

Continuity of Partition

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ABSTRACT

Throughout the history of culture, particularly in philosophy, there existed – and still exist – numerous ways of contemplating human's place in the world and our relationship with the universe. Moving from myth to philosophy and from religion to science, human culture has acquired enormous richness and diversity. This has led to the emergence of multiple directions, tendencies, and philosophical schools that address the central issues of human life, consciousness, society, science and technologies, ethics and logic, aesthetics and language, etc., etc. In observing these, historians of philosophy often attempt to somehow systematize them, dividing the diverse and multifaceted directions of thought into large groups opposed to each other in one or more aspects. More often than not, these divisions are bipolar, making the manifoldness of worldviews accessible for analysis. However, any analysis calls for synthesis which generally means 'taking a higher standing' by the commentator, summoning the ability to generalize and go beyond the specifics. The primary aim of this paper is to display the waving trajectories of philosophical debates showing the continuity of partition – and the reverse movement towards synthesis, sometimes even harmony, – or to fusion, which is often erratic. This paper primarily focuses on two pairs of opposing trends in philosophy: namely, these of essentialism / relativism and empiricism / rationalism, as well as two couples of closely linked concepts: nature/essence and reason/rationality. In conclusion, the paper introduces the author's theory of cognition, termed *existential materialism*, to academia and all the reading public.

KEYWORDS

philosophy; controversial trends; essentialism; relativism; empiricism; rationalism; nature; essence; reason; rationality; idealism; existential materialism

1 Introduction

In ancient European culture, the progression of knowledge from the stage of myth to scientific-theoretical and philosophical-ideological explanation occurs practically simultaneously. When the level of scientific knowledge is reached, philosophical interpretations are also offered. But this is not just a consistently ascending "stairway" from mysticism or the ordinariness of common sense. The ideological branching on this path of development involved the confrontation of many sides.

When the level of scientific knowledge is reached, philosophical explanations start simultaneously. But it wasn't just a stairway. These were offshoots on this path of development.

The starting position was challenged by the next step: philosophy polemical with myth, world religions with philosophy, science with religion, philosophy of science with philosophy of life, and both of these latter disciplines – with metaphysics.¹ Yet, nothing viable ever perishes completely in time; it transforms and changes; all the main historical worldviews continue to exist today.

In both ontogenesis and phylogenesis, the process of philosophical cognition founding scientific worldview offers a range of *glossa* interpreting natural and cultural phenomena. Originally, the demystifying currents of thought split into partition, flowing in opposing directions – Ionian philosophy versus Italian philosophy, namely, materialism vs idealism, and dialectics vs metaphysics: the European legacy from ancient times; realism vs nominalism, and '*haecceitas*' vs '*quidditas*' ('thisness' versus 'whatness') – combatants of the Middle Ages; rationalism vs empiricism forming the portrait of English and French Enlightenment, or modernity; positivism vs existentialism, theory vs practice, pluralism vs universalism of the 19th – 21st centuries, i.e., in contemporaneity.

One might also recall the everlasting disputes on good and evil, beauty and ugliness, matter and spirit, nature and culture, freedom and necessity, truth and falsity, trial and error, love and duty; on experience vs theory; socialism vs capitalism; totalitarianism vs democracy; etc., etc.

Transgressing a certain line and violating the measure of perseverance, the opposing currents of thought, according to the logic of the Möbius strip or to Heraclitan-Hegelian dialectical law, each turn into its opposite. Radical ancient skepticism led to the systematization of arguments (Sextus Empiricus) or to the dogmatization the critique of dogmatism (Aenesidemus). Credo of Protagoras, the father of sophistry, that "Man is the measure of all things: of things that are, that they are, and of things that are not, that they are not" suggests a notion echoed centuries later by the medieval scholastic

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¹ We will understand the doctrine of an unobservable essence in which being and consciousness coincide as metaphysics.

William of Ockham: "...Intuitive knowledge (*notitia intuitiva*) of a thing is such knowledge, by virtue of which it is possible to know, whether there is a thing or not (*utrum res sit – vel non*), so that, if the thing is, (*sit*), the mind immediately makes judgments that it is, and clearly cognizes, what it is (*et evidenter cognoscit eam esse*)".²

Probably the most exaggerated yet at the same time representative case today, is the absolutization of the Relative in postmodernism³.

This is not a simple mishandling of the subject matter; the proper research would untangle the logic of transformations inherent in unraveling the laws and regularities of cognition.

There are three basic steps of discernment expound in elementary logic: conjunction, disjunction, and implication (or inference).

Consciousness – more precisely, a cognizing human reflecting the world in one's mind – first encounters the multiplicity of objects and events which the mind then starts enumerating: entity + entity + entity + phenomenon + phenomenon + phenomenon... → everything. At some stage, the process of cognition changes. Comparing a sufficient number of objects, establishing their similarity and difference in terms of extent, degree, time, space, etc., the mind begins to operate differently: it divides, classifies, deliberately establishes boundaries, sets membranes, replacing a numerical row with some general concept. Classifications are divided in two – either branching (forking, dichotomic) or typifying according to the specifying property (quality). Changing of the basis for division/classification might be productive, revealing additional facets of the object under study, but this change should always be done openly.

Classification, akin to creation, rationally strengthens the boundaries of the "first entities" (individuals), and then the "second entities" (species and genera). In place of "everything" the concept of "universal" emerges.

Finally, the operation of implication logically (formally) reflects the mind's ability to grasp causality, which is a certain expression of time.

However, formal logic alone is not sufficient, as it presents a stable, static picture that lacks movement. It is "anatomy, not physiology, of thought." To grasp the latter, only dialectics is helpful and functional.

Young Hegel, beginning with his first book written in 1801, concentrated his attention on the concept of "bifurcation" (*Entzweiung*) of all things, processes, and events. In this form of dualism, oppositions are clearly distinct, but at the same time they freeze in their contrasting mutual polarity.

"So wie aber der Speculation... sich zum System bildet, so verläßt sie sich und ihr Princip und kommt nicht in dasselbe zurück; sie übergibt die Vernunft dem Verstand, und geht in die Kette der Endlichkeit des Bewußtseyns über, aus welchen sie sich zur Identität und zur wahren Unendlichkeit nicht wieder rekonstruiert." [Hegel; *Differenz der Fichtes'schen und Schelling'schen Systems der Philosophie*. S. 6]. In English: "As soon as speculation forms a system, it abandons itself and its principle and does not return to it. It entrusts reason to the understanding and passes into a series of finites (*Endlichkeiten*), from which it is not then reconstructed into identity and true infinity," – Hegel asserts.

In Kant, such states were defined in the sharpest possible way, but dialectics cannot dwell on polarities; those should be overcome through their further movement.

Thus, efforts and attempts have always been made to reverse formal disjunction, to merge the boundaries between the controversies either observed in nature and society or drawn by logic – or to unite them in a synthesis. It is reflected in the basic law of dialectics, that of unity and struggle of opposites, from Heraclites to Hegel and Marx. Let alone the Kantian *a priori* synthetic judgments – already at the dawn of European philosophy, Socrates bound rationality and ethics in consciousness, and Aristotle's ethics treated about the need for a "golden mean" in controversial attitudes and corresponding concepts. Similarly, in the 21st century, the brand new Virtue epistemology of Duncan Pritchard, Shane Ryan, and Artur Karimov, again ties rationality and ethics together. A century ago, Empiriocriticism sought to find a third path "beyond materialism and idealism". Meanwhile, postmodernists, with their notorious concept of the holistically indistinguishable 'rhizome', propagated an alternative to the law of contradictions, either embracing antagonistic unity or peaceful coexistence.

Notwithstanding these efforts we can still remember the famous scientific principle of complementary.

This principle, originally formulated by great scientists of the 20th century, Niels Bohr and Werner Heisenberg, in the version of correspondence in physics, is applied nowadays in humanities, and elaborated within philosophy as well.

This partially explains the effect of collective discussions in teams (brainstorming) which often result in a form of 'osmosis'.

² William Ockham. *Selected works*. – М.: РАН ИФ, Едиториал УРСС, 2002. – P. 99. [Bilingua Latin – Russian].

³ They are always both there, however: Absolute and Relative, – as there are both rest and motion. Rest is relative and movement is absolute. Call it a Möbius strip.

Thus, the continuity of partition along with the processes that bring back unity of the opposites and non-contradictory balance – sometimes reaching harmony akin to the ‘golden age’, opposing in themselves as disintegration and integration, aka coincidence – will make the subject of this paper.

2 Methodology

We make use of both formal (Aristotelian) and dialectical (Hegel’s and Marx’s) logic.

Aristotle was the “most methodical mind among Greeks” (Marx). Method [‘way’, in Greek] is a means of obtaining, organizing, storing, transforming, and transmitting knowledge. A scientific method is a system of regulatory principles and rules of practical and theoretical activity developed by a subject based on the regularities of the object of knowledge. Analysis and synthesis, induction, deduction and analogy, operations with judgments and rules of argumentation are applied in the article unconditionally. It is also accepted that many useful additions to elementary logic were made by the scholastics: for example, the “logical quadrate” clearly explains the relationship between (simple) judgments of the same matter in terms of quantity (one or many) and quality (affirmation or negation). In addition, the “logical quadrate” demonstrates the cardinal difference between opposites and contradictions, which is the most important thing in it.

Turning to dialectics. Born in Ancient Greece, dialectics became a universal method of cognition over time, and its subject to comprehension was movement and change. The Milesians and Heraclites paved the way to dialectical philosophy, let alone sophistic and the Sceptics’ relativism. The outstanding Russian philosopher Alexei Losev, considering the peculiarities of thinking of the ancient Greek naturalists of the early period, and further, the classics of Plato and Aristotle, then also the academics of the Hellenistic era, – emphasized that doubt, searching, and anti-dogmatism was the norm in Greece for all philosophical movements, from Democritus to the classical academics, the skeptical academics, and finally, to Saturninus. A. F. Losev believed that in those early times, all reasoning was directed at never-ending searching, doubt, and probing of the most obvious. Plato, in *Timaeus*, laid out the basic principle of later skepticism, based on the general material fluidity of things, which prohibits the expression of any precise and contradictory judgments.⁴ Sextus Empiricus, remaining consistent to the end, also subjected all his arguments against dogmatism to philosophical doubt and skeptical denial. This principle which unites position and opposition while affirming the indistinguishability of boundaries was called *isostheny*. However, this was not yet a system. The credit for transforming dialectics from a common philosophical approach and a way of resolving disputes into a scientific-philosophical theory of universal development, that is, a system, belongs entirely to Hegel. In Hegel, the method developed into science. He turned dialectics as a way of knowing into the most developed theory of dialectics as a philosophical science, a remarkable feat of speculative thought.

It is worth recalling the theoretical divergence between young Shelling and Hegel: first formulated in polemics with Shelling who asserted full identity of contraversies, the following panorama in Hegel’s masterpiece “Science of Logic” became later the most famous explanation of the most “Hegelian” law concerning the opposites as combatants “an dem Bewußtsein”, in consciousness (namely, the law of negation of the negation):

“...Das Negative ebenso sehr positiv ist, oder... sich Widersprechende sich nicht in Null, in das abstrakte Nichts auflöst, sondern wesentlich nur in die Negation seines besonderen Inhalts, oder... eine solche Negation, nicht alle Negation, sondern die Negation der bestimmten Sache, die sich auflöst, somit bestimmte Negation ist; also im Resultate wesentlich das enthalten ist, woraus es resultiert; – was eigentlich eine Tautologie ist, denn sonst wäre es ein Unmittelbares, nicht ein Resultat. Indem das Resultierende, die Negation, bestimmte Negation ist, hat sie einen Inhalt. Sie ist ein neuer Begriff, aber der höhere, reichere Begriff, als der vorhergehende; denn sie ist um dessen Negation oder Entgegengesetztes reicher geworden, enthält ihn also, aber auch mehr als ihn, und ist die Einheit seiner und seines Entgegengesetzten. – In diesem Wege hat sich das System der Begriffe überhaupt zu bilden – und im unaufhaltsamen, reinem, von außen nichts hereinnehmendem Gange sich zu vollenden”. [Hegel, *Wissenschaft der Logik*; S. 37 – 38]. Author’s translation: “The negative is also positive, or ...the self-contradictory does not pass into zero, into an abstract nothing, but essentially only into the negation of its particular content, or... such a negation is not the negation of everything, but the negation of a certain thing which resolves itself, therefore such a negation is determinate; ...thus the result essentially contains that from which it follows; – properly speaking, a tautology, for otherwise it would be something immediate and not a result. Since the result, the negation, is a determinate negation, it has a certain content. It is a new concept, but a higher, richer concept than the previous one; for it has been enriched by its negation or opposite, it therefore contains the previous concept, but more than just this, and is the unity of itself and its opposite. – In this way, a system of concepts must be formed in general, – and in an irresistible, pure movement that does not accept anything

⁴ Losev A.F. Cultural and historical significance of ancient skepticism and the work of Sextus Empiricus. / Introduction to: Sextus Empiricus. Works in 2 volumes. – Vol. I. – Moscow: “Mysl”, 1976. P. 21–38.

from outside, it must receive its completion."

In philosophy, besides Hegel's peerless dialectics, several Kantian ideas prove to be methodically effective. The Author is not a Kantian, but one cannot ignore certain great insights of the Königsberg thinker; in this paper, we will recall famous "schema", aiding to understand philosophically the meaning of mediating forms of the universals.

The (ability of) judgment itself was assumed by Kant to be the synthesis of theoretical and practical reason. In his gnoseology, Kant paid great attention to the judgments called 'schemas': those were "something third" placed between phenomena and categories; he hoped, with his doctrine of "schematism", to discover the mechanism of the extension of categories to sensibility precisely as the way of active influence of reason on the material of sensuality.

"Nun ist klar, daß es ein Drittes geben müsse, was einerseits mit der Kategorie, andererseits mit der Erscheinung in Gleichartigkeit stehen muß, und die Anwendung der ersteren auf die letzte möglich macht. Diese vermittelnde Vorstellung muß rein (ohne alles Empirische) und doch einerseits intellektuell, andererseits sinnlich sein. Eine solche ist das transzendente Schema." [Kant, Kritik der Reiner Vernunft. S. 187]. In English: "Obviously there must be some third thing, which is homogeneous on the one hand with the category, and on the other hand with the appearance, and which thus makes the application of the former to the latter possible. This mediating representation must be pure, that is, void of all empirical content, and yet at the same time, while it must in one respect be intellectual, it must in another be sensible. Such a representation is the transcendental schema." [Kant, Critique of Pure Reason, p. 181].

As a result, such a quality (of a concept) as universality appears.

In the format of this paper, however, dialectics is mainly applied as a method of cognition. A scholar might not be developing philosophical theory, literally; still s/he can be a dialectician, in method. What makes dialectics a method and not a theory, is a system of four principles: these are universal interconnection, development, practical determinant of the object's link with person's needs, and concreteness of truth.

«Чтобы действительно знать предмет, надо охватить, изучить все его стороны, все связи и «опосредствования». Мы никогда не достигнем этого полностью, но требование всесторонности предостережет нас от ошибок и от омертвления. Это во -1- х. Во -2- х, диалектическая логика требует, чтобы брать предмет в его развитии, «самодвижении» (как говорит иногда Гегель), изменении ... В -3- х, вся человеческая практика должна войти в полное «определение» предмета и как критерий истины и как практический определитель связи предмета с тем, что нужно человеку. В -4- х, диалектическая логика учит, что «абстрактной истины нет, истина всегда конкретна» ...». [ПСС, т. 42. С. 290].

Author's translation from Russian: "In order to really know a subject, it is necessary to embrace and study all its aspects, all its connections and "mediations". We will never achieve this completely, but the demand for versatility will protect us from mistakes and from numbness. This is first. Second, dialectical logic requires that we take the subject in its development, "self-movement" (as Hegel sometimes puts it), change... Third, all human practice must enter into the complete "definition" of the subject both as a criterion of truth and as a practical determinant of the subject's connection with human needs. Fourth, dialectical logic teaches that "there is no abstract truth, truth is always concrete" ...". [Lenin, p. 290].

We find the elaboration of the problem of the universals – i.e. the dilemma between medieval realism and nominalism – by a Russian logician and philosopher G. D. Levin, methodically useful. He rightly identified the main logical obstacle preventing a resolution of this problem in contemporary philosophy: the confusion of universal/individual and abstract/concrete, respectively. To substantiate the notion of essentialism, we draw on the research of several authors for "The Stanford Encyclopedia of Philosophy" (Cross, Robertson, Atkins, et al.).

We also find the research conducted by Russian philosopher M. A. Kissel' on the dilemma of empiricism and rationalism methodically very helpful. Kissel' thoroughly explored the similarities and distinctions between these foundational schools of modern philosophy.

The Author is not a postmodernist, but the drive to a more "humane" gnoseology (to avoid calling it 'subjective'), in itself, is appealing to a certain extent; therefore, in conclusion we will sketch the outline of a new theory of cognition that considers the possibility of changing the principle of partition.

3 Discussion

We begin the discussion by a staunch statement that controversies are inevitable and that their opposition – often turning into confrontation – is a natural law. Take an example from physics: according to the known forces of interaction of material particles, these universal and necessary forces that are aimed at attracting particles to each other act upon a certain point. Beyond that point forces of repulsion manifest themselves stronger than gravity. In this picture of the world, fundamental particles behave in an ambiguous way: say, electron can hit other particles – and at the same time diffract like a wave of light. While we can't change the laws of nature, we can interpret them in different ways painting different classical and non-classical pictures.

Speaking materialistically, the continuity of partition is the law of nature and hence, of thought; however, controversies (*Entgegengesetzte*) differ from contradictions (*Widersprechenden*), which is also evidenced by terminology: dictum (*sprechende*) means expressed in wording, like identity and non-identity, while controversies allow for some intermediate state: in Aristotle's "Categories"⁵ these are grey and daffodil colours standing between white and black. Confusion or confluence of the opposites (*Entgegengesetztes*) is very feasible in such cases.

There is a problem of whether the laws of nature can be called laws, if they prove to be contingent: "The... issue is whether there are any contingent laws of nature. Necessitarians continue to work on filling in their view, while Humeans and others pay relatively little attention to what they are up to;" [Carroll, John W.] — but dialectics based on natural science established that controversies fall under the term 'law' squarely.

Both in objective and subjective reality, there is certain regularity, or 'logic', of development: holistic totality – (divided) similarity – dissimilarity – essential difference – controversy – contradiction – conflict. In the course of a conflict controversies either destroy each other and collapse, like electron and positron transforming in the course of an annihilation reaction and turning into two photons, – or one side survives – and is immediately complicated by a new opposite. Even without destroying the opposite, one side of the contrasting powers or trends of thought, can obtain another combatant in addition to the already existing one.

Controversies might come to reconciliation – in many ways and forms. If this goes on naturally, then there is nothing unsound or misleading in it. For example, in nature, transitional forms exist, such as polyps or fungi, which live between plants and animals. Same is true for the phenomena in society – i.e., language is both natural and cultural⁶; in semiotics, sense proves to be a centaur: it belongs to both the sensory and rational realms. In times of instability in the development of society, transitional forms emerge, for example, cooperation. In psychology, sensations dwell between the physiological (corporeal) and the mental (ideal). In aesthetics, beauty is opposed not only to ugliness, but also to falsehood [E. Fromm, *Psychoanalysis and Ethics*], these latter playing in unison. In the metalanguage of the observer – commentator – interpreter this is a so-called 'higher standing' – say, Aristotle's "third man" embracing the 'first man', a real human being, and a 'second man', the ideal concept. Or Kantian 'schemata'. Or positivism in the form of empiriocriticism. Or socialism permitting private ownership.

In Hegel's philosophy, the intermediate stage between *Verstand* (understanding, ratiocination) and *Vernunft* (reason) is negative dialectical reason: flexible and mobile, not reaching the identity of opposites, it, nevertheless, records their interaction. In Kant, prior to this, there existed the erring statement: "Opposites, for instance, cannot exist in the same thing at the same time, but only the one after the other." [Kant. *Critique of Pure Reason*]. But other Kant's ideas are handy for us: the manifold picture of 'schemas' is truly convincing⁷. For Kant, this was an attempt to move from sensuality to reason using the concept of "empirical representations" directly connected with objects through sensations.

Contingency of partitioning conversely, of convergence means that, in some cases, it may appropriate to speak of similarities, as, for example, between empiricism and rationalism; however, conversely, accepting assemblance, let alone identification of the concepts such as nature and essence, reason and rationality, may prove erroneous. Moreover, the same pairs of categories can allow for either closeness or opposition, depending on the context/circumstances. Some cases of convergence can be considered 'legitimate' – for instance, when authors applicably treat reason and rationality, being akin etymologically, as synonyms – and it is not uncommon; the same is true when the difference between genesis and basis becomes irrelevant (nature=essence), as in Neil Roughley or Michael Mitias. Also, it would be acceptable to change the angle from which the object under study is observed, as long as this shift is clearly indicated and proved fruitful. One and the same concept – say, 'students', – can be characterized in different, though interrelated modes, as 1)

5 After discussing the ten categories, four ways are given in which things may be considered contrary to one another. Chapter Ten. Four kinds of adverse. "Concerning things that are adverse to one another, they are spoken of in four ways: either as related to one another, or as opposites, or as privation and possession, or as affirmation and negation. ...for example, the double is opposed to the half as related, evil to good – as opposites, blindness to sight – as privation and possession, "he sits" and "he does not sit" – as affirmation and negation." Author's translation from Russian.

6 Czarnocka, Małgorzata. *Reason in Science and Beyond*. – Germany, 2024. "It is impossible to identify, for example, languages and linguistic competences as a product only of culture or only as a purely biological structure of the human brain. It is similar to the primary forms of cognitive methods; it is reasonable to maintain that they arise in the biological world and pass into the sphere of culture in a continuous, emergent way." Chapter V. § 1. Metatheses about human nature and subjective reason. – P. 140.

7 To enlarge on it: "The schema of cause... is the real upon which, whenever posited, something else always follows. It consists, therefore, in the succession of the manifold, in so far as that succession is subject to a rule. The schema of community or reciprocity, the reciprocal causality of substances in respect of their accidents, is the coexistence, according to a universal rule, of the determinations of the one substance with those of the other. The schema of possibility is the agreement of the synthesis of different representations with the conditions of time in general. Opposites, for instance, cannot exist in the same thing at the same time, but only the one after the other. The schema is therefore the determination of the representation of a thing at any time whatsoever. The schema of actuality is existence in some determinate time. The schema of necessity is existence of an object at all times". – P. 185.

general, 2) concrete, 3) positive, 4) relative (students are bound to their professors); 5) collective ("students of our group held a conference"), – or 6) non-collective ("students of our group receive stipends"); it might also be taken as registering; it depends.⁸

In other cases, however, the assemblance of convergences might turn out to be misconstrued. Russian philosopher G. D. Levin, criticizing Quine's example of philosophical dispute in his paper "On universals", outlined as "Philosophical debate about whether there are universals aka abstract entities...", underlines the following: "If Quine had said directly that the abstract and the general are the same thing, it would have been a mistake. But these concepts are sometimes merged, sometimes separated in him. And this is confusion".⁹ The reason is that abstractness and generality are closely related: the more general a concept is, the more abstract and poorer in content it grows, Levin points out. "Due to... metonymy... a term denoting an object often denotes a qualitatively different but closely related neighboring object."¹⁰

One general principle (warrant) guides the correctness of synthesis: the law of the mutual transition of quantitative changes into qualitative ones. Sometimes the point of change is known ('water freezes at 100°C'); but in great many cases the observer can't predict the moment of bifurcation.

Given that the field for discussion is not just enormous but endless and boundless, we focus on several foundational oppositions for closer analysis: 1) classical philosophical pairs of such trends as essentialism/relativism and empiricism/rationalism, and 2) the categories crucial for our inquiry: nature/essence and reason/rationality. We examine some examples of the reverse movement from the overt opposites endeavoring to repose the controversial courses.

The philosophical directions we inspect have been extensively studied in literature, so we'll concentrate only on the main theses – those regarding their partition and connection.

Essentialism and its opponents. Starting with the opposition of not separate paired categories, but entire philosophical trends, we must recall the most comprehensive and profound judgment that has come to us from the distances of millennia: the All is One. This was the absolute beginning of the true philosophical search for the unchanging foundation on which the universe rests.

Different elements pretended to play the role of this eternal matter – μητέρα – i.e., mother of all that exists: water, Gaia, air, fire, number, idea, logos, atom, monad, electron, (table of) elements... photon, quantum... Spin...

Or God.

However – as it was mentioned already – the starting position is challenged by the next step: partitioning of the directions begins, and the branches, in time, obtain their own specifics and justification.

The classical trends, essentialism and relativism, originated in antiquity: the ancient rationalistic tradition of Parmenides – Plato – Pythagoras was questioned by Heraclites, sophists, and skeptics. In Middle Ages, the opposition of (medieval) realism and nominalism was the main syntagmatic axis. Also, the distinction between existentialism and essentialism was comprehended. During the Renaissance, the latter became the epistemological premise of the New European science of Galileo and Newton, as a method of rational interpretation of experimental data in search for the "truth of the world". But further development of methodology raised the question of boundaries between "physics and metaphysics", and the foundations of criticizing essentialism were laid by D. Hume and I. Kant, each in his own manner.

Further on, another opponent emerged, to the detriment of essentialism: phenomenology with its descriptivism and the emphasis on the sensually given (and sensually taken) world of phenomena.

Existentialism, too, was vividly shaped in the 19th-20th centuries, and 'philosophy of life' challenged 'philosophy of science'. Essentialism then was opposed by both existentialism and positivism (from A. Comte to the present day), which denies "essences" unreducible to observations, – and instrumentalism, which views scientific theories as tools that can be replaced any time depending on the object under study. Still later, K. Popper used the term "essentialism" to designate a trend in philosophy of science, formed by believers in the ultimate knowledge of the eternal "essences" underlying observed phenomena. At last essentialism obtained one more combatant, called constructivism.

Ontologically speaking, essentialism was the search of the unique objectively existing basis, or fundament, capable of supporting Cosmos with all its uncountable properties and qualities. This One was called "beginning", "cause", "essence", "substance", Unitedness, "totality", or simply "Being" in Parmenides, the "glorious *ontos on*".

This is the reason why essentialism is sometimes called fundamentalism, or also monism, and the dilemma looks like Universalism vs Pluralism, while the talk about these induces the old disputes on universals. It is reflected in vast literature, so we will be brief here emphasizing only one problem. In Aristotle, "first essences" were particulars capable of existing separately, i.e., independently; while "second essences", genera and species, were dependent on individuals. Inasmuch it

8 Individual vs general, positive vs negative, concrete vs abstract, collective vs non- collective; half of these divisions characterizing concepts are controversies, and half are contradictory.

9 Левин Г. Д. Levin G. D. *Проблема универсалий. Современный взгляд*. – М.: Канон+, 2005. – p. 17.

10 Ibid., p. 16.

is accepted, the questions arise, first, as to whether genera and species exist at all (nominalism denies it); and if they do (as realism affirms), they should be either corporeal or incorporeal. If they are incorporeal, – Boethius argued discussing Aristotle and Porphyry, – then they either are independent of bodies, like God, mind, soul, or are dependent on bodies, like a line, plane, number or individual property. Thus, we distinguish between the universals as subjects of predication, and as subjects of inhesion. Inherent in a subject, though not a part of the subject, is a 'thing' which cannot exist without it: e.g., 'shape in a thing having a shape'. In early scholastics, the dichotomy called "The Tree of Porphyry" illustrated that division of the main universal (category), substance, could go down to establishing the "first substance" (essence) – Socrates, Plato, Virgil. Further division would not be classifying the concept, but "cutting" the individual body into parts.

Russian scholar G. D. Levin explains: "The first essence in the grammatical sense is the name of an individual object... It ... can only be the subject of a judgment. In the second, ontological sense, the first essence is the individual thing itself, designated by a proper name, and "everything else" is its attributes that characterize it, giving it certainty."¹¹

In search of the strong anchor to which the Universum is securely attached, you feel proud and happy when you find that it is *usia*, aka essence, or substance – but, on the other hand, you can instantly feel glad that this one Universum, unique and united in its Oneness (it is better expressed in German: in its *Einheit* and *Einzigkeit*), is so vast and multifaceted, so lavishing and rich in content. This is the opposition of the significant categories, or the last explanatory abstractions underlying the division: for essentialism/realism it is essence, for nominalism it is content.

Speaking about the difference of essence and content: One will always turn many, and many will always be underpinned with one.¹² The problem has been discussed for Millenia; however, this is not to be solved by means of the formal (elementary) logic, but only through dialectics. Different wording shows different paths of thinking; matter is one that is many, – same as consciousness.

Nowadays "Essentialism in general may be characterized as the doctrine stipulating that (at least some) objects have (at least some) essential properties. This characterization is not universally accepted..., but no characterization is; and at least this one has the virtue of being simple and straightforward."¹³

The averse vision called pluralism evidently was formed in ancient philosophy by Empedocles with his four roots and two powers, and by Descartes in the times of modernity who usually is attested as dualist for recognizing two substances, *res extensa* (matter) and *res cogitans* (spirit) possessing no common predicates – and especially by Leibniz with his "monads".

The terms "monism", "dualism", and "pluralism" are defined up to now based on the quantity, and from the point of view of ontology; but they are also sometimes used in gnoseology and social philosophy, although in a slightly different sense. In ontology, these are characteristics of the number of prior elements of being; in gnoseology, it is characteristics of the number of sources of knowledge; in social philosophy, it is characteristics of the number of leading political forces or social factors.

Based on the quality of the fundamental substance, a distinction was and is made between materialism and idealism. It must be underlined, though, that both materialism, ancient and modern, and objective idealism are compatible in an essentialist way in their search for the ONE substantial principle in *Außerlichkeit*, in the pitch darkness of the external world; both seek for this ONE outside the human mind, in contrast to subjective idealism.

Unlike the situation in cognition theories with the counter-position of gnoseological object and gnoseological subject, in frame of theories of being, presence of consciousness doesn't "double" the universe splitting it into two domains, material and ideal. Hence struggling currents of thought are expressed in relief and more vividly in theories of knowledge than in ontology. In gnoseology, for instance, essentialism was often claimed dogmatism and strongly opposed, both in antiquity – by sophistic, and in modernity – by relativism. Its main polemics in such cases concerned the problem of absolute truth.

Relativism started as an ancient philosophical trend and received mighty proofs in the newest times from natural sciences. A huge role, as it has already been underlined, was played by the correspondence principle applied for the construction of consistent quantum mechanics in the 20-ies of the 20th century.¹⁴ It was precisely physical interpretation

11 Левин Г. Д. *Проблема универсалий. Современный взгляд*. – С. 25–26.

12 In Plato (Parmenides): "If... some one were to abstract simple notions of like, unlike, one, many, rest, motion, and similar ideas, and then to show that these admit of admixture and separation in themselves, I should be very much astonished." – P. 2165-2166. (Sophist): "And, again, the all becomes more than one, for being and the whole will each have their separate nature." – P. 2354. <https://www.cakravartin.com/wordpress/wp-content/uploads/2008/08/plato-complete-works.pdf>

13 Robertson Ishii, Teresa and Philip Atkins, "Essential vs. Accidental Properties", *The Stanford Encyclopedia of Philosophy* (Spring 2023 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/spr2023/entries/essential-accidental/>

14 According to the correspondence principle, the presence of transitions between stationary states accompanied by radiation, is associated with the harmonic components of oscillation in the motion of an atom, which determine in classical theory the properties of radiation emitted as a result of the motion of a particle.

of quantum mechanics that Niels Bohr and Werner Heisenberg were pondering at this time, accepting the wave-particle dualism in 1925. The result was the concept of complementarity, which was presented in September 1927. The idea of complementarity reflects the logical relationship between two modes of description or sets of ideas that, although mutually exclusive, are both necessary for a complete description of a state of affairs. Such relationship is called coordination: both parties are subordinate to one umbrella concept¹⁵. In a general philosophical sense, these principles, which link new knowledge with the achievements of the past, are those of the main methodological principles of modern science.

Nowadays, relativism can be seen as a winning tendency compared to fundamentalism, precisely due to the efforts of postmodern thought. However, it is interesting that the main philosophical paired currents – realism/nominalism and empiricism/rationalism – do not part with the ideas of essentialism. 1. Hypostasizing now the “first”, now the “second” essence (following Aristotle), both nominalism and realism recognize and discuss both categories as cognitive values. 2. The dispute between rationalism and empiricism about the foundations of human knowledge concerned methodology, and not the essentialist attitude of the founders of classical science.

The case of essentialism could have been lost from the very beginning. However, the ancient and medieval philosophers were not looking for the basics in thought, — but rather, primarily in being, which underpins thinking. Periodically, the call arises, “back to things”! Rem tene, verba sequentur! Leibniz, Husserl, Harman, Meillassoux...

By the way, no dedicated essentialist ever becomes relativist, existentialist, positivist or ‘instrumentalist’, let alone constructivist: there is no osmosis between the main stream and the specific currents intervening it and digging their own channels.

It can be argued that essentialism acts as a *basso ostinato* of the entire symphony, or choir, forming a majestic ensemble of almost Pythagorean Universe – and therefore it cannot disappear, embodying the very first philosophical idea in the world: The All Is One.

Empiricism and Rationalism. The difference between these classical trends is too well known, even from the aphorisms ascribed to John Locke and Gottfried Leibniz, correspondingly:

- 1) there is nothing in reason that first had not existed in senses;
- 2) there is nothing in intellect that first had not existed in senses – except intellect itself.

Truly, the dispute between Leibniz and Locke concerned the question of understanding cognition. However, neither of them held purely one-sided views: Leibniz recognized the role of experience, and Locke was not a primitive sensualist. Leibniz appealed both to experiment and to reasoning; Locke pointed out that primary qualities were not given in the perceptions of figure, extension, or density – produced by the action of bodies and particles inaccessible to perception. Likewise, Descartes conducted experiments, and Hobbes constructed his theory of cognition as arithmetic in his “*De Corpore*”. It is also agreed that most rationalists and empiricists support one thesis concerning the ways “in which we become warranted in believing propositions in a particular subject area”¹⁶: namely, it is claimed that intuition – a direct insight – followed by deduction, together provide us with knowledge independent of experience.

Contemporary accounts of the dilemma (within the frame of Virtue Epistemology) run as follows. “Most rationalists claim that there are significant ways in which our concepts and knowledge are gained independently of sense experience. Being a rationalist, however, does not require one to claim that our knowledge is acquired independently of any experience: at its core, the Cartesian Cogito depends on our reflective, intuitive awareness of the existence of occurrent thought... almost no author falls neatly into one camp or another.”¹⁷

The dilemma in fact was rooted in the awareness of the difference between experimental-mathematical natural science of modernity, that of Galileo and Newton, and the old natural-philosophical style of thinking. As Russian philosopher Michael Kissel’ explained, “The purely gnoseological difference between empiricism and rationalism was not so great, since there were no rationalists who completely denied the role of experience in cognition, and there were no empiricists who did not understand the significance of abstract thinking.”¹⁸ But experimental-mathematical natural science of the 17th – 18th centuries put forward a new criterion of rationality in opposition to the philosophical tradition supported by rationalism, which sought absolute self-evident principles in order to found on them the entire existing worldview theoretical construction. The previous “metaphysics” had to give way, according to empiricists’ project, to an

15 Take, for instance, the opposing political parties in the USA: conservatives and democrats; both are representing bourgeoisie, coordinated by this latter concept. Or consider flute, violin and drums. Quite different as they are, all are subordinate to one umbrella concept, musical instrument.

16 Markie, Peter and M. Folescu, “Rationalism vs. Empiricism”, *The Stanford Encyclopedia of Philosophy* (Spring 2023 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/spr2023/entries/rationalism-empiricism/>

17 Markie, Folescu, op. cit.

18 Киссель М. А. Судьба старой дилеммы (рационализм и эмпиризм в буржуазной философии XX века). – М.: Мысль, 1974. – р. 8.

experimental philosophy of human nature. "Under these conditions, rationalism from Leibniz up to Hegel acted as a restorer of metaphysics, as an exponent of philosophical traditionalism, based on the spiritual heritage of millennia, on "philosophia perennis", in opposition to the "innovative" empiricists."¹⁹ Classical empiricism, legitimate son of the British Isles, embodied the idea of transforming philosophy itself in the image of experimental science. Later on, the idea was caught up in continental positivism.

We should distinguish between the level of general gnoseology (the level of basic elements of cognition) and the level of large blocks or forms of scientific knowledge addressed in epistemology and philosophy of science. Considering that epistemology is a theory of scientific knowledge *prima facie*, and given that philosophy of science is a philosophical trend that views science as an epistemological, methodological and sociocultural phenomenon as its main subject matter, – the confrontation of empiricism and rationalism was the rebellion of true science about nature against such philosophy which pretended to play the role of natural science, and even against philosophy as a teaching about the world as a whole.

In nominalism of William Ockham as well as in modern social philosophy, rationalism (intellectualism) was also opposed by voluntarism (the term goes back to Proto-Indo-European root *wel-/wol- "to like"); while rationalism of Rene Descartes (as well as of Benedict Spinoza, and Gottfried Leibniz) born almost simultaneously with empiricism of Francis Bacon (also of Thomas Hobbes, and John Locke) in the 17th century, was questioned and criticized by irrationalism of Schopenhauer and Nietzsche in the 19th century.

While empiricism (called sensualism, in gnoseology) and rationalism as controversies still have much in common, rationalism and irrationalism are in a true contradiction, the latter giving birth to existentialism, while empiricism and rationalism together became the basics of Philosophy of science. "Radical rationalism is present only in theories of scientific knowledge within the philosophy of science, while in other philosophical domains, man is treated as a being with unified instances, more specifically, as a being whose reason is in interactions with emotions, faith, intuition, sensory perception and instincts."²⁰

The concept and trend of empiricism is broader than sensualism, for it includes social problematics. A pendulum of opposing trends and conceptions in philosophy and more wide-ranging – in society, – often is attempted to stop to reconcile those, or work out some 'third line' to pass beyond conflict. Here is just one recent example. Lately, a new concept – "femalism" – aimed at solving gender problems was proposed by an African philosopher Chioma Carol Opara. This concept is used to avoid a sense of aggression and antagonism between men and women, – instead of "feminism". "Western feminism is marked by a seeming antagonism to masculinism and derives its definition from its opposition to it. Feminism is a concept born of the Hegelian heritage of the origin of concepts from the negation of opposites. Femalism is the sign of the birth of the origin of independent concepts that arise together and strive to live together in cooperative harmony."²¹

Thus, these classical directions of thought, empiricism and rationalism, do intersect, or cross, with such intersection representing a type of compatibility.

Nature and essence. As was already mentioned, these concepts are often viewed as close synonyms. Take just two examples.

Neil Roughley, treating on different forms of essentialism: "For normative essentialism, "the human *essence*" or "human *nature*" is a normative standard for the evaluation... slogans intended to pin down "the human *essence*" or "human *nature*" – reason, linguistic capacity ("the speaking... of "real *essence*" (1689: III, iii, 15)²²."²³

Michael Mitias, introducing his new book: "...Human nature is essentially rational; ... as the essential fabric of human nature, reason exists as a potentiality in the human body... This is why I shall use "reason" and "human nature" interchangeably".²⁴ Or also: "As human beings, we cannot take a vacation from *our moral nature*"²⁵ [italized by me. – E.T.].

Let's discuss it.

¹⁹ Ibid., p. 14.

²⁰ Czarnocka M.: "It should also be added: the philosophy of science... is sometimes called rationalistic for greater clarity, because sociological approaches to scientific cognition distance themselves from this thesis." – Footnote 263 to p. 136.

²¹ Allinson, R. E.. Forward to: "Deconstructing Boundaries". Published by Univ. Press PLC, Ibadan, Nigeria". P. x.

²² Here John Locke's "Essay..." is cited.

²³ Roughley, Neil, "Human Nature", §1.3 Essentialisms. *The Stanford Encyclopedia of Philosophy* (Winter 2023 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/win2023/entries/human-nature/>

²⁴ Mitias, M. Human Dialogue. Peter Lang GmbH. Internationaler Verlag der Wissenschaften. – Berlin 2023. – P. 12.

²⁵ Ibid, p. 127. In many other cases, though, Mitias differs nature and essence: c.f.: the rubric "Reason as the Essence of Human Nature", Chapter II. Or also: "...The human is spiritual *par excellence*; as such, it is formless and colorless." P. 134. Or: "...we know the essence of human nature by its manifestations". – P. 119.

Firstly, nature and essence are different categories. Although, in great many works, they are taken as synonyms, it is generally inaccurate to do so. Recalling that Boethius in his time translated Aristotle's (οὐσία, *usia*), "essence" – as "substance", we quote here Kant: "Substance, for instance, when the sensible determination of permanence is omitted, would mean simply a something which can be thought only as subject, never as a predicate of something else. Such a representation I can put to no use, for it tells me nothing as to the nature of that which is thus to be viewed as a primary subject." [Kant. Critique of Pure Reason. P. 187]. Substance is seen here as next to be useless. You can't assert the same of nature.

Secondly, different entities, possessing distinctly varied essences, may have the same nature. Coal, graphite, and diamond are all carbon in nature. Philosophers discussing Middle Ages' thought today analyze and make use of such characteristic as "thisness", "haecceity": "…Haecceity is needed as a constituent of a being that shares its nature with something else."²⁶ Other contemporary authors give an example of an atom having six protons, which "might count as an essential property of a carbon atom because this property figures fundamentally into explanations of its possession of other properties, like its bonding characteristics."²⁷

Thirdly, it could be the other way round: two natures – and one resulting essence. Plato gives the following example in Theaetetus, 203e: a syllable does not consist of sounds, not of their simple sum, but is a certain *eidos* that has arisen from them, containing in relation to itself a single idea. Commenting on this difficult passage in Plato, the Russian philosopher A. F. Losev wrote: "We have two different sounds. By merging them into a single syllable, we have thereby transferred the resulting sum into a certain, already new, semantic sphere. The resulting syllable is no longer just a sum, but, in its semantic quality, it is already something new. This means that instead of a simple sum we have received a certain *eidos*, a certain new kind of meaning…".²⁸

Or consider the even more complicated case of one essence, two natures and three hypostases ('persons', after Boethius), existing as inseparable/unmerged. Isn't that sedition? Ney; it's the Trinity: of 1) God; 2) of two natures, spiritual (non-material) and human; and 3) of three persons: Our Father in Heaven; His Son Jesus; and the Holy Spirit.

To avoid touching religious topics, let us recall, with Peter Forrest, the (logico-philosophical) Leibniz's Law: $\forall F(Fx \leftrightarrow Fy) \rightarrow x=y$: "The Identity of Indiscernibles is a principle of analytic ontology first explicitly formulated by Gottfried Leibniz in his Discourse on Metaphysics, Section 9. It states that no two distinct things exactly resemble each other. This is often referred to as 'Leibniz's Law' and is typically understood to mean that no two objects have exactly the same properties. The Identity of Indiscernibles is of interest because it raises questions about the factors which individuate qualitatively identical objects."²⁹

Thus, nature and essence are different concepts; nature, "the sphere of genesis, the universal mother", permits genetic definitions – while essence, after many hesitations, was characterized by Aristotle himself as that which can be predicated of nothing, nor can it be within anything.

Contemporary authors help to distinguish the phenomena of essence and nature showing wittily where the mixture might come in.

"…We have already encountered one – the claim that the property of being human is essential to Socrates. Another example is the claim that Socrates's biological origin – Socrates's parents, or more particularly, the sperm and egg from which Socrates arose – is essential to Socrates. The first example is a brand of sortal essentialism while the second is a brand of origin essentialism."³⁰

To conclude the paragraph, we will consider etymology of the concepts 'nature' and 'essence'.

Nature (from Greek *physis*, from *phyein* – to arise, to be born; fr. Latin *natura*, from *nasci* – the same) – is what is essential for every being from its very origin. Therefore, the word "nature" denotes both the originality of a thing and the totality of all things untouched by man. Nature, in content, is the sum of all immediate activity, of all things and events in their general connection; formally – it is being in general.

Essence (also "somethingness" – Latin *quidditas*) – is what constitutes the "heart" of a thing in the wholeness of its defining properties, or signifying one defining property, as "sapiens"; it is the substantial core of an independently existing entity. Sometimes this core is considered as an independent entity itself.

Essence / nature are not identical, but intersecting (crossing) categories.

26 Cross, Richard, "Medieval Theories of Haecceity", *The Stanford Encyclopedia of Philosophy* (Winter 2022 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/win2022/entries/medieval-haecceity/>

27 Ishii Robertson, Teresa and Philip Atkins, "Essential vs. Accidental Properties", *The Stanford Encyclopedia of Philosophy* (Spring 2023 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/spr2023/entries/essential-accidental/>

28 Losev A. F. *Очерки античного символизма и мифологии*. – М.: 1993. Изд-во Мысль. – С. 277.

29 Forrest, Peter, "The Identity of Indiscernibles", *The Stanford Encyclopedia of Philosophy* (Spring 2023 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/spr2023/entries/identity-indiscernible/>

30 Robertson Ishii, Teresa and Philip Atkins, "Essential vs. Accidental Properties", *The Stanford Encyclopedia of Philosophy* (Spring 2023 Edition), Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/spr2023/entries/essential-accidental/>

Reason and rationality. Once I was charmed by the distinction of reason and rationality (*Vernunft und Verstand*) in German classics: it seemed very intelligible to bind rationality with logic and reason with spirit. The lofty intention seemed to go well with reason, while "profane" ability to calculate looked like solidly grounded on earth, sounding more human than heavenly.

In Marxism those were not divided so strictly, playing as synonyms; and indeed, they are.

Reason comes from Middle English: from Old French *reisun* (noun), *raisonner* (verb), from a variant of Latin *rationem* (nominative ratio), from rat-, past-participle stem of *rerī* – 'consider', 'recon', 'think', 'calculate' (from Proto-Indo-European root *re- "to think, reason, count").

Ratio first comes from Latin theological writings, meaning "reason, rationale, reckoning, account, numbering, calculation", hence "a business affair; course, conduct, procedure"; also, a mental action, "judgment, understanding, that faculty of the mind which forms the basis of computation and calculation".

The mathematical sense of "relation between two similar magnitudes in respect to quantity", measured by the number of times one contains the other, is attested in English from 1650s (it also was a sense in Greek *logos*). [<https://www.etymonline.com/word/>]

In many dictionaries reasonable is explicated as rational, sensible, sane, and even as *compos mentis* meaning peace of mind. Still here we shall consider these concepts as different, though indeed compatible, and discuss the qualities of their partition.

To opine that reason is always reasonable would be mistaken, I'm afraid; tautology as it is, this is not the cause for changing 'reasonable' into 'rational'. Let's examine the examples.

"For what reason? On the reason that..."

This doesn't mean "reason" as «разум»³¹, but as a "cause", "ground", and "argument".

The corresponding Russian «резон» coming from "reason" means the same: "cause", too, but mainly "ground" and "argument".

There is nothing "spiritual" or highly metaphysical in such cases of usage. However, this certainly is about ratio and rationality.

It is sort of a *pas-de-deux*, where these valuable concepts, reason and ratio, play equally beneficial roles, or parties, so that you would think that classical distinction between *Vernunft* – reason, and *Verstand* – mind, logic, calculus, – is too rigid and schematic. It especially looks so, because the Google gives the following translation of one-root terms «рациональность» and «рациональный» from Russian into German: "Rationalität" – but "vernünftig".

They are, however, not equal in stance and weight: REASON supports RATIONALITY.

They are, hence, compatible by subordination, or inclusion. Reason includes, alongside with rationality meaning logic or calculus, also spirit, morals, or better yet, *kalokagathia*.

Calling Human a *Sapience*,³² we are highly likely talking of right-minded reason.

In Russian literature on epistemology, i.e., theory of scientific knowledge, we can find a synopsis of what scientific rationality is as a species of common rationality as its genus studied by *gnoseology* – a general theory of elements, or basics, of cognition.³³

"Rationality in general is a type of thinking (also its corresponding product – rational knowledge), possessing the following necessary properties:

- 1) linguistic expressibility (discursivity);
- 2) distinctness of concepts and terms and the judgments (statements) made up of them, their meaning and sense;
- 3) systematicity (the presence of coordinating and subordinating connections between concepts and judgments);
- 4) justification (the existence of logical connections between judgments);
- 5) openness to internal and external criticism of the foundations, means and results of thinking;
- 6) reflexivity (self-control of the thinking process);
- 7) the ability to change and improve thinking.

31 Purely Russian concept, bearing the root morpheme «ум», "mind".

32 "Sapiens" [Lat.] is an adjective capable of substantivation as "wise" or "learned". It belongs to the third subgroup which includes adjectives that have one ending common to all three genders. There are four varieties of such endings including *-ns*. The dictionary form of adjectives of this subgroup includes the general gender form of the nominative case and the ending of the general form of the genitive case: *sapiens, sapientis*.

33 *Gnoseology* and *epistemology* are not equivalent though comparable and compatible; these are genus and species, and their relationship is inclusion.

Scientific rationality is, so to speak, an “enhanced” rationality, characteristic of science. It differs from general rationality in a more rigorous (precise) explication of all the basic properties of rational thinking, the desire for the maximum achievable certainty, accuracy, conclusiveness, and objective truth of rational knowledge. Scientific rationality is characterized by:

- objective subject matter (empirical or theoretical);
- unambiguity;
- evidence;
- verifiability (empirical or analytical);
- ability to improve.

Scientific rationality always has a historical and concrete character, being realized and consolidated in paradigmatic ideas for a particular area of scientific research about the ideal of scientific knowledge and the methods of achieving it.

Logical and mathematical rationality: ideal subject matter, constructive unambiguity, formal proof, analytical verifiability.

Natural scientific rationality: empirical subject matter, observational and experimental unambiguity, partial logical proof, experimental verifiability (confirmability and falsifiability).

Engineering and technical rationality: “material” subject matter, constructive systematicity, empirical verifiability, systemic reliability, practical efficiency.

Social and humanitarian rationality: social and value subjectivity, reflexivity, integrity, cultural validity, adaptive utility.”

True, in the same educational and scientific source one can find an attempt to distinguish between the specific and the generic; c.f.: scientific rationality “is distinguished from general rationality by a more rigorous explication of all the basic properties of rational thinking, the desire for the maximum achievable certainty, accuracy, evidence, objective truth of the diet of rational knowledge”.³⁴ But the same generic features are present here that characterize “ordinary” rationality, which must be treated critically:

- objective subject matter empirical or theoretical, is non-specific;
- unambiguity is next to impossible and achievable only within the limited framework of a theory;
- evidence is listed notwithstanding the experience of positivism; it should be taken as provability/falsifiability;
- empirical/analytical verifiability is the regular criterion of truth;
- ability to change and improve should be attributed either to the category of metaphors of fiction (given the unclear nature of the concept of “improvement”), or to the universal ability of being to develop.

The last item: scientific rationality differs from “rationality in general” by one single feature – science is capable of providing objective truth. Wow. What about the experience of the 20th century exploring conventionalism, coherentism, or metaphors of physics such as “red and green” leptons, “charmed and strange” particles, “black, white and worm-like holes”, “hedgehogs” and “strings”? We should also mind the inconsistency of scientific pictures of the world, and the self-sufficient carnival of interpretation the social sciences and humanities, and European postmodern philosophy itself, which have refused this feat – the achievement of objective truth.

Yes, scientific rationality is an enhanced rationality. But enhanced by what? No; not by argumentation; it is mainly empowered by conviction: I believe that snow is really white.

I am inclined to agree with M. Czarnocka’s conception of the issue: “Contemporary philosophy of science rarely resorts to the traditional classifications of reason and rationality and usually speaks about scientific reason and rationality or reason and rationality in science. Also, science philosophers are immersed in “family feuds,” formulating diverse reason variants which they believe are... valid in science, and which they debate among themselves but relatively seldom with science and reason opponents, including the heirs of postmodern thought”. (P. 39).

Furthermore, let us not forget about the wave of the “digital tsunami”.

September 2024, the IV Congress of the Russian Society for the History and Philosophy of Science was held in Vologda. One of the renowned Russian philosophers V. A. Lektorsky delivering a plenary speech, said: “Science should be open; however, neither corporate nor military interests allow it now. But it is time to single out another form of rationality, i.e., digital (“huge memory”, “big data” calculation, etc.)”.

Enlarging on it, Lektorsky said: “Computers are undergoing deep learning right now, and they are capable of production, although they do not have the natural strength of the human hand or the human mind. Man should not be a slave to the machine, but its partner. We’ve got not to manage, but to direct!”

Another prominent Russian philosopher heading the Congress, I. T. Kassavin, has put a question to Lektorsky: “Is the “rationality” of artificial intelligence rationality at all?” (Lektorsky answered that AI cannot explain nor understand what it does).

There is a Russian critical saying applicable to computers: «у машины не стыда, ни совести» (machines know neither

34 *Философия науки*. ред. С. А. Лебедев. *Philosophy of Science*. Ed. by S. A. Lebedev. – P. 26–27.

shame nor conscience).

Answering Kassavin's question, I said to myself: yes, it is certainly rationality. BUT NOT REASON.

4 Discoveries. Existential Materialism

This conception is being elucidated since the 90-ies, and Author still holds it.³⁵

Is there a need for such an innovation?

I believe there is, and here is how it can be explained.

The historical division of materialism into phases or forms – ancient, modern (mechanical-metaphysical), newest (dialectical) – is not the only and not the exhaustive one.

The already established traditional logical division of idealism into objective and subjective, connected with understanding of the knower in the first case, as an objectively existing mind, and in the second case – as human consciousness, can be applied to materialism as well. As was already noted, it might be fruitful to change the angle of analysis and the specifying property (basis of division) as long as this shift is clearly indicated.

We divide materialism into "objective" (in fact, a naive realism, with which natural philosophy starts, and with which the natural sciences end) – and "subjective" one. The latter takes into account the inevitability of the living presence of the observer in the observed, and the necessity of the transformed (ideal) being of the known in the knower. To avoid confusions with the term "subjective", which has negative connotations (arbitrariness, lack of evidence, delusion, solipsism, etc.), I use the term "existential" to characterize this type of materialism. This allows me, without any special reservations, to construct gnoseology not only as "knowledge about knowledge", but also as knowledge about cognition in general, including the socio-historical context, spirituality, experiences, skills, communication algorithms, "competences", "initial attitudes", "predispositions", "tacit knowledge" of M. Polanyi, "cryptoknowledge" of B. Whorf, reification in the sign-symbolic forms of culture – E. Cassirer, S. K. Langer, E. V. Ilyenkov, etc.

One of the crucial categories underlying existential materialism is a concept constructed from Hegel's and Heidegger's Dasein – here-and-now-being – and a German term for consciousness, Bewußtsein. Hence comes here-and-now-being-consciousness, or *Dabewußtsein*.

Author takes up the task of showing that existential materialism is not an "elitist theorism", nor just one of the logically possible directions of philosophical thought, but the most natural, necessary, and substantial one.

It is not subjective idealism, despite the declared recognition of the coincidence of a (gnoseological) object and a (gnoseological) subject in "*Dabewußtsein*" – because my theory recognizes the universal credo of all materialism: namely, the objective existence of the primary source of knowledge, physical reality; it recognizes, moreover, the activity not only of the subject, such novelty appearing into gnoseology after Kant, but also of the object yielding itself to cognition.

It is not Kantianism, despite assuming "thing-in-itself", i. e., the external object, existing outside human mind, – because the "thing-in-itself" is taken to be knowable, and most importantly, because the "separation" of the foundations of being and consciousness is not accepted. An objectively existing and fundamentally knowable thing is acknowledged as a unity (though not an identity) of essence and phenomenon.

It is not Hegelianism, either – though an objectively existing and fundamentally knowable thing is recognized as a unity in *Dabewußtsein*. True, Hegel explained the principle of identity in the following way:

"Das transcendente Wissen vereinigt beydes, Reflexion und Anschauung; es ist Begriff und Seyn zugleich. Dadurch, daß die Anschauung transcendental wird, tritt die Identität des Subjektiven und Objektiven, welche in der empirischen Anschauung getrennt sind, ins Bewußtseyn... Im philosophischen Wissen ist das Angesehene eine Thätigkeit der Intelligenz und der Natur, des Bewußtseyns und des Bewußtlosen zugleich; es gehört beyden Welten, der ideellen und realen zugleich an..."³⁶ It means: "Transcendental knowledge unites both, reflection and contemplation; it is both concept and being at the same time. Through the fact that contemplation becomes transcendental, the identity of the subjective and objective, which are separated in empirical contemplation, enters into consciousness... In philosophical knowledge, what is contemplated is the result of the activity of the intellect and nature, of consciousness and the unconscious at the same time. It belongs to both worlds at the same time, the ideal and the real". (Author's translation).

Hence, in Hegel, it is both "Urım and Thummim", Light and Truth, as Lock once (unexpectedly) put.

For us, however, *Dabewußtsein* is the (dialectical) beginning and a fellow traveler of cognition; further process shows that the laws of development of nature and society are not derived from thinking; on the contrary, the laws of

35 Tajsin, Emilia A. An Advance to A New Theory of Cognition // *Dialogue and Universalism*, # 3, 2014. – P. 75–79. Тайсина Э. А. Теория познания. Интродукция и рондо каприччиозо. СПб., Алетейя, 2013. – 608 с. [In Russian]. See also: Tajsin, Emilia A. Theory of Cognition. Introduzione e Rondo Capriccioso. 2021. <https://lumenpublishing.com/theory-of-cognition-introduzione-e-rondo-capriccioso-emilia-a-tajsin/>

36 Hegel, G. W. F. *Differenz der Fichtes'schen und Schelling'schen Systems der Philosophie*. S. 27–28.

development of thinking are derived from the laws of nature and are considered to be the ideal reproduction of these latter.

My conception is based on the maxim of great Aristotle and unrivaled Hegel, about the coincidence of the foundations of being and knowledge, but this is precisely materialism with its recognition of reflection as a real process in brain and as the main principle of gnoseology. It's not for nothing that such terms as consider, contemplate, deliberate, evaluate, examine, weigh, ruminate, etc., as many other synonyms, go under one umbrella concept: namely, reflection.³⁷ The earliest principle of materialistic gnoseology, it conveys the ancient idea of thought mirroring nature. Millenia past since, bringing about discussions concerning specifics of this kind of reflection, but not cancelling it.³⁸

Why, then, is it not a "Lockean paradigm"?

It is so because we don't concede knowledge as merely perception of the correspondence or non-correspondence of some "ideas". Further, "simple ideas" are in reality not at all simple; complex ideas are not simply "cumulated"; truth does not consist only in the logical coherence of ideas; the most important thing for gnoseology is the dialectic of absolute and relative knowledge; cognitive ascent is not an arithmetical operation; matter does exist, — and it does not exist as a conglomerate of bodies, but as such, per se, i.e., as "objective reality", "one in number", "given to us in sensations".

Then why is it not dialectical materialism?

It is so because mine is a "simpler" materialism, namely, syntagmatic in method.

I explore the important term "syntagma" to designate highly significant "frames" of reasoning that initiate philosophical discourse, necessarily containing a certain "taxis", a logical-grammatical connection of supporting concepts- "tags", and at the same time – "the semantic energy of the entire sentence". However, this is a topic for separate research.

In the frame of existential materialism, the core gnoseological categories receive the following definitions.

Knowledge can be defined as discovery and recognition ("understanding", i.e., "possession", appropriation) of being, participation of the man in particular existence of an object so that it (the object) is replaced, to be precise, it is represented, introduced (vorgestellt), denoted in an ideal form.³⁹

Absolutely true knowledge is the knowledge of essence. Understanding of absolute truth as exhaustive completeness and content completion, and yet as an "extremely precise knowledge", which coincides with the object in its entirety, is rather sophisticated, but not scientific. It came to us as a legacy of religious world-picture, where the central explanatory abstraction, "the first championship of perfection" was the "Biggest", i.e., God (which has, of course, cognitive and historical and cultural value. Relatively true knowledge is knowledge of large meaningful content; it is a particular judgment about holistic picture fragment, and it can also be understood geometrically, as all that is non-absolute – that is, in the range from 0 to 1, except these boundary numbers.

One can still make an attempt to give logical definition of truth.

Generic property of truth is ideal presentation of the object, in both senses of the term "ideal" (Platonic and modern), and in both meanings (Latin and Russian), of the word "presentation".

Species definitive property of truth is representation of the order of material qualia and relations of things.

Accidental properties of truth are transported (necessary or accidental, external or internal, obvious and non-obvious, substantive and formal) traits, qualities, etc.

The essence of truth is ideal (re)presentation and transfer (transporting, transference) of order, i.e. following of things, properties and relations, events and actions of one beside the other, and one after another, deepening congruent similarity of knowledge to the essence of things.

In general, this new theory of cognition is called upon to replace the postmodernist (basically Kantian) teaching on understanding, just as the Renaissance replaced the Middle Ages.

5 Conclusion

The paper's aim was to display the cycloids of philosophical discussions showing the continuity of partition and merging – movement onwards, and back to synthesis, strong opposition, and/or consolidation.

Oppositions can be explicit; for example, being and non-being; rationalism and irrationalism.

37 Cf. "Copying theories of knowledge, still not only present, but dominant, at least in the philosophy of science, are, one might say, an obvious testimony to this field." M. Czarnocka, op. cit. Footnote 285 to p. 146.

38 The main correction was made by means of semiotics showing the interrelation up to mutual transition of *sign* (symbol) and *image* in cognition.

39 For the first time was introduced in: E. A. Tajsin "To definition of knowledge" // *Nature and Human Ecology Phenomena*. Materials of an International Symposium. – Kazan: 1997.

However, there is also the possibility of rapprochement between contradicting positions – reconciling conflicts through synthesis or the ‘third line’; or amalgamating; or coalescence; or soldering; or sort of osmosis.

Extremes meet. Totalities fork. Controversies, initially intensifying and struggling, may eventually come to concurrence, losing antagonism; contrasting positions show agreement; the dividing borders can become blurred, thus phenomena, as well as concepts reflecting them, cannot be clearly typified; fighting parties might come to accordance (or confusion), and this is as true for thinking as for the laws of nature underpinning thought.

For comparable concepts, there are three types of compatibility: equivalence, intersection (crossing), and inclusion (subordination of individual to species or species to genus).⁴⁰ To illustrate this: essentialism can be regarded equivalent to fundamentalism; rationalism and empiricism intersect, as well as nature and essence; rationality and reason stay in inclusion as species and genus. This is the conclusion of the analysis conducted in the paper, regarding two pairs of opposing trends and two couples of key concepts in philosophy.

Also, I my own theory of cognition called Existential Materialism. It changes the principle of division of philosophical forms of materialism from (notorious) historical to logical, in line with logical division of idealism. It also contains the justification of such introduction and the new ideas inspired by a new angle of observation, including the characteristics of truth.

Existential materialism is by no means irrationalism, and it does not break with logic. On the contrary, it is based on the postulate of the unity of the foundations of being and knowledge, put forward by Father of logic and supported by many classics.

At the same time, this materialism is also based on the existentialist category of Dasein, being-here-and-now, but the latter is understood not as the trepidation of being-towards-death or the horror of a borderline situation, but as the deep basso ostinato of every genuine human existence.

Existential materialism is not the notorious “thinking about thinking”; for “thinking about thinking” is a certain methodology. Ours is precisely the theory of cognition, cognizing being, including human being, which includes ontology and asserts that consciousness contains being in itself in a necessary inherent way, and that philosophy reasoning on being, “comes out” to the here-and-now-being-consciousness, “Dabewußtsein”.⁴¹

Truth and essence coincide in this very special state of here-and-now-being-consciousness, and further goal of developing and deepening cognition is to discover in phenomena the essence of objects-under-study and to call this knowledge truth – which is an arterial path of development of philosophy in general.

Disclosure Statement

The author declares no conflicts of interest.

Funding

This research received no external funding.

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References

- Plato. (n.d.). The complete works of Plato (B. Jowett, Trans.). Compiled by Mohamed Elwany. *University of Oxford*. <https://www.cakravartin.com/wordpress/wp-content/uploads/2008/08/plato-complete-works.pdf>
- Carroll, J. W. (2024). Laws of nature. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford Encyclopedia of Philosophy* (Winter 2024 Edition). <https://plato.stanford.edu/archives/win2024/entries/laws-of-nature/>
- Cross, R. (2022). Medieval theories of haecceity. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford Encyclopedia of Philosophy* (Winter 2022 Edition). <https://plato.stanford.edu/archives/win2022/entries/medieval-haecceity/>
- Ogbujah, C. N., & Diala-Ogamba, B. (Eds.). (2024). Deconstructing boundaries: A festschrift in honour of Prof. Chioma Carol Opara. *University Press PLC*.
- Forrest, P. (2023). The identity of indiscernibles. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford Encyclopedia of Philosophy* (Spring 2023 Edition). <https://plato.stanford.edu/archives/spr2023/entries/identity-indiscernible/>

⁴⁰ There also are three types of incompatibility distinguished in logic: coordination, controversies, contradiction.

⁴¹ For further explanation see: Tajsin, Emilia. *Theory of Cognition. Introduzione e Rondo Capriccioso*. EDITURA LUMEN 02/11/2021. <https://lumenpublishing.com/theory-of-cognition-introduzione-e-rondo-capriccioso-emilia-a-tajsin/>

- Hegel, G. W. F. (1988 – 1990). Difference between the philosophical systems of Fichte and Schelling in comparison with those of Rheingold tending to make easier the synopsis of philosophy in the beginning of the 19th century. Kantian Collection, 13, 148–173; 14, 126–156; 15, 127–157. [In Russian]
- Hegel, G. W. F. (2018). Differenz der Fichtes'schen und Schelling'schen Systems der Philosophie [Difference between the philosophical systems of Fichte and Schelling]. In Hauptwerke in sechs Bänden (Vol. 1, pp. 1–92). Felix Meiner Verlag.
- Hegel, G. W. F. (2018). Wissenschaft der Logik: Einleitung. In Hauptwerke in sechs Bänden (Vol. 3, pp. 37–38). Felix Meiner Verlag.
- Robertson, T. I., & Atkins, P. (2023). Essential vs. accidental properties. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford Encyclopedia of Philosophy* (Spring 2023 Edition). <https://plato.stanford.edu/archives/spr2023/entries/essential-accidental/>
- Kant, I. (1929). Critique of pure reason (N. K. Smith, Trans.). Macmillan. (Original work published 1781)
- Kant, I. (n.d.). Kritik der reinen Vernunft [Critique of pure reason]. <http://www.zeno.org/Philosophie/M/Kant,+Immanuel/Kritik+der+reinen+Vernunft/>
- Markie, P., & Folescu, M. (2023). Rationalism vs. empiricism. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford Encyclopedia of Philosophy* (Spring 2023 Edition). <https://plato.stanford.edu/archives/spr2023/entries/rationalism-empiricism/>
- Mitias, M. (2023). Human dialogue. Peter Lang.
- Roughley, N. (2023). Human nature. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford Encyclopedia of Philosophy* (Winter 2023 Edition). <https://plato.stanford.edu/archives/win2023/entries/human-nature/>
- Tajsin, E. A. (2014). An advance to a new theory of cognition. Dialogue and Universalism, 3, 75–79.
- Tajsin, E. (2021). Theory of cognition: Introduzione e rondo capriccioso. Editura Lumen. <https://lumenpublishing.com/theory-of-cognition-introduzione-e-rondo-capriccioso-emilia-a-tajsin/>
- William of Ockham. (2002). Избранное [Selected works] (Bilingual Latin-Russian edition). RAN IF.
- Spade, P. V. (Ed.). (1995). William of Ockham: From his Summa of Logic [eBook]. University of Adelaide. <https://ebooks.adelaide.edu.au/>
- Киссель, М. А. (1974). Судьба старой дилеммы (рационализм и эмпиризм в буржуазной философии XX века) [The fate of the old dilemma]. Мысль.
- Левин, Г. Д. (2005). Проблема универсалий. Современный взгляд [The problem of universals: A contemporary view]. Канон+.
- Ленин, В. И. (1963). Ещё раз о профсоюзах, о текущем моменте и об ошибках тт. Троцкого и Бухарина [Once again about trade unions...]. In Полное собрание сочинений (Vol. 42, pp. 264–290).
- Лосев, А. Ф. (1976). Культурно-историческое значение античного скептицизма и деятельность Секста Эмпирика [Cultural significance of ancient skepticism]. In Секст Эмпирик. Сочинения (Vol. 1). Мысль.
- Лосев, А. Ф. (1993). Очерки античного символизма и мифологии [Essays on ancient symbolism and mythology]. Мысль.
- Тайсина, Э. А. (2013). Теория познания. Интродукция и рондо капричиозо [Theory of cognition]. Алетейя.
- Лебедев, С. А. (Ред.). (2004). Философия науки [Philosophy of science]. Трикта.
- Фромм, Э. (1993). Психоанализ и этика [Psychoanalysis and ethics]. Республика.