering work has been done by a French group – Pièces et Main d'œuvre – , e.g. in *Rfid: la Police Totale Puces Intelligentes et Mouchardage Electronique*, Paris, Éditions de L'Échappée, 2008.

[33] Catherine Keller, *From a Broken Web. Separation, Sexism, and Self*, 1986, p. 223

The world of opinion and propaganda in which we now live will be all the more so locked when nanochips will allow to collect and treat with real-time computing all data linked with our lives. This concept is already alive in the "internet of things" that began as a research project by Massachusetts Institute of Technology's Auto-ID Labs to help the Department of Defence track and control military stockpiling and inventory.

In sum, the future that is prepared in labs and think tanks is a *panopticon*. Bentham's important concept[34] actually became inconspicuous in utilitarianism, it acquired visibility only with *Foucault's Discipline and Punish*.[35] It perfectly describes the bigmotherhood that RFID will allow: a world in which privacy has vanished, a world of objectual transparency. But individuals themselves could still escape the smothering web: neither their actual location nor their thoughts would be fully mastered.

9.2. Big Brother: active microchip

The other technology that is being developed will require a bit more time to spread – and some mythological narrative will be needed as well to make it acceptable. Its archetype is the "Digital Angel" chip that combines an implanted active microchip, just as a subcutaneous artificial pacemaker, with a Real Time Locating System. It already works in warehouses to localize equipment and stock. The immediate possibility of geolocalized microchip is mind-blowing – and indeed nei-

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[34] Michel Foucault, *Surveiller et punir. Naissance de la prison*, Paris, NRF Éditions Gallimard, 1975.

[35] Jeremy Bentham, *"Panopticon": or, the Inspection-House; containing the idea of a new principle of construction applicable to any sort of establishment, in which persons of any description are to be kept under inspection; and in Particular to Penitentiary-houses, Prisons, Houses of industry, Workhouses, Poor Houses, Manufacturies, Madhouses, Lazarettos, Hospitals, and Schools; with a plan of management adopted to the principle; in a series of letters, written in the year 1787, from Crechoff in White Russia, to a friend in England*, Dublin, Thomas Byrne, 1791.

ther Huxley nor Orwell envisioned it – : it would be possible, once all humans (or all humans worthy be kept under control) are chipped to localize them precisely at all time and to monitor all their activities.

The first steps in that directions are already made by experts and corporations. We are insistently told that it would be wise to chip the elderly, who are so prone to health emergencies and who usually get somehow demented. It would make sense to chip children, who can equally get lost or go astray in our megapoles and who are sometimes abducted. It is equally urgent to chip criminals in order to monitor them closely and to avoid the social cost of imprisonment. And so forth and so on. The technology is available, it is simply waiting for a triggering event to be implemented in one of these fields and, from there, it will spread like a flashing cancer. Interestingly enough, supporters of warrantless surveillance – including the Obama administration it seems – *already* argue that a person's movements in public are not protected by the Fourth Amendment and that old-fashioned GPS tracking device can and should be used when « need » be.

The next steps are already developed by surgeons and cognitive scientists, often under Darpa contracts (in France, research is fostered under the University of Grenoble's "Clinatec," which is part of the umbrella project "CEA-Minatec"). It is the old dream of the transhuman cyborg (the postmodern Golem) that is being fleshed out. An active microchip could be wired directly on the central nervous system in order to obtain a brain machine interface allowing humans to pilot external devices *and* IT to be implemented on the brain in order to monitor its activity.[36] Here also, the pretext can be medical, such as the use of deep brain stimulation to prevent epilepsy or alleviate Parkinson's disease or the dream of silicon-based immortality. Eventually, mentation itself could be monitored.

[36] Cf. Kevin Warwick's multiple micro electrodes array.

In sum, the future is of the order of a *pancraticon*.[37] Transparency would be total (both objective and subjective), there would be no escape from the technocratic world. Please notice that technology would not be used simply to lure the appropriate behaviour and to predetermine the adequate mentations (this is Huxley's smooth totalitarianism) – but to impose behaviours and mentations, thereby factually confronting what would remain of free processes. As Orwell taught us, power is not a matter of rationally organizing all social intercourse, but to crush the will of *conscious* individuals. The art of torture does not amount to persuade into submission reluctant individuals or to murder those who refuse submission, it does not either seek to inflict abruptly a pain so unbearable that the individual looses consciousness: the priest of power imposes the highest possible pain that could be entertained without the loss of consciousness. A patient secured in a dissociative state is unacceptable.

10. Reasons to Hope

Independently of the general philosophical standpoint that is adopted here – Whiteheadian optimism – there is one reason to hope for a better world. All the crises that we have listed and all the facets of the capitalistic *modus operandi* can be subsumed under one single category: the political crisis. We are not confronted with multiple crises, each demanding a specific and highly expert answer; we have to deal with local exemplifications of the collapse of an ideological-political model of exploitation. In other words, if we could change the political system, all problems could come back within our reach (but not solved instantly of course: climate change and nuclear waste, for instance, are likely to require hundreds if not thousands of years of effort to be stabilized). Two points deserve to be made from this perspective.

[37] Pièces et Main d'œuvre, *Terreur et possession. Enquête sur la police des populations à l'ère technologique*, Montreuil, Éditions L'Echappée, 2008.

10.1. The Pragmatics of Political Change

The pragmatics of political change would involve three main types of measures. Since they are interdependent, one could start from any level but let us keep in mind that the main key is political.

First, at the political level, three main actions ought to be taken: to terminate particracy, to politicize society, and to simplify laws and levels of power. To repeat: the problem we have to confront is purely political and it boils down to the necessity to put an end to particracy. It is through particracy that the democratic interplay of actors is hijacked. Particracy bypasses the *separation of powers* imperative, that is as old as the concept of direct democracy. Politicians nowadays do not represent their constituents but their own interests and their party's. Hence there cannot be any real independence between the executive, the legislative, and the judiciary. In sum, the termination of particracy means to divorce politics and economics. This, in turn, involves the politicization of the social tissue: if politics are divorced from economics, the old alliance of politics and the social tissue can be resuscitated. This means that people accept to act as concerned citizens instead of worried customers. In order to make this shift possible, laws and levels of power must be simplified. It should be the end of expertise and the comeback of commonsense.

Second, at the social level, the fostering communitarian degrowth would involve three moves. To provide the conditions of possibility of conviviality and to enforce (technological) simplicity. To reframe society on public *education* – not on private schooling.[38] To relaunch social security, a feat that would not involve the abolition private property.[39]

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[38] Ivan Illich, *Deschooling Society*, 1971.

[39] Paul Tillich, *The Courage to Be*, New Haven, Yale University Press, 1952; R.D. Laing, *The Divided Self. An Existential Study in Sanity and Madness*, London, Tavistock Publications Ltd, 1960.

Third, at the economical level, one should acknowledge that the real, local, economy ("knots and bolts") is the only meaningful one. The social ellipse should be managed by its political focus, not its economical focus. Hence the three following proposals: a monetary reform that would involve the nationalization of central banks, the fostering of local exchange trading systems, and the encouragement of alternative systems such as the bancor (Keynes) or melting money (Jean Gesell); the degrowth of production and of consumption; the relocalization of production and of consumption accordingly.

10.2. No Revolution Needed

The amazing fact is that, in the case of most countries, it would be possible to implement such changes without changing their Constitution! So perhaps that the very first move would be to realize that one should stick to the Constitution. Of course, such a healthy dose of cultural relativism has its limits and one could argue that some Constitutions provide a better background for the pragmatics of political change, but the Pandora's box cannot be opened here.

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Przekłady

STUDIA WHITEHEADIANA
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Alfred North Whitehead

POJĘCIE PRZYRODY[1]

Rozdział II
Teorie rozdwojenia przyrody

W poprzednim rozdziale poddałem krytyce koncepcję uznającą materię za substancję, której własności spostrzegamy. Ten sposób myślenia o materii przeniknął do nauki i pozostaje niejasnym założeniem naszego myślenia o przyrodzie. Dlatego obecna naukowa doktryna wydaje się nam tak oczywista. Wydaje nam się mianowicie, że spostrzegamy atrybuty rzeczy, i że te rzeczy, których atrybuty spostrzegamy, są kawałkami materii.

W XVII wieku zadano poważny cios naiwnej prostocie takiego spojrzenia na materię. Pracowano wówczas w nauce nad teoriami transmisji[2], które do końca stulecia nie były kwestionowane, choć od tego czasu niektóre ich postacie uległy modyfika-

[1] A.N. Whitehead, *The Concept of Nature*, Cambridge, 1920, s. 26–48.

[2] Whitehead używa określenia teorie transmisyjne (*transmission theories*) nie tylko w odniesieniu do falowej teorii światła i dźwięku, ale w odniesieniu do wszystkich tych teorii fizycznych, do których odwołują się zwolennicy teorii rozdwojenia przyrody, wyjaśniając spostrzeganie zmysłowe. Wrażenia traktuje się tu jako efekt „transmisji danych" z przedmiotu do narządów zmysłowych spostrzegającego podmiotu. [przyp. tłum. PL]

cjom. Ukonstytuowanie się tych teorii wyznacza punkt zwrotny w relacjach pomiędzy nauką a filozofią. Mam tu na myśli przede wszystkim teorie światła i dźwięku. Nie mam wątpliwości, że teorie te w mglistej postaci krążyły już wcześniej jako zdroworozsądkowe oczywistości, gdyż żadna myśl nie jest nigdy całkowicie nowa. Jednak w tej epoce zostały one usystematyzowane i uściślone, a ich konsekwencje logiczne zostały dedukcyjnie wyprowadzone w sposób niebudzący najmniejszych wątpliwości. Potraktowanie poważnie konsekwencji logicznych stanowi moment prawdziwego odkrycia teorii. Systematyczne teorie światła i dźwięku jako czegoś, co jest emitowane przez ciała, zostały wówczas ostatecznie ugruntowane, a w szczególności, za sprawą Newtona, określono szczególny związek, jaki zachodzi pomiędzy światłem i kolorem.

W rezultacie zniszczono zupełnie prostotę opartej na pojęciach substancji i atrybutu teorii percepcji. To, co widzimy, zależy od światła, jakie dociera do naszego oka. Co więcej, nie widzimy nawet tego, co dociera do naszego oka. Spostrzegamy barwy, a przecież tym, co jest przesyłane, są fale. Tę trudność chciał rozwiązać Locke, przedstawiając teorię jakości pierwotnych i wtórnych. Istnieją według niego pewne atrybuty materii, które spostrzegamy – są to własności pierwotne, i są też inne rzeczy, które spostrzegamy, takie jak kolory, które nie są atrybutami materii, choć spostrzegamy je tak, jak gdyby nimi były. Są to własności wtórne.

Dlaczego mielibyśmy spostrzegać własności wtórne? Sytuacja, w której mielibyśmy spostrzegać mnóstwo rzeczy, które nie istnieją, wydaje się skrajnie niefortunna. Jednak właśnie do tego prowadzi teoria własności wtórnych. Obecnie zarówno w filozofii, jak i w nauce powszechnie przyjmuje się, że niemożliwe jest ujęcie przyrody tak, jak odsłania się ona w świadomości zmysłowej, bez wspominania o jej relacjach z umysłem. Nowoczesne ujęcie przyrody nie jest, tak jak powinno być, zwyczajnym ujęciem tego, co umysł wie o przyrodzie, lecz jest także łączone z tym, jak przyroda wpływa na umysł. Rezultat jest katastrofalny zarówno dla nauki, jak i filozofii, jednak głównie dla filozofii.

Doniosłe pytanie o relacje pomiędzy przyrodą a umysłem zamieniono na błahą postać problemu oddziaływania pomiędzy ludzkim ciałem a ludzkim umysłem.

Dyskusja, jaką wokół pojęcia materii wywołał Berkeley, była oparta na błędzie, którego źródłem była transmisyjna teoria światła. Był on zwolennikiem – słusznie, jak sądzę – porzucenia doktryny materii w jej obecnej postaci. Nie miał jednak w zamian nic do zaoferowania, poza teorią relacji umysłów skończonych do umysłu boskiego.

W tych wykładach zamierzam zajmować się tylko przyrodą i nie wykraczać poza byty, które odsłaniają się nam w świadomości zmysłowej. Zdolność spostrzegania traktujemy jako coś oczywistego. Rozważamy warunki spostrzegania, jednak o tyle tylko, o ile znajdują się one wśród tego, co odsłania nam percepcja. Syntezę poznającego i poznanego zostawiamy metafizyce. Jeśli struktura argumentacji w tych wykładach ma być zrozumiała, niezbędne są pewne dalsze wyjaśnienia i uzasadnienie przyjętego tu stanowiska.

Pierwszą tezą tych rozważań jest twierdzenie, że dowolna interpretacja metafizyczna jest nieuprawniona w filozofii nauk przyrodniczych. Przez interpretację metafizyczną rozumiem dyskusję „jak" (poza przyrodą) i „dlaczego" (poza przyrodą) myśli oraz świadomości zmysłowej. W filozofii nauki szukamy ogólnych pojęć, które stosują się do przyrody, tych mianowicie, których jesteśmy świadomi w spostrzeżeniu. Jest to filozofia rzeczy spostrzeganej i nie powinna być mylona z metafizyką, której zakres obejmuje zarówno spostrzegającego, jak i to, co spostrzegane. Nie można rozwiązać żadnej trudności dotyczącej przedmiotu wiedzy, powiadając, że istnieje umysł, który go spostrzega[3].

Innymi słowy, przyjęte tu stanowisko jest następujące: świadomość zmysłowa jest świadomością czegoś; jaki zatem jest ogólny charakter tego czegoś, czego jesteśmy świadomi? Nie pytamy o spostrzegającego ani o proces spostrzegania, lecz o to,

[3] Por. *An Enquiry Concerning The Principles Of Natural Knowledge*, Wstęp

co spostrzegane. Podkreślam ten punkt, gdyż dyskusje w filozofii nauki są zwykle skrajnie metafizyczne, moim zdaniem z wielką szkodą dla przedmiotu.

Uciekanie się do metafizyki jest jak rzucanie zapałki do magazynu prochu. Wszystko wylatuje w powietrze. Dokładnie to czynią filozofowie nauki, kiedy są przyparci do muru i wykaże się im niespójność. Natychmiast wywlekają kwestię umysłu i zaczynają mówić o bytach w umyśle czy poza umysłem. Dla filozofii przyrody wszystko, co spostrzegamy, jest w przyrodzie. Nie możemy sobie wybierać. Czerwony zachód słońca musi być dla nas w tej samej mierze częścią przyrody, co cząsteczki i fale elektromagnetyczne, przy pomocy których człowiek nauki wyjaśniałby to zjawisko. To właśnie filozofia przyrody powinna zająć się analizą tego, w jaki sposób rozmaite elementy przyrody są ze sobą połączone.

Stawiając to żądanie, traktuję swoje nastawienie wobec wiedzy percepcyjnej jako coś bezpośredniego i instynktownego, coś, co porzucamy jedynie pod wpływem teorii. Instynktownie skłaniamy się do przekonania, że odpowiednio zwracając swoją uwagę, możemy odnaleźć w przyrodzie więcej niż to, co widać na pierwszy rzut oka. Jednak nie zadowoli nas nic mniej. Od filozofii nauki oczekujemy jakiegoś ujęcia spójności rzeczy ujmowanych przez nas zmysłowo.

Oznacza to odmowę wsparcia jakiejkolwiek teorii psychicznych dodatków do przedmiotów poznawanych zmysłowo. Na przykład dana nam jest w spostrzeżeniu zielona trawa. Przedmiot ten poznajemy jako składnik przyrody. Teoria psychicznych dodatków traktuje zieleń jako psychiczny dodatek spostrzegającego umysłu, zostawiając w przyrodzie jedynie cząstki i energię światła, która wywołuje spostrzeżenia w umyśle. Mój argument jest następujący: takie wciąganie do gry umysłu, który dodaje coś od siebie do rzeczy, jakie są nam dane w świadomości zmysłowej, jest zwyczajnym omijaniem problemu filozofii przyrody. Problem ten polega na rozważaniu relacji rzeczy poznawanej *inter se*, w oderwaniu od faktu, że rzecz ta jest poznawana. Filozofia przyrody nie powinna nigdy pytać, co znajduje się

w przyrodzie, a co w umyśle. Pytanie o to oznacza przyznanie, że nie udało się wyrazić relacji zachodzących pomiędzy rzeczami poznawanymi zmysłowo. Są to te relacje, których wyartykułowanie jest filozofią przyrody. Zadanie to może okazać się dla nas zbyt trudne. Relacje te mogą być zbyt złożone i zbyt różnorodne dla naszego pojmowania lub też zbyt trywialne, by warto je było przedstawiać. Faktycznie jest prawdą, że posunęliśmy się bardzo niewiele w kierunku adekwatnego sformułowania takich relacji. Jednak przynajmniej nie próbujmy ukrywać niepowodzenia przy pomocy teorii dodatków spostrzegającego umysłu.

Tym, czemu sprzeciwiam się nade wszystko, jest rozdwojenie przyrody na dwa systemy rzeczywistości, które jeśli są realne – są realne w różnych znaczeniach. Jedną rzeczywistość stanowią byty takie jak elektrony, które są przedmiotem badania fizyki teoretycznej. Ma ona stanowić rzeczywistość poznawaną, choć zgodnie z tą teorią nigdy nie jest znana. Ponieważ tym, co jest znane, jest drugi rodzaj rzeczywistości, który jest jedynie ubocznym skutkiem działania umysłu. Tak oto istniałyby dwie przyrody, z których jedna jest hipotezą, a druga snem.

Innym sposobem wyrażania teorii, z którą tutaj dyskutuję, jest rozdwojenie przyrody na dwa obszary, mianowicie przyrodę ujmowaną w świadomości i przyrodę, która jest przyczyną świadomości. Przyroda, która stanowi fakt ujmowany w świadomości, zawiera w sobie zieleń drzew, śpiew ptaków, ciepło słońca, twardość krzesła oraz odczucie aksamitu. O przyrodzie, która jest przyczyną świadomości, przypuszcza się, że jest systemem molekuł i elektronów, które wpływają na umysł tak, by wytwarzał świadomość przyrody fenomenalnej[4]. Punktem

[4] Przyroda przyczynowa *(causal nature)* oraz przyroda fenomenalna *(apparent nature*) to terminy, których Whitehead używa by opisać obszary, na jakie teorie rozdwojenia dzielą przyrodę. Angielski przymiotnik *apparent* posiada sens pozytywnie wartościujący, w którym oznacza tyle, co „widoczny" oraz sens pejoratywny, kiedy oznacza tyle, co „pozorny". Opisując teorie rozdwojenia Whitehead korzysta z obu tych znaczeń. Dlatego zdecydowałem się w przekładzie nie używać terminów „przyroda pozorna", „przyroda widoc-

spotkania tych dwu rodzajów przyrody jest umysł, gdzie przyroda przyczynowa stanowi strumień wpływający, a przyroda fenomenalna strumień wypływający.

Cztery kwestie nasuwają się od razu w związku z teorią rozdwojenia przyrody. Dotyczą (I) przyczynowości, (II) czasu, (III) przestrzeni oraz (IV) iluzji. Kwestie te nie są faktycznie odrębne. Stanowią jedynie cztery różne punkty wyjścia dla rozważań.

Przyroda przyczynowa wpływa na umysł, stanowiąc przyczynę wypływania z umysłu przyrody zjawisk. Tej koncepcji przyrody przyczynowej nie należy mylić z koncepcją, w której jedna część przyrody stanowi przyczynę drugiej. Dla przykładu – palenie się ognia i przepływ ciepła przez przestrzeń jest przyczyną określonego sposobu zachowania się żywego ciała, jego nerwów i mózgu. Jednak to nie jest działanie przyrody na umysł. Związek przyczynowy, z jakim mamy tutaj do czynienia, jest przyczynowością w innym sensie niż wpływanie tego systemu oddziaływań ciała z przyrodą na wyobcowany z niej umysł, który w ten sposób spostrzega czerwień i ciepło.

Teoria rozdwojenia przyrody stanowi próbę ukazania nauk przyrodniczych jako dziedziny badającej przyczyny wiedzy. Usiłuje się mianowicie przedstawić przyrodę fenomenalną jako emanację umysłu wywołaną przez przyrodę przyczynową. Cała ta koncepcja oparta jest na milcząco przyjmowanym założeniu, że umysł może poznać jedynie to, co sam wytwarza i w jakiś sposób w sobie utrzymuje, choć wymaga zewnętrznej przyczyny jako tego, co zapoczątkowuje i determinuje charakter tej aktywności umysłu. Jednak podejmując kwestię wiedzy, powinniśmy pozbyć się wszystkich tych przestrzennych metafor w rodzaju „w umyśle" czy „poza umysłem". Wiedza jest ostatecznym punktem odniesienia. Nie może istnieć wyjaśnienie „dlaczego" wiedzy, możemy jedynie opisywać „co" wiedzy. Możemy mianowicie analizować treść wiedzy i jej wewnętrzne relacje, lecz nie możemy wyjaśnić, dlaczego wiedza istnieje. Tak więc przy-

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zna" czy „przyroda jawna", lecz termin „fenomenalna", ze względu na jego neutralność. [przyp. tłum. PL]

roda przyczynowa jest metafizyczną chimerą, choć istnieje potrzeba metafizyki, której zakres przekracza przyrodę. Celem tak pojętej nauki metafizycznej nie jest jednak wyjaśnienie wiedzy, lecz jak najpełniejsze ukazanie naszego pojęcia rzeczywistości.

Trzeba jednak przyznać, że przyczynowa teoria przyrody posiada swój atut. Powodem, dla którego rozdwojenie przyrody wkrada się zawsze z powrotem do filozofii nauki, jest ogromna trudność, jaką stanowi ukazanie spostrzeganej czerwieni i ciepła ognia w jednym systemie relacji z pobudzonymi cząsteczkami węgla i tlenu wraz z ich energią promieniowania oraz różnymi funkcjami materialnego ciała. Jeśli nie stworzymy wszystko-obejmującego systemu relacji, stajemy w obliczu rozdwojonej przyrody, to znaczy ciepła i czerwieni z jednej strony oraz cząsteczek, elektronów i eteru z drugiej. W ten sposób te dwa czynniki wyjaśnia się odpowiednio jako przyczynę oraz reakcję umysłu na tę przyczynę.

Czas i przestrzeń zdają się dostarczać tych wszystko-obejmujących relacji, których domagają się zwolennicy jedności przyrody. Spostrzegana czerwień i ciepło ognia wchodzą niewątpliwie w relacje czasowe i przestrzenne z cząsteczkami ognia i ludzkiego ciała.

Nie będzie niewybaczalną przesadą stwierdzenie, że określenie znaczenia przyrody redukuje się w istocie do analizy cech czasu i przestrzeni. W kolejnych wykładach przedstawię mój własny pogląd na temat czasu i przestrzeni. Spróbuję pokazać, że są one wyabstrahowane z bardziej konkretnych składników przyrody, jakimi są zdarzenia. Rozważanie szczegółów procesu abstrahowania ukaże czas i przestrzeń w ich wzajemnych powiązaniach i doprowadzi nas na koniec do związku pomiędzy ich pomiarami na gruncie współczesnej teorii względności. Jednak w ten sposób wyprzedzamy kolejny krok argumentacji. Obecnie chciałbym rozważyć, w jaki sposób nasze potoczne poglądy na czas i przestrzeń sprzyjają lub nie unifikacji naszej koncepcji przyrody.

Rozważmy najpierw teorie absolutnego czasu i przestrzeni. Każde z nich, to znaczy zarówno czas, jak i przestrzeń, musi-

my rozważać jako oddzielne i niezależne systemy bytów, każdy poznawany w sobie i dla siebie, równolegle z naszą wiedzą o zdarzeniach w przyrodzie. Czas jest uporządkowanym następstwem pozbawionych trwania chwil, które poznajemy jako elementy relacji czasowego uporządkowania, a relację tę znamy z kolei jako relację porządkującą chwile. Tak więc zarówno ta relacja, jak i chwile są nam dane w naszym ujęciu czasu łącznie, w taki sposób, że jedno implikuje drugie.

To jest teoria czasu absolutnego. Szczerze mówiąc, teoria ta wydaje mi się bardzo niewiarygodna. Nie potrafię wskazać w doświadczeniu niczego, co odpowiadałoby czasowi w tej teorii. Czas poznaję jako abstrakcję z następstwa zdarzeń. Fundamentalnym faktem, który umożliwia dokonanie takiej abstrakcji, jest płynięcie przyrody, jej rozwój, twórczy postęp i, powiązana z tym faktem, kolejna istotna cecha przyrody, a mianowicie: relacja rozciągłości zachodząca pomiędzy zdarzeniami. Te dwa fakty, przepływ zdarzeń i rozciąganie się zdarzeń wzajemnie na siebie, stanowią, według mnie, te własności, z których wywodzą się abstrakcyjne pojęcia czasu i przestrzeni.

Wracając tymczasem do teorii czasu absolutnego, powinniśmy przyjąć, że znamy czas niezależnie od jakichkolwiek zdarzeń mających miejsce w czasie. To, co wydarza się w czasie, zajmuje czas. Ta relacja zdarzeń do czasu, który zajmują, to znaczy relacja zajmowania czasu, jest podstawową relacją, jaka zachodzi pomiędzy przyrodą i czasem. W ten sposób teoria ta wymaga, byśmy byli świadomi dwu podstawowych relacji: relacji czasowego uporządkowania zachodzącej pomiędzy chwilami i relacji zajmowania czasu zachodzącej pomiędzy chwilami i stanami przyrody, które wydarzają się w tych chwilach.

Dwie okoliczności stanowią bardzo silne wsparcie dla teorii czasu absolutnego. Po pierwsze, czas rozciąga się poza przyrodę. Nasze myślenie dokonuje się w czasie. W związku z tym wyprowadzenie czasu jedynie z relacji zachodzących pomiędzy elementami przyrody wydaje się niemożliwe. Relacje czasowe nie mogłyby wówczas dotyczyć myślenia. Ujmując tę kwestię metaforycznie, wydaje się, że czas jest głębiej zakorzeniony w rzeczy-

wistości niż przyroda. Możemy bowiem wyobrazić sobie myśli, powiązane relacjami czasowymi niezależnie od jakichkolwiek spostrzeżeń przyrody. Możemy, na przykład, wyobrazić sobie anioły Miltona, których myśli następują po sobie w czasie, choć nie zauważyły one nawet, że Wszechmocny stworzył przestrzeń i umieścił w niej materialny wszechświat. Co prawda sądzę, że Milton umieszczał przestrzeń na tym samym absolutnym poziomie co czas, nie powinno to jednak deformować zarysowanego tu obrazu. Po drugie, trudno wyprowadzić własność realnego następowania po sobie chwil z relacyjnej teorii czasu. Każdy moment jest nieodwołalny. Natura czasu sprawia, że nie może on powrócić. Jeśli jednak na gruncie teorii relacyjnej moment czasowy jest po prostu stanem przyrody w danym czasie, a relacja porządkująca następstwo chwil jest po prostu relacją zachodzącą pomiędzy tymi stanami, nieodwołalność czasu wydaje się oznaczać, że obecny stan przyrody jako całości nie może się nigdy powtórzyć. Przyznaję, że wydaje się nieprawdopodobne, by coś takiego mogło się wydarzyć z uwzględnieniem najdrobniejszych szczegółów. Nie chodzi tu jednak o nieprawdopodobieństwo. Nasza ignorancja jest tak przerażająca, że nasze sądy określające prawdopodobieństwo przyszłych wydarzeń nie mają znaczenia. Istotne jest to, że powtórzenie się stanów przyrody jest jedynie nieprawdopodobne, natomiast powtórzenie się chwili kłóci się z naszym pojęciem porządku czasowego. Chwile, które przeminęły, są chwilami przeszłymi i nie mogą się nigdy powtórzyć.

Każda alternatywna teoria czasu musi wziąć pod uwagę te dwie okoliczności, stanowiące filary teorii czasu absolutnego. Nie będę jednak teraz kontynuował ich analizy.

Teoria absolutnej przestrzeni jest podobna do teorii czasu absolutnego, choć racje przemawiające na jej rzecz są słabsze. Na gruncie tej teorii przestrzeń jest systemem pozbawionych rozciągłości punktów, które są składnikami porządkujących przestrzeń relacji, które z kolei mogą być sprowadzone do jednej relacji. Relacja ta nie porządkuje punktów w następstwach liniowych analogicznie do prostej metody czasowego porządko-

wania chwil. Logiczną charakterystykę tej relacji, z której wypływają wszystkie własności przestrzeni, matematycy formułują w postaci aksjomatów geometrii. Z tych aksjomatów[5], w ujęciu współczesnych matematyków, geometria może zostać wyprowadzona na mocy najściślejszego logicznego rozumowania. Szczegółowa analiza tych aksjomatów nie jest nam teraz potrzebna. Kiedy ujmujemy przestrzeń, punkty i relacje są poznawane przez nas łącznie, wzajemnie się implikując. To, co zdarza się w przestrzeni, zajmuje przestrzeń. Zwykle, kiedy wprowadza się relację zajmowania przestrzeni, mówi się nie o zdarzeniach, lecz o przedmiotach. O pomniku Pompejusza powiemy na przykład, że zajmuje przestrzeń; nie powiemy tak jednak o zdarzeniu, jakim było zabójstwo Cezara. Potoczny sposób mówienia jest niefortunny. W moim przekonaniu relacja zdarzeń i przestrzeni jest analogiczna, pod każdym względem, do relacji zdarzeń i czasu.

Powyższa teoria jest pozbawiona dwu głównych filarów, jakie wspierają teorię czasu absolutnego. Przede wszystkim, przestrzeń nie rozciąga się poza przyrodę w takim sensie, w jakim zdaje się to czynić czas. Zajmowanie przestrzeni przez nasze myśli nie wydaje się tak bliskim związkiem, jak relacja myśli i czasu. Na przykład rozmyślam, znajdując się w pokoju, i w tym sensie moje myśli zajmują przestrzeń, jednak pytanie, czy zajmują one stopę sześcienną, czy cal sześcienny przestrzeni pokoju, wydaje się bezsensowne. Podczas gdy te same myśli zajmują określony czas dnia, powiedzmy od jedenastej do dwunastej.

O ile zatem relacje określane przez relacyjną teorię czasu są potrzebne, by porządkować myśli, o tyle nie wydaje się tak oczywiste, że wymagane są do tego relacje relacyjnej teorii przestrzeni. Powiązanie myślenia z przestrzenią wydaje się niebezpośrednie, co trudno powiedzieć o jego związku z czasem.

Poza tym nieodwołalność czasu wydaje się nie mieć żadnego odpowiednika w przestrzeni. Przestrzeń na gruncie teorii relacyjnej jest sumą relacji pomiędzy przedmiotami, o których

[5] Por. (na przykład) *Projective Geometry* by Veblen and Young, Vol. I. 1910, Vol. II. 1917, Boston.

potocznie mówimy, że znajdują się w przestrzeni; tam gdzie są przedmioty, tam też jest przestrzeń. Nie wydaje się powstawać trudność podobna do tej, z jaką mamy do czynienia, gdy wyobrazimy sobie, że złe chwile mogłyby powrócić, w momencie gdy myśleliśmy, że mamy je już za sobą.

Teoria absolutnej przestrzeni nie cieszy się dziś wielką popularnością. Wiedza o pustej przestrzeni jako systemie bytów znanych nam w sobie i dla siebie, niezależnie od naszej wiedzy o zdarzeniach w przyrodzie, wydaje się nie mieć żadnego odpowiednika w naszym doświadczeniu. Przestrzeń, podobnie jak czas, jest abstrahowana ze zdarzeń. Na gruncie mojej teorii przestrzeń i czas odróżniają się od siebie w kolejnej fazie procesu abstrakcji. Bardziej popularnym sposobem ujmowania relacyjnej teorii przestrzeni jest uznanie jej za abstrakt z relacji pomiędzy przedmiotami materialnymi.

Przypuśćmy, że istnieje absolutny czas i absolutna przestrzeń. Jaki wpływ ma to założenie na pojęcie przyrody rozdwojonej na przyrodę fenomenalną i przyrodę przyczynową? Rozdwojenie to niewątpliwie nie jest obecnie tak radykalne. Każdemu z tych dwu rodzajów przyrody możemy przypisać dwa wspólne systemy relacji, ponieważ możemy założyć, że obie te przyrody zajmują tę samą przestrzeń i ten sam czas. Na gruncie przyjmowanej współcześnie teorii, przyczynowo powiązane zdarzenia zajmują określony okres czasu absolutnego oraz zajmują określone miejsce w przestrzeni absolutnej. Zdarzenia te wpływają na umysł, który w efekcie spostrzega określone zdarzenia przyrody fenomenalnej, które zajmują określony okres czasu absolutnego oraz zajmują określone miejsce w przestrzeni absolutnej. A czasy i miejsca zajmowane przez fenomeny znajdują się w określonej relacji do czasów i miejsc zajmowanych przez zdarzenia w przyrodzie przyczynowej.

Co więcej, określone zdarzenia przyczynowe wytwarzają w umyśle określone zjawiska. Iluzje są to fenomeny, które zachodzą w określonych miejscach, zajmują określone okresy czasu, nie będąc skutkiem tych zdarzeń przyczynowych, które są właściwe dla ich spostrzegania.

Cała ta teoria jest w pełni spójna logicznie. Nie powinniśmy liczyć na to, że uda nam się w dyskusji filozoficznej sprowadzić błędną teorię do logicznej sprzeczności. Pomijając zwykłe pomyłki, osoba broniąca teorii wtedy tylko popada w sprzeczność, gdy zostanie onieśmielona przez *reductio ad absurdum*. Podstawowym powodem odrzucenia teorii filozoficznej jest „absurdum", do którego nas ona redukuje. W przypadku filozofii nauk przyrodniczych tym *absurdum* może być jedynie to, że nasza wiedza spostrzeżeniowa nie posiada cech przypisywanych jej przez tę teorię. Jeśli nasz oponent twierdzi, że jego wiedza posiada te cechy, możemy jedynie – po sprawdzeniu, że się rozumiemy – zgodzić się, że się różnimy. Podstawową powinnością osoby prezentującej teorię, z którą się nie zgadza, jest przedstawienie jej w sposób spójny. Nie na tym polega jej problem.

Podsumujmy sformułowane wyżej zarzuty pod adresem teorii rozdwojenia przyrody. Przede wszystkim jej celem jest poszukiwanie przyczyn naszej wiedzy o rzeczy poznanej, zamiast poszukiwania cech rzeczy poznanej. Po drugie, teoria ta zakłada istnienie wiedzy o czasie samym w sobie, niezależnej od zdarzeń powiązanych relacjami czasowymi. Po trzecie, zakłada wiedzę o przestrzeni samej w sobie, niezależną od zdarzeń w przestrzeni. Poza wymienionymi zarzutami teoria ta posiada jeszcze inne niedostatki.

Rzucimy nieco światła na sztuczny status przyrody przyczynowej w tej teorii, pytając, dlaczego zakłada się, że przyroda ta zajmuje czas i przestrzeń? Podnosimy w ten sposób fundamentalną kwestię zakresu podobieństwa pomiędzy przyrodą przyczynową a fenomenalną. Dlaczego – na gruncie tej teorii – przyczyna, która wywołuje spostrzeżenia w umyśle, miałaby mieć podobną charakterystykę co przyroda fenomenalna? W szczególności – dlaczego miałaby znajdować się w przestrzeni? A mówiąc bardziej ogólnie – co wiemy o umyśle, który pozwala nam określać poszczególne cechy przyczyny wywołującej w tym umyśle określone skutki?

Argumentem, choć słabym, na rzecz tezy, że przyroda przyczynowa znajduje się w czasie, jest wykraczanie czasu poza

przyrodę. Jeśli bowiem umysł istnieje w jakimś okresie czasu, mamy pewien powód, by przyjąć, że przyczyny wpływające na umysł istnieją w tym samym okresie czasu. Lecz jeśli umysł nie zajmuje przestrzeni, nie widać powodu, dla którego mielibyśmy przyjmować, że przyroda przyczynowa powinna zajmować przestrzeń. W ten sposób przestrzeń okazuje się pozorna w takim samym sensie, w jakim przyroda fenomenalna jest pozorna. A zatem, jeśli nauka rzeczywiście zajmuje się badaniem przyczyn działających na umysł, błądzilibyśmy całkowicie, zakładając, że przyczyny te powinny być powiązane relacjami przestrzennymi. Co więcej, nie znamy niczego, co w analogiczny sposób wpływałoby na umysł, wywołując spostrzeżenia. A zatem, poza słabo ugruntowanym założeniem, że zajmują one czas, nie ma naprawdę żadnej podstawy pozwalającej określić własności tych przyczyn.

To, że nauka nie jest bajką, przyjmuję jako aksjomat. Nauka nie zajmuje się przystrajaniem niepoznawalnych bytów w arbitralne i fantastyczne właściwości. Czym zatem, zakładając, że jest to coś ważnego, zajmuje się nauka? Moja odpowiedź brzmi: zajmuje się określaniem własności rzeczy poznawanych, mianowicie własności przyrody fenomenalnej. Termin „fenomenalna" możemy opuścić, gdyż istnieje tylko jedna przyroda. Ta mianowicie, która jest nam dana w naszej wiedzy spostrzeżeniowej. Własności, które nauka odkrywa w przyrodzie, mają subtelny charakter, nie są czymś oczywistym już na pierwszy rzut oka. Stanowią one relacje relacji i własności własności. Jednak, przy całej swej subtelności, są one naznaczone pewną prostotą, która sprawia, że niezbędne jest ich uwzględnianie przy rozplątywaniu złożonych związków pomiędzy własnościami stale obecnymi w spostrzeżeniach.

Fakt, że rozdwojenie przyrody na składnik przyczynowy i fenomenalny nie jest zgodne z naszym rozumieniem wiedzy, staje się dla nas oczywisty w momencie, gdy uświadamiamy sobie nasz sposób myślenia podczas rozważania zagadnienia przyczyn naszych spostrzeżeń. Na przykład ogień płonie, a my widzimy czerwony węgiel. Nauka wyjaśnia to, odwołując się

do pojęcia energii promieniowania emitowanej przez węgiel w kierunku naszych oczu. Lecz szukając takiego wyjaśnienia, nie pytamy o rodzaj zdarzeń, które nadają się do tego, by sprawiać, że umysł spostrzega czerwień. Łańcuch przyczyn jest zupełnie inny. Umysł zostaje całkowicie wyłączony. Prawdziwe pytanie brzmi: co takiego odkrywamy w przyrodzie, kiedy odkrywamy tam czerwień? Pytamy o analizę składników przyrody, towarzyszących pojawieniu się czerwieni w przyrodzie. W kolejnym wykładzie podążę dalej tym tokiem rozumowania. Tutaj zwracam na to uwagę jedynie po to, by podkreślić, że falowa teoria światła nie została przyjęta dlatego, że to fale sprawiają, że umysł spostrzega kolory. Nigdy nie powoływano się na ten argument jako świadectwo na rzecz teorii falowej, choć jest to, z punktu widzenia przyczynowej teorii percepcji, jej jedyna istotna część. Innymi słowy, nauka nie bada przyczyn wiedzy, lecz spójność wiedzy. Rozumienie, którego poszukuje nauka, to rozumienie relacji zachodzących w przyrodzie.

Dotychczas przedstawiałem rozdwojenie przyrody w kontekście teorii absolutnej przestrzeni i absolutnego czasu. Czyniłem tak dlatego, że wprowadzenie teorii relacyjnych jedynie osłabia racje na rzecz rozdwojenia, a chciałem podjąć dyskusję z tą koncepcją w jej najmocniejszej postaci.

Przypuśćmy, dla przykładu, że przyjmujemy relacyjną teorię przestrzeni. Przestrzeń przyrody fenomenalnej stanowi wówczas sumę relacji pomiędzy fenomenami. Jest to zbiór relacji fenomenalnych łączących fenomeny jako człony relacji. Przyroda fenomenów jest marzeniem sennym, relacje fenomenalne są śnionymi przez nas relacjami, a przestrzeń jest przestrzenią snu. Podobnie przestrzeń przyrody przyczynowej wyraża relacje wiążące przedmioty do niej należące. Wyraża fakty związane z przyczynami działającymi poza obszarem zjawisk. Przestrzeń przyczynowa i fenomenalna należą do innych porządków rzeczywistości. Dlatego nie ma między nimi ścisłej więzi i nie ma sensu mówić, że cząsteczki trawy są w jakimś określonym miejscu, znajdującym się w ściśle określonej relacji do miejsca zajmowanego przez trawę, którą widzimy. Jest to paradoksalna

konkluzja, która sprawia, że cały nasz naukowy sposób mówienia zostaje pozbawiony sensu. Sprawy mają się jeszcze gorzej, gdy uznamy relacyjny charakter czasu. Na mocy tego samego argumentu czas dzieli się na czas snu i czas przyczynowy, które należą do różnych porządków rzeczywistości.

Do tej pory przedstawiałem skrajną postać teorii rozdwojenia przyrody. Jest to, jak sądzę, ta jej postać, której najłatwiej bronić. Już sama jej kategoryczność zniechęca do krytyki. Pośrednia postać tej teorii dopuszcza możliwość, że przyroda, która jest przedmiotem badania, jest przyrodą bezpośrednio poznawaną i w tym zakresie odrzuca teorię rozdwojenia. Uznaje jednak, że istnieją psychiczne dodatki do przyrody bezpośrednio poznawanej, które w żadnym sensie nie są częściami przyrody. Spostrzegamy na przykład czerwoną kulę bilardową o określonej dynamice, masie i bezwładności, we właściwym dla niej czasie i miejscu. Jednak jej czerwień i ciepło oraz dźwięk uderzania o inną bilę stanowią dodatki psychiczne, to jest – własności wtórne, które są jedynie sposobem, w jaki umysł spostrzega przyrodę. Jest to nie tylko szeroko rozpowszechniona teoria, lecz jest to, jak mniemam, historyczna postać teorii rozdwojenia przyrody, w jakiej teoria ta wywodzi się z filozofii. Będę ją nazywał teorią psychicznych dodatków.

Teoria psychicznych dodatków jest mocną, zdroworozsądkową teorią, która kładzie wielki nacisk na realność czasu, przestrzeni, masy i bezwładności, lecz podchodzi nieufnie do takich artystycznych dodatków jak barwa, ciepło i dźwięk. Teoria ta jest skutkiem wycofywania się zdrowego rozsądku ze swoich roszczeń. Powstała w epoce, w której opracowano naukowe teorie transmisji. Na przykład kolor jest wynikiem transmisji z przedmiotu materialnego do oka, choć tym, co jest transmitowane, nie jest kolor. Kolor nie jest częścią przedmiotu materialnego. Z podobnych powodów z przyrody „znika" dźwięk. Także ciepło jest wynikiem transferu czegoś, co nie jest temperaturą. Tym sposobem zostajemy z miejscami czasoprzestrzennymi i czymś, co można nazwać „bezczelnością" ciała. Otrzymujemy w ten sposób tezę osiemnastowiecznego materializmu, głoszącego,

że tym, co rzeczywiste w przyrodzie, jest znajdująca się w czasie i przestrzeni bezwładna materia.

Zakłada się istnienie różnicy jakościowej, pozwalającej wyróżnić spostrzeżenia dotykowe wśród pozostałych. Stanowią one spostrzeżenia prawdziwej bezwładności, podczas gdy inne spostrzeżenia stanowią psychiczne dodatki, które muszą zostać wyjaśnione na gruncie przyczynowej teorii percepcji. Różnica ta jest produktem epoki, w której fizyka wyprzedziła patologię i fizjologię. Spostrzeżenia nacisku są przecież w równej mierze wynikiem przesyłania, co spostrzeżenia barwy. Kiedy spostrzegamy kolor, komórki nerwowe zostają w pewien sposób pobudzone i przekazują swoją wiadomość do mózgu. Kiedy spostrzegamy nacisk, komórki nerwowe zostają pobudzone w inny sposób i również przekazują swoją wiadomość do mózgu. Przekazywanie wiadomości w tej pierwszej sytuacji nie polega na przekazywaniu koloru, podobnie jak w drugiej – nie jest przekazywaniem nacisku. Jednak w tym pierwszym przypadku spostrzegamy barwę, a w drugim nacisk ciała. Gdyby odpowiednie nerwy zostały przecięte, przestalibyśmy spostrzegać kolor. Przecinając inne, uniemożliwilibyśmy spostrzeganie nacisku. Wydaje się zatem, że dowolna przyczyna usuwająca z rzeczywistej przyrody barwę powinna usuwać też bezwładność.

Tak oto zawodzi próba rozdwojenia przyrody fenomenalnej na części, z których jedna jest przyczyną zarówno swojego przejawiania się, jak i przejawiania się drugiej, czysto fenomenalnej. Próba ta nie może się powieść, gdyż nie potrafimy przeprowadzić fundamentalnego odróżnienia dwóch sposobów poznania tak podzielonych części przyrody. Nie przeczę, że odczucie wysiłku mięśniowego było historyczną przyczyną ukształtowania się pojęcia siły. Ten historyczny fakt nie uzasadnia jednak tezy, że bezwładność materii posiada w przyrodzie status rzeczywistości nadrzędnej w stosunku do koloru czy dźwięku. Gdy idzie o rzeczywistość, wszystkie nasze spostrzeżenia zmysłowe „jadą na tym samym wózku" i powinny być traktowane na tej samej zasadzie. Równe traktowanie jest właśnie tym, czego brakuje omawianej tu kompromisowej teorii.

Nie jest łatwo poradzić sobie z teorią rozdwojenia. Powodem jest bardzo poważna trudność, jakiej musimy stawić czoła, gdy chcemy w tym samym systemie bytów połączyć czerwień płomienia z pobudzeniem cząsteczek. W kolejnym wykładzie przedstawię moje wyjaśnienie źródeł tej trudności oraz źródeł jej rozwiązania.

Innym popularnym rozwiązaniem, najsłabszą postacią teorii rozdwojenia jest utrzymywanie, że cząsteczki oraz eter, o których mówi nauka, mają charakter czysto pojęciowy. Istnieje tylko jedna przyroda, mianowicie przyroda fenomenalna, a atomy i eter są jedynie nazwami pojęć logicznych, występujących w formułach obliczeniowych.

Jednak czym są formuły obliczeniowe? Można je uznać za stwierdzenia, głoszące, że coś jest prawdą w odniesieniu do tego, co zachodzi w przyrodzie. Weźmy najprostszą formułę, głoszącą, że dwa plus dwa równa się cztery. Stwierdza ona – o tyle, o ile odnosi się do przyrody – że gdy weźmiemy dowolne dwa przedmioty należące do przyrody, a następnie kolejne dwa, połączony zbiór będzie zawierał cztery przedmioty. Takie formuły, które są prawdziwe dla dowolnych bytów, nie mogą prowadzić do sformułowania pojęcia atomu. Co więcej, są formuły, które stwierdzają, że istnieją w przyrodzie byty o specjalnych własnościach, powiedzmy na przykład własnościach atomów wodoru. Jeśli byty tego rodzaju nie istnieją, nie potrafię zrozumieć, jak stwierdzenia mówiące o nich mogą stosować się do przyrody. Na przykład stwierdzenie, że „jest zielony ser na księżycu" nie może być przesłanką żadnego, posiadającego naukowe znaczenie, rozumowania, jeśli obecność zielonego sera na księżycu nie została potwierdzona eksperymentalnie. Popularną współcześnie odpowiedzią na powyższe zastrzeżenia jest twierdzenie, że choć atomy są jedynie pojęciami, stanowią interesujące i malownicze narzędzie mówienia czegoś prawdziwego o przyrodzie. Lecz jeśli istotnie jest coś innego, co ma się tutaj na myśli, trzeba to powiedzieć, na Boga! Należy się pozbyć skomplikowanej maszynerii pojęciowej, składającej się z twierdzeń o rzeczach nieistniejących, które mają dostarczać prawd

na temat rzeczy istniejących. Stoję na stanowisku, że prawa naukowe, jeśli są prawdziwe, są stwierdzeniami dotyczącymi bytów, które poznajemy jako byty w przyrodzie. A jeśli byty te nie mogą być bytami odkrywanymi w przyrodzie, stwierdzenia mówiące o nich nie mają żadnego odniesienia do zjawisk przyrodniczych jako takich. A zatem, jeśli tylko nauka poprawnie formułuje swoje prawa, cząsteczki i elektrony, o których mówią teorie naukowe, są czynnikami, które można odkryć w przyrodzie. Elektrony mają status hipotetyczny o tyle tylko, o ile nie jesteśmy pewni, że teoria elektronów jest prawdziwa. Lecz jeśli uznamy prawdziwość tej teorii, z samej jej treści nie wynika hipotetyczność elektronów.

Tak więc na końcu tej nieco skomplikowanej analizy wracamy do stanowiska sformułowanego na początku. Podstawowymi zadaniami filozofii nauk przyrodniczych jest objaśnienie pojęcia przyrody, rozumianej jako złożony fakt dany nam do zbadania, wskazanie fundamentalnych bytów i fundamentalnych relacji pomiędzy bytami, w terminach których wszystkie prawa przyrody powinny być formułowane, a także wykazanie, że wskazane byty i relacje są adekwatnym narzędziem do wyrażenia wszystkich relacji pomiędzy bytami występującymi w przyrodzie.

To właśnie w związku z trzecim zadaniem, jakim jest wykazanie adekwatności, powstaje cała trudność. Przyjmuje się zwykle, że ostatecznymi danymi w naukach przyrodniczych są czas, przestrzeń, materia, własności materii oraz relacje pomiędzy przedmiotami materialnymi. Lecz dane w tej postaci, w jakiej występują w prawach naukowych, nie dotyczą wszystkich bytów, które ujawniają się w naszym spostrzeganiu przyrody. Na przykład falowa teoria światła jest znakomitą, dobrze ugruntowaną teorią, niestety pomija kolor w tej postaci, w jakiej jest on spostrzegany. Tak więc spostrzegana czerwień – czy też inne kolory – muszą zostać wyeliminowane z przyrody i zamienione w reakcję umysłu na prawdziwe zdarzenia w przyrodzie. Innymi słowy, pojęcie fundamentalnych relacji zachodzących w przyrodzie (jakiego dostarcza falowa teoria światła)

nie jest adekwatne. Powinniśmy z tym większą energią dążyć do wyartykułowania pojęć adekwatnych.

Lecz czy w ten sposób nie próbujemy w istocie rozwiązać problemu metafizycznego? Nie sądzę. Staramy się jedynie wskazać ten typ relacji, które zachodzą pomiędzy bytami, które faktycznie spostrzegamy w przyrodzie. Nie jesteśmy zobowiązani do żadnych deklaracji w kwestii psychologicznych związków podmiotu i przedmiotu czy też ich ontologicznego statusu. To prawda, że ten rodzaj badań może dostarczyć istotnych danych dla dyskusji tych zagadnień i powinien czynić to z powodzeniem. Stanowi jednak jedynie możliwy argument w tych dyskusjach, sam nie będąc analizą metafizyczną. Aby wyjaśnić charakter tej dalszej analizy, która wykracza poza nasze zainteresowania, przedstawię dwa cytaty. Autorem pierwszego jest Schelling, a pochodzi z pracy rosyjskiego filozofa Losskiego, która niedawno została przetłumaczona na angielski[6].

> „W *Filozofii przyrody* rozważałem podmiot-przedmiot nazywany przyrodą w jego aktywności samo-konstruowania się. By to zrozumieć, musimy wznieść się do intelektualnej intuicji przyrody. Empirysta tu nie dociera, dlatego w jego wyjaśnieniach zawsze to *on sam* okazuje się być konstruktorem przyrody. Nic dziwnego, że tak rzadko konstrukcja pokrywa się z tym, co jest konstruowane. Filozof przyrody (*a Natur-philosoph*) uwalnia przyrodę, karząc jej konstruować samą siebie i dlatego nigdy nie czuje konieczności przeciwstawiania przyrodzie konstruowanej (tj. jako doświadczenie) przyrody rzeczywistej czy też poprawiania jednej przy pomocy drugiej".

Drugi cytat pochodzi z odczytu dziekana katedry św. Pawła dla Towarzystwa Arystotelesowskiego z maja 1919 roku. Artykuł doktora Inge'a nosi tytuł „Platonizm a nieśmiertelność człowieka" i zawiera następującą tezę:

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[6] N.O. Lossky, *The Intuitive Basis of Knowledge*, tłum. Mrs Duddington, 1919.

„Podsumowując, Platońska doktryna nieśmiertelności opiera się na idei *niezależności* świata duchowego. Świat duchowy nie jest światem niezrealizowanych ideałów, przeciwstawionych rzeczywistemu światu faktów pozbawionych duchowości. Przeciwnie, jest światem rzeczywistym, o którym posiadamy wiedzę prawdziwą, choć bardzo niepełną. Jest światem przeciwstawionym światu codziennego doświadczenia, który jako całość nie jest rzeczywisty, gdyż jest zbudowany przy pomocy wyobraźni z rozmaitości danych, pochodzących z różnych poziomów. Nie istnieje żaden świat odpowiadający światu naszego codziennego doświadczenia. Przyroda dokonuje abstrakcji za nas, decydując, jaki zakres drgań jest dla nas słyszalny i widzialny, i jakie rzeczy mamy spostrzegać i zapamiętywać".

Zacytowałem te fragmenty, ponieważ oba dotyczą tematów, które, choć znajdują się poza obszarem prowadzonych tu rozważań, są zawsze błędnie traktowane jako ich część. Dzieje się tak dlatego, że leżą one w najbliższym sąsiedztwie naszego obszaru rozważań i są kwestiami niezwykle interesującymi dla umysłów o skłonnościach metafizycznych. Filozofowi trudno jest uznać, że ktoś może faktycznie ograniczać swoje badania, tak by zmieścić je w granicach, które tu zarysowałem. Granice te umieszczam tam, gdzie on zaczyna odczuwać poruszenie. Przedstawiam tu stanowisko, zgodnie z którym niezbędnym wstępem do filozofii oraz do nauk przyrodniczych jest gruntowne zrozumienie typów bytów oraz typów relacji, zachodzących pomiędzy tymi bytami, które odsłaniają się nam w zmysłowym doświadczeniu przyrody.

Tłumaczył: Piotr Leśniak

STUDIA WHITEHEADIANA
2012

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SŁOWO OD TŁUMACZA

The Concept of Nature jest zapisem wykładów, które Alfred North Whitehead wygłosił w roku 1919 w Trinity College w Cambridge, w ramach cyklu wykładów ufundowanego przez Edwarda Tarnera. Cykl ten, rozpoczęty przez Whiteheada, jest kontynuowany do dzisiaj, a jego tematem jest filozofia nauki oraz relacje pomiędzy różnymi dziedzinami wiedzy. Whitehead uznał, że przedstawiając swoje rozumienie pojęcia przyrody, nie odbiega od tego tematu. O jedności różnych nauk przyrodniczych stanowi bowiem ich wspólny przedmiot – przyroda. Filozofia nauki Whiteheada jest filozofią przyrody.

Książka, która ukazała się w roku 1920 nakładem wydawnictwa Uniwersytetu w Cambridge, zachowuje formę i styl charakterystyczny dla wykładu. Zmiany dokonane przez Whiteheada na etapie przygotowania tekstu do druku nie były gruntowne i miały na celu jedynie usunięcie niejasności. *The Concept of Nature* stanowi kontynuację wcześniejszego *Enquiry concerning the Principles of Natural Knowledge*. Obie książki dotyczą podobnych zagadnień, przedstawiając je z nieco innej perspektywy. Obie można uznać za odpowiedź Whiteheada na opublikowaną w 1916 roku ogólną teorię względności, którą podziwiał jako przykład genialnego zastosowania metod matematycznych w fizyce, ale podkreślał także, że zastosowanie tej metody doprowadziło Einsteina do filozofii o bardzo wątpliwej wartości. Whiteheadowska koncepcja przyrody jest rozwijana w pięciu

środkowych rozdziałach książki, dwa pierwsze rozdziały oraz dwa ostatnie mają charakter wprowadzający i wyjaśniający. Prezentowany tu drugi rozdział, w którym przedstawione są teorie rozdwojenia przyrody, jest szczególnie ważny z tego punktu widzenia, gdyż, jak podkreśla Whitehead we wstępie, ktoś, kto ulega złudzeniu rozdwojenia, nie będzie w stanie zrozumieć nawet jednego słowa tej książki.

Chodzi tu o rozdwojenie naszego obrazu przyrody na przyrodę fenomenów, tzn. barw, dźwięków, smaków i zapachów, które są w przyrodzie jedynie pozornie, gdyż nie traktujemy ich jako przyczyn zdarzeń w świecie fizycznym, oraz przyrodę przyczyn, tzn. przyrodę cząstek, sił i pól, które uznajemy za realne przyczyny doznawanych przez nas wrażeń. Popularną współcześnie postacią teorii rozdwojenia jest teoria własności pierwotnych i wtórnych, w której status obiektywności przypisuje się jedynie własnościom pierwotnym, te drugie traktując jako wytwór naszego umysłu. Mówienie o wytworach umysłu podczas opisu przyrody Whitehead traktuje jako wyraz filozoficznej bezradności. Ten „desperacki" sposób myślenia o przyrodzie nie został jednak w naszych czasach przezwyciężony. Idee Whiteheada, Bergsona czy Jamesa ujmujące integralnie doświadczenie przyrody na początku ubiegłego stulecia wydawały się znajdować w ofensywie i spychać do lamusa koncepcje fizykalistyczne i materialistyczne. Jednak główny nurt myślenia filozoficznego podążył w innym kierunku. Fundamentalne dyskusje na gruncie współczesnej filozofii nauki, filozofii umysłu, epistemologii wydają się nadal toczyć w cieniu teorii rozdwojenia. Na przykład problem obiektywności doświadczenia i związany z nim problem statusu ontologicznego przedmiotów teoretycznych (spór realizmu naukowego z antyrealizmem) czy też spór o status ontologiczny umysłu, a w szczególności problem tzw. *qualiów* (spór redukcjonistycznych teorii umysłu z antyredukcjonistycznymi), ale także spór o przyczynowość (ujęcia humowskie kontra syngularyzm). We wszystkich tych sporach obie strony zakładają *implicite* rozdwojony obraz przyrody, co wydaje się skutkować przyjmowaniem szeregu kon-

cepcji filozoficznych „nie do wiary", jak np. eliminacjonizm (nie istnieją przeżycia psychiczne) czy epifenomenalizm (umysł nie może być przyczyną żadnych zdarzeń fizycznych). Argumentacja Whiteheada skierowana przeciwko teoriom rozdwojenia wydaje się zatem przedsięwzięciem filozoficznym niezwykle aktualnym. Nawet bardziej aktualnym dziś, po niemal stu latach, niż w roku 1919.

Wydarzenia

STUDIA WHITEHEADIANA
2012

SPRAWOZDANIE Z KONFERENCJI *THE DYNAMICAL ONTOLOGIES OF A.N. WHITEHEAD AND N. HARTMANN* 5–7 MAJA 2011, KATOWICE, POLSKA

Konferencja *The Dynamical Ontologies of A.N. Whitehead and N. Hartmann* odbyła się w Katowicach-Panewnikach w dniach 5–7 maja 2011 roku. Zorganizowanie tego wydarzenia było efektem naukowej współpracy dwóch towarzystw filozoficznych: polskiego Towarzystwa Metafizycznego im. A.N. Whiteheada oraz włoskiego Nicolai Hartmann Society. Oprócz przedstawicieli obydwu towarzystw w konferencji udział wzięło wielu wybitnych badaczy z różnych ośrodków naukowych Europy i świata. Wykłady miały miejsce na terenie Wyższego Seminarium Duchownego Braci Mniejszych w Katowicach-Panewnikach, które wraz z Katedrą Filozofii Starożytnej i Średniowiecznej Uniwersytetu Papieskiego Jana Pawła II w Krakowie było współorganizatorem tego wydarzenia.

Pierwszy dzień konferencji miał charakter wprowadzenia, którego celem było z jednej strony przedstawienie podstawowych pojęć i twierdzeń ontologicznych systemów Whiteheada i Hartmanna, z drugiej – wstępne ukazanie niektórych podobieństw oraz różnic między nimi. Pierwszym prelegentem był **Roberto Poli** z Nicolai Hartmann Society we Włoszech, który zaprezentował krótkie porównanie pomiędzy dwoma systemami. Włoski uczony omówił wspólne momenty, dotyczące zarów-

no aspektów merytorycznych (np. procesualnego podłoża, teorii wartości, ontologicznej struktury 2+2), jak i ogólnego nastawienia meta-filozoficznego (np. podejście systematyczne, bliski kontakt z naukami szczegółowymi, wyraźny dystans do rezultatów własnych badań).

Następnie miały miejsce cztery wykłady, które trwały około godziny i zakończone były półgodzinną dyskusją wykładowcy ze słuchaczami. Poranna sesja dotyczyła filozofii Whiteheada. **Bogdan Ogrodnik** z Towarzystwa Metafizycznego im. A.N. Whiteheada wprowadził uczestników w schemat pojęć procesualnych, dotyczących skwantowanego procesu, bytów aktualnych, ich bipolarnej natury oraz idei ich wzajemnego, wewnętrznego powiązania. W swoim wystąpieniu omówił współistnienie atomistycznej i ciągłej koncepcji świata, pojęcie organizmu, wibracyjną formę istnienia oraz podkreślił znaczenie religijnego i estetycznego doświadczenia dla metafizyki. W drugim wykładzie **Helmut Maassen** z Deutsche Whitehead Gesellschaft w Niemczech kontynuował omawianie podstawowych pojęć filozofii Whiteheada, zwracając uwagę na jego schemat kategorialny oraz na różne formy procesu analizowane w dwóch aspektach: genetycznym i morfologicznym. Wprowadzając słuchaczy w problematykę wartości, zwrócił on uwagę, iż procesualizm afirmuje zarówno dobro (jako element pozytywny i twórczy), jak i zło (jako element pozytywny i destrukcyjny). Wszechświat jako kreatywny postęp w stronę nowości wymaga obydwu czynników dla swojego istnienia.

Dwa wykłady zawarte w sesji popołudniowej dotyczyły ontologii Hartmanna. Podstawowe dziedziny i sposoby istnienia oraz natura ontologicznych kategorii zostały przedstawione przez **Alicję Pietras** z Pomorskiego Uniwersytetu w Słupsku. W swoim obszernym wykładzie dokonała rozróżnienia na momenty istnienia (*Sosein*, *Dasein*), sposoby istnienia (realny, idealny i irrealny) oraz modi istnienia (aktualność, możliwość, konieczność). Podkreśliła też rozumienie kategorii jako zasad bytu oraz wymieniła szereg filozoficznych błędów związanych z tzw. starą doktryną kategorii. W swoim drugim wykładzie **Roberto**

Poli kontynuował wprowadzenie w myśl Hartmanna, omówił cztery podstawowe tezy ontologiczne, różne typy kategorii (fundamentalne, specjalne, lokalne) i połączył te ostatnie z problematyką poziomów ontologicznych.

Kolejne dwa dni konferencji zawierały czterdziestominutowe wystąpienia podzielone na około półgodzinną część wykładową i dyskusję, trwającą zwykle około dziesięciu minut. Drugi dzień ponownie rozpoczął **Roberto Poli** od wykładu, w którym zwrócił uwagę na dwa wzorce obecne w ontologii Hartmanna: (I) pierwszy, egzemplifikowany przez wiele par fundamentalnych kategorii (np. materia – forma) oraz przez momenty istnienia (*Sosein*, *Dasein*) oraz (II) drugi, dotyczący odróżnienia czystej kategorii od własności bytu, np. czasu i temporalności. **Predrag Cicovacki** z College of the Holy Cross w USA poświęcił swój pierwszy wykład na porównanie koncepcji kategorii u Kanta i Hartmanna. Po przedyskutowaniu historycznych źródeł analiz kategorialnych amerykański filozof ukazał, w jaki sposób Hartmann próbuje odwrócić kopernikańską rewolucję Kanta. Końcowa część wykładu była ciekawą próbą zwrotnej krytyki ujęcia Hartmanna z kantowskiej pozycji. Następnie **Bogdan Ogrodnik** ukazał podobieństwa pomiędzy koncepcjami poznania u Whiteheada i Hartmanna, które wykraczają poza proste odróżnienie podmiot-przedmiot. Podkreślając, że metafizyczne twierdzenia posiadają status hipotez, argumentował, iż filozofia organizmu dostarcza takiego opisu poznania, w którym staje się ono jedynie egzemplifikacją bardziej pierwotnego rodzaju metafizycznej relacji ujmowania.

Kolejną interesującą próbą zestawienia dwóch systemów filozoficznych był wykład, w którym **Maria-Teresa Teixeira** z Lisbon University w Portugalii dokładnie przedstawiła ich aspekty związane z koncepcjami procesu, poziomów rzeczywistości i ewolucji. Ukazując podobieństwo pomiędzy stratyfikacją Hartmanna a hierarchią społeczności Whiteheada, portugalska uczona przyznała, że obydwa systemy posiadają procesualny i dynamiczny charakter, lecz same pojęcia procesu i temporalności są w nich inaczej rozumiane. W kolejnym wykładzie **Karl-**

-Friedrich Kiesow z Leibniz Universitat Hannover w Niemczech porównał teorie dwóch myślicieli na gruncie rozwiniętej przez nich filozofii przyrody oraz zagadnienia relacji *mind – body*. Pomimo różnic w postrzeganiu miejsca umysłu w przyrodzie, obydwaj – Whitehead i Hartmann – próbowali przerzucić pomost pomiędzy umysłem i materią w nowy, bardziej konstruktywny sposób. W ostatnim wykładzie sesji porannej **Jakub Dziadkowiec** z Katolickiego Uniwersytetu Lubelskiego Jana Pawła II przedstawił konceptualne podstawy dla ontologicznej teorii poziomów rzeczywistości. Argumentował on, że w systemach obydwu filozofów istnieją mechanizmy umożliwiające rozwinięcie stratalizmu w dwóch aspektach: horyzontalnym i wertykalnym oraz powiązanie go z ontologiczną relacją emergencji.

Sesja popołudniowa rozpoczęła się od wykładu **Andrzeja Chmieleckiego** z Uniwersytetu Gdańskiego poświęconego propozycjom pewnych poprawek w ontologii Hartmanna. Po krótkiej krytyce niektórych tez niemieckiego filozofa prelegent przedstawił m.in.: analizę par kategorii indywidualny-ogólny oraz czasowy-nieczasowy, rozróżnienie na dwa aspekty istnienia: in-systencję oraz per-systencję, a także propozycję wyróżnienia piątego poziomu bytu realnego, tzw. intelligibiliów. W kolejnym wystąpieniu **Predrag Cicovacki** zestawił Hartmanna koncepcję wartości jako bytów idealnych z Poppera rozumieniem wartości jako obiektów „trzeciego świata". Dyskutując możliwość przyznania wartościom realnego sposobu istnienia, przytoczył argumenty, dla których Hartmann nie przyjął propozycji Poppera. Następnie **Łukasz Lamża** z Uniwersytetu Papieskiego Jana Pawła II w Krakowie opierając się na systemie hierarchicznej klasyfikacji przyrodniczych fenomenów (PACS 2008), przedstawił propozycję empirycznej teorii poziomów rzeczywistości. Jasno określając swoją metodologię oraz zawężając badania do nieożywionej części historii naturalnej, skrytykował linearny i ciągły sposób myślenia o ewolucji kosmicznej. W podsumowaniu zaproponował odświeżoną klasyfikację nieorganicznych poziomów rzeczywistości, których etykiety typu „fizyczny", „chemiczny", „mineralogiczny" czy „biologiczny" powinny zo-

stać zastąpione nazwami „przed-nuklearny", „post-nuklearny", „stały system" oraz „system planetarny".

Po krótkiej przerwie głos zabrał **Piotr Leśniak** z Uniwersytetu Rzeszowskiego, który poświęcił swoje wystąpienie koncepcji czasu i przestrzeni we wczesnych pracach Whiteheada. Wyróżniając trzy typy obiektywności i identyfikując stanowisko Whiteheada z tzw. obiektywnością naturalną, bronił tezy, iż czasu należy poszukiwać w poza-podmiotowej naturze za pomocą pojęcia trwania, które definiuje zdarzenie. Kolejnym prelegentem był **Vasselin Petrov** z Bulgarian Academy of Sciences, który wykazywał, że pojęcie antycypacji – zyskujące na znaczeniu w dzisiejszej nauce i filozofii – należy do istotnych elementów metafizyki Whiteheada. Analizując późne prace Whiteheada, bułgarski uczony zauważył, że pojęcie antycypacji odegrało rolę w krytyce kartezjańskiego substancjalizmu oraz było wykorzystane w koncepcji społeczności w wyjaśnieniu obecności przyszłości w teraźniejszości. Jego teleologiczny wydźwięk pozwolił też na częściowe zatarcie różnicy pomiędzy bytami ożywionymi i nieożywionymi oraz wzmocnił argumentację na rzecz gradualnej emergencji życia z nieorganicznego podłoża. Ostatni wykład drugiego dnia konferencji przedstawiła **Olga Stoliarova** z Moskiewskiej Wyższej Szkoły Ekonomicznej w Rosji. Ukazała ona kategorię możliwości zarówno w relacji do bytu konkretnego, jak i w dwóch aspektach: epistemologicznym i ontologicznym. Wiążąc pierwszy aspekt z filozofią C.I. Lewisa, natomiast drugi z metafizyką Whiteheada, argumentowała na rzecz rewaluacji rzeczy konkretnych w terminach ich możliwości.

Trzeci dzień obrad rozpoczął się od wystąpienia **Artura Mordki** z Uniwersytetu Rzeszowskiego, który omówił elementy ontologii Hartmanna w kontekście estetycznej analizy obrazu. Zaznaczając, że na aksjologicznym poziomie analiz fundamentalne kategorie nabierają odmiennego znaczenia, prelegent wyróżnił cztery rodzaje relacji zależności w strukturze obrazu. Stwierdził również, iż warstwowa struktura obrazu oraz wprowadzone przez Hartmanna kategorie ontologiczne pełnią ważne funkcje w refleksji nad niektórymi fenomenami sztuki współ-

czesnej. Problem wartości pojawił się ponownie w wystąpieniu **Piotra Pękali** z Towarzystwa Metafizycznego im. A.N. Whiteheada, który stwierdził, że nie sposób mówić o wartościach w oderwaniu od powiązanego z nimi systemu metafizycznego. Argumentował, że Whiteheada ujęcie wartości jako organicznych i wewnętrznych aspektów wszystkiego, co aktualnie istnieje, może konkurować z innymi opracowaniami aksjologicznymi, przyznającymi wartościom odmienny sposób istnienia. Następnie **Martin Kaplicky** z Uniwersytetu Karola w Pradze w Czechach przedstawił fragmenty spekulatywnej metafizyki Whiteheada, aby podjąć próbę scharakteryzowania procesualnej estetyki. Zwracając uwagę na kategorię Kreatywności, stwierdził, że naturalne wartości stanowią klucz do metafizycznej syntezy istnienia. Jednocześnie zaproponował on dynamiczne ujęcie procesualnej estetyki.

Przedmiotem kolejnego wystąpienia był związek kategorii procesualnych z myślą indyjską przedstawiony przez **Kuriana Kachappilly'ego** z Christ Univeristy w Bangalore w Indiach. Omówiwszy niektóre podstawowe pojęcia i tezy metafizyki Whiteheada, zestawił je kolejno z buddyzmem oraz z myślą Ramanudźy i Ghandiego. We wnioskach zwrócił uwagę na komplementarność ujęć zachodnich i wschodnich myślicieli, których zestawienie przekracza wąskie ograniczenia wiedzy i w ten sposób poszerza horyzont życia. W kolejnym wykładzie **Coling Shingleton** ze Swinburne University of Technology w Australii przedstawił własne rozważania związane tak z filozofią procesu, jak i z hermeneutyką Levinasa oraz z szerszą tradycją filozoficzną. Stwierdził m.in., że metafizyka Whiteheada nie jest rozwinięciem zachodniej tradycji, lecz posiada własną etiologię i charakterystykę ontologiczną. Prześledził, w jaki sposób zrodziła się różnica między metafizyką materialistyczną i procesualną oraz ukazał znaczenie tej ostatniej w epoce modernistycznej i w anglosaskiej filozofii. Ostatni w sesji porannej głos zabrał **Piotr Wilczek** z Politechniki Poznańskiej, prezentując wykład o matematycznym platonizmie Whiteheada. Dyskutując koncepcję obiektów matematycznych jako przedmiotów wiecznych

i czystych potencjalności, zwrócił uwagę na obiektywność, ogólność i niezmienność zawarte w tym ujęciu. Prelegent odwołał się do współczesnych dyskusji w ramach filozofii matematyki i zaproponował interpretację pozycji Whiteheada z perspektywy tzw. wieloświatowego ujęcia ontologii w matematyce.

Sesja popołudniowa zawierała jedno wystąpienie, którego autorem był **Marcin Rządeczka** z Uniwersytetu Marii Curie-Skłodowskiej w Lublinie. Zaprezentował on Hartmanna ontologię nauk o życiu w relacji do ogólnej ontologii oraz ukazał jej filozoficzne znaczenie. Stwierdził, że inaczej niż w logicznym pozytywizmie, Hartmann nie uznawał filozoficznych rozważań o rezultatach nauk przyrodniczych za czystą analizę języka naukowego. Stwierdził, że problemy naukowe w swoim aspekcie fenomenologicznym mają znaczenie filozoficzne, podobnie jak rezultaty filozoficznych rozważań mogą być dwojako włączane w naukę – na poziomie aksjologicznym i ontologicznym. Konferencja została zakończona panelem dyskusyjnym zatytułowanym *Quo vadis Ontologia? Final Remarks on Meaning, Place and Role of the Modern Ontology*, w którym otwarta dyskusja wszystkich uczestników konferencji została wypełniona wnikliwymi uwagami na temat kondycji współczesnej ontologii oraz znaczenia myśli Hartmanna i Whiteheada w jej aktualnym rozwoju.

Jakub Dziadkowiec

STUDIA WHITEHEADIANA
2012

REPORT OF THE CONFERENCE *THE DYNAMICAL ONTOLOGIES OF A.N. WHITEHEAD AND N. HARTMANN* 5–7 MAY 2011, KATOWICE, POLAND

The conference *The Dynamical Ontologies of A.N. Whitehead and N. Hartmann* has taken place in Katowice Panewniki between the 5th and 7th May 2011. The event was organized jointly by two philosophical societies: the A.N. Whitehead Metaphysical Society from Poland and the Nicolai Hartmann Society from Italy. Besides the representatives of both societies, many scholars from various scientific centers from around the world took part in the conference. The lectures were delivered at the Franciscan Seminary in Katowice Panewniki that was one of the event's co-organizers, joined by the Chair of History of Ancient and Medieval Philosophy of The Pontifical University of John Paul II in Krakow.

During the first day introductory lectures were delivered, the purpose of which was to present basic concepts and theses of Whitehead's and Hartmann's ontological systems and to initially discuss some resemblances and differences between them. The first speaker was **Roberto Poli** from the Nicolai Hartmann Society in Italy who presented a short comparison of the two systems, discussing both the substantial aspects (e.g. the processual basis, the theory of values, the 2+2 ontological structure) and a global meta-philosophical attitude (e.g. the systematic ap-

proach, the close connection to science, the ability to distance themselves from their own results).

Subsequently four lectures were delivered that lasted one hour each and were followed by 30 minutes of discussion. The morning session was focused on Whitehead's philosophy. **Bogdan Ogrodnik** from the A.N. Whitehead Metaphysical Society in Poland summarized the scheme of processual concepts, including the quantized process, the actual entities, their bipolar nature and the idea of their mutual, internal bonds. He discussed a co-presence of atomistic and 'continuous' models of the world, the concept of organism, the vibrational form of existence, and emphasized the meaning of religious and aesthetic experiences for metaphysics. In the second lecture **Helmut Maassen** from the Deutsche Whitehead Gesellschaft in Germany continued the introduction of the fundamental concepts of Whitehead's philosophy, paying attention to his categorial scheme and to diverse forms of process analyzed in two aspects: genetic and morphological. Introducing the problem of values, he observed that the processualism accepts both the good (as a positive and creative element) and the evil (as a positive and destructive element). The universe as a creative advance into novelty requires both factors for its existence.

Two lectures included in the afternoon session concerned the ontology of Hartmann. Basic domains and types of existence as well as the nature of ontological categories were introduced by **Alicja Pietras** from the Pomeranian University in Słupsk, Poland. In her comprehensive lecture she distinguished between the moments of existence (*Sosein*, *Dasein*), the types of existence (real, ideal and irreal), and the modes of existence (actuality, possibility, necessity). She also presented categories as the principles of being and discussed a number of philosophical mistakes connected with the so-called old doctrine of categories. In his second lecture **Roberto Poli** continued a preface to Hartmann's thought, discussed four basic ontological theses, different types of categories (fundamental, special, local), and combined them with the problem of ontological levels.

The next two days of the conference contained forty-minutes lectures divided into a half an hour talk and a discussion that lasted ca. 10 minutes. The second day was again opened by **Roberto Poli**, who discussed the two patterns present in the ontology of Hartmann: (i) the first one, exemplified by many pairs of fundamental categories (e.g. matter-form) and by the moments of existence (*Sosein*, *Dasein*), and (ii) the second one, concerning the difference between a pure category and a being property, e.g. time and temporality. **Predrag Cicovacki** from the College of the Holy Cross in USA dedicated his first lecture to the comparison between Kant's and Hartmann's concepts of categories. After discussing historical sources of categorial analysis, the lecturer presented Hartmann's attempt to invert the Copernican revolution of Kant. The final part of the talk was an interesting attempt of a reverse critique of Hartmann's approach from the Kantian perspective. Next, **Bogdan Ogrodnik** introduced the similarities between Whitehead's and Hartmann's concepts of knowing which both reach beyond a simple subject-object distinction. Emphasizing that metaphysical statements have a hypothetical status, he argued that the philosophy of organisms provides such a description of cognition in which it becomes only an exemplification of a more primordial type of metaphysical relation of prehension.

The next interesting attempt of comparison between the two philosophical systems was the lecture, in which **Maria-Teresa Teixeira** from the Lisbon University in Portugal carefully discussed their aspects connected with the concepts of process, levels of reality and evolution. Revealing similarities between the Hartmann's stratification and the Whitehead's hierarchy of societies, she admitted that both systems have a processual and dynamic character, however the very concepts of process and temporality are understood differently. In the successive lecture **Karl-Friedrich Kiesow** from the Leibniz Universitat Hannover in Germany compared both thinkers on the ground of the philosophy of nature and their discussion of the mind-body relation. Despite the differences in perceiving the place of mind

in the nature, both – Whitehead and Hartmann – tried to bridge the mind and the matter in a new, more constructive way. In the last lecture of the morning session **Jakub Dziadkowiec** from the John Paul II Catholic University of Lublin in Poland introduced conceptual foundations for an ontological theory of the levels of reality. He argued there are mechanisms in both systems that enable a development of stratalism in two aspects: horizontal and vertical, and its connection with the ontological relation of emergence.

The afternoon session began with the lecture of **Andrzej Chmielecki** from the University of Gdansk in Poland dedicated to proposals of some modifications to Hartmann's ontology. After a short critique of several Hartmann's theses, the lecturer presented: an analysis of the pairs of categories: individual-general and temporal-atemporal; a distinction of the two aspects of existence: in-sistence and per-sistence; and a proposition of the identification of the fifth level of real being, the so-called intelligibilies. In the next lecture **Predrag Cicovacki** combined the Hartmann's concept of values as ideal beings with the Popper's understanding of values as objects of the "third world." Discussing a possibility of ascribing the real type of existence to values, he adduced the arguments by virtue of which Hartmann did not accept the Popper's suggestion. Afterwards, **Lukasz Lamza** from the Pontifical University of John Paul II in Krakow, Poland, referring to a hierarchical classification of research topics in physics and astronomy (PACS 2008), introduced a proposal of an empirical theory of the levels of reality. Clearly defining his methodology and narrowing his research down to the inanimate part of natural history, he criticized a linear and continuous way of thinking about the cosmic evolution. In the summary he proposed a refreshed classification of the inorganic levels of reality, where common labels like "physical," "chemical," "mineralogical," or "biological" should be replaced by names "pre-nuclear," "post-nuclear," "solid state," and "planetary".

After a short break the floor was given to **Piotr Lesniak** from the University of Rzeszow in Poland who dedicated his lecture

to the concept of time and space in early works of Whitehead. Distinguishing three types of objectivity and identifying Whitehead's position with the so-called natural objectivity, he argued for the thesis that the time is to be searched – by means of the concept of duration that defines an event – within an extra--subjective nature. The next speaker was **Vesselin Petrov** from the Bulgarian Academy of Sciences, who demonstrated that the concept of anticipation – gaining its importance in the contemporary science and philosophy – belongs to the essential elements of Whitehead's metaphysics. Analyzing late works of Whitehead, the speaker noticed that the concept of anticipation played its role in a criticism of Cartesian substantialism and was used in the processual concept of society in explaining the place of future in the presence. Its teleological overtone also allowed for a partial denial of the difference between animate and inanimate beings, and strengthened an argumentation for the gradual emergence of life from its inorganic basis. The last lecture of the second conference day was delivered by **Olga Stoliarova** from the State University Higher School of Economics in Moscow, Russia. She presented the category of possibility in the relation to a concrete being, as well as in two aspects: ontological and epistemological. Conjoining the former aspect with the philosophy of C.I. Lewis, and the latter aspect with the Whitehead's metaphysics, she argued for the revaluation of concrete things in terms of their possibility.

The third day began with the lecture of **Artur Mordka** from the University of Rzeszow in Poland who discussed the elements of Hartmann's ontology in a context of the aesthetical analysis of the painting. Emphasizing that fundamental categories acquire a distinct meaning at the axiological level, the lecturer distinguished four types of the dependence relation in a structure of a painting. He also claimed that the layer structure of painting and the ontological categories introduced by Hartmann play an important role in the reflection over some phenomena of the contemporary art. The problem of values appeared again in the talk of **Piotr Pekala** from the A.N. Whitehead Metaphysical So-

ciety in Poland, who stated that there is no possibility of discussing values apart from a metaphysical system conjoined with them. He argued that Whitehead's concept of values as organic and internal aspects of everything what actually exists can compete with other axiological studies, ascribing the different type of existence to values. Next, **Martin Kaplicky** from the Charles University in Prague, Czech Republic, introduced fragments of Whitehead's speculative metaphysics in attempt to characterize the processual aesthetics. Underlining the category of Creativity, he maintained that natural values constitute a key to the metaphysical synthesis of existence. At the same time he proposed a dynamic approach to the processual esthetics.

The subject of the next talk was the relation of processual categories to Indian thought presented by **Kurian Kachappilly** from the Christ University in Bangalore, India. After discussing some basic concepts and theses of Whitehead's metaphysics, the lecturer combined them successively with Buddhism and with the thought of Ramanuja and Gandhi. In conclusions he noticed the complementarity of proposals of Western and Eastern thinkers, whose comparison exceeds the narrow limits of knowledge, and therefore, broadens the horizon of life. In the next lecture **Colin Shingleton** from the Swinburne University of Technology in Australia presented his own considerations connected with the process philosophy, as well as with the hermeneutics of Levinas and with a broad philosophical tradition. He maintained, among others, that Whitehead's metaphysics isn't essentially a development of Western tradition, but possesses its own etiology and ontological specification. He traced how the difference between the materialist and the processual metaphysics came to being, and revealed a meaning of the latter in the modern era and in the Anglo-Saxon philosophy. The last speaker of the morning session was **Piotr Wilczek** from the Poznan University of Technology in Poland who delivered a lecture on the mathematical Platonism of Whitehead. Discussing the concept of mathematical objects as eternal objects and pure potentialities, he underlined the objectivity, generality and immutability enclosed in the con-

cept in question. The lecturer referred to contemporary debates within the philosophy of mathematics and proposed an interpretation of Whitehead's position from the perspective of the so-called many-world ontology in mathematics.

The afternoon session contained just one lecture of **Marcin Rzadeczka** from the Maria Curie-Sklodowska University in Lublin, Poland. He presented the Hartmann's ontology of life sciences in relation to the general ontology, and he exhibited its philosophical meaning. The speaker claimed that, unlike the logical positivism, Hartmann did not consider the philosophical consideration about results of natural science a pure analysis of scientific language. He maintained that scientific issues in their phenomenological aspect possess a philosophical meaning, as well as the results of philosophical considerations may be included in the science in a twofold way – at the axiological and at the ontological levels. The conference was ended with the panel discussion entitled *Quo vadis Ontologia? Final Remarks on Meaning, Place and Role of the Modern Ontology*, in which an open discussion between all participants was filled with insightful remarks on a condition of contemporary ontology and on a meaning of Hartmann's and Whitehead's thoughts in its current development.

Jakub Dziadkowiec

ŚWIATOWY KONGRES FILOZOFII PROCESU W POLSCE

W wrześniu 2013 roku w Krakowie odbędzie się IX Międzynarodowy Kongres Filozofii Procesu (IX International Whitehead Conference). Pierwszy kongres odbył się w „mekce" procesualizmu, tj. w Clermont (USA), a ostatnich kilka odbyło się w Seulu (2004), Salzburgu (2006), Bangalore (2009) oraz Tokio (2011). Dzięki staraniom Towarzystwa Metafizycznego im. A.N. Whiteheada udało się zainteresować International Process Network (IPN) lokalizacją kolejnego kongresu w Krakowie. Oficjalnym organizatorem konferencji jest IPN oraz Towarzystwo Metafizyczne. IPN jest nieformalną grupą 15 osób reprezentujących różne stowarzyszenia związane z filozofią procesu i jej aplikacjami. Głównym jej celem jest wspieranie i koordynowanie rozrzuconych po całym świecie stowarzyszeń, ośrodków oraz środowisk filozoficznych rozwijających filozofię procesu. Towarzystwo Metafizyczne utworzono w 2003 roku w Katowicach-Panewnikach. Obecnie liczy ponad 30 filozofów, teologów, fizyków, biologów, lingwistów itd. z Polski, Czech, Węgier, Niemiec, Indii.

Współorganizatorem IX Kongresu oraz gospodarzem będzie Uniwersytet Papieski Jana Pawła II w Krakowie. Wzorem poprzednich kongresów zorganizowanych zostanie wiele sekcji tematycznych pokrywających swym zasięgiem zagadnienia od fi-

lozofii przyrody po problematykę filozoficzno-teologiczną czy historyczno-filozoficzną.

W Polsce były znane i rozwijane zarówno logiczne prace Whiteheada (żeby wspomnieć tylko Leona Chwistka i jego wkład w teorię typów), prace analityczno-krytyczne z zakresu filozofii przyrody (Metallmann, Witkiewicz) aż po esencjalną dyskusję z metafizyką procesu (Ingarden, Życiński). Tak więc organizacja kongresu wpisuje się w długą tradycję recepcji i polemiki z myślą A.N. Whiteheada w Polsce.

Roboczy tytuł konferencji to „Proces i społeczność: teoria i zastosowania". Organizatorzy postanowili zaproponować uczestnikom szerokie ramy pojęciowe w analizie różnych obszarów rzeczywistości wyznaczone kategoriami „proces" jak i „społeczność". Mają one w filozofii Whiteheada znaczenie dalekie od potocznego, a jednak pozwalające z nowej perspektywy dojrzeć w otaczającej rzeczywistości, zarówno tej dostępnej naukom szczegółowym, jak i doświadczeniu potocznemu unifikujące je wzorce dynamiki wyłaniania się bytów aktualnych oraz tworzonych przez nich społeczności.

Do udziału w kongresie w roku 2013 w Krakowie zapraszamy filozofów, którym bliska jest perspektywa procesualna (obecna przecież w większości wielkich systemów filozoficznych) oraz naukowców zainteresowanych osadzeniem swoich dyscyplin w mocnym filozoficznym kontekście.

Towarzystwo Metafizyczne im. A.N. Whiteheada

Uniwersytet Papieski Jana Pawła II w Krakowie

Historia Uniwersytetu Papieskiego Jana Pawła II w Krakowie zaczyna się w tym samym czasie, co dzieje najstarszej polskiej uczelni – Uniwersytetu Jagiellońskiego. W roku 1397 papież Bonifacy IX erygował Wydział Teologiczny w ramach Studium Generale. Od tego czasu wydział rozwijał się i aktywnie działał, zdobywając sławę i uznanie środowiska naukowego, zarówno w Polsce, jak i poza jej granicami. Jego funkcjonowanie próbowała przerwać dopiero komunistyczna władza, która jednostronną uchwałą Rady Ministrów w 1954 roku usunęła Wydział Teologiczny z Uniwersytetu Jagiellońskiego. Decyzja ta nie przerwała jednak jego działalności.

Dziś Uniwersytet Papieski Jana Pawła II jest dynamicznie rozwijającą się uczelnią. Nasza oferta dydaktyczna jest ciekawą propozycją dla młodych ludzi. W ramach pięciu wydziałów wciąż otwieramy nowe kierunki i specjalności dostosowane do potrzeb naszych czasów. Nawiązujemy wciąż nowe kontakty z zagranicą.

Tradycja, w której jesteśmy zakorzenieni, zobowiązuje nas do dbania o wysoką jakość kształcenia oraz podejmowania nowych wyzwań badawczych zgodnie z myślą naszego patrona bł. Jana Pawła II, który podkreślał pozytywną rolę Kościoła w rozwoju kultury i oświaty oraz przywiązywał wielką wagę do dialogu ze światem nauki. Mamy nadzieję, że w przyszłości Uniwersytet Papieski będzie przyczyniał się do zachowania tożsamości europejskiej poprzez wzmocnienie relacji między sferą nauki i wiary w duchu encykliki *Fides et ratio* oraz przypominanie o chrześcijańskich korzeniach europejskiej kultury.

Studia w Krakowie to dla naszych słuchaczy niepowtarzalna okazja do kontaktu z kulturą i nauką w jednym z najpiękniejszych miast Europy. Stanowią dla nich szansę duchowego i intelektualnego rozwoju. Chcemy, aby nasi studenci odnosili sukcesy, dlatego oferujemy zajęcia w małych grupach, które sprzyjają dobrym kontaktom między studentami i wykładowcami, zapewniając indywidualne podejście do każdej osoby. Główną zaletą naszej uczelni jest połączenie atmosfery wiary i tradycji Kościoła katolickiego z nowoczesnym sposobem studiowania.

STUDIA NA UNIWERSYTECIE

Wydział Filozoficzny
- filozofia

Wydział Historii i Dziedzictwa Kulturowego
- historia
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