



Engels' Dialectics of—Human Activity in—Nature

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ABSTRACT: Several Marxist theorists criticize Engels for his supposed non-dialectical and non-philosophical conceptualization of “praxis,” which, according to Lukacs, amounts to Engels’ alleged misunderstanding of Kantian “thing-in-itself.” I argue that such “criticisms” of Engels is based on a dualistic understanding of practical vs. theoretical. Contrary to the critiques’ allegations, Engels provides an account of praxis/labour as a philosophical category that is truthful to Marx’s and his own earlier efforts for constituting a materialist dialectics—one that anticipates the concept of “human activity” elaborated particularly in philosophical works of Evald Ilyenkov and psychological studies of Lev Vygotsky. According to Engels, the so-called laws of dialectics are historical thus depending on human activity as it is “with man [that] we enter history.” Furthermore, it is through labour (the highest form of human activity) that not only the human hands but also social humanity and human consciousness have been constituted. Thus, laws of dialectics are the most general laws of human activity in social nature. Engels, truthful to Marx’s materialist method, prioritizes action over substance.

KEYWORDS: Dialectics, praxis, activity, labour, substance.

INTRODUCTION

In *History and Class Consciousness* (1971), Lukacs quotes Engels defining dialectics as the science of the most general laws of motion both in society and nature. Interpreting this definition, Lukacs criticizes Engels for extending the method of dialectics to be applied to nature, whereas, this is not allowable. He criticizes Engels for his conceptualizing “praxis” not dialectically and philosophically which amounts to the latter’s alleged misunderstanding of Kantian “thing-in-itself” (Lukacs 1971, 132). Several others in Western Marxism tradition have made Engels’ conceptualization of nature, human being, and praxis/activity subject of their criticism.

Alfred Schmidt (1971, 55), who is critical of Lukacs as well, for instance, criticizes Engels for not conceiving of human being and nature as united through historical practice but “as product of evolution and a passive reflection of the process of nature, not however as a productive force.”

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He further accuses Engels of getting involved in the scholastic debate concerning the dialectical or non-dialectical structure of nature, whereas accordingly and in contrast to Lukacs's position that forms the basis of the latter's criticism of Engels, "the concept of nature cannot be separated, *either in philosophy or in natural science*, from the degree of power exercised by social practice over nature at any given time" (ibid., 60, emphases added). Unlike Lukacs, Schmidt does not reject the concept of "dialectic of nature" *in toto*. Accordingly, "the Marxist theory itself already contains the dialectic of nature" (ibid.). Further he states, "Nature becomes dialectical by producing man as transforming, consciously acting Subjects confronting nature itself as forces of nature. Man forms the connecting link between instrument of labour and the object of labour. Nature is the Subject-Object of labour" (ibid., 61). Schmidt accuses Engels of demanding a dialectics of nature independent of forms of human (productive) activity; such dialectics are possible only if one assumes a Hegelian idealist stance. Hegel assumes a "logic of being" to be later mediated through logic of essence to be followed by its mediation through logic of Concept. "Nature passes over into Spirit, objectivity passes over entirely into subjectivity, transactions which are naturally denied to the materialism of Engels" (ibid., 59). In other words, according to Schmidt, Engels assumes a position that is self-contradictory as it leaves out human activity, the middle term that brings in nature and its laws into the realm of the "for-us," and which is historically limited. Dialectics of nature is relevant only to the extent that human interacts with nature (or acts in nature): if human is absent then "there can be no question of a dialectic of external nature, because all the essential moments of a dialectic would in that case be absent" (ibid.). In other words, such a notion of "dialectic of nature," that is attributed to Engels, is incompatible with a materialist stance because allegedly in Engels' breed of materialism there is no Spirit or a subject as the active agent of history. However, Schmidt does not provide any convincing argument in favour of his criticism and as I will further argue in this paper with reference to some of Engels' earlier and later writings, Engels does attribute a central role to human agency and human activity (labour) in relation to nature and the concept of dialectic of nature. Vesa Oittinen (2016, 35), in a similar vein, states that the young Marx and the old Engels conceive of "praxis" or "practice" quite differently and thus "Marx's ideas on *Praxis* in the 'Theses

on Feuerbach' of 1845 must be read in a context other than Engels's 'practical' critique of Kant in his *Ludwig Feuerbach* of 1886."¹

Reasoning along similar lines, Avineri (1968, 65) accuses Engels of being a mechanistic materialist as, accordingly, Engels, "by applying dialectics to nature divorces it from the mediation of consciousness." Avineri provides no proper argument for his claim; why the alleged "application of dialectics to nature" amounts to removal of mediation of consciousness but application of dialectics to society does not? The reason seems to be that in contrast to Hegel for whom the inanimate nature could be included in dialectics because accordingly "nature is spirit in self-estrangement" (ibid.) in Engels' view it is "only opaque matter" that historically precedes spirit and "is the cause and source of evolution of consciousness" (ibid., 66). That matter or material world precedes consciousness and is the cause and source of human activity and the consequent emergence of consciousness is a view that is also shared by Marx; interestingly, Avineri (1968, 68) maintains this point (and contradicts himself) stating that according to Marx "there always exists a 'natural substratum'² which is a necessary condition for the activity of human consciousness" although Marx, contrary to Avineri's contention, never stops at the limit of "consciousness" as for him, just as is for Engels, the basis upon which human consciousness emerges is human beings' activity in nature. All in all, it is not consciousness that acts in nature but it is the living human beings who act with their bodily organs as much as with their consciousness, which itself emerges through this interaction.

1. I should admit that previously I had uncritically endorsed similar allegations against Engels. I have come to realize that I had not suggested a logically strong argument in order to adequately support such a "critique" of Engels' materialism and simply appropriated such attacks by a faulty appeal to authority. See Azeri 2019, 598–599.

2. For Marx material existence, i.e., nature, is far more than a "substratum;" rather it is a constituent, a necessary element of human beings' productive activity, which permit their existence as much as their activity. In *Capital* we read "The labour process [...] is purposeful activity aimed at the production of use-values. It is an appropriation of what exists in nature for the requirements of man. It is the universal condition for the metabolic interaction [*Stoffwechsel*] between man and nature, the everlasting nature-imposed condition of human existence, and it is therefore independent of every form of that existence, or rather it is common to all forms of society in which human beings live [...] therefore [...] it was enough to present man and his labour on one side, nature and its materials on the other." (1992, 290)

Contrary to these critiques³, I intend to show that Engels, particularly in his *Dialectics of Nature*, provides an account of praxis as a philosophical category that is truthful to the spirit of Marx's and his own earlier efforts for constituting a materialist dialectics—one that anticipates the concept of “human activity” elaborated particularly in philosophical works of Evald Ilyenkov. To put it in a nutshell, dialectics of nature is the dialectics of human's historically specific activity *in nature*⁴. According to Engels (1975, 338–339), the so-called laws of dialectics are historical thus depending on human activity as it is “with man [that] we enter history” (ibid., 330). Furthermore, it is through labour (the highest form of human activity) that not only the human hands but also social humanity and human consciousness have been constituted (Engels 1975, 453–454, 456, 458). Thus, laws of dialectics are the most general laws of human activity in social nature. Engels, truthful to Marx's materialist dialectics, prioritizes action over body-substance.⁵

In order to demonstrate the implausibility of Engels' “critiques,” a conceptual reinterpretation of Marx's and Engels' conceptualization of key concepts such as history, praxis, human activity and dialectics is required. To this end initially the concept of history in Marx's and Engels' writings

3. The literature for and against Engels' conceptualization of materialism and dialectics (and his relation to Marx's “authentic” position) is far larger than what has been addressed in this article. I have chosen these particular authors because, in my view, their different and at times apparently contrasting approaches to Engels are based on common presuppositions. For an almost exhaustive list see Kangal 2020, particularly chapter 2.

4. “Knowledge is not a set of propositions... sentences, propositions ... scientific concepts and conceptual machines ... are means for relaying the rules, methods, and laws of human activity of manipulating the social world” (Azeri 2019, 598).

5. In his recently published article Rognéy P. Arencibia (2021) elaborates on the relation between Engels' concept of dialectic of nature and Ilyenkov's concept of the “ideal.”

Arencibia sets a two-fold task before himself: 1. Critique of “Western Marxism's” negative attitude towards Engels (particularly his *Dialectic of Nature*); 2. Ilyenkov's endorsement of Engels' view of dialectics (of nature) and philosophy and thus the incompatibility or the incommensurability of Ilyenkov's philosophical stance with “Western Marxism.” He provides solid counter-arguments against the “cultish rejection of dialectics of nature” by “Western Marxism” which amounts to “a blind idolatry towards positivistic views” about philosophy, its subject matter and its relation to (natural) sciences. My account diverges from Arencibia's in emphasizing the role that the concept of “activity” (praxis) plays in Ilyenkov's view of philosophy and dialectics and the role this concept (practice) plays in Engels' conceptualization of dialectics. It is the alleged dismissal of the concept of activity/praxis (as a philosophical category) and the consequent dismissal of the “active side” (which was left to be developed by idealism) by “Engels” that forms the core of some interpreters' “criticisms”—a view which I set to challenge in this article.

will be analyzed. It will be argued that the concept of praxis (human activity) and its historically specific forms are central to Marx's and Engels' understanding of history. Furthermore, Marx's and Engels' concept of "practical materialism" will be evaluated and reconstructed; it will be argued that Marx's and Engels' practical materialism, in contradistinction to mechanical materialisms and idealism, prioritizes activity over substance. In the third section, Engels' critique of metaphysical views that consider philosophy as a "science of sciences" will be considered. It will be argued that this position is not "anti-philosophical;" rather it demarcates the subject matter of philosophy, that is, laws of thinking and theory of knowledge, and its methodology—dialectics. In the fourth section, the role of labour (productive human activity) in history and constitution of human species as a social being and emergence of human consciousness will be considered. It will be shown how through the concept of activity, Engels, truthful to the spirit of Marx's and his own practical materialism, overcomes the subject-object or mind-matter dualisms dear to metaphysical and mainstream viewpoints. In conclusion the historicity of human knowledge, the mutual mediated interdependence of thinking and reality (thought and matter) will be considered and it will be argued that like other laws of nature, dialectic of nature is dialectic of human activity in nature.

THE CONCEPT OF HISTORY

In *The German Ideology* Marx and Engels (1976b, 41) identify the first fundamental condition of history as human's physical existence: "men must be in a position to live in order to be able to make history." Similarly, they consider human beings' existence as the first premise of their materialist method: "The first premise of all human history is, of course, the existence of living human individuals" (ibid., 31). Thus, history is nothing other than human beings' historical activity in nature, which always attains a specific *social form*. Owing to human beings' historical activity nature too attains a historical existence as social nature⁶. Historicity of nature pertains to the

6. "Social nature" and "nature" are used interchangeably in this article. The reason for the use of the term "social nature" is emphasizing the role of human activity and its metabolic relation to nature that amounts to knowledge-production. "Nature for Marx appears only through social labour. Even time and space are social in their origin. [The] objective "in itself" is relevant only if it is made into a "for us;" in other words, it is relevant insofar as nature is drawn into the web of human social practice with the use of artefacts, and to the extent that it becomes a socially produced artefact" (Azeri 2020, 356).

interdependence of human and nature, which are united and divided through human activity. Marx and Engels consider nature as the primary source of all instruments and objects of labour; hence, in their account, nature should be primarily conceived of in relation to human activity. Former materialism, that of Feuerbach included, ignores the fundamental role of human activity and labour in process of manipulation and the consequent socialization of nature and in doing so it reproduces the idealist stance, for which abstract thinking is the only genuine activity. Accordingly, the state institute as well as the law and religion are “thought entities’ or products of “pure, abstract philosophical thinking” (Marx 1975, 331). Engels (1975, 330) resonates this very idea of interdependence and historicity of human and nature through the mediation of human activity when in the *Dialectics of Nature* he states that “with man we enter history.”

Human consciousness, as well as its knowing activity, are also determined by historical activity and emerges only as a social product.⁷ The Marxian conceptualization of knowing is in contrast to the age-old rationalist-empiricist one. Older materialist as much as empiricist conceptualization of cognitive activity is based on “observation-learn” dogma; for Marx, to the contrary, cognition is preceded by and is rooted in “activity-change.” For the former sciences work on or are about trans-historically given, immutable and atomic facts; furthermore, the subject of knowledge is considered a neutral, pure spirit whose quest for knowledge is triggered by natural curiosity. Contrarily, from a materialist dialectical stance, knowledge-producing activity is a specific type of the socio-historically determined activity aiming for manipulating nature and is inseparable from the historically-specific social needs, which are in-formed by this very activity, and the specific form of the social relations of production. Thus, criticizing Feuerbach’s contemplative materialism Marx and Engels, in *The German Ideology*, state:

Feuerbach speaks in particular of the perception of natural science; he mentions secrets which are disclosed only to the eyes of the physicist and chemist; but where would natural science be without industry and commerce? Even this “pure” natural science is provided with an aim, as with its material, only through trade and industry, through the sensuous activity of men. (Marx and Engels 1976b, 40)

7. This paragraph draws on Azeri (2017, 74, 77).

Engels recapitulates this very approach in his treatment of the historicity of logic and laws of thinking and dialectics. Laws of thinking as a peculiar form of human activity are subject to historical change owing to the change in the mode and form of human activity in nature. Thus in *Dialectics of Nature* Engels states:

In every epoch, and therefore also in ours, theoretical thought is a historical product, which at different times assumes very different forms and, therewith, very different contents. The science of thought is therefore, like every other, a historical science, the science of the historical development of human thought. And this is of importance also for the practical application of thought in empirical fields. Because in the first place the theory of the laws of thought is by no means an “eternal truth” established once and for all, as philistine reasoning imagines to be the case with the word “logic.” (Engels 1975, 338–339)

Engels (1975, 356) further defines dialectics as “the science of interconnections, in contrast to metaphysics.” Dialectics, which is abstracted from *history of nature and human society* expresses the most general laws of these two facets of *historical* development as well as those of development of human activity and thinking. Laws of dialectics are deduced from history (of nature and society) that is actual only in relation to human activity. The match between the laws of dialectic of thinking and that of nature appears mystical to one that rigidly reproduces the age-old subject-object dualism, which separates thinking and reality categorically and feigns the existence of an unsurmountable gap between them. Hegel’s idealist conceptualization of dialectics suffers exactly from such a dualism which amounts to supposing that dialectical laws, as those belonging to pure thought, are imposed on nature.

This is the source of the whole forced and often outrageous treatment; the universe, willy-nilly, has to conform to a system of thought which itself is only the product of a definite stage of development of human thought. If we turn the thing round, then everything becomes simple, and the dialectical laws that look so extremely mysterious in idealist philosophy at once become simple and clear as noonday. (Engels 1975, 356)

Interestingly, such dualism and the consequent mystification of dialectics, at least to the extent that scientific knowledge of nature is concerned, is recapitulated by Lukacs in his attempt to criticize Engels. Lukacs (1971, 132) retreats to a Feuerbachian substance materialism in conceiving of scientific knowledge as “contemplation at its purest” and dismisses the “active side” in the process of production of scientific knowledge; he claims that dialectical method of investigation “is limited to the realms of history

and society” because “the crucial determinants of dialectics—the interaction of subject and object, the unity of theory and practice, the historical changes in the reality underlying the categories as the root cause of changes in thought, etc.—are absent from our knowledge of nature” (Lukacs 1971, 24, n. 6). Lukacs, like “[Feuerbach] does not see how the sensuous world around him is, not a thing given direct from all eternity, remaining ever the same, but the product of industry and of the state of society” (Marx and Engels, 1975, 19). Lukacs fails to see that concepts and conceptual systems employed in sciences are specific historical tools that have been produced through the accumulated historical human activity; he fails to see that “[science] is not dependent upon sensory perception” (Vygotsky 1997b, 273).

Under capitalism “pure” theoretical knowledge has become an actuality; however, such theoretical knowledge is as much material as an axe or a hammer is; what needs to be explained is the emergence of “theory” as a material force and not an uncritical affirmation of the phenomenon of appearance of pure knowledge—knowledge, which pragmatically is not related to any particular individual bodily action. The historical actuality of pure theoretical knowledge has been made possible by capitalist division of labour and its corresponding form of cooperation; thus, in the final analysis, it cannot be conceived of separated from labour and human activity and their specific form. Contrarily it may seem, the emergence of pure theoretical knowledge signifies the dialectical unity of theory and practice. Engels formulates this interdependence of theory and practice as follows:

The new tendency, which recognised that the key to the understanding of the whole history of society lies in the history of the development of labour, from the outset addressed itself preferentially to the working class and here found the response which it neither sought nor expected from official science. The German working-class movement is the heir to German classical philosophy. (Engels 1990, 398)

Metaphysical materialism identifies activity with mere individual action and reduces the motives behind it to personal ones—it treats activity and history pragmatically (see Engels 1990, 388). Thus, in the face of its own *necessary* failure in discovering an “immediate” link between personal motives and actions and particular epistemic-theoretical developments (because there does not have to be any such immediate bond) it becomes bewildered and is pushed to recapitulate the ideologists’ stance in attributing independence to the theoretical by considering it as purely mental, severe it from the material (human activity) which is to be followed and

complemented by accusing Engels for his alleged reductionism and “economic determinism.”

Such is, for instance, Shlomo Avineri's consideration of the history of development of Marx's ideas and methodology: he considers Marx's materialism a *Weltanschauung* rooted in Hegel's speculative philosophy; accordingly, the core of Marxian materialism is not prioritizing activity or praxis over substance, but legitimizing matter “through a transforming contemplation of the principles of German idealist philosophy itself” (Avineri 1968, 6). All Marx's development is thus reduced to “theoretical” or “intellectual” development, a movement initiated by a mere clash of ideas. Avineri's theoreticist stance is also evident in his consideration of the relation between the political and the epistemological; according to Avineri, Marx's critical thought is rooted in classical German philosophical tradition whereas the later Engels mostly draws upon eighteenth-century French and English materialism. For Marx, as Avineri's argument goes, utopian socialism is an immediate outcome of Anglo-French materialist epistemology while Marx's own epistemology, which yields his political outlook, “is deeply imbedded in German idealist tradition” (*ibid.*, 68). If Avineri's account concerning the priority of epistemology over politics were plausible, one could barely explain Hegel's ultra-conservative political siding despite the central role he attributes to labour and activity in his system.

Avineri (1968, 235–236), in criticizing what he labels as the “technological bent” in Engels' view, argues that Engels attributes autonomy to technology which is based on his understanding of material nature and objects as entities completely alien to human beings and of industry as something irreducible to “directable human action.” This alleged view is supposedly in contrast to Marx's stance that does not consider technology as an objective, external force. To support his view, he paraphrases Engels' argument in “On Authority” that “authoritarian discipline is an immanent ingredient of large-scale industry” independent from social relations of production, which, according to Avineri (*ibid.*, 235), is in contrast to Marx's contention that production determines forms of organization. Avineri (1968, 236) further argues that in Marx's view, “future society will not require authoritarian industrial discipline,” whereas for Engels there exists a despotism in industrial production independent of the form of organization (*ibid.*, 235).

However, it can be argued that Engels' position in the “On Authority” is the continuation of Marx's analysis of machines in *Capital*; there Engels

(1988, 423) states that “All these workers, men, women and children, are obliged to begin and finish their work at the hours fixed by the authority of the steam, which cares nothing for individual autonomy[...] The automatic machinery of the big factory is much more despotic than the small capitalists who employ workers ever have been.” Here, on a different level of abstraction, Engels explains that every tool, every object that is produced by human beings, is “ideal” also in the sense that it dictates a particular form upon human activity. This *form*, it is true, is not independent from the historically specific mode of human activity; it is the mode of subjective activity objectified. Under capitalism, tools of production are basically machines which Marx defines as means of exploitation of surplus value from workers. It is clear that with the triumph of a socialist revolution such an aspect would not disappear by itself over a night since as much as the relations of production, means of production too should be revolutionized. Thus, Engels is quite right in two senses: on a trans-historical level he emphasizes a general rule that tools dictate forms of activity; on a historically specific level these rules will be of disciplinary nature peculiar to capitalism. These views complement Marx’s understanding of machines not as complicated tools but as revolutionary means of production. Ironically, Avineri’s own account is reductionist and simplistic, which separates the mode of administering tools from their specific existence; from such a viewpoint machines, means of production etc. are transhistorical entities the relations of which to the mode of production and the historically specific mode of activity is accidental.

In a similar vein, Lichtheim argues that there is an element of industrial technocraticism in Engels so that he is mainly concerned with the role of proletariat in *industrial* revolution; his consequent understanding of socialism, thus, is the liberation of “productive forces;” and this aspect is so strong that also echoed in the *Manifesto* in emphasizing the revolutionary role of capitalism in doing away with “pre-industrial forms of society.” This, however, is Lichtheim’s own understanding of the revolutionary role of capitalism and not Engels’. *Manifesto* declares capitalism revolutionary not only due to its technological advancement—although this is a by-product of capitalization of production relations—but because of the universal character of capitalist relations of production which is manifest in capital’s “creat[ing] a world after its own image” (Marx and Engels, 1976a, 488); Marx and Engels (1976b, 73) had already emphasized this aspect of capitalism in *The German Ideology*: “Industrial capital [...] [through] compete-

tion destroyed as far as possible ideology, religion, morality, etc [...] It produced world history for the first time."

MARX'S AND ENGELS' PRACTICAL MATERIALISM

Engels (1990, 382), in his *Ludwig Feuerbach* notes that Marx represents a return to materialism, where the term refers not to prioritization of one substance (matter) to another (mind/soul) but to an effort to understand and thus necessarily change historical reality noting that social reality is a unity of nature and history merged through and within human being's historical activity. It is within this unity that "for the *practical* materialist, i.e., the *communist*" the question of human beings' relation to the world transforms into "a question of revolutionising the existing world, of practically coming into grips with and changing the things found in existence" (Marx & Engels, 1976b, 38–39). Materialism, thus, is the comprehension of facts on their own as they present themselves to every human being [the so-called] facts can "present themselves" to human beings in activity, not in contemplation but in the process of changing the world].

Engels criticizes Hegel for his "ideological perversion" i.e., for attributing a trans-social or trans-human independence to dialectics and its "laws," as if it exists and is at work independent of human thinking: "According to Hegel ... *dialectical development appearing in nature and history* [...] is only a copy of the self-movement of the concept going on from eternity, no one knows where, but at all events *independently of any thinking human brain*" (1990, 383, emphases added). Hegel's perverse formulation of dialectics suffers from a dual fallacy: it attributes what is truly "material" to "mind/soul"; but most importantly, it simply converts the metaphysical materialist dogma in attributing "independence" (from human thinking) to dialectics and dialectical laws of development in society and nature. Once such mystification is done away with "dialectics reduced itself to the science of the general laws of motion, both of the external world and of human thinking—two sets of laws which are identical in substance, but differ in their expression in so far as the human mind can apply them consciously" (Engels 1990, 383). Dialectics of thinking, thus, is a "reflection" of the dialectics of the real motion of the world, where "world," as indicated above, is historical nature—the historical world of historical human activity. Therefore, (Marx's and Engels') materialist conversion of Hegel does not simply refer to replacing a substance with another, it also emphasizes the attribution of active side to human being—to do away with the

mystical conceptualization of activity as that of mind or soul (which would be identical with mere inaction): the substance-subject of history, if any, is living human being and its historically specific mode of activity. Thus, concludes Engels, “In this way, however, the *revolutionary side* of Hegelian philosophy was again taken up and at the same time freed from the idealist trimmings which with Hegel had prevented its consistent execution” (1990, 384, emphases added). Reality, in contrast to age-old metaphysical dogma inherited uncritically by [Kant’s “critical” philosophy and] the sciences, consists not of “given,” “ready-made *things*” but of “processes” where the latter points to relentless human interaction with nature—a conception that in its turn dissipates the idea of ahistorical [thus absolute] knowledge (knowledge of the thing—*faits accomplis*) independent of and prior to changes and processes. All knowledge is historical not only in the sense that it reflects the transitory state of modes of reality but also, and more importantly, in that such changes and processes as much as their “laws” are revealed solely in human activity in nature. Hence, Engels states,

If, however, investigation always proceeds from this [Marxian materialist] standpoint, the demand for final solutions and eternal truth ceases once and for all; one is always conscious of the necessary limitation of all acquired knowledge, of the fact that it is conditioned by the circumstances in which it was acquired. On the other hand, one no longer permits oneself to be impressed by the antitheses, insuperable for the still common old metaphysics, between true and false, good and bad, identical and different, necessary and accidental. (Engels 1990, 384)

Lichtheim (1961, 15, n. 1) claims that Engels, like Feuerbach, is committed to a program of unification of sciences and philosophy, although not in a “vulgar materialist” style, reminiscent of a “positivist programme.” In the same note, he admits that the term “dialectical materialism” was coined by Plekhanov, yet, providing no further argument, he attributes diamat to Engels. Lichtheim’s discussion at this point reveals his traditional, uncritical conceptualization of science, which interestingly is inspired by positivists of whom Engels is considered an ally.

From a materialist dialectical point of view, the roles ascribed to philosophy and to sciences is related to how knowledge is defined and what is to be done with it; furthermore, it depends on the specific field within which a particular form of knowledge is produced (mathematics, physics, biology, philosophy). In this particular sense, there is nothing that philosophy may add to individual sciences; yet, to the extent that the question

concerning the nature of knowledge, its social form of production etc. are concerned, philosophy and no other “science” has a say.

Lichtheim implies that Engels has a more schematic understanding of development of history; that backwardness of Germany for him renders the anticipated revolution (if it was ever to come) necessarily a democratic-bourgeois one while Marx thought the backwardness of Germany necessitates a more radical revolution. It might look as if these are different views but if one accepts Lichtheim's interpretation one has to state that both Marx and Engels thought about history *deterministically* without leaving no room for the acting agent/subject. The only alleged difference is that while Marx emphasizes backwardness as a “positive” element Engels considers it a “negative” one (to the extent that a proletarian-communist revolution is at stake). However, even if we accept that Engels anticipated bourgeois democratic revolution vs. Marx's radical-communist revolution, this might be due to how they considered the capacities and capabilities of the working class and its organizations etc.

Emphasizing the alleged substantial difference between Marx's and Engels' methods, Lichtheim (1961, 235–236) states that “The *Theses on Feuerbach* (1845), with their proclamation of the need for thought to become ‘practical’ and ‘change the world,’ represent a pragmatic doctrine of revolutionary action which cannot by any stretch of language be called ‘scientific’.” If by science one understands a positivistically-conceived contemplative stance that supposedly “discovers” the allegedly “objective laws” in the phenomena under scrutiny, Lichtheim's interpretation might be plausible. Yet, a Marx– (and Engels–) inspired conceptualization of science considers it as a specific form of human activity in interaction and metabolic relation to social reality which amounts to production of knowledge, where the latter signifies manipulation of objective reality through tool-mediated and object oriented human activity. The produced knowledge itself, through and through, is social and thus ideal; it is itself a tool, an organ, which is actualisable only in action, in praxis, which means changing the world.

Lichtheim further continues his unfounded allegations against Engels in the face of counter-evidence. He considers Marx, in contrast to Engels' supposedly positivist program, a true heir to Hegel who, despite his differences with the latter, ultimately considers the identity between thought and reality, which also amounts to their rejection of the trivial discrepancy between the “is” and the “ought” (Lichtheim 1961, 238–239). Notwithstanding the fact that Engels, in his *Ludwig Feuerbach*, draws attention to

and emphasizes the relation between reason and reality as a revolutionary element in Hegel's philosophy, Lichtheim's interpretation of this relationship is still dualistic and ideological as he deals with reason and reality as pure metaphysical categories. The missing link in Hegel's interpretation that amounts to his speculative stance and which is criticized by Marx and Engels is the absence of real, historical activity of living human beings and the particular historical concrete *form* of their activities in his system. In Marx's and Engels' account it is not the reality that is rational; rationality is the reason appropriate to a particular *form* of socio-historical human activity. The absence of a true definition of "praxis," i.e., of human activity in Lichtheim's (1961, 241) account of Marx and Engels' standpoint eventually obliges him to consider "the core" of "Marxian vision, idealist." In the absence of such a category a materialist account of reality and objective existence of thinking/thought and the ideal becomes impossible and idealism inevitable. Engels' account is an attempt to show the materiality and objectivity of categories of human thinking, which is rooted in dialectics of human activity in nature.

Lichtheim's evaluation of Engels' position as "an amalgam of Hegelian and Darwinian concepts" that does not add to Marxian early critical stance of 1843–1845 (that of Engels' own included) is baseless and not evidenced and is rooted in anti-Engelsian assumptions. These allegations betray Lichtheim's own understanding of "philosophical" as speculative, "metaphysical" and thus non-scientific; accordingly, scientific means what scientism and positivism understand from the term. For Lichtheim dialectics cannot be materialistic and thus materialism cannot be dialectical; he continues to stay in the realm of substances and does not appreciate the specific and central role Engels (alongside Marx) attributes to human agency, praxis, and historically specific mode of human activity

PHILOSOPHY AND SCIENCE

Engels' position concerning the impossibility and undesirability of philosophy as a "science of sciences," which he also maintains in *Anti-Dühring* forms the ground upon which Ilyenkov (and Korovikov) will launch their attempt to reinstate Marxian practical materialism. Philosophy is *not* and *cannot assume* the role of a science of sciences. To the extent that production of knowledge is at stake, this is a task to be realized by individual sciences; as for philosophy, it is a theory of theoretical thinking, a theory of knowledge and of the laws of thinking, which are themselves subject to

historical determination and not separable from the historically specific form of human activity. To the extent that Engels' position and his rejection of such a role for philosophy is concerned, his position is anti-positivist—this latter conceives of philosophy as a parasite to feed itself upon sciences. It is not clear how, from such a point Lichtheim arrives at his evaluation of Engels' position as positivist and anti-philosophical: "Instead of the 'realisation' of philosophy through action which transforms a world that has philosophy for its necessary complement, we have here a differentiation of philosophy into 'the positive sciences'; or rather its partial differentiation" (Lichtheim 1961, 245). This, however, is Lichtheim's own understanding of sciences as contemplative, purely "theoretical" endeavor that aims at forming a world-view. Knowledge-producing scientific activity is an action of manipulation the object/objective world. Lichtheim starts with positivistic-contemplative and commonsensical conceptualization of science and scientific knowledge as something separate from and in contrast to activity of the knowing subject in particular and the mode of social activity in general and then projects this image of knowledge and science onto Engels and presents this image as his—this, at best, is a straw man argument. No knowledge is possible without affecting the world and changing it as knowledge is activity in and upon objective social world—this was even known by Hegel's (2004, 65) animals as early as 1807).

Marx and Engels (1976b, 28) clearly consider knowledge of nature and that of history (what Lichtheim designates as "human nature") as two phenomena or form of appearance of human activity in social nature. That is why Lichtheim's Lukacs-inspired criticism of Engels' "dialectics of nature" misses the point and betrays his own somatic materialist stance: "if nature is conceived in materialist terms it does not lend itself to the dialectical method, and if the dialectic is read back into nature, materialism goes by the board. Because he knew this, or sensed it, Marx wisely left nature (other than human nature) alone" (Lichtheim 1961, 247). Whereas, Marx and Engels, criticize Feuerbach for exactly a similar understanding of nature:

[Feuerbach's] error is not that he subordinates the flatly obvious, the sensuous *appearance* to the sensuous reality established by detailed investigation of the sensuous facts, but that he cannot in the last resort cope with the sensuous world except by looking at it with the "eyes", i.e., through the "spectacles," of the *philosopher*. (Marx and Engels 1976b, 39)

Any attempt at reviving a "philosophy of nature," according to Engels (1990, 386), is redundant as much as it is reactionary. This idea goes hand

in hand with rejecting a conceptualization of philosophy as a meta-science. Engels' approach, rather than being rooted in some alleged inclination toward positivism and scientism is based on a materialist dialectical understanding of the nature of knowledge and knowing activity: knowledge is not a mere propositional bulk *about* things; it is not a, or an element of a "worldview." It is, first and foremost, the capacity of manipulating social nature; knowledge appears in activity at the line of contact between human being and social reality; not only is it bound to activity, but also, in its actuality it is unconceivable independent from the active subject of knowledge. As knowledge is object-oriented and tool-mediated, it bears the mark of the particular means (say, theories, set of questions invoked by this theoretical means/organs and objects of knowing activity) deployed for manipulation of objects; in this sense all knowledge is concrete as it is produced in the process of knowing concrete objects—there is no knowledge as such and thus any attempt at "synthesising" particular knowledges for arriving at a "general," "universal" Knowledge is futile and will necessarily fail. Ilyenkov and Korovikov (1954), following Marx and Engels, describe this situation in their "Theses on Philosophy" as follows: "positive knowledge" is itself able to reach, and is obliged to reach, that very final essence of the object of research, beneath, above and beyond which there is nothing to find for the reason that there is nothing more" (Thesis 12).

THE ROLE OF ACTIVITY (LABOUR)

In the section "The Part Played by Labour in the Transition from Ape to Man" Engels emphasizes the fundamental role of human activity, the height of which is labour, in the process of emergence of human species as a "social animal" in the true sense of the term. Engels (1975, 452) clearly states that it is "labour" that "created man himself." He further notes that hands are not only the organs of labour but also its products (*ibid.*, 453–454). Furthermore, labour has a socializing effect meaning that human is a truly social being because it labours and not vice-versa. Labour is an exclusively humanizing and socializing practice to the effect that the emergence of human society has been facilitated by labour. "This further development has been strongly urged forward, on the one hand, and guided along more definite directions, on the other, by a new element which came into play with the appearance of fully-fledged man, namely, *society*" (*ibid.*, 456).

Here Engels clearly resonates the ideas that formerly he and Marx had put forward in *The German Ideology* that the distinctive feature of human beings in comparison to animals is neither consciousness nor religion but is the production of their means of subsistence and the consequent production of their actual material life. What brings about the distinction between human and non-human animals is labour (Engels 1975, 460). Furthermore, Engels openly prioritizes action (labour) over body (substance) and in doing so he anticipates Ilyenkov's formulation "[in the *Dialectical Logic* that] the subject of thought [is] not body, but [is] action—the process of labour: 'Labour [...] is the "subject" to which thought as a "predicate" belongs'" (Maidansky 2016, 45).

As the "curvature of the social," i.e., as a social relation, human consciousness is also a product of labour (activity) which is actualized within specific social forms. Consciousness, both individual and social, is a function of the form of organization of society and productive activity—labour—which is reflected, say, in specific forms of consideration of the impact of productive activity on nature and environment. Hence, so far all modes of production have dealt only with the immediate and direct useful effects of labour, i.e., have considered it positively only and neglected the later effects of gradual repetition and accumulation of labour process. This is visible, for instance, in the science of political economy, "the social science of the bourgeoisie" that "in the main examines only social effects of human actions in the fields of production and exchange that are actually intended" (Engels, 1975, 462–463) and remains blind to the disastrous effects that the capitalist production has on the environment. "This fully corresponds to the social organisation of which it is the theoretical expression" (ibid., 463).

Engels's elaborations on the concepts of necessity and causality further reveal his activity-based conception of knowledge and dialectics. He states, "the proof of necessity lies in human activity, in experiment, in work: if I am able to *make* the *post hoc*, it becomes identical with *proper hoc* (Engels 1975, 510). He further adds, "we can even produce motions which do not occur at all in nature (industry)... *In this way*, by the *activity of human beings*, the idea of *causality* becomes established" (ibid.). The proof of laws of nature is human activity because laws are realized in that activity; the law of nature is the law of human activity in nature. This is quite different, actually it is opposed to, the official diamat understanding of "practice as the criterion of truth" which is a quite verificationist formulation. Activity here is introduced not as verification of theory/thought but as its actuality, its

realization to the effect that the two become identical. Activity is theory-embodied just as theory is activity-universalized—activity as a concrete universal. Thus writes Engels:

Natural science, like philosophy, has hitherto entirely neglected the influence of men's activity on their thought; both know only nature on the one hand and thought on the other. But it is precisely the *alteration of nature by men*, not solely nature as such, which is the most essential and immediate basis of human thought, and it is in the measure that man has learned to change nature that his intelligence has increased. (Engels 1975, 511)

It is along the same lines that Engels rejects the Kantian notion of the “thing-in-itself” because in nature we find what we act on and thus the form of our activity carved in object or our activity objectivized in response to the form of object: “we can only know under the conditions of our epoch and *as far as these allow*” (Engels 1975, 521).

Lukacs's allegation that Engels conflates the Kantian notions of “in itself” and “for us” and thus misses the point in considering the “thing-in-itself” as a barrier to the expansion of knowledge is based on ignoring this relation between human activity, and its tools—be them physical or ideal-conceptual—and its objectification in nature. He states that contrary to Engels' contention, Kant's conceptualization of knowledge tailored in accordance to Newtonian paradigm allows a limitless expansion of knowledge. However, what Kant's critique implies is that knowledge of phenomena will never be more than knowledge of phenomena; furthermore, phenomenal knowledge is essentially unable to transcend the “structural limits of knowledge” (Lukacs 1971, 132). These structural limits are based on the antinomies of content and totality meaning that what we know are nothing other than our own concepts or conceptual projections onto nature.

Lukacs' criticism of Engels, however, is based on an old-age misunderstanding or dogma, which radically differentiates between concepts, conceptual systems or tools and the objects that are to be known and manipulated by deploying these tools. In this picture, concepts are nothing other than chimeras or subjective images that are created by or appear in individual minds (recall Marx's critique of Kant's rejection of the ontological proof by way of differentiating real dollars in one's pockets from those the person imagines them in one's pocket). As Vygotsky aptly put:

It would be as much a mistake to say that it [i.e., science—S. A.] studies concepts and not the reality reflected in these concepts, as it would to say of an

engineer who is studying a blueprint of a machine that he is studying a blueprint and not a machine, or of an anatomist studying an atlas that he studies a drawing and not the human skeleton. For concepts as well are no more than blueprints, snapshots, *schemas of reality* and in studying them we study models of reality, just as we study a foreign country or city on the plan or geographical map. (Vygotsky 1997b, 247–248, emphases added)

In the section on “historical materialism” of his *Main Currents of Marxism*, Lezek Kolakowski criticizes Marx and Engels for their alleged truism concerning the relation between the so-called “base” and “superstructure.” Accordingly, that superstructure elements (historical events), from wars to religious changes, are related to many factors including class struggle is a matter of common sense and there is nothing specifically Marxist about it. Kolakowski argues that Engels aims at explaining away this difficulty by simply stating that it is in the final analysis that the base (the relations of production) determine the superstructure (meaning that the former determine the latter indirectly); however, such a formulation, according to Kolakowski (1978, 364), is still deterministic notwithstanding that it does not explain which factors should be considered as the chief determining ones in each historical era. The fundamental problem with this interpretation is the way Kolakowski considers “objectivity” of laws governing social reality; it recapitulates the view that treats practical materialism of Marx and Engels as a form of empiricist realism that considers “laws” of nature and society as independent from human activity and its specific social form and conflates their independence from individual consciousness with their independence from social reality. The determining role of the “relations of production” is not something that follows immediately from the so-called “material” production in contrast to “non-material” or “ideal” production. Rather, it maintains that both physical and ideal production and products are products of human activity the height of which is labour. The important point is the specific social form these products attain owing to the historically specific form of human activity which is also manifest in forms of organization of production, forms of property relations, and forms of co-operation between members of the society.

Kolakowski (1978, 377) considers Marx’s supposed engagement with theoretical consistency rather than the relation between theory and facts and Engels’ concern with constituting a relationship between the theoretical and the factual as a major point of divergence between their methods. Accordingly, Engels views social sciences as a prolongation of natural sciences (and seeks for same basic methods underlying both). Still,

Kolakowski maintains that Engels does not aim at a mechanical reduction for the sake of such unity but intends to find dialectical laws appropriate for each field of inquiry. It is not clear why seeking a unity between sciences, by itself, should be considered not a praxis-based but a metaphysical doctrine, or not a re-appropriation of philosophical and theoretical tradition but “a doctrinal stereotype which, under the name of dialectical materialism, came to be officially regarded as the ‘Marxist ontology and theory of knowledge’ (Kolakowski 1978, 377). Engels cannot be held responsible for the notorious definitions of dialectical and historical materialism that would be provided in the *Short History*—this does not count a justified criticism. Furthermore, that Engels’ three major works, *Anti-Dühring*, *Ludwig Feuerbach*, and the unfinished *Dialectics of Nature*, “unlike those of Marx, deals with questions *traditionally* regarded as belonging to philosophy” (ibid., emphasis mine) is no evidence of Engels’ divergence from Marx’s and his own earlier practical materialism; it might seem so only if one disregards the whole body of works and polemics that have been proposed by Marx and Engels since 1840s and the consequent theoretical and conceptual advancement in materialist methodology and the sublation of philosophy, political economy and other fields of knowledge; this, in its turn, amounts to a fallacy of equivocation: equating Engels’ epistemological concerns with traditional epistemological questions is as much justified as equating Marx’s theory of value to Ricardo’s and contemporary physics’ notion of atom to that of Democritus.

The disregard for such conceptual transubstantiation in Marx’s and Engels’ activity materialism is also visible in Kolakowski’s treatment of Engels’ approach to the historical confrontation between philosophical materialism and idealism in his *Ludwig Feuerbach*. Accordingly, Engels considers the opposition between these two schools as the central question over which philosophical debates has hitherto turned. “In the last analysis it was, in his opinion, a debate concerning the creation of the world” in which idealists hold on to the idea of precedence of mind over matter and the materialists to the opposite. Kolakowski (1978, 378) then goes to say that not in every historical epoch such confrontation has been the central one: “There have been times, for example the Christian Middle Ages, when civilization knew nothing of materialism in the strict sense.”

However, Engels does not stop at such a substance-materialist stance; materialism, traditionally, has defined itself as a doctrine that defends the priority of material substance; this classical materialism might have formed the basis for the new “dialectical materialism” but Engels’ own version has

the category of praxis at its core. In *Ludwig Feuerbach* Engels (1990, 365) defines the most fundamental question of all philosophy as the relation between thinking and being. (This is a reformulation or recapitulation of Marx's second thesis on Feuerbach regarding the "this-worldliness" or "reality" of thinking.)

Engels argues that the question concerning the relation between thinking and being, which also takes the forms of the question of primacy of mind over matter or vice-versa, or the theological question of creation of the world is rooted "in the *narrow-minded and ignorant notions of savagery*" (1990, 366, *emphases added*). What is worth noting here is that the primary subject of criticism for Engels is not the answers provided by these two camps but the very question of the priority of one substance over another—it is this question, which is responsible for and is a manifestation of all religious and speculative illusions and absurdities.

Engels (1990, 367) further argues that there is another side to or other forms of formulation of this question: Is thinking capable of grasping the reality surrounds us? Can we know reality correctly? In language of (speculative?) philosophy, says Engels, this becomes the question whether thinking and reality are identical, to which the overwhelming majority of philosophers answer affirmatively; yet, the idea of the identity of thinking and reality, proposed idealistically or materialistically, takes substance as its fundamental category. Interestingly, Kolakowski himself admits that in Engels' view "the essential opposition in philosophy between nature and spirit ... expresses a kind of dualism" (Kolakowski 1978, 378) which regards these two categories as separate substances whereas Engels is inclined towards a monistic materialism. Though, such monism, Kolakowski (*ibid.*, 379) contends, is based on "rejecting the belief in any form of being that cannot be called material." In order not to fall back into the pitfall of substantialism, Engels, according to Kolakowski (*ibid.*), "takes a purely scientific or phenomenalist view and dispenses altogether with the category of substance." From this, Kolakowski (*ibid.*) concludes that "materialism as understood by Engels is not an ontology in the usual sense but an anti-philosophical scientism which sees no need to ask questions about 'substance' and is content with the bare facts of natural science" that equates "all philosophy [with] idealism, an imaginative embellishment of scientific knowledge."

These criticisms, however, largely disregard certain central features of Engels' activity materialism. First, Engels holds onto an emergentist view

of reality. For instance, in his critique of Cartesian substantialism and mechanical materialism he states that what the animal was to Descartes, man was to the materialism of eighteenth-century: a machine. Although humans consist of natural parts, of bodies that are at the most basic level material-chemical compounds, human being and human consciousness is irreducible to such particles and their fully mechanical relations—emergence. Thus, such fundamental laws, according to Engels, although at work even in human beings, “are pushed to the background by other, *higher* laws” (Engels 1990, 370, emphasis added).

The absence of an emergentist conceptualization of reality by mechanical materialism is also based on its understanding of nature as a static entity—accordingly, although nature is in perpetual movement, this motion is circular and repetitive; it does not yield higher material orders (Engels 1990, 370). Engels (1990, 371) also criticizes mechanical materialism for simply making itself a (radical?) theory of atheism and thus concludes that Feuerbach was right not to take the responsibility of such a metaphysical stance.

Furthermore, Engels provides two reasons in favour of Feuerbach’s protest against older materialism and his incapability to form his own radical theory: first, the wretched political and social situation in Germany of the time that amounted to his isolation; second, which is truly important, what may be called Feuerbach’s “anti-scientism”:

Feuerbach is quite correct in asserting that exclusively natural-scientific materialism is indeed “the foundation of the edifice of human knowledge, but not the edifice itself.” For we live not only in nature but also in human society, and this also has its evolution and its science no less than nature. It was therefore a question of bringing the science of society, that is, the sum total of the so-called historical and philosophical sciences, into harmony with the materialist foundation, and of reconstructing it thereupon. (Engels 1990, 372)

Clearly, the reason that Engels rejects the category of matter-as-such is because he aims at distancing himself from substance (“somatic”) materialism. Substance materialism, ironic as it may seem, like idealism, in its quest for substance looks for The Fruit, which is allegedly different than actual fruits. It is also not clear at all why one should accept Kolakowski’s account of Engels’ stance as “anti-philosophical phenomenalism/scientism”? The dichotomy between philosophy and scientism is a false one: nothing obliges one to either uncritically endorse philosophy of substance or reject all philosophy as idealism; this is clearly a straw-man argument; Engels’ is an activity materialism; part of his agenda (that he shares with

Marx) is to dissipate this uncritical appropriation of prejudices of history of philosophy. As Kolakowski (1978, 380) himself notices, Engels speaks of philosophy as “both abolished and preserved” and demarcated according to its new content and subject: a science of thoughts and its laws. Still, Kolakowski considers Engels’ position as being in line with the positivism of his time, for which “philosophy is a superfluous adjunct to the individual sciences” (1978, 380).

Hence we arrive at the problem of reworking of the concept of praxis as a philosophical category and its possible resolution—the problem is not one of veracity of thinking but the “this-worldliness” of it: this world signifies the world of appearances; the world of social reality; the only world that we know; that is provided by industry and trade. Thus thinking is inevitably this-worldly first and foremost in this sense.

This first sense implies a second sense: thinking is already “true” as it is the thinking of this world; the offspring, the “reflection,” the conceptual reconstruction of this world; so there is no problem of verification of thinking in and against reality. In this sense, Hegel is right, though perversely, in defining the world as a moment of thinking; although he states only half the truth.

Materialistically put, the world is a moment of thinking because thinking is that of this world—hence no exceptional place can be attributed to thought-thinking; because “nature could not be unreasonable” (Engels 1975, 502); hence, no problem of the match, identity, duality etc. of thinking and reality, of theory and practice⁸. Hence follows the eternity, infinity, and essential absoluteness of the true knowledge of nature which is reflected in “an infinite number of finite human minds, working side by side and successively at this infinite knowledge, committing practical and theoretical blunders, setting out from erroneous, one-sided, and false premises, pursuing false, tortuous, and uncertain paths, and often not even finding what is right when they run their noses against it” (Engels 1975, 514).

BY WAY OF CONCLUSION

Engels’ position is hardly compatible with any breed of positivism; even Kolakowski admits this although in a covert manner stating that in considering philosophy as an epistemology of general laws of nature, Engels’

8. For a detailed discussion of a particular form of appearance of the problem of this worldliness of thinking and the “match” between the “ideal” and material reality see Azeri 2021.

position is “less anti-philosophical than at first appeared” (Kolakowski 1978, 380). Contrary to Engels, positivism conceives of philosophy uncritically, just as Kolakowski does; it turns philosophy into a parasitic endeavour that feeds on propositions of sciences; and in doing this, it reconstitutes philosophy as a science of sciences. Engels’ point, if followed to its logical ends, is best explained by Ilyenkov and Korovikov in the “Theses on Philosophy,” in formulating the idealist tendency in history of thought as one that proclaims the inadequacy of scientific-theoretical inquiry in reaching the essence of phenomena. “Parasitizing on the historical immaturity and limitedness of knowledge of nature and society, idealism insists on the necessity of paths to knowledge of truth that are different in principle from the scientific-theoretical analysis of the phenomena of nature and society, namely religious or speculative-logical conceptions of the “essential,” of the “universal”” (Ilyenkov 2019, Thesis 6).

Of relevance to this point is the conception of knowledge: knowledge is manipulation of the objective world or the world of objects; it is not a propositional-theoretical bulk in need of application to reality. Once understood in this way, it becomes clear why there is no other knowledge than what the specific sciences produce—knowledge, as tool-mediated and object-oriented activity, by definition, is knowledge of objects and in no need of further “application.” Knowledge “is always of a particular object, for it is impossible to know ‘in general’, without knowing a particular system of phenomena” (Ilyenkov 1974; see also Ilyenkov 2007). It is in this sense that philosophy as science of sciences is impossible because such conception implies that philosophy adds to knowledge-as-manipulation; or it becomes manipulation of the methods of manipulation which is redundant. In the absence of such a materialist conceptualization of knowledge as a form of activity, Engels’ critique of the idea of philosophy as a science of sciences appears as a positivistic demand—an image that has nothing to do with Engels’ materialism and betrays the Kolakowski’s and other “critiques” uncritical appropriation of philosophical prejudices and dogma.

Both the so-called Western and official Marxisms share the view that Engels conceives of dialectics as the study of the most general forms of motion in nature, society, and thought and that his version of materialism is an heir to mechanical materialism and Feuerbach. Emphasis on the centrality of and reworking praxis in Engels’ account of materialism and human being’s metabolic relation to nature is the missing elements in

most of such defences as much in criticisms⁹. Accordingly, “there is an objective dialectic which governs nature and a subjective dialectic which is the *reflection* of the same laws in the human mind” (Kolakowski 1978, 388). Allegedly, Engels contends that human ability to think dialectically is a consequence of our minds obeying the same laws of motion in nature and society. Accordingly, Engels follows the naturalistic doctrines of his time in accepting a psychological view of logic and considering logical laws as “empirical regularities of the functioning of the nervous system” (Kolakowski, 1978, 388). Yet, the relation between human thinking and objective “natural” phenomena does not have to be conceived of as Kolakowski, alongside others, does. There is a match between the so-called dialectic of nature and that of thinking because thought has no independent existence from human beings who act, cognize, perceive, and think. These two dialectics coincide because human thinking is a particular mode of human action; human action is tool-mediated and object-oriented meaning that it conforms to *forms* of objectivity within which human activity is actualized while all objects, even if they are not objects of immediate bodily action (say, galaxies that are hundreds of thousands of light year afar), bear the mark of human activity. Of course, activity in this sense transcends the boundaries of individual’s actions (equating activity with such action is pragmatic); it is social activity or to put it differently, activity with a specific *social form*. In this latter sense dialectic of nature is dialectic of human activity—thinking included—in nature.

Engels confirms the ancient Greek wisdom that nature cannot be unreasonable; the question, however is that what does “reason” refers to? Whose reason is that? Were reason thought of as Objective Reason determining the course of the motions of the things independent of human activity in nature this statement would be, at best, a mere repetition of Hegelian idealism. However, reason is that which comes to the fore in form of concepts, as specific tools—human artefacts—the social significance of which is groping the essence of phenomena. Pertaining to Hegel, Engels

9. For instance, Rees (1994) is at pains to show that there is nothing wrong with the allegations that Engels considers human being a (passive) “product” of nature—because according to Rees, human is a “natural” being and nature is always historical (he gets this from Marx and Engels) but he considers the basis of this unity the “substance,” that is, matter, and in doing so, he, like the “critiques,” retreats to Feuerbachian materialism that is satisfied with a simple conversion of Hegelian identification of human and nature (or thinking and matter) in thought—thus he recapitulates the position of those he intends to criticize.

(1975, 502) states, “The development of a concept, or of a conceptual relation ... in the history of thought, is related to its development in the mind of individual dialectician.” In other words, the emergence of the law of nature is necessarily bound to its emergence, first and foremost, as the law of thinking; thinking in concept is positing “objective” chance as “subjective” necessity. In positing itself as necessity, the law of thinking thus emerges as the concrete universal (general) law of motion, of which concrete singular examples of motion appear as instantiations. As the expression of such (subjective) necessity, “the general law of change of form of motion is much more concrete than any single “concrete” example of it” (Engels, 1975, 502). Dialectical thinking, on the other hand, investigates the nature of concepts themselves, that is, it investigates the historical (phylogenesis and ontogenesis) development of “laws of thinking”—logic. It is in this sense that as the science of laws of human thinking dialectics emerges as the science of general laws of motion. Dialectics is the investigation of laws of the forms of human motion (activity/praxis) in nature; hence it is actualisable only in human activity: “dialectical thought—precisely because it presupposes investigation of the nature of concepts themselves—is only possible for man, and for him only at a comparatively high stage of development” (Engels, 1975, 502).

Contrary to what is implied by several critiques, Engels does not look down on philosophy but on idealism, which at his time, is identical to what philosophy was; but there is more to it: Engels might consider science as an important, even the most important and most successful means for producing knowledge, yet he considers science as a form of human social activity; his conception of knowledge is also different from positivist and also from those critiques who, ironically, adhere to positivist account of knowledge.

Engels’ dialectics of nature, contrary to Lukacs’s and other critiques’ claims, is not formulated as to relate “nature in itself.” As pointed out, it is Lukacs’s account of scientific knowledge and of natural scientific activity, which has been uncritically appropriated by other critiques from Kolakowski to Lichtheim that is positivistic and naturalistic. Contrary to Lukacs’s view of natural sciences that is inspired by scientism and Dilthey’s cultural vs. natural dualism, natural scientific knowledge-production should be considered first and foremost a particular form of labour and thus an interaction between human beings and nature, in which human itself appears as a natural force. As Vygotsky (1997b, 244) aptly put, “This process is determined in the first place by the properties of the nature

which is being transformed and the properties of the natural force which is transforming, i.e., in the present case, by the nature of the psychological phenomena and the epistemic conditions of man.” The coincidence between human being’s mental functions, psychological capacities and laws of thinking and natural processes is a consequence of such interaction.

Disregarding the Marxian conceptual theoretical transubstantiation parallels the mainstream history and philosophy of science’s blindness towards Marx’s criticism of positivism, of scientific activity and history, which goes hand in hand with his critique of political economy and capitalist society (Murray 1988, xiv).

Thinking is a property of matter, this is true but on an indeterminate level; neither Marx nor Engels stops at such a substantialist limit—and this is how they transcend Spinoza’s substantialist monistic materialism. Thinking for Marx and Engels, theoretically speaking, is an emergent form of human activity *in* and its metabolic relation *with* nature.

Matter does not yield thinking immediately: such formulation is a perverse image of an idealism that considers matter an immediate offspring of spirit. Thinking emerges only in activity of living organism and above all in its most sophisticated form in human abstractions which themselves are subject to socio-historical determinations; it is as human thinking that thought becomes capable of comprehending matter and only in conceptual thinking and with the use of conceptual organs¹⁰ and tools that it emerges as a truly objective, material force, an “ideal,” capable of manipulating objective reality and thus positing and actualizing reality socially as much human subjectivity. This latest form coincides with the emergence of capitalism and the consequent large-scale industrial production.¹¹ Engels’ contention that producing certain elements and aspects of reality through production and industry is a proof of correctness of human beings’ conception of natural phenomena (Engels 1990, 367) is an expression of this situation and the emergence of thinking as an independent force. This is in line with Marx’s formulation of the ideality of human being’s productive activity, which Vygotsky (1997a, 68) names the “doubling of experience”: “what distinguishes the worst architect from the best of bees is that the architect builds the cell in his mind before he constructs it in wax. At the end of every labour process, a result emerges which had already been conceived by the worker at the beginning, hence already existed ideally” (Marx

10. For an analysis of concepts and conceptual systems as “conceptual cognitive organs” see Azeri 2013.

11. For further elaboration on this point see Azeri 2016.

1992, 284). The study of reality through concepts as a specific form of activity in nature with the use of tools, involves not only the study of the facts, but also of concepts devised for such analyses. Thus, Lukacs is mistaken in his contention that “scientific experiment is contemplation at its purest,” a claim he bases on the alleged fact that “The experimenter creates an artificial, abstract milieu in order to be able to observe undisturbed the untrammelled workings of the laws under examination, eliminating all irrational factors both of the subject and the object” (Lukacs 1971, 132) because in utilizing concepts, as in utilizing any tools, we involve a study and mastery of concepts and tools as much the study and manipulation of the object of knowledge. As Vygotsky states, “Already in the very first stage of the scientific processing of empirical material *the use of a concept is a critique of the concept by the facts*, the comparison of concepts, their modification” (1997b, 251, emphases added). Once conceived of it this way the interdependence of matter and thinking, of concept and reality is properly understood and Kant’s thing-in-itself is dissipated as thinking emerges not only as a necessary consequence of matter but as much a condition for its existence (Ilyenkov 2017, 190).

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