

## SOCIALISM AS A SOCIETY OF NETWORKS AND THE PROBLEM OF TECHNOLOGICAL INNOVATIONS

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### *Introduction*

This paper explores the problems of (technological) innovations under socialism - the overall social, political and economic environment they are taking place; the specific mechanisms of innovations in these societies, and the main actors involved. It aims at generalized but sufficiently detailed theoretical model, an “ideal type”, as a key to understand the findings from historical analysis of various concrete cases. In search for such a conceptual model three different theoretical framework were juxtaposed – the implicit *theory of economic development in non-market (communist) economy* of Joseph Schumpeter, the *techno-economic networks (TEN) approach* (Michel Callon) and the findings of newly emerged *historical sociology of socialism*. The later constitutes the core of the paper, which is set by a critical account of the works of Bulgarian sociologists Andrej Boundjoulov, Andrej Raichev and Dejan Dejanov, along with the analyses of some other authors (Czech sociologist Ivo Mojni, the Hungarian sociologist Ivan Szeleny, etc.).

The new *historical sociology of socialism* challenges some established views on the former socialist societies. It provides a detailed and much more complex account of how the concrete political and ideological actors (the communist apparatus or ‘nomenclature’) behave in the context of changing *management practices* the socialist society has undergone. It

reveals also the indigenous strategies the local social actors have developed to cope with ideological and political pressure. This helps to identify phenomena, which have escaped the attention of other researchers of socialism (for example Kornai's political economy of socialism developed in Kornai 1992), such as: the pendulum-like process of economic reforms; the key role of the organizational departments of the communist party; the tensions and scuffles between the 'economic' and the 'party' nomenclature, and most of all the emergence and raise of unique socialist phenomenon – the so-called “second networks”. All these findings critically influence our understanding of the mechanisms of technical change under socialism.

The corner stone of historical sociology of socialism was the idea of socialist society as 'heterotopia' (Foucault 1986: 24) of the capitalist one. It was developed by Andrej Boundjoulov in his 1995 book, where he considered the socialism as a unique and concrete world of its own (where different ideological, political, economic, etc. aspects intertwine), and at the same time as a 'boundary' phenomenon of the capitalist society. He distinguishes two aspects of socialist heterotopia – "... *external*, e.g. the point of view of the outsiders, and *internal*, i.e. the point of view of the dwellers. While looking at their "mirror" image, Westerners believe that the socialist heterotopia has compensating and *normalizing* functions and stabilizes the identity of capitalism threatened as it is by internal conflicts and contradictions. However, people who lived under socialism regarded the heterotopia as an entirely different world of its own, which emerged from the double negation – ideological and practical – of the Western world and of the socialist societies' own capitalist past." (Boundjoulov 2002, p.1)

According to Boundjoulov the 'ideal project' of socialism originated from the milieu of the 19<sup>th</sup> century liberal West but by the time Lenin and the Bolsheviks made it real in the early 20<sup>th</sup> century, capitalism had changed. As Boundjoulov argues, this is one of the main paradoxes of the socialist project and the reason for many of its inconsistencies. However, most of the authors working in the framework of historical sociology of socialism dissect the socialist society using the same Marxist schemes on which this society was actually founded. They unanimously share the idea of "self-acting" nature of the modern intermediary structures - the determinative role of ownership, money as a universal equivalent, the profit as an "appropriation" of the "surplus" value of living labor, etc, to which the socialism set as an alternative the mechanism of conscious planning. In this sense they comes under the provisions of their own conclusion about original communist project! It turns out that we still

comply with some of the key assumptions of the society whose “immediate agents” we have been, years after it became extinct.<sup>1</sup>

In previous analyses I have stressed the possibility of developing a *sociological theory of (technological) innovations under socialism*, based on Joseph Schumpeter’s theory of economic development. (See Tchalakov 1997; 2001, and 2003). This theory provides important frame of reference when analyzing the achievements of historical sociology of socialism, helping to draw the line between its original empirical findings and their biased interpretations.<sup>2</sup> That is why I begin the first section below with brief outline of Schumpeter’s ideas of innovations under the socialism, stressing his differences from Marxism. The second section presents the main findings of historical sociology of socialism bearing on mechanisms of technical change in socialist economies. These findings point out to the important limitations of the original Schumpeterian model, asking for its further development. The author sought one of the possible lines of such development in adopting the notion of ‘techno-economic network’ (M.Callon), and especially the idea of *two states* – emerging and stabilized – of these networks. This idea is developed in the last section of the paper, which provides also some supporting empirical evidences.

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<sup>1</sup> As a matter of fact, when asking himself whether we should take up the stand of postsocialist researchers who seek to examine the socialist heterotopia, Boundjoulov argues about “our today’s position”. The answer he provides is that “...we are not Western observers. Neither are we unbiased observers who accept socialism as a historical reality. We have lived for some time in the heterotopy”. However, I think that Foucault’s viewpoint does not entirely serve the case – although we find ourselves in the “inversion” period, many of the “ghosts” of socialism still reign over our minds and do not let us go beyond its range of vision to perceive a little bit more of its consistency.

<sup>2</sup> Schumpeter’s theory of economic development is the appropriate tool in understanding the socialist economy, and not the Marxist paradigm which grounds the historical sociology of socialism (if with important blending from M.Foucault and P.Bourdieu). My arguments are similar to those of Peter Murrell against neoclassical economics: “...Much of the discussion of the properties of the socialist economies, both academic and popular, is cast in terms that are directly derived from the standard paradigm of Western economics – the set of ideas that economists call neoclassical economics... By applying neoclassical theory in an empirical framework, I sought to discover the characteristic features of socialist economic behavior, but as the analysis proceeded it became clear that marked differences between the two types of economic systems were not a significant element of the results derived from the traditional economic models. Once the empirical analysis stepped outside the confines of these models, however, distinctive features in the behavior of the socialist economies became really apparent... In explaining the results of the empirical analysis, I have sought refuge on a Schumpeterian theory of economic behavior.” (Mirrell 1990: 3-4) In my view the so-called *redistributive theory of socialist economy* also fails to provide convincing explanation of the observed phenomena in socialist technological development, maybe because it also shares the basic assumption of neoclassical economics. (see Szelenyi, Beckett and King in Smelser and Swedberg 1994:234-251)

*1. Schumpeter on innovations in non-market (communist) economy*

Let us begin with the logical scheme, which follows Schumpeter's analysis of capitalist economic development:

- The distinction between circular flow and development is fundamental for the capitalist economy. In the first the economic system functions in a 'static' state, as a 'routine' following the beaten track of 'past cycles'. The 'development' signifies a specific class of economic changes - the radical, abrupt changes in production.
- The source of development is 'functioning in a different way, i.e. the introduction of innovations (new combinations). Because the new combinations are always more profitable, key aspect of 'economic development' is the competitive elimination of the old forms of production. This process of 'creative destruction' is fundamental trait of capitalism.
- The introduction of innovations is impossible without the function of the entrepreneur. The only contribution of entrepreneurs is their 'will and action' in channeling the existing production resources along new tracks. But the entrepreneurs could not implement new combinations without resources, i.e.
- Having no access to capital - already existing or created ad hoc, which explains
- The essentially different role of credits when the economy functions in a regime of development. Creating 'ex nihilo' means of disbursement (through a plethora of credit tools) and thus ensuring credit to entrepreneurs, the banker seems to 'suck value from the future' into the present economic cycles, hence dynamiting them. (Schumpeter 1936, see also Tchalakov 2003)

Tracing the difference between innovations in market economy with private property and in non-market economy, it is relevant to begin with *the entrepreneurial function*. This specific combination of 'will and action' is a type of leadership and demands qualities possessed as rule by a limited circle of individuals. This leadership is needed not only to break routines and traditions, but also to overcome the adverse reactions of the social environment in which the new combinations are carried out: the resistance of endangered producers ousted from the market by the new combinations; winning over consumers; finding allies, etc. Precisely because these are rare qualities the next condition - providing *access to credit* for every potential entrepreneur, i.e. to the resources needed in the implementation of new

combinations, was a key condition for economic development. Another conditions being *the possibility to receive the anticipated entrepreneurial profit* as compensation for his efforts.

How all this is arranged in the non-market economy? In "Theory of Economic Development" Schumpeter quotes two cases of non-market economy: 1) The isolated kingdom where all the means belong to the signor; 2) The isolated communist society in which the central authority possesses all commodities and labor resources and determines all commodity values. What is common between the two cases, according to Schumpeter, is that *some individuals enjoy absolute control* over the means of production. They expect no production cooperation, nor do they provide possibilities for making profit to other economic agents. So the problem of access to resources necessary for carrying out the new combinations "... does not exist in a non-exchange economy even if new combinations are carried out in it; for the directing organ, for example a socialist economic ministry, is in a position to direct the productive resources of the society to new uses exactly as it can direct them to their previous employments". (Schumpeter 1934: 68)

This distinction allows Schumpeter to define the difference between the two types of economies: the "capitalist" economy is the one in which resources necessary for new production are drawn from the circular flow by an 'ad hoc' established purchasing power (bank loan), while '*communist' economy is an economic form where the resources necessary for new production are drawn through some kind of power or command*. Hence follows the assumption that 'communist leaders' (central organ) can play the role of entrepreneurs *directly*, without using bankers as middlemen. In the case when the banking system is formally preserved, the leaders combine both functions: of a motive power for the introduction of new combinations (entrepreneurs) and of creators of an ad hoc purchasing power by a decree for financing the new combinations (bankers). What are the effects of the behavior of the communist leaders as entrepreneurs for the functioning of non-market economy?

*First*, the 'development' in the sense of channeling the economic process along new tracks, introducing product, technological, organizational, market, etc. innovations is also possible in non-market economy of a communist type: "The leader of such a community, whatever his position may be, withdraws a certain quantity of means of production from their previous uses and with them carries out a new combination..." (Schumpeter 1934: 141) Moreover, according to Schumpeter, in the *developing* non-market economy "...the entrepreneurial

activity of the leader as necessary condition for the realization of new combinations, may be conceived as means of production." (ibid. p. 143) It is the *third production factor*, alongside labor and natural resources (the land). Hence follows that part of the value of the new product should be ascribed to it. The amount of this part, as well as the part ascribed to labor and land, is determined by competition. But since in non-market economy there is no competition, and profit is much less significant than in market economy, the value of the leader's entrepreneurial activity is not clearly expressed.<sup>3</sup>

*Second*, the direct control by communist nomenclature over the necessary resources creates an *essentially different situation as regards risks and the speed of introducing innovations*. In market economy the entrepreneur must first persuade the banker, gain his confidence so as to get the necessary credit. The conjuncture of the credit market has a strong impact on the rates and scope of entrepreneurial activity. In non-market economy all this is non-existent. If he deems so, the leader may always withdraw the necessary resources, even risking holding back or worsening the living standards of the remaining social groups.

*Third*, given a direct control over production factors, the communist leaders, that have introduced the new combination in the economy, are rightfully entitled to the entire entrepreneurial profit. In a non-market economy the leaders need not share the entrepreneurial profit with bankers and other owners of capital (resources). Thus, at the start-up of development and the successful mass introduction of new combinations in the economy the ruling elite gets an additional, new source of resources for the purposes of its economic policy. They are entitled to it by rights and whether they will share it with the other economic agents depends solely on their good will. In a communist society the profit belongs completely to the community, however, this does not mean that profit from innovations is transformed into wages, even if it is distributed in its entirety. On the contrary, if those working outside the sectors where new combinations have been introduced get additional payments, this can happen only if they exploit their leaders! This state of affairs can be put in other words: "The profit has no significance as a distributive category in a non-exchange economy" (ibid, p. 144).<sup>4</sup>

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<sup>3</sup> Schumpeter believes that the part of surplus value ascribed to the leader's entrepreneurial efforts is determined by subtracting the value of the losses incurred by not using means of production in old ways of production from the value of the new product.

<sup>4</sup> The analysis of non-market, and especially the "communist" economy allows Schumpeter to make the major conclusion that the phenomenon of profit does not depend on the concrete form of economic organization.

*Fourth*, the phenomenon of “creative destruction” practically disappears. In market economy with private property the profit reaches the entrepreneur only after it has made its way through competition. It is not only competitively distributed among bankers and owners of capital, but also its very existence stimulates the next waves of entrepreneurs who, attracted by the success and monopoly profit of the First Innovator, also introduce the new combination and depending on the speed of introduction ‘steal’ a bigger or smaller portion of the profit until fully exhausting it (the new combination has ‘aged’). In market economy in the long run this is irreversibly linked to the relative drop of prices as regards wages, result of the higher effectiveness of new combinations. The communist leaders' direct control over resources in non-market economy does away with competition and economic agents related to it: bankers and other autonomous entrepreneurs. On the one hand this abolishes barriers before the quick introduction of innovations, but on the other it also does away with pressure on sectors working under old combinations. Schumpeter maintains that here new and old combinations can exist in parallel and profit be distributed among them. The complete restructuring of the sector on the basis of new more effective combinations is a *matter of will, of administrative decision*, rather than a competitive pressure.

*The fifth* and maybe the most important difference between market and non-market economy is the *narrowing of the social basis of entrepreneurship*.<sup>5</sup> Control over necessary resources is a key condition for introducing the new combinations. Credit in the market economy with private property and the relevant re-distributive function of entrepreneurial profit aim precisely at providing every potential entrepreneur with such [temporary] control over the necessary resources, at the respective cost (credit interest). The absolute control on behalf of the communist leaders over resources deprives the remaining economic agents of the possibility to carry out independent entrepreneurial activities. They are economically unable

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Being a particular and independent value phenomenon, the profit proves to be fundamentally related to the role of leadership in the economic system. Had not this system needed leadership and a directing force, profit as a phenomenon would not have existed separately, but would have been included in wages and rents. (Schumpeter 1934: 146)

<sup>5</sup> The establishment of economic democracy, e.g. formal “equality” in the access to credit is the result of a long historical process, which started with the fight against the “mercantilist state” in the 18<sup>th</sup> century (when the king decided who could be an entrepreneur), went through the fight against the monopolistic and oligopolistic markets during the 20<sup>th</sup> century and prompted the emergence of new forms of crediting like the risk capital and the newly fledged small and medium enterprises. From this point of view, socialism may be regarded as a relapse into 18<sup>th</sup> century mercantilist practices when Stalin could appoint and discharge economic leaders, e.g. grant the privilege to be an entrepreneur.

to become entrepreneurs.<sup>6</sup> Schumpeter considers this seemingly superficial and minor peculiarity to be highly important, with major long-term effects on the rates of innovations (hence on the rate of development) in socialist communist economy. The personal qualities and motivation are crucial, he says, because development is not a “natural process”. The successful introduction of innovations is a hard assignment. Therefore, the opportunity granted to every potential entrepreneur to be part of the process is the best possible motive power of development.

In this part we presented briefly the key features of Schumpeter’s implicit theory of innovations in non-market economy. What follows is a concrete analysis of the findings of historical sociology of socialism on the real process of economic development, taking place in Russia after 1917 Socialist revolution and in Eastern Europe after WW II.

## *2. Taking away the power of goods. The socialist planning*

What are the main features of the model, offered by the historical sociology of socialism relevant to the problem of (technological) innovations?

According to the historical sociology of socialism the capitalist society is governed by ‘self-acting’ anonymous structures (goods have power over people), while socialism is a society where goods have no power. Here the anonymous structures are powerless and power itself is personified: “...Marx asserts that if taken away, the power of goods changes into power of one person over another... Expropriation leads to the concentration of power in the command points of the party and state bureaucracy. Consequently, the economic, as well as all other fields (Bourdieu) of society become completely dependent on the political field (political capital), which is distributed hierarchically along the pyramid of power... Hence, the profit is no longer the main incentive of economic behavior and the very essence of social relationships changes fundamentally. The capital as a self-moving and self-expanding ‘substance’, the way Marx has formulated it, ceases to exist.” (Boundjoulov 2002, lecture 1)

Boundjoulov points out that “unlike the anonymous power of modernity, the power of Stalin is singular and personalized”. The expropriation of capitals “changes the very essence of

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<sup>6</sup> At first glance there is a solution suggested by the practice of market economy where certain groups of "dependent employees" - a term by which Schumpeter denotes technical directors, managers, board members in large companies and corporations - often can be regarded as entrepreneurs and can really fulfill entrepreneurial functions, receiving in return not profit, but a wage increase. He links this phenomenon, however, with the "disappearance of entrepreneurship" in late capitalism, with its bureaucratization.



power: from anonymous, fluid and dispersed, as Foucault describes it, it becomes the personified and robust power of the big Apparatus". It seems that in this point he shares Kornai's view, adding that power is now concentrated in a homogeneous and transparent ('superconductive') political structure whose focal point is Stalin. However, Boundjoulov claims, the Stalinist power is 'modern', in the sense that it is based on Party, Ideology and Plan, uses extensively modern technologies and maintains the modern institutions it has inherited – state, school, industrial enterprise, prison, etc. (Boundjoulov 2002, lecture 2)

The *mechanism of planning* is an essential feature of socialism: "The socialist revolution, unlike previous revolutions, is entirely intentional and reflexive and is based on a preliminarily designed project. The socialist society could emerge only on the basis of Soviet power, as a result of a teleological action or 'construction'." (ibid) In fact, the socialist society incorporates many of the achievements of capitalism and by re-defining them, it manages to establish complete control over (almost) all fields of social life and turn them into mere 'resources' for the execution of the socialist plan.<sup>7</sup> These transformations have far-reaching consequences and act upon the possibilities of introducing innovations in the economy. They will be considered in the next section.

In his analysis Boundjoulov points to the existence of two socialist projects – the initial project of Lenin and the subsequent Stalinist model. Lenin's socialist project was designed as a *complete antipode* of classical capitalism. Shortly after its accomplishment a discussion started about the "limits of compromise", set by the impossibility to destroy money-goods relationships.<sup>8</sup> The Stalinist model differs from the initial design inasmuch it launched large-

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<sup>7</sup> "The transformation of power goes hand in hand with another major transformation – the replacement of law as the fundamental regulative system of the modern society by ideology. The "revolutionary law" reverses the initial 'causal' relation between political and economic structures. We can see traces of ideology in the so-called "socialist legislation" established later on... At first glance this legislation looks very much like the Western one. However, the legal norm here is (partly) powerless. Unlike modern power where discipline and universal jurisprudence fuse (Foucault), the secret of socialist power lies in the *fusion between disciplinary institutions and ideological discourse* and in the replacement of power by ideology. This fusion changes the very nature of the modern disciplinary institutions" (Boundjoulov 2002, lecture 1)

<sup>8</sup> "Initially Lenin regarded the new society as a *complete antipode* of the classical capitalism. There is no money, no goods, and no market economy in this society. The state will wither away, there will be no more social classes, nor laws ... In the beginning the Bolsheviks planned to destroy completely money-goods relationships and to transform goods into mere "products", raising slogan "Let's smash the fetishist cover of goods!". However, a few years later it became evident that this was not possible and the "limits of compromise" were put to discussion. To what point and to what extent can money-good relationships be suppressed, to what extent is private ownership allowed? This reconsideration of the initial plan is known as *New Economic Policy* [NEP, formulated by Lenin in 1921]. The impossibility to realize the socialist project in its initial radical form left an emptiness, from which the Stalinist model emerged." (Boundjoulov, ibid, p.2)

scale industrialization at the expense of agriculture. However, if we examine Lenin's and Stalin's models of socialism from the point of view of Schumpeter's theory of economic development, we will see that they are very much alike because neither of them disputes the dominance of the 'communist leaders' in the economy. Also in both models the rapid introduction of industrial innovations remains the top priority and the inherited obstacles to "technological progress" (conservative traditions, inadequate and underdeveloped system education, family prejudices, etc.) are removed. However, Boundjoulov discerns another and far more important difference between the two models – the Stalinist model instilled tension inside the communist nomenclature.

### *3. The tensions inside the nomenclature. The pendulum-like dynamics of socialism*

The main difference between Boundjoulov's and Kornai's analyses is that they are divided over the status of the economic nomenclature. Kornai considers it part of the all-encompassing administrative system (Kornai 1992:338-341), while Bounjoulov argues that the division between "party" and "economic" nomenclature is a key feature of the Stalinist model. As it often happens in social sciences, he found the best formulation of his thesis in the novel of the late Soviet writer Anatolyi Ribakov "The Children of Arbatt":

“... Lenin was aware of the importance of the apparatus. However, he chose to strengthen the state apparatus because he needed its support to perform as head of the government while Stalin relied on the party apparatus.... Stalin introduced strict control over the state apparatus (which executed primarily economic functions) through newly fledged party structures. *The party apparatus had to control all other apparatuses in the country, including the economic one, and above all the one in industry because it had the most independent, educated and pre-eminent cadres.* [the Italic mine – I.Tch.]” (Ribakov 1987: 250-251; 266)

To put it briefly, in Lenin's model the party apparatus complements the role of the state and the economic apparatuses, while in Stalin's model the latter are controlled by the party nomenclature. Bounjoulov accepts the well-known definition of the nomenclature as a "list of executive positions which are approved at the corresponding party level". However, when analyzing the nomenclature, he uses key concepts of Pierre Bourdieu's sociological theory. The most important one is the "extended" notion of capital which allows the description of the actors' behavior in a given social 'field' according to the model of economic behavior.<sup>9</sup> In

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<sup>9</sup> After his study of the pre-capitalist societies (such as the Kabile society in Alger), Bourdieu does not reduce 'capital' simply to the accumulation and investment of money, but shows that other types of resources – such as trust, prestige, etc. – could play a similar role. (Bourdieu 1994) It is hardly a coincidence, however, that Bourdieu's "expanded" notion of capital is closer to that of Marx rather than to Schumpeter's. I mean that in Bourdieu too the capital is "self-acting", "self-developing", and "self-expanding". Similarly, the "structures", which intercede in this expansion and development, are "self-acting" The real actors are in a way "forced from

the socialist society the political (not the economic!) capital plays a fundamental role and promotes the “nomenclature” as the main power group in society.<sup>10</sup>

It is evident from Ribakov’s quotation that, “the nomenclature is not a homogenous structure. It is formed of circles whose significance is determined by the extent of their access to the political capital. Within the framework of this general premise the different circles have a privileged access to different resources: economic, ideological, organizational, cadres, information, etc. They intertwine and interchange, compete and enhance each other”. (Boundjoulov, lecture 2) The privileged part of the nomenclature is the “party nomenclature”, i.e. *organizational departments* which “...concentrate the whole information about the cadres (inquiries, personal and service records), make proposals and coordinate them with the other departments, which are likewise obliged to harmonize their proposals with the organizational department. The structure of the party is a replica of the institutional structure of society and this guarantees its influence and leadership in every field.” (op. cit.) The *ideological departments* are closely associated with the organizational and have a privileged status too.

The relations between the various circles of the nomenclature are rather strained. Basically, the origin of tension is the nature of the social division of labor, which is inherent in capitalism and socialism alike. Socialism deprives the social fields of their autonomy but does not destroy them completely – there are economic, cultural, educational, academic, scientific, etc. fields. The “material rationality” (M.Weber) of every field of social life has influence over the ruling top, though all fields are dependent on the political and ideological logic of the “system”. To quote Boundjoulov: “... the leading functionaries in these fields are *twice as dependent* – on the logic of their party and on the ‘logic’ of the field itself, inasmuch this logic exists.” (ibid)

The relationship between the economic and the party nomenclature is of key importance - the empirical study of socialism reveals here the *main conflict* in the society. According to

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above” (or from behind) to act according to this “nature”. Here the entrepreneur does not play a crucial role in this development and expansion, as it does in Schumpeter’s model. Unlike the Marxist model, in Schumpeter development is not an “automatic and “natural” process, it is the entrepreneurs who set it going.

<sup>10</sup> “The selection of “cadres” in every field is entirely the Communist party committees’ prerogative (from the university rector and dean of the faculty, through the director of a research institute or editor in chief of a local newspaper, to the director of a school or industrial enterprise). Hence, the capacity of selection is their main political “capital” and by using it the party cadres receive “dividends from other fields. For example, the party secretary approves every applicant for the head of department position in a given research institute and is included in every delegation to a scientific conference abroad.

Bundjulov, the cause for this conflict is not the “nature” of the socialist system, but the specific mutation of the original Leninist model. Stalin “launched the industrialization” (at the expense of agriculture) and with the intent to restrict the “excessive” power of the economic nomenclature, he built a special party apparatus to duplicate it. Above the economic nomenclature were the organizational and ideological departments [of the communist party], which guaranteed before the “center” that the system would stay integral and would be “transparent” [accessible for the ruling top at every point]. Then, it was not the whole “apparatus” but only part of it – *the economic and more so the industrial apparatus of “independent and highly accomplished grandees”, which was able to carry out reforms (new combinations) in the economy*. This distinction is very important because it rent the administrative hierarchy end to end and on all levels (in Kornai the differences within the nomenclature, if any, are between the lower (local) and the higher (central) level). Furthermore, besides different, these two parts of the nomenclature are also in opposition, which escalates into an acute conflict.<sup>11</sup>

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<sup>11</sup> Lenin sought support in the economic nomenclature while Stalin safeguarded the dominance of the party (organizational, cadres) nomenclature. Is it possible for the economic nomenclature to preserve the dominant position it had in NEP period? Could socialism in this case evolve more easily to a situation when the immediate economic agents will be re-vested in power and conditions will be created for expanding the social base of entrepreneurship by encouraging private initiative?

The texts of the authors analyzed herein, provide a detailed account of the relationships between the two main “circles of the nomenclature” whose decade-long conflict follows the *pendulum-like oscillation of socialism between two end conditions* – one of the directions signifies the dispossession of goods of their power and the inactivation of the modern mediatory structures (commodity-money relations, private property, market, the bourgeois state and parliamentarism, bourgeois law and democracy, the bourgeois forms of life), which is not downright possible. The other direction indicates their partial restoration and I say partial because it cannot be fully accomplished either. That’s how it is, provided we accept the Marxist thesis of the “self-acting character” of the intermediary structures according to which “...the abrogation of private ownership and capitals by means of decrees [generates] a huge *vacuum in power*. New structures appear to make up for the deficiency but this expansion undermines the foundations of the system. And then the ruling top has to take due measures. The cycle reproduces itself” (Boundjoulov, lecture 1).

#### 4. The ‘second networks’.

The fundamental discovery of the historical sociology of socialism are the so called “*second networks*” which make up for the “vacuum in power” and the impossibility of the economy (and the former autonomous fields) to self-act. There is a close relation between the emergence of the second networks as compensatory structures and the “pendulum-like” movement of the socialist economy. The authors provide convincing arguments and plentiful of empirical facts about the relationship between this “pendulum-like” movement and the “second networks” and which are in contrast to the traditional notions of “classical socialist system” (Kornai).

##### 4.1. The early notion: “second networks” as additive micro-phenomena

This notion of “second networks” appeared elaborated for the first time in Andrej Raichev’s book “The young personality and the little truth” in 1985.<sup>12</sup> It is defined as a structural correlate of the “small truth” phenomenon (i.e. selfish, egoistic behavior which contradict to the ideologically promoted self-sacrifice in the name of the people). Raichev calls it a key mechanism in the reproduction of the social relations under socialism, the “social essence” of what in the upper layer of social life is perceived as “deviations”. He agrees with Petar Mitev

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<sup>12</sup> The idea of ‘second networks’ is take from a paper of Bulgarian sociologist Petar Mitev, who related them with the ‘remnants’ of the former capitalist relationships of alienation. However, as Raichev notes, the term itself is used by Nedyalka Mihova in a paper, published in 1966 in Bulgarian journal “People’s Youth”.

that the second network is a 1) structural formation of social relationships, which could be considered as 2) specific process of role interactions among social actors, and which is 3) historically predestined, e.g. connected with the fundamentals of the socialist society.

This is a rather orderly scheme which I provisionally call early notion of the second networks. They are regarded as having a special *material content* vested in an appropriate *social form* and are defined as *micro phenomena*. They are a totality of *additive relations* (their summation does not generate a new quality) and do not enter into complex interrelations. Following major principles of Marx's political economy, the second networks are operating in the *sphere of the distribution* of goods and services and not in the sphere of production. However, here distribution is interpreted in its broad sense because "it is not only goods, but also the positions of the individuals in production and consumption which are distributed through the second network" (Raichev 1985: 23). In this sense, the "molecule" of the second networks (as an additive totality of "micro phenomena") represents an *exchange of goods and social statuses*. It is clear that in the conditions of the socialist economy, each (scarce) commodity can be an object of this exchange: getting children into children's establishments, enrolling secondary vocational schools and higher educational establishments, taking a job, working one's way up, obtaining a residence permit, admittance into public organizations are all examples of an exchange of statuses (op.cit.). These exchanges are reproduced always by combining *two different role relationships* – an official and publicly sanctioned relationship and a "hidden" one which duplicates the former. Hence, the name of these formations – "second", because they are screened by the official "first" roles. Importantly, "these two role relationships" should lie in different spheres of social life so that "the functioning of an element of a sphere is made dependent on interests in the other sphere" (p. 25-26).<sup>13</sup> Although widely spread, the second networks do not have a permanent content, nor uniform mechanisms of reproduction. (They resemble to what Georg Zimel used to call "formal" social relationships).

This early notion identifies a very important empirical phenomenon – the second network relationships in the economy can be described as "local" interactions between social actors who "correct" or "make amends" for the problems generated by the officially structured

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<sup>13</sup> Raichev gives the following example of coupling of the two roles relationships – if the relationship is between a boss and his employee or between a salesman and a customer, then the hidden relations which duplicates and submits it to its interests is between a cousin and a cousin. This idea has led Ivo Mojni to his "family theory" of the fall of communism (Mojni 1991).

social interactions. It is, therefore, logical to assume that the second networks make up for the failures of the “forcible administrative regulation of relationships” exactly because the anonymous self-acting structures (for example markets) have been dispossessed of power. Although the early ‘second networks’ notion pronounces them strictly socialist phenomena and not anachronisms, it nevertheless regards them as “supplementary” and “temporary” phenomenon which functions just because of the “imperfections” of the administrative system.

#### 4.2. The late notion: ‘second networks’ as fundamental phenomenon of socialist society

In another article published recently, Andrej Raichev makes important corrections to the original model. What we see now is not only an exchange of goods and statuses but also an exchange of “statuses for goods”. This evolution was prompted by some new works in the area after 1984 and especially Dejan Dejanov’s view of the socialist state as suffering from a “permanent power deficit”, the socialist society as being “permanently aligned to its power center”.<sup>14</sup> This is a major complement to Kornai’s theory of socialism as a “society of the deficit” which catches only the economic effects of the impact of the administrative system. According to this late notion of second networks, they emerge “on the borderline” between the deficit of power and of deficit of goods. From this point of view, *the second networks may be regarded as a fundamental phenomenon of the socialist society* and their essence can be generalized as an “exchange of goods and power”. In reality, the second networks are the “civil society” of socialism and “the main form of its existence”, Raichev argues. In this sense, *they do not duplicate the socialist state but are its opposite*: “the history of socialism is in some measure the victory of the [so perceived] civil society over the state”. Defined as an “exchange of goods and power”, the second networks cease to be a simple additive relationships reduced to a series of micro phenomena:

“In [socialist] society, there are *real* hierarchies besides the *formal* ones because with an exchange of goods for statuses, it is normal to have central and peripheral points. *Therefore, there emerge public hierarchies to compete the official ones* (the Italic is mine – I.Tch) and have an increasing influence over them. In this sense, we can rightfully define this process as colonization [see Ivo Mozhni 1991 – I.Tch.]. (Raichev 2002: p 4).

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<sup>14</sup> The secret of this society, Andrej Boundjoulov points out in his analysis depending on Dejan Deyanov (1992), is not in the “cult of personality”, but in the deficit of self-acting power – “Stalin had the absolute power of deciding. He could give orders for a river bed to be moved away, decide about the place of residence of a whole nation, decree the construction of a metallurgical works, the Moscow underground, etc. He could reduce the prices and raise the salaries but could not possibly make the economy *self-act*, i.e. to develop autonomously. Herein lies the paradox of this model.” (Boundjulov, lecture 1)

Let's stand to it – *in its mature form the socialist society is composed of hierarchies structured according to different principles and organized around different interests!* This is fundamentally in contrast to Kornai's description of administrative coordination where conflicts of interests are likely to emerge between the different levels or branches of the economy (military and civil, group A and group B, etc.), between the economy and other sectors. Ultimately, however, the administrative system is steered by a *single will and "logic"*! It is far more complicated, Raichev says, because some hierarchies seem to be incommensurable, having different 'logics'. He does not use this term but it is clear to see what he means.

What kind of hierarchies are these? For better understating, I shall refer again to Andrej Boundjoulov's texts. In his "*Lectures on historical sociology of socialism*" I already examined, he does not divert substantially from Raichev's concept but while analyzing the development of the second networks, he finds their origin and functions to be far more complicated.

His first important observation is that the "*official system of distribution*, which counterpoises the second networks (according to Raichev's concept) *is not uniform and homogeneous* – not because it coalesces with them but because it has its own mechanisms of functioning. After the expropriation it was the "Apparatus" and not the self-acting market structures to start building the society. To make up for the huge economic and power deficits it used efficacious and power-concentrating instruments such as the *Plan* and the *State budget*. Having monopolized their use, the Apparatus "... created *two systems of distribution – official and unofficial*. The former was apparent and encompassed all individuals. Education, healthcare, recreation, canteen meals and etc. social systems were for the whole society. This common system operates on a relatively low level. *Compared to Western criteria, it is almost ineffective both in terms of quality of the services and standards*"<sup>15</sup>. (Boundjoulov 2002, lecture 2) To meet its own needs, the Apparatus created an additional ("special") system of distribution, *the system of privileges* – special shops with high-quality merchandise, specialized hospitals and rest homes which provide better treatment, comfortable flats in elite residential quarters, privileges in obtaining higher education, traveling abroad, etc. Moreover, Bundjoulov writes, the higher an individual stands in this structure, the more privileges he

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<sup>15</sup> According to Boundjoulov this system of distribution "... has another and even more important function. It levels out and minimizes social differences. There are no classes but "social strata". The differences between the town and the village, between intellectual and physical labor "are ironed out". A homogeneous mass of a new type emerges." (op.cit.)



enjoys. Such privileges may be granted also to social layers or groups of “working people” outside the Apparatus – for example, to “fighters against capitalism”, to people who work in “strategic” branches, to young people and students, to border regions which industrialization has left depopulated, etc. Boundjoulov goes even further and distinguishes *three systems or levels of distribution* – 1) system which caters for the needs of the apparatus; 2) official system of distribution for the general public and 3) official privileges for certain social layers or regions. The difference between the first one and the other two is that the system of privileged distribution is *off the record* – “*the privileges of the apparatus are secret, they are not known to the public*”, he points out!

In this way Boundjoulov substantiates (and makes more complicated) the idea of the “socialist system of distribution”. There not one, but several systems of distribution developed through the years not without internal conflicts and resistance<sup>16</sup>. If that’s the way it is, the functions of which system “counterpoise” and “duplicate” the second networks - of the “official” or of the “secret” distribution system? A more elaborate study suggests that the second networks in Raichev’s model have something in common with the “secret privileges” of the nomenclature – they both equilibrate the official system of distribution and are “hidden from observation”, each in a different way (the exchange is accomplished either “under the counter” or behind the closed doors of the special shops, restaurants, hospitals, etc.). At the same time, the difference between the two is plain to see – the first one, though hidden, is part of the “official” hierarchies and is, therefore, centrally controlled. As “alien elements” of the system, the second networks slip out of administrative coordination and make it the subject of their own goals. These are the goals of the specific social actors and Andrej Raichev finds it relevant to call them the “civil society” of socialism.

What is then the common point between these two formations, different as they are? If we accept their relation, we may consider credible the hypothesis that the “hidden privileges” of the nomenclature are related to the second networks provided they also result from the personal interests of its representatives and emerge contrary to the ideological principles officially discoursed by the nomenclature itself. By creating privileges in the conditions of

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<sup>16</sup> Boundjoulov cites as an example a letter which Krastyo Rakovsky, Chairman of the Communist party of Ukraine wrote to a friend in 1928 pointing among other things to the emergence of a new socialist bureaucracy. The privileges it enjoyed and its lifestyle set it wide apart from the proletariat which was supposed to be the ruling class. Krastyo Rakovsky was executed several years later together with hundreds of thousands of party members who dared oppose the Stalinist system.

continuous deficit, *the nomenclature acts as a second network* – it makes the official systems of distribution dependent on some other logic.

When describing this phenomenon, Boundjoulov agrees in general with Raichev's ideas – he also contends that the second networks offset the impossibility to accomplish all-round planning within the whole economy and calls them the “*artificial joints*” of socialism - e.g. with the help of these artificial joints the socialist economy, blocked as it is by administrative coordination, can nevertheless move forward. In fact, these “informal and invisible channels for the delivery of scarce goods and services function according to the logic of gift-giving and generate pre-modern effects typical of the “archaic economy” (Boundjoulov, lecture 1) The point is, he continues, that “these structures are not only and not so much distributional. *Had they really been, the question why the socialist society nevertheless developed and did not decline would have remained unanswered* (the Italic mine – I.Tch.)” (op.cit.)

This is a very important conclusion provided the initial thesis that socialism “blocks” the self-acting intermediary structures of capitalism is well based. When there is “power deficit” - e.g. the “Apparatus” is unable to regulate public life and more so the economy – the second networks could not possibly deal with the constantly erupting dysfunctions. Obviously there is evolution under socialism too! – Boundjoulov exclaims. To cope with the problem, he relies on Dejan Dejanov's idea that the second networks which duplicate and counterpoise the official structures, have distributional as well as *productive functions*. At some point, Dejanov says, the second networks start breeding “capital motivations” and start acting like the autonomous structures of the capitalist economy. They create their own rules of behavior which go beyond the purely “compensatory” logic.

The line of reasoning is as follows: in the first years after the expropriation “...”moral sense” played the crucial if not the only role. The Communist party, the Young Communist League and the trade-union structures built a system of instruments – emulation and suchlike initiatives to maintain “socialist awareness.” (Boundjoulov, lectures 2) An official and visible system of privileges granted to front-rankers, heroes of socialist labor, etc. was gradually developed to raise awareness. In a long-term perspective, however, moral sense could not account for the stability of the system - “... there had to be some *quasi-economic, quasi-capital interest*, - he wonders – which could not possibly be generated in the distributional and compensatory structures, nor in the family (clan) networks.” (op.cit.)

This economic interest is defined as *real*. What does “real economic interest” mean and why is it opposed to the “family networks”? - For having nothing in common with distribution as the adopted (Marxist) vision of socialism suggests! *The real economic interest is related to production* – to that same production which is in the exclusive command of the “official” administrative system. Therefore, it cannot possibly be the “...mass interest which reproduces itself in the family”. This kind of interest thrives in *specific places of the party and state apparatus*. It appears that there is no real economic interest in the “civil society” of socialism, nor in the nomenclature as a whole (which controls the means of production), except in some of its segments – *the economic nomenclature*: “...the attempts at reformation are vested in the idea that part of the profits should remain for the enterprise. The ideas of “self-support”, “on a self-supporting basis”, etc., gained ground in most of the socialist countries in the mid-1960s. The economic nomenclature got the right to control the public property and the profits, though within certain limits.”<sup>17</sup> (Boundjoulov, lecture 2)

Boundjoulov argues that the “real economic interest”, or the profit-oriented production was not promoted by the working class, nor by the state employees - i.e. of economic agents that have been deprived from entrepreneurial function in Schumeter’s term. It did not originate in the family, nor as something which tempts to misappropriation, etc., but was fostered by the economic nomenclature. While trying to seize the “*real power of the economic capital*” it went against the party nomenclature and its monopoly of the “*political capital*”. Hence the history of socialism witnessed several attempts of the economic nomenclature “to emancipate” from the control of party nomenclature and to act as real entrepreneurs for their own sake (which is in the core of its pendulum-like dynamics).<sup>18</sup> That is why they acted like “second networks”. However, the historical sociology of socialism consider this phenomenon as “*third network*”, because it fail to comply with its considering the second networks as predominantly *distributive phenomenon*. (Deyanov 1992) Deyanov calls the “third networks” the reformers of socialism, because according to his view the second networks have ceased to be more or less tolerable “deviations” from its normal pace and have become a point of

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<sup>17</sup> Foreign trade with the West, i.e. the contacts with capitalist economic agents was one more source of ‘real economic interests’, although these contacts were the exclusive monopoly of the special foreign trade organizations. The (partial) elimination of the foreign trade organizations as mediators between the socialist enterprises and their foreign partners was one of the battle lines in reforming the socialist economies. In Bulgaria this barrier was partly lifted in early 1980s.

<sup>18</sup> The last of these attempts were the wide spread ‘reforms’ in the late socialism, which ‘depth’ and radicalism differed among the socialist countries, the Hungary being the leader.

departure for the restoration of the anonymity of the social actors and the “self-acting” of the anonymous public mediators. No doubt, this implies a relapse into capitalism.

This is very important finding of historical sociology of socialism! We see how close it approaches Schumpeter’s idea that it is only the communist leaders which are in position to foster the economic development. However, having revealed the intricacy of the socialist hierarchies and the socialist system of distribution and having highlighted the “second networks” as the fundamental phenomenon of socialism, the historical sociology of socialism makes rather futile attempts to explain the phenomenon “*development*” under socialism and the mechanism of its disintegration. It appears that socialism, which is inherently doomed to immobilization, keeps moving only thanks to the “artificial joints” of the second networks, which, in addition to that, are only “distributive” phenomena! The large-scale process of industrialization, which went for decades and reorganized entirely these societies, could be accomplished only to the detriment of agriculture! Having no right to take the initiative, the ordinary working people and the “families” got obtrusively conspicuous only with “distribution” (under the counter, straight from the storehouse, etc.) and had to wait for the “top people”, e.g. the reformers of the economic nomenclature to repair the strength of money and goods...

Isn’t this confrontation between the “distributional” and the “production” functions of the second networks, which called the artificial edifice of “third networks” a little bit forced? Why not simply stick to their *compensatory* function, no matter where it manifests itself (in distribution as well as in production)? Ivan Szelenyi hints at this point, when he describes the socialist entrepreneurs in rural Hungary, although he did not use the term “second network”.<sup>19</sup> (Szelenyi in collaboration with Manchin 1988) Or maybe nevertheless there is some sense in “third networks” idea as pointing at specific role of economic nomenclature (approaching Schumpeter)? But then we could imagine quite a different (from that of the

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<sup>19</sup> In fact we can see second networks anywhere where there is “production distribution”. With time they become an important mechanism of the socialist economy. I remember how in the 1970s and 1980s my mother and her colleagues – the economic managers of a big textile works - had to make numerous calls to one-time schoolmates or fellow countrymen who worked in companies of the technological chain (suppliers of yarn, dies, etc.) and ask them for extra quantities when the planned quotas were not delivered. Sometimes these relationships evolved into complex “triangular” or “multiangular” “operations”. To get the necessary materials, she didn’t have to ask the person who had them but a third one who would eventually agree to provide the former with the necessary scarce materials so that he could grant my mother’s request. (See also the idea of Roumen Avramov of second networks as equivalent of ‘grey economy’ – Avramov 2002).

pendulum-like) dynamics which sets the pattern for the lasting presence and continuously increasing significance of second networks in the course of socialism.

5. *The principles of historical sociology of socialism and the Schumpeterian model of economic development*

As we stated in the beginning the authors, working in the framework of historical sociology of socialism, share the (Marxist) idea of “self-acting” nature of the modern intermediary structures - the determinative role of ownership, money as a universal equivalent, the profit as an “appropriation” of the “surplus” value of living labor, etc. To this it is maintained that there exist structures (second networks) which counterpoise administrative coordination. The problem can be formulated in the following way: can we substantiate this empirically well-founded assertion in a way other than the ideas of the self-acting structures and their elimination by socialism?

As I said, in my view the Schumpeter’s model provides an adequate description of the societies comparable with the socialist project. It is precisely from this point of view that I wish to reconsider the arguments of the historical sociology of socialism and redefine some principal characteristics of its “network model”.

While Marx contends that economic development evolves from the nature of capital as a “self-expanding” value and the capitalist, as a “personified capital”, is obliged to follow its “logic”, development in Schumpeter’s model is not considered indispensable. Had it not been for the entrepreneurs, capitalist production too would have followed the beaten track paved by the inherited forms of production and consumption. The entrepreneurs often fail but when successful, they can revolutionize production in whole branches and give an impetus to what Schumpeter calls “creative destruction”. Similarly, it is not just the exploitation of living labor but the new combinations, e.g. the production of goods in a radically new and more efficient way that generate profit. Another fundamental difference from Marxism lies in his understanding of money and credit in the conditions of development. They are not simply an element of the exchange, a “commodity equivalent” and “universal added value” as Marx claims, but an entirely new mechanism of “draining value from the future”, e.g., of selecting innovations with the highest potential.

If Schumpeter’s theses are relevant, then the capitalist society from the beginning of the 20<sup>th</sup> century *cannot be described as “natural” and “self-acting” on the basis of “anonymous” structures*. Neither can we explain tensions inherent in the socialist system generated by the

impossibility to fully eradicate these structures and by the necessity to “restore” them in a certain form. This fundamental illusion, or rather reduction is the cause for many problems and forced decisions in the (second) network model of socialism, such as division between productive and distributive functions of second networks, or inability of recognize – as we will see below – yet another dynamics behind the “pendulum-line” one.

The common thing about the historical sociology of socialism and Schumpeter’s model is that in both cases the resources are centrally controlled, and distribution is effected through power and command. The difference lies in the importance which the former attaches to the quasi-automatic role of ownership of the means of production and to the unique role the latter attributes to the access to credit and the roles of individuals (entrepreneurs) in “catching” chances of making profits and promoting development. In Schumpeter the functioning of the economy in a regime of development, i.e. when innovations are constantly introduced, also enhances the importance of property rights, but rather as an “opportunity” to appropriate a future entrepreneurial profit. It demands *stability* in the relationships between the economic actors, predictability of the rules of the game and remuneration for “authorship”. The economic and political cataclysms and concomitant misuse of the legal system impede development. Hypothetically, the uncertainties in the appropriation of the entrepreneurial profit are one of the reasons which precipitated the crisis after the first phase of industrialisation and the intensification of the productive function of the second networks. *When legal, ownership guarantees that no one else but the entrepreneur (as owner of the outcomes of the new combinations and not of the resources) will appropriate the profit and will repay the bank credit.*

According to historical sociology of socialism, expropriation, i.e. “taking away the power of the self-acting structures” can eventually be qualified as “original sin” – the umbilical cord of development has been cut off, society will continue moving on for a while thanks to the concerted efforts of the apparatus but in a long-term perspective no development will be possible. Just the opposite – *not only is development possible, but under certain conditions it can be far more accelerated than in the capitalist economy.* The empirical and theoretical studies of practices in the countries of Eastern Europe prove it. As Kornai points out, in the first decades of their existence, all countries with an administrative socialist economy which were in a much lower stage of their development as compared to the advanced socialist states, reported on remarkable growth and investment rates. For example, in the 1960s Bulgaria was

one of the most rapidly developing country in the world and most of the socialist countries placed among the world's 20 front-rankers. (Kornai, 1996:166)

Stepping on this, we can offer an alternative explanation of how the nomenclature's "hidden privileges" were created. As we pointed above, according to Schumpeter, the entrepreneurial activity of the communist leader in socialist economy may be regarded as *third production factor* along with labor and the natural resources (the land). Given their direct control over the production factors, the communist leaders who have introduced the new combination in the economy, are fully entitled to the whole profit and do not have to share it with anybody else. Consequently, with the start of development and the large-scale successful introduction of new combinations in the economy (this happened in almost all socialist countries which started making headway from a relatively low level of development) the ruling elite got one more source of support for its economic policy. *The origin of hidden privileges for the nomenclature means that the communist leaders begin all too "spontaneously" to consider themselves the real motive force of development (after forcefully depriving the autonomous individuals of this right) and believe that they are fully entitled to the lion's share of the profit.* As far as they "are unaware of their interests" and regard themselves seriously as "deputies" of the real owner – the proletariat and the progressive peasantry, we may say together with Schumpeter that "the working people can exploit their leaders!" (Schumpeter 1934:148) This implicit logic induced the performance of Stalin and his entourage to which the "staunch Bolshevik" Krastyo Rakovski strongly objected (footnote 16).

However, in the beginning of the 1970s, the rates started going down and a decade later they went below zero. This is second period when (after dismantling of Lenin's NEP) the upsurge of the "second networks" began. It is at this point that *the internal differences between the various segments of the nomenclature and the complex and contradictory relations highlighted by the historical sociology of socialism demand radical changes in Schumpeter's model of economic development in socialism.* If we should stick to his initial model, the separate party (organizational and ideological) units of the nomenclature are absolutely unnecessary for economic development. The economic nomenclature could structure and reproduce itself quite independently. Meanwhile it can incorporate people from the enterprises and universities and promotes in the hierarchy the party members who are successful in the introduction of innovations and the development of the economy. Unexpectedly, *it turns out that the economic nomenclature - just like the entrepreneurs in the capitalist economy, faces again certain limitations of its activity.* However, the restrictions

now are not imposed not by bankers and competitors, but by party nomenclature. The situation is even more complicated – economic nomenclature is restricted *firstly* by the party apparatus which controls the economy (economic departments at Central and regional committees of the communist party), and *secondly* by the organizational and ideological apparatus of the party (Communist party ideological and organizational departments, including the special services which are under their complete control).

Presumably, during the first stage of accelerated development, this constellation had been advantageous for both sides. The economic apparatus needed an organizational and ideological apparatus to secure resources for the infrastructure and launch innovations in entire branches (what Stalin did in his time), something the economy itself failed to do – “temporary” overexploitation of the peasants, large-scale literacy campaign, ample opportunities for secondary and higher education, development of research and information (libraries) infrastructure, scientific and technological intelligence work, mobilization to observe the labor discipline, etc. With the advance of industrialization, however, the situation changed. The administrative system based on “Plan”, socialist “moral sense”, and overt or hidden “Terror” started to slip.

However, it is not possible to identify the cause of these processes staying in Schumpeter’s model only. Things are far more complicated. No doubt, to explain these processes we have to clarify the *nature of planning in the late capitalist economy and henceforth, in the socialist economy*. In my view the other key to understanding them can be found in the theory of economic development in the late capitalism – the theory of the socio-economic networks.

#### *6. The socialist planning reconsidered. From emerging to stabilized techno-economic networks.*

When analyzing the entrepreneurs Schumpeter notes that "...it is no part of entrepreneurial function to 'find' or to 'create' new possibilities. They are always present, abundantly accumulated by all sorts of people. Often they are also generally known and being discussed by scientific or literary writers. In other cases, there is nothing to discover them, because they are quite obvious." (Schumpeter 1934: 87.) Hence he considered the keys for economic development in introduction of innovations as new form of economic behaviour, different from the inherited ones. However, already the second industrial revolution in the end of 19<sup>th</sup> century showed that the new combinations were impossible without the large-scale development of fundamental and applied research. This process unfolded after World War I and more so after World War II when new industrial branches emerged on the basis of the



latest scientific and technological achievements. In this sense, Schumpeter's model ignores important aspects of the relation between scientific discoveries and entrepreneurial activity.

We cannot possibly analyze the entrepreneur's activity and the introduction of innovations after the Second World War if we don't examine the relation between the production of new scientific and technological knowledge and its integration into the economy – simply because most entrepreneurs are already holders of scientific degrees or have a long length of service in universities, research institutes and industrial laboratories. The administrative economies in Eastern Europe appeared at about that time. It is not accidental that the “economic application of the latest achievements of science and technological progress” became their major ideological slogan and an immediate practical task.<sup>20</sup>

Promoting the *notion of techno-economic network* (TEN), Michel Callon notes: “...Today economic organisation as a way of coordinating different mutually supplementing activities has spread beyond the industrial sphere and the lonely world of the enterprise. Public or semi-public research centres, technical centres, research and engineering offices, etc. are increasingly becoming full-fledged economic actors, like the public political authorities themselves... The entire society and its economy resemble a strange socio-technical complex in which human and non-human actors continuously interact” (Callon, 1992, page 54) This notion reflects the structure of the market economy in the developed Western countries late last century and is closely related to the impressive development of research which revised the traditional concept of scientific activity. The mechanisms of “translation” between technological solutions and the logic of the market, advanced by the *theory of the techno-economic networks*, are based on the new understanding of the nature of scientific and technological knowledge as a unity of three interrelated elements: 1) *codified knowledge* (objectified in scientific texts, formulas and diagrams); 2) *technical artifacts* (scientific equipment) to corroborate this knowledge; 3) specific *skills embodied* in scientists and engineers as their ability to use scientific texts, operate the scientific equipment and interpret and compare data and texts.

The development of sciences and technologies implies the establishment and maintenance of a *network of local scientific centers* (laboratories) and channels along which the three

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<sup>20</sup> Although working on an exceptionally rich empirical database which evidences major efforts of socialist countries in the field of science and technology, Kornai stays away of Schumpeter's line of reasoning maybe

elements constantly circulate as a special kind of *mediators* (scientific texts, artifacts and accomplished scholars). It is a dynamic process of *local reconfiguration of the experience* when new ways of handling the natural and other agents are devised in the laboratories. After that the agents *circulate* along the junctions of the networks in the form of mediators where they are checked or “put to the test”. Only then are they endorsed and integrated into the scientific and/or industrial practice.

The contemporary science and technology studies (STS) show that *this process is extremely expensive and involves a constant high level of investments*. The traditional idea of scientific and basic technological knowledge as universally accessible “public good” is thereby changed. It is only because of the *local level of investments*, that this knowledge can become public good. You can benefit from the announcement of a new scientific discovery or a new patent only if you have been prudent enough to invest in relevant workforce and equipment in good time. Hence the development of science and technologies is like an *oligopolistic market* where admission is limited – only the “club” people who maintain a high level of investments in (techno)science and the related high-tech industries can “appropriate” the results of research.

In an earlier text (Tchalakov 2002), we highlighted some specific features of the socialist economy, which impede the application of the TEN approach. The major difficulty stems from the popular belief that this economy is “administrative” and “hierarchically structured” and that the immediate economic agents have practically no autonomy. Already at the time some empirical and theoretical data proved the other side of the statement. We assumed that a more concrete analysis of the apparently complete dominance of the communist elite in the system of administrative coordination would probably help identify real actors and economic agents. Though differing from the classic agents of the market economy, they pursue their own interests, form coalitions and compete with each other. Also, they rely on various non-human agents, “tamed” in scientific laboratories to “translate” the interests of their potential allies and reverse the established techno-economic order. *In the light of the latest analyses of the findings of historical sociology of socialism the situation becomes more tangible*. We already have conceptual tools to describe these presumptive real actors of socialist economic

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because of his adherence to the neoclassical vision of technologies and science as an “exogenous factor” of the economic dynamics.

development and “give them the floor”. The TEN “model of translation” in studying innovations substantially complements the Schumpeterian model on this matter.

The analysis of Bulgaria’s socialist economy evidences that until the early 1970s the key problem had been the copying and diffusion of innovations that already had come out successful in the developed (Western) countries, rather than the development of original scientific and technological products and their application. Successful innovations had been also the “transfer” or “diffusion” of whole industrial branches such as machine-building, sub-branches of the chemical industry, electronics and so on. There had been attempts to develop independently and introduce original innovations, especially in the military sphere, not until the mature stage of the socialist economy.

If translated into the TEN language, Kornai’s conclusion that “technological progress in the classical socialist economy entails only the copying of innovations in the advanced capitalist states (Kornai 1996:278) would mean the necessity of creating *conditions for the simultaneous “transfer” of the three components of science and technologies – codified knowledge, embodied skills and the relevant artifacts*. In turn, this implies the integration of these countries’ economies into the global techno-economic network established in the most advanced capitalist economies and the possibility to transport the “local reconfigurations of experience”.

Probably the most significant contribution of the TEN concept to perceiving the dynamics of the socialist economy relates to the notion of “*state of the techno-economic network*”. (see Callon 1996)<sup>21</sup> Two such states are distinguished: 1) *emergent networks* (emergent configurations) and 2) *consolidated networks* (consolidated configurations). The most important difference between them is that contrary to what economists claim, knowledge and skills in the newly emergent networks are rivalry and appropriable whereas in the established and consolidated networks they are a common public good of universally acknowledged utility.

According to this distinction, in the emergent networks codified statements (publicized discoveries or patented engineering projects), which are fresh from the laboratory or the research center, prove externally contestable just like any other commodity. They are not

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<sup>21</sup> Callon works out this notion when studying the economic status of knowledge and speculates that well-known qualities such as “incontestability” and “unappropriation” depend on the *state of the techno-scientific network* in which this knowledge reproduces itself and circulates.

simply statements but a whole set of “statements+instruments+embodied skills”. Initially this package exists in only one specimen and the first repetition prompts the replications of the other elements of the package – delivering a scientific report, diagram, etc.; securing the necessary equipment; training researchers, engineers and technicians. The “copying” of the instruments is not an easy job. It involves long and complicated operations such as calibration, production of the necessary materials and substances, huge standardization work. All this is carried out through *transformations and adaptations* and requires investments, which may often be costly. Considerable *infrastructure* is also needed – assembly lines, theories, scientific and engineering societies which have mastered the necessary practices and can “translate” the innovation: “... the notion of information is preposterous unless hidden infrastructure works are underway and investments are available for that purpose”, Callon points out. (ibid) As this process gets along, the mutual interests become stable and the networks intersecting them spread out and solidify with which the statements become more non-rival and non-appropriable. Scientific and technological knowledge turns into information. TEN enters upon the stage of its stabilization.

The world of the *stabilized networks* is entirely different – “there are many places where one and the same instruments and embodied skills are available and open to mobilization. They help communicate meaning and utility to the statements which circulate inside the network. With such a configuration the scientific statements are indeed non-rival and impossible to appropriate. This is called universalism inside the network”. (Callon 1996, c.50)<sup>22</sup> In this structured and stabilized world, the programs can be defined in advance because the states of the possible worlds are likewise easy to identify.

The possibility “to formulate implicit expectations” is a fundamental property of the stable networks: “...the programs of the different economic actors (corporations, governments, etc.) precede action and set its size and shape. To some extent, they are mutually replaceable because *the actors know each other's objectives* and mobilize similar competences. Every program engages a certain amount of resources and can establish a relation between them and the expected objectives. The expectations *are rational*: the actors possess identical

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<sup>22</sup> We must not take this world for the “circular” state of the economy defined by Schumpeter when there is no development – the world of the stabilized networks is developing too and is based on innovations. However, it largely resembles “normal science” the way T. Kun described it – the actors are very much alike, have common competences and problems and compete with each other. There are already R&D programs, which seek to resolve similar problems through important and universally acceptable decisions.

capabilities and, therefore, their estimates of the consequences of the action, program, etc., are similar. As a result, the behavior of the competitors becomes predictable." (Callon 1996: 51)

I think we are familiar with this world – the objectives and priorities are clear-cut and definite, the necessary resources can be estimated and programmed. But why programs? - We can safely call them “plans” – five-year plans, annual plans, etc. The plans can be reduced to tasks and behind each task there is an actor with his rights and responsibilities: “Communism is Soviet power plus electrification of the whole country!” The GOELRO plan... What followed was a boom of chemical engineering, electronic engineering, and biological sciences. This was simply a techno-economic networks or a series of reconfigured networks. However, these networks were already well known, had been “approved” and stabilized *in some other place!* It remained only to spread and extend them.

When a socialist country is building its industry, it is actually in a situation which can be defined neither as an *emergent* nor as a *stabilized network*. On the one hand, its industry is not yet part of a “long and stabilized network” where the actors have similar competences and embodied skills, similar production equipment and experimental facilities, and stable channels for the circulation of the scientific texts (“information”). Here the information, skills and artifacts are unequal and asymmetric. They are yet to be established. On the other hand, the process of their establishment differs significantly from the emergent networks because we don’t have unique and newly emerged sets of “statements+artifacts+embodied skills” but sets about which we already know. At first glance, the aim is the same – in the industrializing socialist society like in the newly emergent networks the three elements must be “transported” together. However, along with this, *the socialist ‘entrepreneurs’ were saved from the risk of not knowing exactly what should be transported, what behavior “leads to identifiable results”* and so on. The communist leaders and actors in a long and stable network have learnt about the necessary statements, artifacts and embodied skills much in advance - because they have been identified and spread about developed capitalist countries.

*It is precisely at this stage, in the conditions of “clearly defined goals” and “predictability of resources” that the advantages of administrative coordination over the market in terms of mobilization and control of the resources, are manifested.* It is the time when the removal of the inherently capitalist barriers to entrepreneurial activity produce “positive effects” – the communist elite obtains complete and direct (without the mediation of bankers) control over

the resources and receives the whole entrepreneurial profit. This elite enjoys freedom of action which is not possible to have in the capitalist economy. The adversaries of the system and hence competitors are ruthlessly crushed. As a result of the communist propaganda, most of the working people in towns and villages are “disciplined and ready to make sacrifice” in the name of the “bright future”. Most importantly, it is generally clear what should be done, i.e. *it is possible to plan!*

It might be that the socialist project had been possible precisely because of the specific situation in the countries peripheral to capitalism. The catchphrase “Soviet power plus electrification!” fully communicates the essence of this project. In the course of thirty years (1874 – 1904) a whole galaxy of inventors and industrialists made numerous experiments (Edison, Westinghouse, Nickolas Tesla, Siemens, etc.) and huge resources were spent until electrification stabilized in a form which has remained unchanged ever since – *alternating and not direct current; power generation at the raw-material sources and large distance electricity transfer along high voltage transmission lines; consumption in the daytime (through a.c. electric engines) to make up for the evening loading (for lighting, etc.) and so on.* It was not until after thirty years of experimenting, described by Thomas Hughes in his book on *Networks of Power*, that someone like Lenin could come onstage and pronounce the famous winged phrase encouraging millions of people to perceive the rightness of the course and follow him.

When these conditions are present, then the following lines which brim over with enthusiasm and Hegel-like aplomb are entirely justifiable “...The socialist revolution, unlike previous revolutions is the outcome of a conscious action based on a preliminary drafted project. The specific ‘socialist seal’ of every activity can be the product of Soviet power only and is the result of a purposeful action or “building”. History is a self-developing spontaneous process but here it has “stopped” indeed. To use Hegel’s parlance, the subject has returned to itself. The history of the purposeful actions of a multitude of educated people and their emanation – the educated subject armed with a scientific ideology (i.e. the Communist Party). The establishment of new economic and political relations. *Project and Plan*”. (Boundjoulov, lecture 2)

*During its first stages the administrative economy is a privileged world where you can be the “pioneer entrepreneur” and will be protected from the mistakes of those who have built the network somewhere else.* This is the basis on which the *socialist Plan* becomes applicable.

However, it is not a “self-conscious” subject (revolutionary vanguard) which stands behind it but a special configuration of stabilized socio-technological networks of developed capitalism. It is this configuration that makes the revolutionary vanguard possible.

#### 7. The second networks and socialist entrepreneurship

It is already clear that what Kornai used to call “copying” of Western technologies screens a much deeper and larger process of reconfiguration of the inherited techno-economic network in the socialist economies. A country like Bulgaria could not profit by scientific and technological learning unless it had invested previously in its own science and technologies and had built its own industry to “appropriate” the relevant scientific and technological knowledge. It didn’t become “public good” and remained the possession of *an oligopoly* of several developed industrial states for a long time<sup>23</sup>. This process lasted for almost two decades (from the late 1940s to the mid-1960s) and it was not until scientific, technological and production infrastructure was built in a wide range of branches that the scientific and engineering information became a resource which Bulgaria could mobilize.

Now we are able to outline behind the pendulum-like dynamics advanced by historical sociology of socialism yet another, *linear* dynamics of socialism. It is hardly accidental that in their subsequent texts the examined authors speak of “three cycles” of the pendulum-like movement.<sup>24</sup> In some other place socialism is said to have “four stages” of a linear nature: attempts to implement the Project; temporary “compromises” (NEP); “classic system” according to Kornai’s definition; attempts to effect reforms. To me these statements show awareness of the “multi-variability of the economic and broadly speaking, social dynamics of

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<sup>23</sup> During this initial period Bulgaria managed to make large-scale investment in the three elements of technological science: 1) trained a large number of specialists, competent engineers and researchers; 2) set up laboratories, engineering departments and information infrastructure; 3) build its own industrial facilities the light and heavy industry. The Central Institute of Techno-scientific Information began an exchange with kindred establishments in the world. There was a “special department” where experts analyzed the intelligence reports and submitted them to the R&D units. “All of a sudden” techno-scientific intelligence work became important because there already were specialists capable of deciphering the stolen formulas or copied designs...

<sup>24</sup> “...The pendulum describes three big cycles which as Dejan Dejanov observes, are similar and at the same time structured differently. The first cycle relates to the *formation and emancipation of the networks* in the party and state pyramid and their coalescence with the partially restored market relations and petty ownership. (NEP till the end of the 1920s.) The second cycle reflects the *colonization of the fields in the second networks*. It is clearly visible in the classic system when the latter was especially successful: deficiency of goods, intensive exchanges along the network channels, a special system of catering for the needs of the apparatus on all levels (It coincided with the trials against the “enemies of the people” in the mid 1930s). It was not accidental because the Party-State struck back by taking reprisals. The third cycle relates to the formation and emancipation of the networks which Dejanov calls “*third networks*” – messengers of stable capital motivations and reformist

socialism which is influenced by different “logics”. Below I will propose a different kind of dynamics from the point of view of economic development (through innovations) under socialism.

When analyzing Kornai, Szelenyi, Mozni, Bulgarian authors like Stephan Donchev and others we supported the thesis that the socialist economy goes through two stages – the *stage of “forced growth”* (Kornai) and the *stage of decelerated development* (stagnation or “zastoi”, if we should use the native Russian term). (Tchalakov 2002). Taking in mind the contribution of TEN approach to Schumpeterian model of socialist economic development, it is possible to distinguish the *initial stage of creating the necessary infrastructure (educational, scientific, technological)* for the next stage of “forced growth”!

This is the stage of Bulgaria’s integration into the global techno-scientific network of the industrial states and we can describe it also as the “stage of technological optimism”. Back then the 1947 Law on nationalization abolished private ownership and the autonomous economic agents and the first two-year economic plan became operational. Followed almost two decades until the second half of the 1960s, when the first vertically integrated “socialist corporations” like IZOT, Metalhim, Balkancar and others with their proper industrial research facilities, as well as modern institutes of fundamental and applied research at Bulgarian Academy of Sciences were opened. It was not until this first stage of “technological optimism” that Bulgaria could *start capitalizing* the innovations introduced in the developed Western economies and receive as a dividend the whole codified knowledge circulating in various techno-economic networks as “information”. At this point, the socialist states which had drawn level with the advanced capitalist states and had become comparable with them seemed ready to enter upon the “*second stage*” of their development when they were going to rely on their own original projects and innovations.

However, what does “original innovation” mean? - It means that the *future course of industrialization is not known* in advance! Could someone late in 1950s conclude “Socialism is Soviet power plus an electronics-based economy”? Certainly, but only some ten years later. Because at the end of the 1950s, even the most developed Westerners were not certain of

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ideologies which cannot be destroyed as it happened in Stalin’s day. (The first attempts to reform the system and the period of “stagnation”.) This is the late socialism.” (Boundjoulov, lecture 2, para 2)



that.<sup>25</sup> What happened with the nomenclature *when copying* [Western technology] *was no longer possible* and the communist entrepreneurs felt unsteady in the “emergent configurations”?

Well, the historical sociology of socialism provides an answer to this question: *the nomenclature split and the contradictions between its contingents - most of all between “party” and “economic” nomenclature - shot up*. As the historical sociology of socialism had expected, the second networks developed “production functions”. The task of examining this last stage when the official hierarchies blocked development and the different kinds of nomenclature began to fight meanwhile involving “the public (second network) hierarchies that compete the official ones” (Raichev), will be left to another analysis. Before that, however, the elaborated theoretical framework needs to be applied in the concrete historical analysis of technological development in the former socialist countries during their initial stage of industrialization. In Bulgaria this is approximately the period between 1947 and 1974.

February 2004, Sofia

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<sup>25</sup> However, the managers of IBM, DEC, and of several other private Western companies *believed* in it because they detected an opportunity for real profits. Taking the risk, ten years later they made it universally valid... A concrete episode of this process is described by Tracey Kidder in his book “The soul of a machine”. (Kidder 1981)

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