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*M.R. Shagiakhmetov*

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This article presents dialectics not only as an object of study, but also as a methodology that needs to consider phenomena in their interrelation and development. Dialectics allow to comprehend the link between thinking and ideas as interaction of proactive and conservative components, justifying the conclusion that the state of public consciousness is determined by the nature of thinking and worldview ideas, the interrelation of which is the driver of development thereof. That said, dialectics are regarded as a new quality of thinking, as a stage of development thereof in interrelation with developing worldview ideas. On the basis of the analysis carried out using dialectics the author comes to the conclusion that the concepts of spiritual and material substances are inextricably interconnected dialectical opposites, and the opposite forms of idealistic and materialistic worldviews have been formed by linear thinking with its inherent logic of opposing and one-sided nature of links. At the stage of opposition of idealism and materialism, dialectics are an achievement of theoretical thinking in the conditions of linear thinking dominance in the public consciousness.

**Keywords:** dialectics, thinking, dualism, opposites, spiritual and material substances, idealism, materialism, public consciousness, human and nature, systematic unity.

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# Dialectics as a Stage of Thinking Development

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*This article presents dialectics not only as an object of study, but also as a methodology that needs to consider phenomena in their interrelation and development. Dialectics allow to comprehend the link between thinking and ideas as interaction of proactive and conservative components, justifying the conclusion that the state of public consciousness is determined by the nature of thinking and worldview ideas, the interrelation of which is the driver of development thereof. That said, dialectics are regarded as a new quality of thinking, as a stage of development thereof in interrelation with developing worldview ideas. On the basis of the analysis carried out using dialectics the author comes to the conclusion that the concepts of spiritual and material substances are inextricably interconnected dialectical opposites, and the opposite forms of idealistic and materialistic worldviews have been formed by linear thinking with its inherent logic of opposing and one-sided nature of links. At the stage of opposition of idealism and materialism, dialectics are an achievement of theoretical thinking in the conditions of linear thinking dominance in the public consciousness. The emergence of dialectics, as of a new quality of thinking, was due to the increase of contradictions between the proactivity of thinking and conservatism of idealistic and materialistic ideas. Dialectics are the opposite of the logic of contrast of the linear nature of thinking related to dualistic worldview, and the interrelation thereof as of a thesis and an antithesis takes thinking to a new qualitative level. Comprehension in unity of the spiritual and material substances and of the opposites related thereto: consciousness and matter, mind and reality, subject and object creates a condition for*

*comprehension of the unity of human and nature; however, dialectics, while removing the contrast of the oppositions, do not cover the unity of heterogeneous elements that are not opposites. To comprehend the unity of the world, one needs to introduce the category of systematic unity and to use a systematic approach. The worldview of the world systematic unity is interrelated with the systematic nature of thinking, a transfer to which is dialectics.*

**Keywords:** dialectics, thinking, dualism, opposites, spiritual and material substances, idealism, materialism, public consciousness, human and nature, systematic unity.

## I. DUALISM AND DIALECTICS

Upon refusal of the materialistic ideology the Russian philosophic thought was largely restructured in accordance with the Western one, having also adopted the attitude towards dialectics dominant in the Western philosophic thought. This attitude can be described briefly as irrational rejection, since it does not have any rational justification. For instance, one of the most authoritative Western philosophers, Karl Popper in 1937 wrote an article called “What Is Dialectics?”, in which he seriously criticized the dialectics. K. Popper presented dialectics as a private development theory, which he confined to the Hegelian Trinity of “thesis, antithesis and synthesis”<sup>1</sup>. Having opposed dialectics to the trial and error method, K. Popper came to the conclusion that “interpretation in terms of the trial and error method is a little more flexible than interpretation in terms of dialectics”<sup>2</sup>. According to K. Popper, the main disadvantage of dialectics

<sup>1</sup>Popper K. What Is Dialectics? // Issues of Philosophy. 1995. No.1. pp. 118–138. – p.118.

<sup>2</sup> ibid., p. 119.

is their conciliatory attitude to contradictions: “dialecticians come to a conclusion — the wrong one, as we can see, — that there is no need to avoid such fruitful contradictions”<sup>3</sup>. The argument used is rather characteristic: a ridiculous assertion is attributed to anonymous “dialecticians”. Having specified that I. Kant destroyed the philosophy of identity as a justification of rationalism, K. Popper thus states the position of G.W.F. Hegel: “How did Hegel overcome the Kant’s refutation of rationalism? Very easily — he suggested not to pay attention to contradictions”<sup>4</sup>. G.W.F. Hegel revealed and justified the dialectic unity of identity and difference in abstract definitions of mind, each of which is “mediated” by “its other”, the opposite. K. Popper interprets it as a suggestion of “not to pay attention to contradictions” by mixing or, more precisely, by substituting the dialectic contradictions with the logical ones. It constitutes either complete misunderstanding of dialectics or direct misrepresentation of the G.W.F. Hegel’s views. As a whole, the Hegel’s philosophy, according to K. Popper, “is the worst one among all absurd and unbelievable philosophic theories”<sup>5</sup>. That’s the line of reasoning, according to which the Western philosophic thought refuted dialectics that, presented by K. Popper in such a way, turned into an absurd theory reconciling with logical contradictions. Such irrational refutation of dialectics is rather characteristic of the Western philosophic thought. As the American philosopher R. Rorty points out: “This attempt to disengage oneself from the time and changes, to forget Hegel and joint Kant, is commonly widespread nowadays in the English-speaking philosophic community”<sup>6</sup>.

The irrationality of attitude towards dialectics is a manifestation of the largely irrational Western philosophical thought as a whole. G.W.F. Hegel justified the necessity of dialectics based on the fact that one-sided definitions of mind are

abstractions in relation to reality, in which contradictions are in unity: “But, in fact, the one-sided does not mean something immutable and existing for itself, but is contained in the whole as captured”<sup>7</sup>. The use of dialectics allowing to comprehend contradictions with their mutual transitions and interrelations in unity takes thinking to a new qualitative level while increasing the adequacy thereof to the reality. But dialectics threatens the existence of the dualistic worldview dominant in the Western society in the form of transcendent truth (or God) standing above the reality, or of the “intelligible world” and “world conveyed by our senses” (according to I. Kant), which the linear nature of thinking is related with, that opposes one part of reality to the other as a true and false, spiritual and material substances, mind and reality, human and nature, etc. This kind of thinking sees only one-sided link of phenomena and understands unity only as based on identity. The worldview dualism is related to inadequacy of the linear nature of thinking, the insufficiency of which was mentioned by G.W.F. Hegel and is increasingly recognized nowadays: “We were accustomed to think in terms of linear causality, but now we need new “methods of thinking”, according to I. Prigogine and I. Stengers<sup>8</sup>. Refusal of dialectics constitutes a refusal of thinking development, which results in insoluble contradictions. For instance, during the whole 20<sup>th</sup> century the Western philosophical thought had been trying to implement the “demarcation idea”, which was expressed in the attempts to separate the rational and the irrational, the objective and the subjective, knowledge and ignorance. This idea was never implemented, which is quite logical, since it deals with the dialectic contradictions “mediating” each other (according to G.W.F. Hegel). These attempts, according to V.I. Moiseev, resulted in the “crisis of the demarcation idea and

<sup>3</sup> *ibid.*, p. 121.

<sup>4</sup> *ibid.*, p.135.

<sup>5</sup> *ibid.*, p. 137.

<sup>6</sup> Rorty R. *Philosophy and the Future*. 1976. // *Issues of Philosophy*.- 1994.- No.6. pp. 120-129.

<sup>7</sup> G.W.F. Hegel. *Encyclopedia of the Philosophical Sciences*. Volume 1. *The Science of Logic*. M., Mysl, 1974. 452 pages – p.139.

<sup>8</sup> Prigozhin I., Stengers I. *Order Out of Chaos: Man’s New Dialogue with Nature*: Translated from English/ Under the general editorship of V.I. Arshinov, Y.L. Klimontovich and Y.V. Sachkov. — M.: Progress, 1986.— 432 pages – p. 53.

virtually complete loss of understanding of the scientific knowledge specificity”<sup>9</sup>.

As opposed to the efforts of the Western philosophical thought to ignore and even discredit dialectics, the Soviet philosophical thought defended comprehension thereof as of a “science about the most common features, links and relations, about universal laws applicable in any area of reality – in nature, society or thinking”, according to V. Stolyarov<sup>10</sup>. Materialistic dialectics as stated in the classic works by Marxism-Leninism authors was an obligatory subject in Soviet higher educational institutions and the only allowable method of the Soviet philosophical thought. However, even in the Soviet philosophical thought dialectics were applied only limitedly. This a little bit unexpected conclusion results from an analysis of using dialectics in idealism and materialism and relationship thereof to these two different worldviews.

## II. DIALECTICS IN IDEALISM AND MATERIALISM

An analysis of the idealistic and materialistic worldview ideas shows quite clearly that, when building opposite hierarchies out of the following substances: spirit over nature or matter over consciousness, idealistic and materialistic worldviews determine the link thereof far from dialectically, but in accordance with the linear thinking, as an hierarchy, in which the primary component is linear and one-sidedly determines the secondary component. The formation of idealism and materialism itself is a manifestation of the linear nature of thinking, that, without overcoming the dualism of substances, takes a step towards the unity thereof, but sees only one-sided nature of links between them. The formation of idealism and materialism did not overcome dualism, but brought it to the level of

opposition of two contrary worldviews. Idealism, having brought the world unity into the realm of “absolute spirit” (according to G.W.F. Hegel), could not overcome the dualism of transcendent truth (or God) above the reality. The idealistic worldview structure conflicted with dialectics and forced G.W.F. Hegel to build hierarchies with primary components dominating over the secondary ones, breaking the dialectical interaction of the finite and infinite elements: above the “finite” world of nature there is the infinity of the “absolute spirit”, or God, as well as of the internal and external elements: the internal element (spirit) is “the truth of nature and absolutely primary in relation thereto”<sup>11</sup>. The effect of dialectics is limited by the realm of the internal element, which is opposed to the external and natural one: “In fact, nature is characterized by external appearance, it’s intrinsic to nature to allow the differences to separate themselves and to act as beings indifferent to each other. The dialectical concept, however, providing forward motion to the stages, constitutes the internal element therein”<sup>12</sup>.

Materialism, without adding anything new to the content of dialectics, changed the understanding thereof by declaring them the “universal laws” of nature, society and thinking, that are reflected in everyone’s consciousness. Upon justification the unity of the world by material nature thereof, materialism subordinated consciousness to matter, having maintained the opposition thereof, while combining the linear nature of thinking and limited use of dialectics. A manifestation and illustration of such combination is the definition of matter given by V.I. Lenin: “Matter is a philosophical category serving to designate objective reality that is given to man in his sensations, which is copied, photographed, reflected by the sensations while existing

<sup>9</sup> Moiseev V.I. Philosophy and Methodology of Science. Training manual. - Voronezh: Central Chernozemnoe Book Publishing House, 2003. - 236 pages – p. 214.

<sup>10</sup> Stolyarov V. Dialectics as Logic and Methodology of Science. M.: Politizdat. 1975. – 211 pages.

<sup>11</sup> G.W.F. Hegel. Encyclopedia of the Philosophical Sciences. Volume 2. The Philosophy of Nature. -M.: Mysl, 1975.- 695 pages – p. 15.

<sup>12</sup> G.W.F. Hegel. Encyclopedia of the Philosophical Sciences. Volume 1. The Science of Logic. M.: Mysl, 1974. 452 pages – p. 34.

independently of them”<sup>13</sup>. On the one hand, V.I. Lenin defines matter via “it’s other”, that is consciousness, and on the other hand — highlights the objectivity and independence thereof from the consciousness. The materialistic structure of worldview ideas makes one to break the dialectical interaction of consciousness and matter, as well as of the subjective and objective, internal and external elements; it is manifested in the “independent” existence of the material world, in the objectivity thereof, in one-sided nature of relation as a “reflection”, in maintained opposition of the above elements.

Idealism has limited the effect of dialectics by the realm of “spirit”, and materialism — by material world: both of these worldview concepts have not extended the effect of dialectics on interaction of the two substances: the spiritual and material ones. However, consistent use of dialectics inevitably leads to a conclusion that the spiritual and material substances are dialectical opposites, they are abstractions of reality, in which they are in unity as the “captured” ones (according to G.W.F. Hegel). When forming opposite hierarchies out of the same substances, idealism and materialism logically become mutually denying, but also interdependent worldview forms, related with which is the existence of the two opposite social systems, that had been developing in controversial interaction. At the same time, linear thinking due to its logic of opposition expectedly perceives the above worldviews as antagonistically incompatible. Dialectics, as a new level of thinking, which can see opposites in unity and mutual interaction, conflict with the linear nature of thinking and the structure of idealistic and materialistic worldview ideas related thereto in the form of opposite hierarchies.

In the public consciousness both of the Western and Soviet society the continuing dualism of worldview ideas and the linear nature of thinking related thereto manifested itself in the lack of

continuity of the dialectical unity of the singular and plural elements: the singular element separated from the plural element turned into dogmatism and relation to the dominant ideology of materialism as to the absolute truth, and the plural element separated from the singular element manifested itself in the Western society ideology as non-system pluralism. Another manifestation of the above separation is absolutization by the Western ideology of rights and freedoms of individuals and absolutization by the materialistic ideology of public interests; the Western ideology cultivates individualism, and the materialistic ideology — collectivism and suppression of individualism. Subjectivism of the Western ideology is opposed to objectivism in the Soviet ideology.

The objectively existing dialectical unity of idealism and materialism and interdependence thereof are manifested in the fact that each of the above worldviews engenders its opposite: dominance of idealistic ideology results in dominance of grossly material interests of utilitarian individualism, and dominance of materialistic ideology results in an idealistic practice of suppression of utilitarian individualism with its inherent pursuit of gain, while selfless service to the country, people and communistic idea is promoted. The social practice of capitalism and socialism confrontation during the Cold War was related with the dualism of the public consciousness of the Western and Soviet societies, the dualism of idealism and materialism and the linear nature of thinking related thereto that perceives the above opposites as antagonistically incompatible.

For the linear nature of thinking, the link between the public consciousness and public practice seems one-sided: either public consciousness forms public practice, or it just reflects the latter. Without dialectics one cannot combine this sufficiently evident mutual influence. The dialectics of proactive and conservative components are also manifested therein: public consciousness forms and changes public practice,

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<sup>13</sup> Lenin V.I. *Materialism and Empirio Criticism / Complete works*, volume 18. M., 1961.

which, in its turn, fixes and maintains the level of consciousness, at which it was formed.

Dialectics, as a new level of thinking, change the methodology of consideration of phenomena, including of the dialectics themselves, which shall be considered in interrelation and development. At the stage of idealism and materialism opposition, dialectics are an achievement of theoretical thinking in the conditions of dominance in the public consciousness of linear thinking related to the dualism of worldview ideas. Using dialectics, one can comprehend the interaction of ideas and thinking as dialectics of proactive and conservative components: thinking forms and develops ideas, but also relies upon the latter as upon a level achieved; the reverse influence of ideas is manifested in the nature of thinking, orientation and logic thereof. The state of public consciousness is determined by the most conservative part of thinking and dominant system of ideas: by the nature of thinking and worldview. Such interaction allows to comprehend the mechanism of impact the worldview provides on practice: each act of people's knowledge and behavior does not necessarily correlate with the worldview, but always includes a way of thinking, the nature of which is related thereto. On the other hand, the use of dialectics allows to determine the idealism and materialism opposition stage as breaking in the public consciousness of the dialectical interrelation between the subjective and objective elements; that said, there was a slight difference between the Western and Soviet societies. The Western social ideology was characterized by maximal separation of the objective element in the form of transcendent truth (or God) from the reality, the image of which was determined by the subjectivity of utilitarian individualism with complete rejection of dialectics, while in the Soviet society ideology the objective truth in the form of Marxism-Leninism lost its transcendent nature and was brought as close as possible to the reality, as a guidance on transformation thereof and as a basis used to overcome utilitarian individualism using dialectics and strengthening

the interaction of the subjective and objective elements. In the conditions of dominance of the dualism of worldview ideas and linear nature of thinking dialectics exist objectively and are realized only in a fragmented way as an achievement of theoretical thinking. The objectively existing dialectics, which have not yet become dominant in the public consciousness, were manifested in the emergence of dialectics by G.W.F. Hegel and K. Marx: "Each stage of dialectics of thinking and existence relation is development and manifestation of the overall dialectics, and the dialectics of each stage is revealed as dialectics of different stages removing themselves when moving from the abstract to the specific", according to E.S. Linkov<sup>14</sup>.

The use of dialectics in this work as the object of study and as a methodology also has dual results. The use of dialectics allows to consider the public consciousness in its development, the driver of which is interaction of thinking and ideas, as the dialectics of proactive and conservative components. Dialectics allow to consider thinking as historical and developing phenomenon with qualitative stages of development that manifest themselves in changes of the nature thereof related to worldviews. On the other hand, consideration of dialectics as of a feature of thinking in the context of the public consciousness development allows to consider dialectics in interrelation thereof with other elements. Such consideration of dialectics allows one to come to a conclusion that the emergence of dialectics constitutes a sign of development of thinking, the proactivity of which contradicts with the conservatism of the idealistic and materialistic worldviews.

### III. DIALECTICS IN THE RUSSIAN PHILOSOPHICAL THOUGHT

In spite of the fact that after refusal of the materialistic ideology as the dominant one the Russian philosophical thought has largely

<sup>14</sup> Linkov E.S. Emergence of Logical Philosophy (introductory article) // G.W.F. Hegel. The Science of Logic. — SPb.: Nauka, 2002.

re-oriented towards the Western one, there is no complete refusal from dialectics. Dialectics are still present in most of textbooks in Philosophy, but now not as a “science about universal laws”, but as an approach towards comprehension of reality that is guided by the principles of “universal links and development”<sup>15</sup>, and the dialectical concept is recognized as the “most adequate form of explanation of development”<sup>16</sup>.

Although the majority of the philosophical community in full accordance with the position of the Western philosophy simply ignores dialectics, however, voices are increasingly often raised for dialectics. For instance, S.F. Vasiliev has demonstrated the inadequacy of the K. Popper’s criticism of dialectics<sup>17</sup>. I. A. Gobozov argumentatively advocates the use of dialectics in social sciences<sup>18</sup>. A.S. Kazennov stands up for the dialectical method as a supreme method of knowledge<sup>19</sup>. According to P.V. Opolev, “dialectics, despite of the crisis, retains their status as of a universal methodological basis in modern philosophy and science”<sup>20</sup>. A manifestation of creative attitude towards dialectics is an attempt made by V.A. Yakovlev (in my opinion, an unsuccessful one) to combine dialectics with hermeneutics<sup>21</sup>. But more important, than the declared commitment of a number of authors to dialectics, is the nature of thinking demonstrated by representatives of the Russian philosophical

community. The difference revealed itself when Russian philosophers joined the discussion of the Western philosophy issues. Russian philosophers have clearly shown the aspiration and ability to consider in unity the things, which Western philosophers separate and oppose. For instance, V.S. Shvyrev points out at inextricable interconnection between the subjective and objective elements: “Objective content accumulated as a result of prior cognitive activity experience, serving as a prerequisite, a precondition for further work on exploration of the world through knowledge, becomes a moment of subjectivity; that said, the subjectivity itself of the cognitive attitude towards the world is not of an abstract nature, it is mediated by the historical experience of separating the objective content”<sup>22</sup>. V.A. Lektorsky writes: “In fact, the objectivist position, i.e. the attitude towards the world of cognitive objects and processes as towards something externally opposed to a subject and separated from it, is nothing but the reverse side of anthropocentrism, the point of view of subjectivity. These are merely two projections of the same projective and constructive attitude”<sup>23</sup>. The demarcation idea and opposition of science and culture related thereto are not supported as well. A.S. Kravets considers science as an element of the “culture system”, introducing a concept of a “sociocultural niche”.<sup>24</sup> G.B. Zhdanov bases on the assumption that the grounds of scientific knowledge “cannot be understood outside the cultural and historical context”<sup>25</sup>. S.N. Zharov and N.A. Mechsheryakova consider science as “realization of cognitive possibilities of culture”, introducing the concept of a “socio-cognitive contour” and basing on the

<sup>15</sup> Philosophy: a Textbook / E.N. Pronina; Moscow Ivan Fedorov State University of Printing. — M. : Moscow Ivan Fedorov State University of Printing, 2011 — 612 pages — p. 390.

<sup>16</sup> Philosophy: Higher Educational Institution Textbook / Under the general editorship of V.V. Mironov. — M.: Norma, 2005 — 673 pages — p. 420.

<sup>17</sup> Vasiliev S.F., Who is Karl Popper? (On the Issue of Relation of K. Popper to Dialectics) / Horizons of Education. Scientific and educational magazine. Altai State Technical University. — 2006. issue 8.

<sup>18</sup> Gobozov I.A. Social Philosophy: Dialectics or Synergy? Philosophy and Society. Issue No.2(39)/2005.

<sup>19</sup> Kazennov A.S. Dialectics as a Supreme Method of Knowledge. — SPb.: Publishing house of the St.Petersburg Polytechnic University, 2011. — 96 pages.

<sup>20</sup> Opolev P.V. Dialectics in the Philosophical Tradition // Young Scientist. — 2009. — No.10. — pp. 202-207. — p. 202.

<sup>21</sup> Yakovlev V.A. - On the Issue of Synthesis of Classical Dialectics and Hermeneutics. Philosophical Thought. No. 07, 2016. pp. 1-22.

<sup>22</sup> Shvyrev V.S. Scientific Knowledge as an Activity. — M.: Politizdat. 1984. - 232 pages — p. 93.

<sup>23</sup> Lektorsky V.A. Scientific and Extrascientific Thinking: a Sliding Boundary. // Scientific and Extra Scientific Forms of Thinking. M. Nauka, 1996. — 335 pages.

<sup>24</sup> Kravets A.S.. Sociocultural Niche of Science. // Physics in the System of Culture. - M. Nauka, 1996 - 231 pages — p. 5.

<sup>25</sup> Zhdanov G.B. Reflections on the Status of Physics in the World Culture. // Physics in the System of Culture. - M. Nauka, 1996 - 231 pages — p. 31.



“socio-cultural determination of knowledge”<sup>26</sup>. N.S. Mudragei<sup>27</sup> and N.S. Avtonomova<sup>28</sup> think it necessary to consider the irrational and rational components in dialectical unity, and V.N. Porus links the overcoming of this opposition with a systematic approach<sup>29</sup>.

In spite of the fact that the Russian philosophical society has re-oriented towards the Western philosophical thought, adopting its range of problems and cognitive approaches, leading representatives of the Russian philosophical thought demonstrate a more dialectical nature of thinking without any logic of opposition. On the other hand, it should be recognized that this nature of thinking has not become dominant in the public consciousness yet, since the fact itself of re-orientation to the Western philosophy is a manifestation of linear thinking, which makes one to choose between the two opposites: either materialism or idealism; either socialism or capitalism and does not provide for other options. For the linear nature of thinking, the refusal of the Russian society from materialism as the dominant ideology is an undoubted sign of victory of its opposite – the ideology of the Western society.

In the greater extent of the dialectical nature of thinking and in the absence of the logic of opposition among representatives of the Russian philosophical community one can clearly see the influence of the materialistic worldview and dialectics. Thanks to a greater extent of the dialectical nature of thinking, the public consciousness combines both idealistic and materialistic ideas, which are already not perceived as the absolute truth; related to this is

the absence of denial of opposites and maintained use of dialectics. Taking into account the dialectical interrelation of the public consciousness and public practice, the change revealed of the nature of thinking of the Russian society allows to understand the reason behind the crash of the hierarchical political system led by the Communist Party of the Soviet Union. In the public consciousness of the Russian society, in which the idealistic and materialistic ideas interact, the process has actually begun of overcoming of the opposition thereof. In accordance with the dialectical logic, development is not a selection of one of the opposites: idealism or materialism, capitalism or socialism, but is some third thing, which is a result of the interaction and synthesis thereof, i.e. the unity worldview overcoming dualism. In the public consciousness this process is already under way. As B. Slavin notes, “sociologists analyzing the results of population surveys think that modern Russians have a certain ideal image of a fairly organized society, which should include the best of socialism and capitalism, but without the key defects of the both systems”<sup>30</sup>.

#### IV. DIALECTICS AND REALITY

The contrast by the linear nature of thinking of abstractions of reality as opposites and overcoming of this opposition through dialectics are two interrelated operations of theoretical thinking. G.W.F. Hegel called linear thinking “metaphysics”; based on this one can determine dialectics as anti-metaphysics, the opposite thereof. This link of dialectics with the logic of opposition is manifested in dialectics being aimed at overcoming of contrast of opposites engendered by linear thinking. Nature does not oppose anything, it is the human who opposes things forming in the process of abstracting from reality one-sided definitions and then overcoming the opposition thereof using dialectics. The link between the logic of opposition and dialectics to the full extent corresponds to the Hegelian

<sup>26</sup> Zharov S.N., Mechsheryakova N.A. *Semantic Bases of Natural Science: Evolution, Challenges, Prospects. // Physics in the System of Culture.* - M. Nauka. 1996 - 231 pages - pp. 138-156. - p. 140.

<sup>27</sup> Mudragei N.S. *The Philosophical Problem: Rational and Irrational Elements (reading A.Schopenhauer).* Issues of Philosophy. No.9. 1994.

<sup>28</sup> Avtonomova N.S. *Rationality: Science, Philosophy, Life. // Rationality as an Object of Philosophical Study.* - M. Nauka, 1995. - 225 pages.

<sup>29</sup> Porus V.N. *Systematic Meaning of the “Scientific Rationality” Concept. // Rationality as an Object of Philosophical Study.* - M.: Nauka, 1995 - 225 pages - p.108-120.

<sup>30</sup> Slavin B. *In Search of Ideology and Models of Development // World of Changes.* 2007. No. 3. pp. 112–127. – p.122.

formula of development, as the interrelation of thesis and antithesis, the interaction of which takes thinking to a new qualitative level. This interaction with the logic of opposition inherent in the linear thinking determines not only the meaning of dialectics in the development of thinking, but also the limitedness thereof.

The process of comprehension itself in unity of spiritual and material substances, idealism and materialism as dialectical opposites creates conditions for formation of a worldview idea about the world unity. The contrast of spiritual and material substances and opposites related thereto — consciousness and matter, thinking and existence, subject and object — are abstractions of interaction between human and nature. The inevitability of overcoming of contrast of these opposites through dialectics is determined by the unity of human and nature. But at the current stage, when theoretical thinking, having acquired a dialectical nature, turns to reality, the problem arises of comprehension of the unity of heterogeneous elements, that are not opposites, including human and nature. Dialectics, presenting a methodological requirement to consider phenomena in interrelation and development thereof, allow to comprehend opposites in their unity, but do not cover other types of unity of heterogeneous elements. Linear thinking opposes human to nature, and dialectics remove this opposition, but are not able to comprehend the unity thereof. Linear thinking sees unity on the basis on identity, the dialectics of identical and non-identical components remove the one-sidedness of such comprehension of unity, but do not cover the unity of heterogeneous components observed in nature. For instance, the unity of hydrogen and oxygen forms a new substance, water (H<sub>2</sub>O), which in certain conditions can be separated to its initial elements, but it is not the unity and struggle of opposites, it is complementarity. Another instance is the unity of heterogeneous elements that form an organism, which no longer can exist independently of each other, — but it is not the struggle of opposites, it is interdependence.

Comprehension of the unity of heterogeneous elements presents one with the necessity to introduce the category of systematic unity and to use a systematic approach to comprehension or reality. The systematic approach relies upon the general nature system theory, in accordance with which in nature the following two types of systems take turns: a single integral system of heterogeneous elements and a system of objects of one kind, which in its turn is included in the integral system of the next level. It allows to comprehend the world unity, which has a systematic nature and an element of which is the systematic unity of human and nature. Briefly, the picture of unity of human and nature formed by the systematic approach is generally as follows<sup>31</sup>.

Human ancestors were an element of a local biogeocenosis system, but upon evolution of their intellect went beyond the limits thereof and, having settled all over the planet, started to interact with the global nature as a whole and began to form the “human and nature” system, the interaction of the components of which is mediated by the system of “public consciousness and public practice”. The cycle of formation of the “human and nature” system can be divided in four stages: from unity with nature of early people, through stages of dependence on nature and dominance over it, to the stage of conscious and dialectical unity, which we are currently moving to. Each stage is related to the level of development of public consciousness, the degree of adequacy of thinking and dominant system of ideas, the basis of which is a worldview. Entering the stage of unity with nature, as a manifestation of the public practice, is related with the dominance of the unity worldview and the nature of thinking related thereto, aimed at and capable of comprehension of the world unity — the systematic thinking.

In this the most general picture of the systematic unity of human and nature there are no new facts, but there is a new level of understanding thereof

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<sup>31</sup> Shagiakhmetov M.R. General Systems Theory and World Unity. // Systematic Psychology and Sociology. 2014. No. 10.

related to the new quality of thinking moving to the level of a systematic one. Linear thinking breaks into pieces representations of reality, considering phenomena in an isolated way, opposing one part of the reality to another one, and dialectics remove this opposition, while systematic thinking forms the picture of the world unity, which allows to consider phenomena in interrelation and development.

The process of formation of the “human and nature” system is a process of historical development, which appears as not an objective one, independent on human, but the process of development of human himself, who interacts with the surrounding reality and is inextricably connected with the cognitive process and development of thinking and ideas. There is no opposition of human and nature: human is both a part of nature and an autonomous element of interaction therewith. The picture of the world systematic unity allows to implement the methodological principle of consideration of phenomena in interrelation and development thereof declared by dialectics; on the other hand, dialectics find its fullest expression in the picture of the world systematic unity as a theoretical comprehension of systematic interrelations. Related to the dominance of the systematic worldview and systematic nature of thinking related thereto is a transition to the level of interaction of human and nature in accordance with the dialectics of proactive and conservative components; in doing so, the link between an individuality and a group of people is transformed into dialectical interaction of the singular element as the bearer of the variability of thinking and ideas and the plural element as the bearer of identity, both as the drivers of development of the public consciousness, which, in its turn, dialectically interacts with the public practice. Taking into account that dialects, while removing the contradictions of linear thinking, turn out to be insufficient for comprehension of the world unity, one can give another definition for dialectics as a transitional stage in development of thinking from the linear to a systematic one.

## REFERENCES

1. Avtonomova N.S. Rationality: Science, Philosophy, Life. // Rationality as an Object of Philosophical Study. - M. Nauka, 1995. 225 pages.
2. Vasiliev S.F. Who is Karl Popper? (On the Issue of Relation of K. Popper to Dialectics) / Horizons of Education. Scientific and educational magazine. Altai State Technical University. – 2006. issue 8.
3. G.W.F. Hegel. Encyclopedia of the Philosophical Sciences. Volume 1. The Science of Logic. M.: Mysl, 1974. 452 pages.
4. G.W.F. Hegel. Encyclopedia of the Philosophical Sciences. Volume 2. The Philosophy of Nature. - M.: Mysl, 1975. 695 pages.
5. Obozov I.A. Social Philosophy: Dialectics or Synergy? // Philosophy and Society. Issue No.2(39)/2005.
6. Zharov S.N., Mechsheryakova N.A. Semantic Bases of Natural Science: Evolution, Challenges, Prospects. // Physics in the System of Culture. - M. Nauka. 1996. 231 pages - pp. 138-156.
7. Zhdanov G.B. Reflections on the Status of Physics in the World Culture. // Physics in the System of Culture. - M. Nauka, 1996 - 231 pages.
8. Kazennov A.S. Dialectics as a Supreme Method of Knowledge. – SPb.: Publishing house of the St.Petersburg Polytechnic University, 2011. 96 pages.
9. Kravets A.S. Sociocultural Niche of Science. // Physics in the System of Culture. - M. Nauka, 1996. 231 pages.
10. Lektorsky V.A. Scientific and Extra Scientific Thinking: a Sliding Boundary.// Scientific and Extra Scientific Forms of Thinking. M. Nauka, 1996. 335 pages.
11. Lenin V.I. Materialism and Empirio Criticism / Complete works, volume 18. M., 1961.
12. Linkov E.S. Emergence of Logical Philosophy (introductory article) // G.W.F. Hegel. The Science of Logic. — SPb.: Nauka, 2002.

13. Moiseev V.I. Philosophy and Methodology of Science. Training manual. - Voronezh: Central Chernozem Now Book Publishing House, 2003. 236 pages.
14. Mudragei N.S. The Philosophical Problem: Rational and Irrational Elements (reading A.Schopenhauer). Issues of Philosophy. No.9. 1994.
15. Opolev P.V. Dialectics in the Philosophical Tradition // Young Scientist. — 2009. — No.10. — pp. 202-207.
16. Porus V.N. Systematic Meaning of the “Scientific Rationality” Concept. // Rationality as an Object of Philosophical Study. - M.: Nauka, 1995. 225 pages - p. 108-120.
17. Prigozhin I., Stengers I. Order Out of Chaos: Man’s New Dialogue with Nature. Translated from English/ Under the general editorship of V.I. Arshinov, Y.L. Klimontovich and Y.V. Sachkov. — M.: Progress, 1986. 432 pages.
18. Popper K. What Is Dialectics? // Issues of Philosophy. 1995. No.1. pp. 118–138.
19. Rorty R. Philosophy and the Future. 1976. // Issues of Philosophy.- 1994.- No.6. pp. 120-129.
20. Slavin B. In Search of Ideology and Models of Development // World of Changes. 2007. No. 3. pp. 112–127.
21. Stolyarov V. Dialectics as Logic and Methodology of Science. M.: Politizdat. 1975. 211 pages.
22. Philosophy: a Textbook / E.N. Pronina; Moscow Ivan Fedorov State University of Printing. — M. : Moscow Ivan Fedorov State University of Printing, 2011 — 612 pages.
23. Philosophy: Higher Educational Institution Textbook / Under the general editorship of V.V. Mironov. — M.: Norma, 2005 — 673 pages.
24. Shagiakhmetov M.R. General Systems Theory and World Unity. // Systematic Psychology and Sociology. 2014. No. 10.
25. Shvyrev V.S. Scientific Knowledge as an Activity. — M.: Politizdat. 1984. 232 pages.
26. Yakovlev V.A. - On the Issue of Synthesis of Classical Dialectics and Hermeneutics. Philosophical Thought. No. 07, 2016. pp. 1-22.