

At the Roots of the Economic Theories of Modern Revisionism: Bogdanov/Bukharin's Theory of Equilibrium II

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Equilibrium in Marxism

The central topic of this work is the exposure of the revisionist character of the theory of equilibrium and how this postulate plays pivotal role in the restoration of the law of value in socialism and, ultimately, the restoration of capitalism. The fact that we insist so much on the theory of equilibrium as a basic tenet of modern revisionism does not imply that the concept of equilibrium is alien or is not mentioned by Marxism. Much on the contrary, equilibrium is a notion that is carefully characterised in dialectical materialism and in the theory of political economy developed by Marx in his economic manuscripts. Needless to say, the characterisation of the concept of equilibrium arises as a criticism of bourgeois thinking, as the postulate of equilibrium is intimately related to the latter. Certainly, Marx and Engels have a deep understanding of the role of equilibrium in the classical political economy and how this evolves and perpetuates itself. In this sense, Marx and Engels have left us much more than clues or indirect references, as modern revisionism and their advocates in modern Russia today would like us to believe, but a clear description of the role of equilibrium in dialectical materialism, historical materialism and political economy.

In this section we are going to touch upon about how the concept of equilibrium is treated in dialectical materialism and political economy and how Marx pinpoints the reliance of the abstract postulate of equilibrium as one of the elements used by the classical economists to perpetuate their theoretical mistakes. It is important to bear in mind at this point, that in exposing the mistakes of classical economists the postulate of equilibrium does not necessarily play a central role. As will be seen later, the classical economists that Marx subjected his analysis upon were not concerned with the postulate of equilibrium as a central thesis or theoretical instrument.¹⁰ The fact that the postulate of equilibrium is not a primary focus of Marx's criticism was perhaps one of the reasons why this theory had a chance to become so popular in the 20s and became paramount in the theoretical apparatus in support for the restoration of capitalism.¹¹ The postulate of equilibrium becomes more prominent in bourgeois post-classical economic thought and its importance becomes closer to the centre of gravity of the economic discussion. For some authors the postulates of equilibrium become a central theme and it permeates modern imperialist economic theories via its high level of mathematisation. As will be seen later, the tendency towards introducing mathematics and turning economics into a mathematical discipline is strongly linked with the notion of equilibrium. This has to do with the fact that the solution to an equation is an act of equilibrium. The postulate of equilibrium is taken further since mathematics, in conjunction with assumptions and boundary conditions, provides predictability. With these mathematical models certain predictions for the behaviour of the market can be performed. Nevertheless, the postulate of equilibrium, by which complex economic systems tend towards states of equilibrium, remains a central methodological point for bourgeois and

revisionist thought. This will be dealt with later especially when we consider economists that are contemporary to Bogdanov, Bukharin and other revisionist economists of the 20s.

The use of the notion of mechanical equilibrium in Marxism

When we mention the concept of mechanical equilibrium, to distinguish it from that in dialectical materialism, we refer to the notion commonly used in the general course of physics. Mechanical equilibrium of an object or system of objects is achieved when all the forces exerted on them cancel out. This notion is very extended in bourgeois economic thinking and it is inherently present in the study of commodity exchange and how supply and demand affect it. The classics of Marxism-Leninism make use the term equilibrium in the mechanical sense of the word. They do it repeatedly, but they do it carefully in a well defined context with a well defined purpose that does not go beyond the mechanical statement per se and does not involve the formulation of general laws based on metaphysical considerations of the tendency towards equilibrium in nature and society, as bourgeois and revisionist thinking do on a regular basis.

The mechanical interpretation of equilibrium can be extended and implemented in general to the study of problems in which the dynamics of determining factors can be described as those of mechanical forces. For instance, the notion of mechanical equilibrium is widely used by the classics of Marxism-Leninism to characterise stable or unstable political junctures as a result of the correlation of class forces. One can treat the social action of a class as a mechanical force. If two classes with antagonistic interests clash, the result of the net social action could be depicted as the result of the mechanical addition of two forces with opposite directions. If treating the problem from the purely mechanical point of view one could say that a given political juncture can be characterised by another force, which is the result of the addition of the forces that represent the social forces: the net force will be parallel to the force with largest magnitude.¹² Consequently, one can describe the evolution of society in terms of a complex system that evolves in such a way so that all the forces that operate internally and externally cancel out at any given time, thus defining society as a succession of more or less stable states of equilibrium.¹³ To a certain extent these are valid abstractions if used carefully. By using this level of abstraction, by which concrete social forces and movements are treated as mechanical forces and social states as the result of the mechanical addition of these forces, Bogdanov and Bukharin (and many bourgeois thinkers before them) create a metaphysical system of laws that govern economic and historical processes. This metaphysical system is consistent with the predicament that social and economic systems, by virtue of the mechanical interpretation, evolve towards equilibrium in general. Contrary to revisionism, Marxism, while occasionally using the mechanical method, subjugates it to the discipline of the Marxist scientific method. Let's give a concrete example to illustrate the essence of this statement. Let's take Lenin's report to the Third Congress of the Communist International in 1921, when touching on the tactics of the RCP as a result of the new international situation following the victory in the civil war and against the intervention of the international bourgeoisie:

'I leave aside the economic basis, but I think that in discussing the international position of our Republic we must, politically, take into account the fact that a certain equilibrium has now undoubtedly set in between the forces that have been waging an open, armed struggle against each other for the supremacy of this or

that leading class. It is an equilibrium between bourgeois society, the international bourgeoisie as a whole, and Soviet Russia. It is, of course, an equilibrium only in a limited sense. It is only in respect to this military struggle, I say, that a certain equilibrium has been brought about in the international situation. It must be emphasised, of course, that this is only a relative equilibrium, and a very unstable one.' (V. I. Lenin, Collected Works, 4th English Edition, Progress Publishers, Moscow, 1965, Vol. 32, page 478).

Lenin discusses a particular historical juncture, which considered in isolation from the economic basis, can be simply described as a state of equilibrium, that is basically unstable due to the antagonistic nature of the relationship between the international bourgeoisie and the proletarian state and the relative strength of the former with respect to the latter. On the one hand, we have the analytical dissection of the subject by separating the political aspect from the economic antagonism and the proposition that the subject can be dealt with as a state of mechanical equilibrium. On the other hand, we have the statement that this certain equilibrium is relative and unstable, i.e. it is not the result of a general or natural tendency, but a result of a 'peculiar combination of circumstances'.¹⁴ Following the analytical approach then Lenin reconstructs the subject of the study, the global juncture in question as the unity of all the different aspects (economic, military, etc...) by a synthetic approach to conclude that this historical situation needs to be used to the benefit of the proletarian state while preparing for further confrontation with the international bourgeoisie.¹⁵ In the process of presenting his thesis Lenin did not appeal or tried to infer a law by which the class struggle between the bourgeoisie and the proletariat has to reach an equilibrium at some point, that will be eventually broken to reach yet another equilibrium, which will be hopefully more advantageous to the proletariat than the initial one. Lenin did not implement nor infer a system different from that of the Marxist method by claiming the discovery of a new law. He uses the Marxist method to disentangle the relevant factors and then arrives at a new synthesis that allows him to formulate a tactical move in the interest of the proletariat. Moreover, did a preconceived postulate or some abstract law of equilibrium predate Lenin's analysis in question? No it did not. Such metaphysical considerations are not only unnecessary but also simply wrong from the point of view of the Marxist methodology that Lenin understood so deeply and implemented systematically.

How would a right wing revisionist view Lenin's proposition about the presence of certain equilibrium between the proletariat state and the international bourgeoisie? Regardless of how stable unstable the equilibrium is, the right wing revisionist would tend to think in terms of a tendency towards equilibrium. The reasoning is standard: the observation of a certain degree of equilibrium is interpreted as a manifestation of an underlying law of equilibrium or a tendency of systems in general (the socialist and capitalist systems in particular) to arrive at a certain equilibrium. The terms of this equilibrium or sequence of equilibria, is in essence the result of the mechanical addition of forces, or the correlation of forces between the proletarian state and the encirclement of bourgeois states. This leads to the revisionist thesis of the possibility of peaceful coexistence between socialist countries and the countries of capitalism. This peaceful coexistence is feasible provided that the necessary factors are in place, understood these from the mechanical point of view. For instance, the strategic balance of military forces by the Soviet Union and the US provides the ground for peaceful coexistence.

In the same spirit as Lenin's assertions about the existence of a certain equilibrium, Stalin deals with the so called questions of the 'peaceful co-existence' with the capitalist encirclement. Stalin in his political report of the Central Committee to the 14th Congress of the CPSU(B) in 1925 states:

'The basic and new feature, the decisive feature that has affected all the events in the sphere of foreign relations during this period, is the fact that a certain temporary equilibrium of forces has been established between our country, which is building socialism, and the countries of the capitalist world, an equilibrium which has determined the present period of "peaceful co-existence" between the Land of Soviets and the capitalist countries. What we at one time regarded as a brief respite after the war has become a whole period of respite. Hence a certain equilibrium of forces and a certain period of "peaceful co-existence" between the bourgeois world and the proletarian world.' (Stalin, Works, Foreign Languages Publishing House, Moscow, 1954, Vol. 7, 267-268)

Stalin discusses the fact what was thought to be a short-lived state of equilibrium turned out to last much longer than anticipated. In fact this period of respite lasted for two decades. From this historical fact Stalin does not deduce the possibility for peaceful co-existence. He uses this term in quotes in order to divorce his reasoning from potential wrong interpretations. The fact of the existence of however prolonged and however stable equilibrium between the proletarian state and imperialism does not signify that the relations between the two are not determined by antagonism and that this antagonism one day will not result in open confrontation. Stalin never concluded that the future collapse of imperialism would go via an evolutionary process, by which the socialist country would become increasingly wealthier by virtue of the superiority of the socialist mode of production over capitalism, other countries would follow the example of the Soviet Union and imperialism would collapse by virtue of their internal contradictions and the overwhelming superiority of the socialist camp. Stalin was very much aware of the fact that sooner or later this antagonistic contradiction would erupt in a violent form, and it did in the most horrific form that no one could have imagined. Instead of advocating the thesis of peaceful co-existence and the relatively peaceful transition to socialism to a world scale Stalin's theses were impregnated with the need to build a strong industrial and self-sufficient socialist state. Bukharin and the right wing opposition were in essence advocating the possibility of a relatively peaceful and evolutionary transition to socialism and the collapse of imperialism in a similar fashion. The transition to socialism and the collapse of the capitalist mode of production in the Soviet Union was envisioned as an evolutionary process, by which the law of value, operating under the form of the law of labour expenses (or in the words of Bukharin, the law of labour expenses in its naked form without the fetishist form of the law of value) would determine the proportions of labour between the sectors. This is the requirement of the postulate of equilibrium. As we will see on multiple occasions in political economy, bourgeois and petty bourgeois thinkers are characterised by their inability to penetrate the surface of phenomena by remaining empirical. The tendency of the bourgeois economist to appeal to considerations of equilibrium when observing the establishment of certain proportions is a manifestation of this methodological flaw.

It is very important to note that the stable or unstable character of the equilibrium does not change the role of the mechanical notion of equilibrium in Marxism. This consideration will become particularly relevant when dealing with the bourgeois and petty-bourgeois treatment of the concept of dynamic equilibrium, which they are forced to introduce with the aim of reconciling the metaphysical notion of equilibrium and the dynamic character of economic phenomena. The two references discussed above are very convenient to discuss this topic. Lenin had in front of him a situation of what was considered to be short lived and highly unstable equilibrium. Stalin considered a concrete historical situation that emerged from the first where this equilibrium had become long lived and relatively stable. Does the role of this notion of mechanical equilibria change in the Marxist analysis? No, not fundamentally. In opposition to Marxism, right wing revisionism wants to reconcile the metaphysical treatment of equilibrium with the notion of perpetual change inherent to dialectical materialism. This is performed by introducing the concept of dynamic equilibrium. The concept of dynamic equilibrium, equilibrium in flux, plays an extremely important role in vulgar economics. Although he was by far not the first to introduce this concept, Bukharin develops it in his ‘Historical Materialism’:¹⁶

“It should be recalled that such equilibrium as we observe in nature and in society is not absolute, unchanging equilibrium, but an equilibrium in flux, which means that the equilibrium may be established and destroyed, may be re-established on a new basis and again disturbed.” (N. Bukharin, ‘Historical Materialism: A system of Sociology’, International Publishers, London, third printing, 1928 page 74).

The train of thought is simple. Since in front of us we have the irrefutable evidence of constantly changing nature and society that these cannot be described with static notions, and then the postulate of static equilibrium is replaced by the postulate of dynamic equilibrium. We see that in Marxism the relative stability of the mechanical equilibrium does not introduce a significant difference in the role of the latter in the analysis. It remains a concept of mechanical equilibrium in both cases, and as such it plays a secondary role in the Marxist analysis, as a useful tool when appropriate. In Bukharin’s view the transition from static (stable) to a dynamic (unstable) equilibrium does make a fundamental difference. The difference is as fundamental as going from a mechanical treatment of equilibrium to the point when this very same mechanical treatment is now regarded as dialectical. Dialectics is basically confused with dynamism, which is a vulgar interpretation of Dialectics and motion in general is confused with mechanical motion.¹⁷ To consider nature and society in the form of successive states of equilibrium, that evolution can be described by means as disturbance and restoration of successive states of equilibria, is, according to Bukharin a dialectical description of the evolution of systems. This is a fundamentally mechanical approach towards evolution, which is a part of the general course of physics, as much as it is the description of systems in static equilibrium.¹⁸ Equilibrium is regarded as a fundamental state, and evolution is depicted as a transition from states of equilibrium. Equilibrium is the beginning and the end of the evolution. This is diametrically opposed to the dialectical understanding of equilibrium, which for practical purposes is no more than a coincidence and does not play a determining role in the characterisation of nature and society.

Lenin refers to this problem when dealing with Bukharin’s book ‘Economics of the Transition Period’. Bukharin formally disassociates himself from the most naïve version of the theory of equilibrium, which he pedantically refers to as ‘harmonia praestabilitata’. According to this

conception the paradigm for the description of the world would be that of a static equilibrium, according to which the world flows or it is supposed to flow towards an ideal state, this static equilibrium. What Bukharin does not take into account is that the bourgeois thought, especially in economics, accepts the concept of continuous movement and dynamism. The notion of static equilibrium is ultimately rejected by the post-classical school as simplistic. Static equilibrium is eventually used as a useful abstraction for certain general considerations, but it is rejected for the solution of complex problems. Contemporaries of Bukharin in the West already widely used the concept of dynamic equilibrium in economic analysis. Bukharin's dissociation is certainly a naïve and rather unconvincing one:

'The examination of the social and, moreover, irrational and blind system from the view point of its equilibrium, has nothing in common, of course, with *harmonia praestabilitata*, for it proceeds from the fact that this system exists and that it develops. The latter presupposes the form of this equilibrium to be mobile and not a static one' (N.I. Bukharin, Routledge Library Editions, Oxon, 2003, page 151).

Lenin understands very well the epistemological principles that Bukharin was implementing, that we are going to dwell upon in the next section, and that his attempts to dissociate himself from this basic tenet of bourgeois thought were superficial. Lenin understands that in Bukharin's system of thought the use of mechanical equilibrium is very different compared to the correct use of this concept in Marxism. Lenin replies to Bukharin:

'This is very good. But would it not be more exact to speak of 'the necessity of a certain proportionality' than of 'the point of view of equilibrium'? It would be more exact, more correct, because the former is objective, while the latter opens the door to philosophical meanderings from materialism to idealism' (V.I. Lenin, *Leninskii sbornik*, Vol. 40, p. 414).

The need for 'certain proportionality' is that Marx actually meant when talking about the existence of 'proportions' in the analysis of the capitalist production. The need for 'certain proportionality' is understood by Bukharin as a manifestation of the postulate of equilibrium, when, in reality, Marx implies the use of the mechanical concept of the equilibrium in the fashion that we have referred to above. This is also Lenin's point of view. The need for 'certain proportionality' is a manifestation of the presence of an economic law. Let's take for instance, the law of exchange of equivalents, or the law of value in commodity exchange. The existence of a law of proportionality implies the presence of a law that governs particular form of labour, but it is not the manifestation of a general law of equilibrium, regardless of how static or mobile the conditions of exchange are. This 'point of view of equilibrium' is pinpointed and exposed by Lenin in all its depth in a very short formulation: the departure from materialism to idealism. The implications of the theory of equilibrium to dialectical materialism and the Marxist method will be dealt with in the next section, in which it will become clearer how this departure from materialism occurs.

Why it is so important to Bukharin to preserve the postulate of equilibrium? It is of fundamental importance not only for his system of 'historical materialism' but also for his theory of 'Market

Socialism'. As a matter of fact, the transformation of the postulate of static equilibrium into that of dynamic equilibrium plays a central role in the bourgeois economic theories following the classical political economy. We will see later that right wing revisionism and the bourgeois economic theories will arrive at different conclusions, since the former are stuck with the defence of pre-monopolistic capitalism and the latter become the ideologists of monopolistic capitalism. Nevertheless, these economic theories are built upon the same premise.

The relatively prolonged and relatively stable equilibrium between the proletariat state and the capitalist encirclement, mentioned by Lenin and Stalin, that emerged after the victorious civil war and the war against the foreign intervention needs to be understood within the context of the concrete historical conditions. This prolonged peace that was broken only two decades later was due to several factors that have been discussed in the Marxist-Leninist literature and are linked to a great extent to the internal contradictions within the imperialist powers and the inter-imperialist contradictions that emerged or that prolonged after the First World War. This is the correct approach within which the use of the mechanical notion of equilibrium may be successfully implemented, as opposed to appealing to metaphysical considerations of the tendency of opposite forces to achieve equilibrium, etc...

It is appropriate to reiterate here that in Lenin's analysis the use of the mechanical concept of equilibrium appears subdued by the Marxist method and emerges as a convenient simple abstraction that assists the latter. With this we want to give actual content to the statement that mechanical equilibrium can become a useful abstraction in Marxism when used properly. We do not want to classify or give a broad selection of examples provided by the classics of Marxism-Leninism of the use of the mechanical notion of equilibrium. This is certainly not necessary in order to bring up the point that Marxism by virtue of its methodological foundations does not appeal to general, ahistoric considerations of the need or the tendency towards equilibrium. Marxism does not advocate the existence of laws of general equilibrium or the mechanical transportation of the natural laws into humanities in order to provide humanitarian disciplines with a scientific substrate. Marxism is certainly not a dogma that imposes on us the prohibition to use abstractions derived from physics, as right wing revisionist claims. However, abstractions derived from mechanics play a secondary role in the Marxist analysis in general and in political economy in particular. This is not the case of right wing and modern revisionism, which use notions of mechanical equilibrium as pivotal aspects of their economic analysis.

So far we have considered examples of use of the mechanical notion of equilibrium outside the realm of political economy, which is what we are mostly concerned with in this work. The use of this notion either explicitly or in the form of the presence of certain balance or proportions can be found on multiple occasions in Marx's economic manuscripts. We do not need to review the use of these notions in a comprehensive way. Nevertheless we'd like to discuss the following passage from Marx's *Capital*, Volume I that is particularly relevant to our discussion, as it captures in a condensed form a number of theses discussed here.

'Classical Political Economy borrowed from every-day life the category "price of labour" without further criticism, and then simply asked the question, how is this price determined? It soon recognised that the change in the relations of demand and supply explained in regard to the price of labour, as of all other commodities,

nothing except its changes i.e., the oscillations of the market-price above or below a certain mean. If demand and supply balance, the oscillation of prices ceases, all other conditions remaining the same. But then demand and supply also cease to explain anything. The price of labour, at the moment when demand and supply are in equilibrium, is its natural price, determined independently of the relation of demand and supply. And how this price is determined is just the question. Or a larger period of oscillations in the market-price is taken, e.g., a year, and they are found to cancel one the other, leaving a mean average quantity, a relatively constant magnitude.’ (K. Marx, Capital, Volume I, Part IV, Chapter 19).

This paragraph is extremely rich in content and it would probably require an entire chapter if not an entire volume to cover all the aspects of political economy, its history, philosophy and epistemology that we can find in it. We are not going to dwell on the question of how the various versions of the theory of value used by the classical political economy failed to unveil the relationship between labour, wages and profit, and with them the essence of other more complex economic categories. Marx in the Capital and especially in the ‘IV Volume’ of the Capital dealt with the mistakes committed by various representatives of the bourgeois economic thought, something that we will deal more with below. Different were the approaches towards the theory of value depending on the author. Despite the heterogeneity all bourgeois authors were unable to arrive at understanding the relationship between capital and labour, which was developed by Marx first by means of what is usually referred to as the theory of surplus value, with which more complex economic categories, and the whole capitalist economy can be understood. What is most relevant to us here is how Marx uses the mechanical notion of equilibrium in order to expose the vulgar character of the bourgeois political economy to expose the metaphysical use of this very notion.

In the first sentence Marx appeals to a well-defined characteristic of bourgeois economic thought its superficial and empirical aspect. The use of such a flaky concept of ‘price of labour’ is a manifestation of how the bourgeois economist is not able to break through the surface of the phenomenon: the worker enters the factory adding its labour to the process of production. For that he gets a wage, therefore the price, or value of labour is equal to its wage.¹⁹ This sounds like a perfectly sound statement, as it is backed by the empirical evidence of a worker coming in leaving labour coming out with a wage. This notion of ‘price of labour’ cannot be considered an abstraction that contains within itself the essence of an economic relationship, that between labour and capital, as it remains a superficial notion. It is a notion that pertains to some level of generality since aims at addressing cost of labour in general in capitalist production regardless of the concrete details of the relationship between the workers and the employer. This aim at generality does not imply a higher level of abstraction with which to unveil the essence of the relationship of labour and capital. Marx illustrates this fact by demonstrating that this notion of ‘price of labour’ does not by any means solve the problem of what the actual price of labour is, rendering the concept pretty much useless.²⁰ In order to solve this puzzle the bourgeois economist then wonders if the balance between labour demand and labour supply can explain the ‘price of labour’. Just like the price of any other commodity may be affected by the correlation between its supply and its demand, this balance can also define the ‘price of labour’.²¹ Marx argues that in appealing to the balance between the demand and supply of labour one does not advance in learning about what’s the ‘price of labour’. One can learn about how this ‘price of

labour' varies but cannot learn about the actual 'central value' that we are after. If the forces of equilibrium and demand are balanced (and here Marx uses the notion of mechanical equilibrium) then these factors can no longer be the metric of value. The bourgeois economist goes from one superficial notion another: it starts with introducing 'the price of labour' which by itself does not solve the problem and moves appealing to the empirical act of balance or equilibrium between supply and demand, which, again does not shed light on the unknown discussed. Marx's quote is a classical example of how what we refer here to as the postulate of equilibrium does not represent a valid tool for the unveiling of the essence of economic phenomena.

The notion of equilibrium in Dialectical Materialism

The notion of mechanical equilibrium obviously predates the notion developed by the classics of Marxism-Leninism. It predates it not only chronologically speaking but the former in fact is indispensable in the development of the latter. This is the reason, because we are not making a formal exposition but more of a historical one, although not strictly speaking, that we started our discussion with mechanical equilibrium followed with how this notion is viewed in dialectical materialism. We do that to illustrate that the latter emerges as the need to resolve the contradictions of the bourgeois and revisionist thought in the 19th century. This order in the exposition assists us in the exposition of the essence of Bogdanov/Bukharin, modern revisionism, and how these are interrelated between them and with bourgeois economic thought, which makes ample use of the mechanical notion of equilibrium.

Bukharin displays a vulgar understanding of dialectics by which the latter is replaced by dynamism in the mechanical sense of the word. In this context, dynamics, or the constant state of movement, is a purely mechanical notion. It is not a movement in the general sense of the word that is inherent to dialectical materialism but in the narrow mechanical point of view. The mechanical point of view considers motion as a displacement of matter from one point in space to another. In the Marxist terminology sometimes we refer to higher and lower forms of movement, by which the latter corresponds, for instance, to the mechanical movement we just defined. It is a tendency of the bourgeois thought to reduce higher forms of movement to lower forms. For instance, there have been attempts to derive the laws governing the human thought (a high form of movement) from the laws of biology (a lower form of movement with respect to the latter) that describe the functioning of organic life, since the human thought is hosted by the brain. There have been attempts to derive economic laws from some laws of biology as well. And finally, there have been even more numerous attempts to use the laws of mechanics in the analysis of economic phenomena. The theory of equilibrium is a consequence of this methodological tendency of bourgeois thought. This generic tendency to reduce higher forms of movement to mechanical movement is one of the most widespread errors in bourgeois thought that Marx and Engels had been exposing all along:

'Mechanical motion. Among natural scientists motion is always as a matter of course taken to mean mechanical motion, change of place. This has been handed down from the pre-chemical eighteenth century and makes a clear conception of the processes much more difficult. Motion, as applied to matter, is change in general. From the same misunderstanding is derived also the craze to reduce

everything to mechanical motion' (F. Engels, 'Dialectics of Nature', pp. 243-256; Progress Publishers, 1934, 6th printing 1974).

We will see later how this predicament is intimately related to the development and expansion of the theory of equilibrium in the post-classical bourgeois economic thinking that sets the stage for Bogdanov and Bukharin. We have seen that the classical economists did consider the postulate of equilibrium, as did economists before them, but in a more subdued form. In addition to the expansion of these postulates in bourgeois economics in the 19th century we also see a parallel process in prominent bourgeois thinkers, who are under the strong influence of this mechanical tendency, such as Comte, Spencer, and following them Dühring, Kautsky. These also set the stage for Bogdanov and Bukharin's theories. These issues were well known in the Soviet Union in the Stalin period. The exposure of the ideological tenets of Bukharinism and Trotskyism was fundamental as they were solidly rooted in bourgeois thought. The exposure of right-wing revisionism as a by-product of bourgeois thought as a petty bourgeois ideological manifestation is certainly not our invention. The fact that bourgeois tendency to reduce motion in general to mechanical motion is deeply rooted in revisionism has been identified and characterised in Stalin's period. The mechanistic theory of development permeates bourgeois thought, as it does also permeate revisionist thought:

'... according to Herbert Spencer, "tyranny and freedom" are forces independent of each other, which strive to balance each other. By the quantitative predominance of freedom or of tyranny the resultant of this antagonism is determined. We also find this principle of development in Dühring, who attacked the dialectic of Marx and Engels, and after Dühring came Bogdanov who constructed a complete philosophy which proposed to explain every phenomenon of nature, society and thought by the principle of equilibrium.

This conception was afterwards borrowed from Bogdanov by Bukharin who saw the cause of the development of social structures not in their internal contradictions but in the relationship of the system with the environment, of society with nature. ('A Textbook of Marxist Philosophy' prepared by the Leningrad Institute of Philosophy under the direction of M. Shirokov, The Camelot Press Ltd, London and Southampton, 1943, page 138)²²

We will see below how important this tenet of bourgeois thought, the reduction of all forms of movement to mechanical movement becomes a pivotal methodological tool that will lead to the postulate of equilibrium. The reduction of all forms of movement to mechanical motion is a convenient simplification that allows the bourgeois thinking to reduce the dynamics of the that drive, for instance, market prices to the result of the equilibrium of forces, treating those factors as forces from the mechanical forces. We will also see that his simplification is strongly linked from the methodological point of view with the notion that the evolution of things are not the result of the resolution and appearance of internal of internal contradictions but the results of the equilibrium of forces of the object and the medium that surround it. These notions are hardcoded into the philosophical worldview of Bogdanov and Bukharin and greatly influence their economy theories. As we will also discuss below, this metaphysical approach in economics is essentially borrowed from the classical political economy; Marx already provided its rebuttal in his economic manuscripts.

We have seen that Marxism does make use of the mechanical concept of equilibrium, as defined above. It makes use of such a concept in various disciplines including political economy. In doing so, mechanical equilibrium is used as a secondary abstraction, not as a general law of development. The latter is characteristic of bourgeois thought. Here we briefly outline the role of equilibrium in dialectical materialism. It is very important to make a distinction between the roles of mechanical equilibrium in bourgeois thought and the role given by the classics to equilibrium in dialectical materialism. This is particularly important in order to understand the bourgeois character of Bogdanov and Bukharin's systems of thought. It is no coincidence that there were attempts in the revisionist period and in today's Russia to confuse the two notions, as a means to reconcile the theory of equilibrium so widely used in the economic discussions of the 20s and Marxism. In doing so, modern revisionism counter attacks by arguing that establishing this dichotomy one incurs in dogmatism. Here we argue that the specific role given to equilibrium in dialectical materialism, so distinct from the mechanical approach, is deeply rooted in Marxism. Before we carry on with our discussion it is important to reiterate what is the overall role of a law of historical development and how this relates to the methodology of Marxism that bourgeois and revisionist thought do not seem to understand. As we have stated earlier, the emergence and implementation of the postulate of equilibrium in economic thought is intimately related to the inability to identify the role of the abstraction in the economic theory, which is the result of fundamentally metaphysical treatment and from the tendency to reduce the economic analysis to empirism.²³ It is a fundamental tenet of the Marxist scientific method, since it is deeply rooted in the materialist understanding of nature and society that all abstractions and laws of development emerge and are ultimately related to the objective reality. Let's take for instance a famous passage of Engels' *Dialectics of Nature*:

'It is, therefore, from the history of nature and human society that the laws of dialectics are abstracted. For they are nothing but the most general laws of these two aspects of historical development, as well as of thought itself. And indeed they can be reduced in the main to three:

The law of the transformation of quantity into quality and vice versa

The law of the interpenetration of opposites;

The law of the negation of the negation.'²⁴ (F. Engels, '*Dialectics of Nature*', Progress Publishers, Moscow, Eighth Edition 1979, page 62.)

The first sentence is a statement of the materialist character of Marx's dialectics. Abstraction and laws in general are inferred from the objective reality and not all the way around. Not even the simplest of all abstractions are the result of innate attributes of the human mind. All the abstractions used in sciences are ultimately related to the objective reality, are inspired by it and reflect it. This is why Marxism is so adamant against abstract schemes, or abstractions that are divorced from the objective reality and calls them metaphysical. It is also stated that the laws of dialectics are general as they apply not only to nature and society but also to human thought, as human thought is in the end of the day a reflection of the objective reality, although not a passive one. The formulation of the postulate of equilibrium is forced into political economy from the outside, as an abstract scheme: it is postulated that economic processes tend to equilibrium and

the evolution of economic processes can be understood as the movement from one state of equilibrium (violation of equilibrium) to another (restoration of equilibrium). This postulate predates the economic analysis and arises from the absolutisation of mechanical notion of motion, which is very common in bourgeois thought. In the end of the day an abstract scheme is imposed on the economic analysis and, in this new scheme, economic processes now are viewed in terms of equilibrium and disequilibrium. The postulate of equilibrium is not generalised from a thorough economic analysis by the revisionist author. Much on the contrary, the interpretation of the objective reality of economic processes by which the latter is viewed from the point of view of the self-evolution of economic harmony is the result of a predetermined wish to perpetuate objective necessity of the law of value and with it, of bourgeois economic relations. From this point of view the postulate of equilibrium emerges as a metaphysical scheme in deep contradiction with the tenets of the Marxist method and dialectical materialism in general.

Then Engels enumerates these general laws of dialectics. These laws are not formulations given by the mind of a genius that happened to be fortunate enough to find those eternal laws that nature and society are governed by, as if we were dealing with some kind of revelation. Much on the contrary, as illustrated by Engels these laws are abstracted from vast numbers of examples in natural sciences and humanities. These are not metaphysical laws that predate knowledge of nature and society, they are inferred from nature and society and they exist as long as nature and society exist and evolve. As the reader can see the postulate of equilibrium is not a law of dialectics. It is neither a law of dialectics nor a secondary, nor a law of derived from dialectics. The fact that we do not consider as a general law the tendency towards equilibrium is not an expression of our dogmatic reading of Marx and Engels, nor was the rejection of the Bogdanov/Bukharin's law of equilibrium a manifestation of short-sighted and simplistic dogmatism.²⁵ The postulate of equilibrium is not general law not because Marx and Engels did not think about it carefully enough, as Bogdanov and Bukharin and their advocates in the revisionist period have tried to portray. As a matter of fact, Marx and Engels had ample opportunities to study and dissect the postulate of equilibrium in multiple aspects of bourgeois thought. Marx and Engels expose the postulate of equilibrium explicitly on multiple occasions when dealing with inconsistencies of bourgeois thought. It is strange to say the very least that modern revisionism turns a blind eye on this obvious fact and raises the accusation of dogmatism when left-wing revisionist economists made mention Marx's and Engel's criticism of the postulates of equilibrium. It is utterly implausible to consider the postulate of equilibrium in any way consistent with Marxism, as revisionism advocates.

There are fundamental reasons why the postulate of equilibrium is not a general law of nature and society. One of the fundamental reasons has to do with the fact that Marxism does not separate equilibrium and motion and in fact considers the former as a particular case of the latter. Moreover, matter and motion are indivisible and to consider equilibrium, however static or dynamic, is a metaphysical abstraction void of a motivation in science.

Equilibrium and motion are inextricable notions in dialectical materialism. They constitute a dialectical unity of opposites. In dialectics, the opposites cannot be permanently disentangled from each other without incurring in loss of knowledge about the object under study, not to mention the terrible methodological flaw, characteristic to bourgeois thought, which the metaphysical separation of opposites leads to. Opposites can be temporarily disentangled in the

service of analysis, if it is done carefully. It is a major characteristic of this dialectical unity that equilibrium is ultimately only relative and temporary, contrary to the vulgar interpretation of mechanics. Engels summarises these two aspects of the interrelation between equilibrium and motion in this infamous passage of *Dialectics of Nature*:

‘Motion and equilibrium. Equilibrium is inseparable from motion. [In margin: “Equilibrium=predominance of attraction over repulsion.”] In the motion of the heavenly bodies there is motion in equilibrium and equilibrium in motion (relative). But all specifically relative motion, i.e., here all separate motion of individual bodies on one of the heavenly bodies in motion, is an effort to establish relative rest, equilibrium. The possibility of bodies being at relative rest, the possibility of temporary states of equilibrium, is the essential condition for the differentiation of matter and hence for life. On the sun there is no equilibrium of the various substances, only of the mass as a whole, or at any rate only a very restricted one, determined by considerable differences of density; on the surface there is eternal motion and unrest, dissociation. On the moon, equilibrium appears to prevail exclusively, without any relative motion-death (moon=negativity). On the earth motion has become differentiated into interchange of motion and equilibrium: the individual motion strives towards equilibrium, the motion as a whole once more destroys the individual equilibrium. The rock comes to rest, but weathering, the action of the ocean surf, of rivers and glacier ice continually destroy the equilibrium. Evaporation and rain, wind, heat, electric and magnetic phenomena offer the same spectacle. Finally, in the living organism we see continual motion of all the smallest particles as well as of the larger organs, resulting in the continual equilibrium of the total organism during the normal period of life, which yet always remains in motion, the living unity of motion and equilibrium. ‘All equilibrium is only relative and temporary.’ (F. Engels, op. cit. page 246).

It is acknowledged not only by Marx and Engels that nature is in a constant state of movement, whether we consider this movement purely mechanical or in the broader sense of the word. Equilibrium is relative in the sense that it emerges as ‘individual equilibrium’ between objects that movement of other objects surrounding continuously breaks either them or by the mere fact that even though they seem to be in equilibrium as seen by those objects that are in their vicinity they are in reality moving because they are enclosed in a system that is actually moving (objects on earth that seem in rest as seen by other objects, in reality are moving since Earth is in constant movement). Engels also states that even though the living organism seems to be in an apparent state of equilibrium, in reality its basic constituents are in constant movement: the sheer fact of life involves a constant state of change of cells and tissues. The concept of equilibrium is therefore inherently linked to that of motion and makes little sense without it.

It is worth noting, as we mentioned earlier, the notion of mechanical equilibrium is also considered here, it is not something that Marxism is particularly afraid of. The fact that temporary and relative equilibria take place in nature is irrefutable, together with the fact that there exist laws of physics that describe the conditions under which these states of equilibria occur. The emergence of relative rest and the tendency of individual motion towards equilibrium,

as mechanical concepts, are acknowledged. However these concepts are not absolute, but relative and temporary ones that are intimately related to motion. This is where the mechanical understanding of evolution fails to properly characterise this relative equilibrium. This relative equilibrium that the metaphysical thinker isolates and absolutises into a fundamental state of matter by isolating it from motion emerges as an illusion that motion in general evolves towards equilibrium, and that equilibrium is not a relative and temporary notion but it was absolute character. The latter comes forth as an independent and absolute state of matter metaphysically disunited from motion. The dialectical unity of equilibrium and motion is ultimately broken in favour of the former. This opens the way to consider motion as secondary and equilibrium as primary. This is an epistemological source to the postulate of equilibrium that is so important to bourgeois and revisionist thought.²⁶

Marxism considers motion and equilibrium as a dialectical unity. In this unity, Marxism considers motion as a leading side. Take for instance, a classical example of dialectical unity in political economy: the unity of production forces and relations of production. In this dialectical unity the forces of production are acknowledged to have a leading role. Bogdanovism, liquidates this dialectical unity, absolutises the leading role of the productive forces and ultimately reduces political economy to the question of organisation of productive forces. Bourgeois thought metaphysically separates equilibrium and movement, but now, it is equilibrium that acquires this leading role and motion is considered as a nuisance, a transitional state between states of equilibria. In both examples we are dealing with the metaphysical separation of the sides of the dialectical unity, by which the leading role of one of the sides acquires an absolute character. The postulate of equilibrium is the result of this type of metaphysical exercise.

The statement that the notion of equilibrium is ‘only relative and temporary’ is an expression of the fact that equilibrium is not a notion that acquires absolute character. To talk about equilibrium as a fundamental state of motion, as bourgeois thought implies, is in contradiction with the role of equilibrium in dialectics. This is not a dogmatic statement of a reader who quotes Engel’s paragraph isolatedly and makes a whole discourse out of it, as modern revisionism and its followers in modern Russia wants us to believe. Much on the contrary, this statement is intrinsic to dialectical materialism. The presence of dialectical unities is ubiquitous in Marxism and even modern revisionism, at least formally, accepts the general rules that apply to this fundamental notion. It is not just a quote of Engel’s ‘Dialectics of Nature’ that is relevant here, but the fact that the entire edifice of Marxism is built upon a very concrete epistemological approach that emerges historically in opposition to bourgeois thought. Those who still attack the so-called ‘Stalinist dogmatism’ and the ‘one-sidedness’ of the Bogdanov/Bukharin critique in Stalin’s period they are utterly ignoring the fact that this very same system of thinking that they are defending as if it were its very own is not more than a reflection of the bourgeois thought of the 19th century that Marxism is a consistent repudiation of. It turns out that this question of equilibrium is on its own way too important to ignore. The metaphysical separation of equilibrium and motion has far reaching consequences that are beyond the methodological question of unity of opposites.

The concept of equilibrium *per se*, taken as an isolated state of matter, has very severe consequences as far as dialectical materialism is concerned. Bourgeois economists treat equilibrium as a fundamental state in the economic phenomena that determines their essence

(take for instance exchange being treated as an act of equilibrium between supply and demand). Equilibrium is in the bourgeois thought a fundamental state of matter, whether this applies to natural sciences or to political economy. If natural or economic phenomena are treated as a succession of states of equilibrium, or, in other words, evolution is considered as a transition from one state of equilibrium to another, within the context of dialectical materialism we arrive at a *contradictio in abjectio*. This has to do with the fact that this postulate unavoidably leads to the tremendous difficulty, related to the fact that ultimately absolute equilibrium cannot become motion by means of self-evolution:

‘Nor is there any means whereby absolute equilibrium can of itself pass into motion.’ (F. Engels, *Anti-Dühring*, Foreign Languages Press, Peking, 1976, page 67).

The fact of the matter is that the acknowledgement of the equilibrium as an absolute notion ultimately implies that at some point in the history of development there is a point when this absolute equilibrium needs somehow to evolve into motion. How is this possible in the framework that bourgeois thought is offering to us? How can an absolute equilibrium evolve into motion on its own? The answer in a self-consistent system has to be in the negative. This has to do with the fact that, if absolute equilibrium is treated within the context of mechanics, and such is in the end the framework that leads to the notion of absolute equilibrium in the first place, then there is no physical way for a equilibrium to evolve into motion. Absolute equilibrium by construction is a stable equilibrium. Unstable equilibrium cannot be by construction considered as an absolute form of equilibrium, since it spontaneously evolves into motion and, therefore it is acknowledged to be of temporary character. Engels had stated that the only way to reconcile this contradiction is to introduce the idea of creation, by means of an external force than creates and sets the initial state into motion. This is unavoidably related, as correctly pointed out by Engels, to the idea of god. This as deep as the idea of absolute equilibrium goes. It is no coincidence that Marx and Engels had carefully thought about the dialectical unity of motion and equilibrium and how untenable it is to separate them metaphysically. In this light it appears preposterous to claim that Marx’s method is consistent with the postulate of equilibrium, as advocated by Bukharin.

Generally speaking, the postulate of equilibrium, if reconciled with the ideas of dialectical materialism (and that is the ultimate goal of revisionism) leads to the same level of absurdity as the act of creation, by which from a complete state of absolute equilibrium, such as the existence of nothing, the world can emerge. The only way to make sense out of this picture is if one gets rid of a fundamental tenet of dialectical materialism, evolution as a result of unfolding of internal contradictions by the metaphysical picture by which evolution is the result of the interaction of the object with the external medium. We will see later how this metaphysical approach unavoidably replaces dialectical materialism in the system of thought of Bogdanov. The postulate of equilibrium is intimately related to the metaphysical view of the world. This is deeply rooted in the bourgeois thought of the 19th century:

‘A motionless state of matter is therefore one of the most empty and nonsensical of ideas – a “delirious fantasy” of the purest water. In order to arrive at such an idea it is necessary to conceive the relative mechanical equilibrium, a state in which a body on the earth may be, as absolute rest, and then to extend this

equilibrium over the whole universe.' (F. Engels, *Anti-Dühring*, Foreign Languages Press, Peking, 1976, pages 74-75.)

We have mentioned earlier that there are fundamental reasons why dialectical materialism treats equilibrium and motion in their dialectical unity and how important this is for the system of Marxism. Engels argues further about the serious error that one incurs by considering equilibrium in isolation. The isolation of equilibrium from motion is logically equivalent to the isolation of motion and matter, which is sheer nonsense in dialectical materialism:

'The materialists before Herr Dühring spoke of matter and motion. He reduces motion to mechanical force as its supposed basic form, and thereby makes it impossible for himself to understand the real connection between matter and motion, which moreover was also unclear to all former materialists. And yet it is simple enough. Motion is the mode of existence of matter. Never anywhere has there been matter without motion, nor can there be. Motion in cosmic space, mechanical motion of smaller masses on the various celestial bodies, the vibration of molecules as heat or as electrical or magnetic currents, chemical disintegration and combination, organic life – at each given moment each individual atom of matter in the world is in one or other of these forms of motion, or in several forms at once. All rest, all equilibrium, is only relative, only has meaning in relation to one or other definite form of motion. On the earth, for example, a body may be in mechanical equilibrium, may be mechanically at rest; but this in no way prevents it from participating in the motion of the earth and in that of the whole solar system, just as little as it prevents its most minute physical particles from carrying out the vibrations determined by its temperature, or its atoms from passing through a chemical process. Matter without motion is just as inconceivable as motion without matter.' (F. Engels, *Anti-Dühring*, Foreign Languages Press, Peking, 1976, pages 73-74).

Because the bourgeois thinker often confuses motion in general (evolution) with mechanical motion, he effectively divorces matter from motion, not realising that motion, as the mode of existence of matter is bound to the latter by virtue of the materialist conception of nature. It is easy to disentangle matter from motion when the latter is treated as purely mechanical. Because there exists objects that may appear to the observer in mechanical equilibrium and because the bourgeois thinker treats this perception superficially, one concludes that the existence of matter and motion are two different notions. Needless to say this is an absolutisation of the notion of mechanical equilibrium. As Engels correctly points out, the mere existence of an organism is naturally linked with motion, even if this is treated in the narrow mechanical sense. The rock that at some points arrives at a mechanical equilibrium sometime, this equilibrium is broken by the fact that Earth moves. Even within the narrow mechanical context it is hard to conceive mechanical equilibrium outside the existence of matter, unless this is forced by the epistemology, by the imperative need to cling to equilibrium as something fundamental for the scientific discussion. We deal here with yet another argument in favour of the dialectical treatment of equilibrium in opposition to that of bourgeois thinking, which is closely linked to the need to consider equilibrium and motion in their dialectical unity. It is because the bourgeois thinker divorces equilibrium from movement that the way is opened to consider matter in isolation from

motion. Both notions are closely related to each other as much as dialectics and materialism are intertwined in Marxism.

There is another very important aspect of the postulate of equilibrium, that is intimately related to Bukharin's theory of equilibrium. We have considered above that the mechanical treatment of movement carries severe consequences with regards to the role of equilibrium. To these consequences we need to add that the establishment of the postulate of equilibrium ultimately implies the absolutisation of the aspect of unity in the dialectics of opposites: unity of opposites becomes harmony of opposites, an absolutisation of the unity in detriment to the contradiction. This is a typical tendency in right wing revisionism that generally confuses antagonistic contradiction with contradiction in general.²⁷ We do not want to confuse two separate issues here. We started the discussion arguing that the postulate of equilibrium emerges from the metaphysical dissociation of the unity of equilibrium and motion, which is the result of reducing motion in general to mechanical motion. Now it is argued that, when revisionists consider any other dialectical unity (at least formally) other than that of motion and equilibrium, by virtue of the fact that the postulate of equilibrium now emerges as general law of development, unity turns into harmony and the internal contradiction of systems is no longer the engine of development, as pointed out above. With regards to the transition to socialism, right wing revisionism advocated a conciliatory policy with regards to capitalist elements and the resulting tendency for the development of class antagonisms. Bukharin opposed Preobrazhenski's metaphysical approach of the transitional economy by which the socialist and capitalist sectors are treated as independent 'boxes', thus forgetting the fact that the transitional society constitutes a certain unity of opposites. Conversely, Bukharin takes the opposite extreme, by which, while correctly advocating the notion of unity in the transitional economy, unity is rendered harmony and the antagonistic contradiction between the socialist and capitalist principles of development is de facto obliterated, to the extent of adamantly denying an 'extra-economic' pressure against the capitalist class.

As we have seen, there are far-fetched reasons to reject the postulate of equilibrium as fundamentally alien to dialectical materialism. The postulate of equilibrium was rejected by the classics of Marxist-Leninism as a question of principle in and it is by far not a manifestation of dogmatic negation. Ideologists of the Stalin period who made a substantiated rebuttal of the revisionist theory of equilibrium put forward by the right-wing opposition took the same approach. Those in the Soviet Union in the revisionist period who argued against this 'dogmatic' negation are ignoring the overwhelming fact that Marxist philosophy emerges in opposition to bourgeois thought and it is precisely the postulate of equilibrium one of the philosophical and epistemological foundations of bourgeois and reformist thought.

To be continued.

Footnotes:

10) The role of Adam Smith's conception of equilibrium (see Chapter 7 and 10 in 'The Wealth of Nations', Book 1) in the establishment of modern bourgeois theories of General equilibrium is a debated topic among bourgeois authors. Well-known and prominent advocates of general equilibrium analysis such as Kenneth Arrow (Nobel Prize winner in Economics in 1972) and

Frank Hahn (see 'General Equilibrium Analysis') claimed that 'Smith was the creator of general equilibrium theory'. We would tend to agree with other authors such as Gavin Kennedy or Ramesh Chandra, among others, in their assessments with respect to this exaggeration: 'A view has emerged which sees Adam Smith's main contribution to economics in terms of his equilibrium theory. This paper argues that equilibrium economics was neither Smith's main contribution nor his chief concern.' (R. Chandra, 'Adam Smith and Competitive Equilibrium', *Evol. Inst. Econ. Rev.* 1(1): 57–83, 2004).

11) As we will see later, Bukharin went as far as claiming that it was Marx was de facto an advocate of the theory of equilibrium.

12) Bogdanov in *Tektology* makes ample use of this mechanical description for the purposes of introducing organisational principles.

13) As in mechanics, we can state that there exist stable and unstable equilibria. Stable equilibria correspond to the case when a disturbance in the state of equilibrium is followed by a net force that impels the system to restore the state of equilibrium. Unstable equilibrium corresponds to the case when the net force that follows the disturbance impels the system to move away from that equilibrium. If viewing this mechanical problem in terms of potential energy, in physics states tend to achieve the minimum potential energy. Unstable equilibria can be described in terms of energy potential as a system for which a disturbance of the equilibrium leads to the decrease of potential energy. By virtue of the general physics law, the system will depart from this state of unstable equilibrium since a movement away from it results in the decrease of potential energy. Conversely, stable equilibria correspond to states in which any displacement results in the increase of potential energy. These considerations are valid in the description of mechanical systems. When these considerations are transported to humanities creating a system of thought that imposes the postulate of the spontaneous tendency towards stable equilibria, we then talk about a form of metaphysics, mechanical metaphysics. This spirit, although more sophisticated in form, is characteristic to Bogdanovism and Bukharinism.

14) This has a deep meaning. This 'peculiar combination of circumstances' implies that the equilibrium is in fact an accident not driven by some metaphysical law derived from mechanics. We will see below in this Section how Marx considers this accidental character when analysing bourgeois classical economic thinking and exposing its internal inconsistencies.

15) It is important to note here that the illustration given here is a simple example of Marxist methodology. Marxist methodology, as implemented by Marx in the *Capital* is a very broad question that goes far beyond the example given here.

16) The concept of dynamic equilibrium was certainly not invented by Bukharin nor was he the only one to implement it in the political economy of the transitional period. We find Kondratieff's (a member of the Socialist-Revolutionary party, that emerged from the narodnik movement; he was a member of Kerensky's government and remained in the Russia; in 1920 he created the Institute of Conjuncture and became a very influential economist till the mid 20s advocating a model of economic development based on the pre-eminence of agriculture and the light industry) account of the relation between statics and dynamics in economic phenomena,

indicating that, in the petty bourgeois system of thought, there is no fundamental difference between the two approaches. Kondratieff accepts the premise that economic phenomena are in a constant state of movement, or a state of flux: 'As a result, the static conception, however perfect in itself, is unable to give a complete explanation of economic realities and to satisfy our craving for their scientific analysis and understanding' ('The Static and the Dynamic View of Economics', *The Quarterly Journal of Economics*, Vol. 39, No. 4 (Aug., 1925), pp. 575) This is also accepted by many bourgeois schools and does not by itself represent a departure from the metaphysical framework. To Kondratieff's credit, he understands that what he refers to as the static approach is closely related to the postulate of equilibrium: 'It [the static approach] deals with reality as if its elements were in a state of fixed equilibrium' (Ibid, pages 576-567). While being strictly speaking correct, Kondratieff is not able to departure from the needs of this postulate of equilibrium, he simply modifies its implementation by mechanically transforming the methodology of static equilibrium into that of moving (dynamic) equilibrium in economic phenomena: 'The dynamic theory may, no doubt use the conception of equilibrium; but in this case it will be not that of static equilibrium, but of dynamic, that is, the equilibrium of variable elements' (Ibid, page 578). This conception of dynamics well known in the general course of physics and it is as mechanical as notions in statics. This emerges from the notion of statics in economic phenomena that opens the way to the mechanical interpretation of the evolution of economic systems: 'The static conception considers economic phenomena, essentially and as a matter of principle, without taking into account their variations in time' (Ibid, page 576). This essentially implies that the static point of view is incomplete because it does not take into account the time evolution, or simply because it does not add time to the description of the phenomena. If this time dimension is taken into account then the static point of view becomes dynamic and, hence, it qualifies to describe the changing world of economic phenomena and their interrelations. It is in this sense that the postulate of equilibrium perpetuate itself in the sense of transforming itself from a purely static notion to a dynamic notion of balance of 'variable elements', i.e. that that the points of equilibria are not fixed but vary with time. It is probably relevant to note that, unlike Bukharin, Kondratieff and other economists in the 20s who did not belong to the Bolshevik party did admit connections with bourgeois economists. This is clear, as the postulate of equilibrium as not an invention of pseudo-Marxism, but is a fundamentally bourgeois idea. The work of Kondratieff and other economists of the 20s are illustrative of the fact that Bogdanov and Bukharin's ideas are ultimately related to well-defined tenets of the bourgeois thought.

17) Bukharin introduces this vulgar concept of Dialectics in the Chapter III of his 'Historical Materialism': 'Matter in motion: such is the stuff of this world. It is therefore necessary for the understanding of any phenomenon to study it in its process of origination (how, whence, why it came to be), its evolution, its destruction, in a word, its motion, and not its seeming state of rest. This dynamic point of view is also called the dialectic point of view' (N. Bukharin, op. cit. page 64). The metaphysical essence of this seemingly Marxist statement is unveiled to by a great extent by Bukharin's theory of equilibrium. A similar treatment of Dialectics we find in later works of Mao Tse Tung. This will be dealt with in a separate section later.

18) We can illustrate the mechanical essence of Bukharin's dynamic equilibrium with the following example. Imagine that treating the world as a static system, is equivalent to saying that Earth is flat. We know that Earth was found to be round, which gave direct evidence that the

postulate of flatness is flawed. However, is the acknowledgement that Earth is not flat enough to liquidate the metaphysical method that lead those to believe Earth was flat in the first place? No, it is not and for the very same reason that acknowledging the ever-changing character of nature and society is not equivalent to accepting dialectics. The metaphysical method is perpetuated by considering the surface of Earth as a succession of short straight lines (or much smaller than the radius of Earth). The epistemology that engendered the postulate of flatness of Earth in the first place is preserved within a different context. Bukharin performs the same operation as described here. Because the Earth is not flat, or because nature and society are not static systems, the description of the latter goes now in the form of successive states of equilibria, as opposed to a single state of static equilibrium; the bending of a straight line can be mimicked by a large succession of short but straight lines. Even it does not look straight anymore it fundamentally remains a straight line.

19) Adam Smith and Ricardo are certainly more sophisticated than this. As a matter of fact, they do consider the notion of surplus value. Nevertheless, the example is a good illustration of the epistemology of bourgeois thinking, including the two leading representatives of the classical thinking. For instance, Adam Smith commits the same mistake as illustrated above by mixing surplus value and profit, arriving at glaring contradictions that did not enable him, together with Ricardo and followers, to unveil the essence of the economic category of surplus value. This remains a feature of post-classical economists, shared by Bogdanov and Bukharin, as well. This is despite of the fact, that unlike the bourgeois economists, from whom they borrow the postulate of equilibrium, they are aware and fully accept such a fundamental tenet of Marx's political economy and the theory of surplus value.

20) Marx on multiple occasions exposes the tautological character of economic categories in the classical school.

21) This tendency to use the equilibrium state between supply and demand as the factor that determines value becomes prominent in the post-classical economic thought. It is important to note that Adam Smith does advocate the theory of equilibrium, by appealing to the postulate the natural tendency of the market price to tend towards the natural price (what we would call the cost of production): 'The natural price, therefore, is, as it were, the central price, to which the prices of all commodities are continually gravitating. Different accidents may sometimes keep them suspended a good deal above it, and sometimes force them down even somewhat below it. But whatever may be the obstacles which hinder them from settling in this center of repose and continuance, they are constantly tending towards it' (Adam Smith, 'The Wealth of Nations' Penguin Books, 1982, pages 160-161). Marx does also talk about price and value, by which the former fluctuates around the latter. However, Marx does not talk about the relationship between price and value as that of a pendulum around the point of equilibrium. In advocating the postulate of equilibrium Adam Smith differs from many in the post-classical schools in that he does not consider the balance between supply and demand as a metric of value. In this sense, it is the post-classical schools that go further in exploiting the vulgar elements of the classical school effectively obliterating the concept of value altogether.

22) In the system of Bogdanov and Bukharin it is not the internal contradiction that drives development but the mechanical notion of the interaction of the system and the medium, just

like, for instance evolution is considered in thermodynamics, as a part of the general course of physics. This feature of Bogdanov's Tektology that is later inherited by Bukharin's theory of historical materialism and political economy will be dealt with later. At this point is relevant to bear in mind that the postulate of equilibrium is inherently linked to the mechanical understanding of evolution and, therefore, is a bourgeois conception. Take for instance Herbert Spencer, a leading bourgeois philosopher of the XIX century, which, whether Bogdanov admits or not, greatly influenced him. Spencer made a name for himself, among other things, for his views on evolution: 'Throughout Evolution of all kinds, there is a continual approximation to, and more or less complete maintenance of, this moving equilibrium (H. Spencer, 'First Principles', The Online Library of Liberty, A Project Of Liberty Fund, Inc. pages 276). The accomplishment of this moving equilibrium, which Spencer treats as a transitional state towards complete equilibrium is the result of certain equilibration of forces. These forces are not the results of internal contradictions but the result of the interaction of the object with the medium: 'So long as there remains a residual force in any direction—be it excess of a force exercised by the aggregate on its environment, or of a force exercised by its environment on the aggregate, equilibrium does not exist; and therefore the re-distribution of matter must continue.' (H. Spencer, op. cit. page 276).

23) Empiricism is a philosophical trend widely used in bourgeois thought that regards the experimental observation as the only one source of knowledge. There are two main types of empiricism: idealist and materialist. The first considers the experimental data as a complex of sensations or conceptions. The second accepts the objective character of the experiment. While, dialectical materialism accepts the premise of materialist empiricism and values the progressive character of the role played by its early advocates (Bacon, Hobbes, Locke, the French materialists of the XVIII century) it rejects its one-sided character, specifically its inability to use the power of abstraction, as demonstrated by Marx's political economy.

24) Marx and Engels occasionally mention the law of the negation of the negation, per se. It is appropriate to note that the Marxist understanding of this statement is very different from the metaphysical system of triads (thesis-antithesis-synthesis introduced by Hegel and perpetuated by revisionism). Bukharin is one of those who make use of this metaphysical system and combined is well with his postulate of equilibrium: 'Hegel observed this characteristic of motion and expressed it in the following manner: he called the original condition of equilibrium the thesis, the disturbance of equilibrium the antithesis, the reestablishment of equilibrium on a new basis the synthesis (the unifying proposition reconciling the contradictions). The characteristic of motion present in all things, expressing itself in this tripartite formula (or triad) he called dialectic. (N. Bukharin, op. cit. pages 74-75). Bukharin goes as far as arguing that Hegel used the theory of equilibrium for the development of dialectics, which is unfair to Hegel. Bukharin is not only being unfair to Hegel, but above all to Marx since he portrays dialectical materialism through the point of view of the theory of equilibrium.

25) We will deal with this later in some detail. At this point it is appropriate to note that Bogdanov and Bukharin have slightly different attitudes towards the interpretation of the postulate of equilibrium in Marx and Engels. Bogdanov is more of the opinion that Marx performed his historical, philosophical and economic analyses in a limited framework, and therefore Marxism is an imperfect system of ideas. Although, according to Bogdanov, Marxism

is not in contradiction with his organisational theory, the latter is a more developed and fundamental theory. Bukharin, even though is under the strong influence of Bogdanov takes a difference attitude towards Marxism in this respect. He advocates the idea that the real essence of Marx's methodology is rooted in the postulate of equilibrium, that he simply did not formulate it explicitly, although he does not state why. Bukharin truly believes that the postulate of equilibrium is deeply rooted in Marxism in general and Marxist political economy in particular. Bukharin was certainly more loyal than Bogdanov to the ideas of Marxism. Nevertheless Bukharin's views are a manifestation of his inability to understand and, let alone implement, dialectical materialism, as pointed out by Lenin.

26) It is convenient to give another reference to Herbert Spencer. As a matter of fact, it is very hard to understand the epistemology of Tektology without Spencer's philosophical principles. 'The rolling stone parts with portions of its momentum to the things it strikes, and finally comes to rest; as do also, in like manner, the various things it has struck. Descending from the clouds and trickling over the Earth's surface till it gathers into brooks and rivers, water, still running towards a lower level, is at last arrested by the resistance of other water that has reached the lowest level... In all cases then, there is a progress toward equilibration. That universal co-existence of antagonist forces which, as we before saw, necessitates the universality of rhythm, and which, as we before saw, necessitates the decomposition of every force into divergent forces, at the same time necessitates the ultimate establishment of a balance. Every motion being motion under resistance is continually suffering deductions; and these unceasing deductions finally result in the cessation of the motion.' (H. Spencer, 'First Principles', The Online Library of Liberty, A Project Of Liberty Fund, Inc. pages 273-274). We see here a classical example of bourgeois thought with regards to the question of motion and equilibrium. The tendency of individual objects towards equilibrium is considered a manifestation of a general tendency towards equilibrium, i.e. equilibrium is absolute and movement is relative, secondary with respect to equilibrium. Motion is dissipated and unavoidable comes to a standstill. The relationship between movement and equilibrium is turned upside-down. Spencer does conceive of the notion of equilibrium mobile, or moving equilibrium. We will be dealing with this concept of moving or dynamic equilibrium more and its role in bourgeois economic analysis. In the mean time, it is convenient to point out that in Spencer's system "this moving equilibrium eventually lapses into complete equilibrium." (ibid, page 275). This is somewhat different from the concept of dynamic equilibrium advocated by Bukharin. The latter formally accepts the notion of constant movement. However, these differences are not essential, as both authors have in common the fact that they disrupt the unity of movement and equilibrium in favour of the latter.

27) A concise summary of Bukharin's theory of equilibrium and its characterization from the point of view of the dialectical materialism was given in successive editions of 'A Textbook of Marxist Philosophy' prepared by the Leningrad Institute of Philosophy under the direction of M. Shirokov. In this book a critique of the theory of equilibrium used to take up an entire separate Chapter. Needless to say such a critique did not appear anymore in textbooks after Stalin.