

Place of Labor and Labor Theory in Tugan Baranovsky's Theoretical System

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Mikhail Ivanovich Tugan-Baranovsky (1865–1919) was one of the *pléiade* of Russian (Ukrainian) *fin-de-siècle* economists who made a significant impact not only on Russian but also on world economic and social thought. In the late 1890s, Tugan elaborated a personal vision of the development of capitalism, diversity of economic forms, and a personal model of socialism. Seeking the theoretical basis of specific economic forms, he constructed a theoretical system that united labor theory with marginal utility theory. After presenting the principles of Tugan's synthesis of labor and marginal utility as value factors and Bukharin's critique of the same, I present some of Tugan's ideas on the significance and role of labor, wages, and distribution and exploitation. A number of insights broadly accepted by modern economic theory, such as those on asymmetry of information, transaction cost, and institutional evolution, may be discovered in Tugan's book on cooperatives. Despite the general coherence of Tugan's social theory, which extends from the synthesis of labor theory and utility to the concrete forms of present capitalist economic activities and ideal societies of future, his synthesis has a number of unresolved issues and inner inconsistencies that raise numerous questions and good opportunities for future researchers.

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This is a paper for the 12th International Conference on an Exchange on Views on Labour: Histories and Theories, Association Charles Gide pour l'étude de la pensée économique, Orléans, May 22–24, 2008. In preparing this paper, I have benefited from discussions with the participants of the conference. My stay in the Kyoto University (February–March 2009) saw significant improvements being made to the previous versions of this paper; these were a result of my discussions and exchanges with Professor Kiichiro Yagi who directed my attention to Yuichi Shionoya's paper on philosophical ideas of the Japanese economist Kiichiro Soda

(1881–1927) (Shionoya, 2008), where I discovered attempts to build the neo-Kantian foundations of economic theory that were similar to Tugan's. Previously, I was interested mainly in the monetary writings of Soda, many times mentioned as originals and valuables by the Bulgarian (Russian-born) economist Simeon Demosthenov (1886–1968), a student of Carl Menger.

Introduction

Mikhail Ivanovich Tugan-Baranovsky (1865–1919) was one of the *pléiade* of Russian (Ukrainian) *fin-de-siècle* economists who had a significant impact not only on Russian but also on world economic and social thought¹⁾.

In the late 1890s, Tugan elaborated a personal vision of the development of capitalism, diversity of economic forms, and a personal model of socialism. Seeking the theoretical basis of specific economic forms, he constructed a theoretical system that strove to unite labor theory and the theory of marginal utility (marginal utility as a determinant of value). It should be mentioned that similar syntheses were attempted many times in the late nineteenth and early twentieth centuries both in Europe and Russia²⁾, and Tugan was not an exception.

This unison was far removed from the purely mechanical eclecticism that Lenin and Bukharin ascribed to. This synthesis was rather original and logical, and naturally, came with its own shortcomings and inconsistencies that are similar to those of most syntheses of this type. Tugan's synthesis was not a technical exercise but a facet of the efforts of early twentieth century Russian economists to find the ethical and religious roots of economic phenomena, as brightly reflected in the works of Sergei Bulgakov, Nikolai Berdyaev, Semen Frank, and, to an extent, Peter Struve. Setting out as Marxists well-acquainted with the historical and classical schools of political economy, these researchers evolved in the directions of neo-Kantianism and Christian idealism, accepting to varying degrees the principles of the then-emergent theory of marginal utility.

Aged 25, Tugan was possibly the first Russian economist to elaborate the principles of marginalism (Tugan, 1890). Further, he relinquished neither the basic postulate of Marxism that was the leading role of labor in human society nor Marx's sociological approach³⁾. For Tugan, labor was one manifestation of the human personality that in turn represented an ethical supreme value (here, Tugan follows Kant and the neo-Kantians, Rickert in particular)⁴⁾ from which the supreme

¹⁾ Tugan can also be considered a Ukrainian economist not only for his Ukrainian roots but also for his involvement, especially during the late periods of his life, in Ukrainian public activity.

²⁾ In Tugan's case, this is the Marxian variant of labor theory although most of the synthetic models are founded on the classical labor theory (mostly Ricardian).

³⁾ Thus, Tugan is distinct from Struve who decamped from Marxism rather quickly, evolving to the right.

⁴⁾ Tugan was acquainted with the works of Kant from as early as his high school years and it can be asserted that he kept returning to Kant and monitored the latest developments in neo-Kantianism (Кондратьев, 1990, [1923]).

value ought to stem all the categories of the economy. Tugan's neo-Kantianism is close to Rickert's whom he quotes on many occasions and also clearly indicates the similarity of their methodologies (Tugan, 1924, [1915], p. 35): seeing man as an objective and not as a means is the other way of formulating human personality as a supreme value. The *a priori* highlighting of an individual category, as it is with the value of human personality here, could be explained with the methodological apriorism of the Austrian School (Tugan cites Menger's book on methodology on many occasions when expanding on his viewpoint). Labor cannot be separated from man, or as Tugan put it: "Our labor — that is we are ourselves" (Tugan, 1924, [1915], p. 35). It is my view that Tugan's attitude to labor reveals a number of parallels with the ideas of human alienation and alienation in labor in Marx's early works (in particular, Marx's Paris manuscripts, which Tugan could not have known, as they were published after World War I (for details about early Marx humanism, see Ellul, 2003, [1947/1979], pp. 61–63).

His entire subsequent work represented an attempt to combine within a single model of human activity matters ethical and economic, materialism and idealism, objective and subjective, cost and value, and producer and consumer. It would be enough to mention the various theoretical sources from which Tugan draws his ideas; in the methodological section of the textbook of political economy, Tugan mentions authors very divergent in character such as Heinrich Rickert (idealist), Wilhelm Dilthey (sociologist, empirist), Hugo Munsterberg (applied psychologist), Wilhelm Wundt (psychologist), and Lev Petrazycki (jurist, sociologist). It seems to me that Tugan avoids using the dialectical method and even where he uses it, he is much closer to the dialectics of Hegel and Proudhon than to that of Marx. As is well-known, in Hegel's interpretation, "the struggle between opposites" leads to their synthesis, whereas with Marx and particularly Engels, this struggle leads to the destruction of one of them.

Having found their bases in the synthesis of cost and value, these combinations assumed *concrete* economic forms, be they cooperatives, syndicates, trades associations, or others. For instance, Tugan views the cooperative system as the epitome of an ideal social organization. The cooperative idea also underlies his analyses of socialism and the specific mechanisms of its functioning, as well as his evaluation of the Russian intelligentsia as being inclined towards socialism, etc.

In Western literature, Tugan is mostly known for his theory of endogenous economic cycles⁵⁾ and less so for his historical analyses of Russian factories, the cooperative movement, or, recently, for his theory of money. The methodological grounds of Tugan's work have rarely been subjected to analysis, the recent review article by Barnett (2004)⁶⁾ being an exception in which that author presents Tugan as an original representative of the historical and institutional direction in

⁵⁾ His theory of cycles attracts economists' attention even today; see for instance, Colombatto (2004).

⁶⁾ See also the analyses of Tugan's theory of money by Barnett, (2001, 2004a), Graziani (1987), and Koropecy (1991).

economic science. Barnett does not cover Tugan's synthesis of cost and value, yet this is precisely the aspect that I consider while covering the leading technical principle that forms the basis for his entire theoretical construct. The book of the German scholar Joachim Zweynert (Цвайнерт, 2008, [2008]) dedicated one entire chapter on Tugan (pp. 322–347), where the author considers all of Tugan's contributions including some methodological issues.

In this paper, I aim for the following: First, I will present Tugan's synthesis and the proofs offered by him because although often cited, his synthesis, as far as I know, has never been presented in detail. Second, I will show the underlying role of the synthesis for Tugan's general theoretical construct down to its concrete offshoots. For instance, cooperatives (like within the Russian *mir* in the past) are considered by Tugan as concrete manifestations of the synthesis between utility and labor theory that overcame the contradictions between labor and capital. A number of insights, such as those on information asymmetry, transaction cost, and a number of ideas on institutions and on the mechanisms of their evolution, which may be discovered in his book on cooperatives (Tugan, 1989, [1915]) are broadly accepted by contemporary economic theory. Third, I will assess Tugan's model while revealing some of its internal inconsistencies. To the criticism made in the past (such as Bukharin's), I will add some of my reasoning and also stress the potential opportunities of future research on Tugan's works.

Labor and Marginal Utility as Factors of Value: Tugan Theorem

Following the neo-Kantian methodology of Rickert, Tugan divides every theoretical research into two phases: description and explanation. We may visualize the two stages as the two upper steps of a pyramid, with description being on the top and explanation coming below it. Specific historical fact forms the base of this pyramid. At the first stage, which concerns ethical and theological propositions, the nucleus is the supreme value [*vischayia cennost*] of the human personality (the idea of the “man as an objective not mean” of every action.) Distinct from the first stage, the second stage, which concerns explanation, is replete with functional and causal dependencies and laws among which ethical and theological explanations are inadmissible. Here, we see the classical methods of induction and, mostly, deduction being utilized⁷⁾. According to Tugan's methodology, value [*cennost*], cost [*stoymost*], utility [*poleznost*], and expenditure [*razhody*] dwell within the second stage of economic knowledge — explanation.

The first methodological stage of description represents the link or “silken thread” that unites the entire theoretical construct. According to Tugan (who strictly follows Kant), the ethical principle was linked with “the supreme value and equality of the human personality;” he also said that this principle, if accepted by all men, offered the possibility for the very existence of economic science and,

⁷⁾ For details, see Кондратьев (1990, [1923]) and Barnett (2004) *op. cit.*

indeed, of the social sciences as a whole. This was so, for it was precisely through such an acceptance that science was elevated *above* the interests of individual groups and classes. (It was no accident that Tugan noted that theory changed according to the points of view of groupings; thus, wages represented income from the standpoint of workers and expenditure from that of capitalists.)

Once the principle of the “supreme value of the human personality” was set (thus removing one value from the scope of explanation), we descend to the second stage: direct formal and logical synthesis of the marginal utility theory of value (MUTV) with the labor theory of value (LTV)⁸⁾. Tugan’s first attempt at such a synthesis dates back to 1890 in the article Учение о предельной полезности хозяйственных благ как причине их ценности [A Treatise on the Marginal Utility of Economic Goods as a Factor in their Value], in offering proof that the emergent theory of marginal utility did not contradict the postulates of labor theory: a “non-rejection,” if the reader so prefers⁹⁾.

I would like to add that this very terminological confusion assumed such mass proportions in the former socialist countries that “value” and “cost” are taken as equal today (see Гальперин, 1993). The correct Russian translation of “cost” (Kosten, couts) is стоимость, of “value” (Wert, valeur) is ценность, and of “expenditure” (dépenses) is издержки. In ideologized Soviet literature (from the early 1930s onwards), “value” was routinely translated as “*stoymost*, стоимость” (i.e., “cost”), and “cost” as “*izderjki*, издержки” (i.e., “expenses”).

Tugan also pinpoints another reason for the confusion in value theory:

Scientific economic terminology has not only failed to improve the terminology of everyday speech (citing Wieser reflections), but has worsened it significantly, introducing a confusion which is injuring everyday speech. Among a number of Russian economists (especially Marxist ones), it has become customary to employ the terms ‘value’ [*cennost*] and ‘cost’ [*stoymost*] not as opposites, but rather as mutually tautological, synonymous ones. (Tugan, 1924, [1915], p. 57)

Subsequently, Tugan stressed the “equality” of MUTV with LTV more than ever before. LTV, in the “crude and radically objective” form it was assuming in Russia (Кондратьев, 1990, [1923]), impelled Tugan to seek alternatives to socialism, be they in the models of utopian socialists, in diverse forms of collective

⁸⁾ Before Tugan, a number of other economists attempted syntheses in the framework of the theory of value, yet they mainly addressed LTV and, in general, utility theory (absolute and cardinal utility) rather than marginal utility (see Albertini and Silem, 2001, [1991], pp. 549–590).

⁹⁾ The same is observed in other Slavic languages; see Свраков, 1995, [1941/1943], pp. 162–163 for translations in Bulgarian. This method of translation was adopted by all classical authors. The intent was to stress the objective and labor-driven character of production. I feel that such translations are unusable for serious reading.

enterprise, and, above all, in cooperatives. Subsequently, this synthesis appeared many times: Tugan's studies devoted to the Austrian School (1901), his seminal textbook of political economy (1909, 1911, 1915, and 1924), and his work addressing socialism (1918). At almost the same time, between 1901 and 1904, Vladimir Dmitriev (Дмитриев, 2001, [1904]) and Nikolai Stoloyarov (Tugan, 1924, [1915], pp. 57, 425; Макашева, 2007, p. 393) in 1902 presented this synthesis in mathematical forms. Among the two syntheses, that of Dmitriev was particularly successful and in many ways approached or even preceded Sraffa's neo-Ricardian models. Tugan points out that, in Struve's German publication in *Das Archiv für soziale Gesetzgebung*, Struve puts forward views similar to those expressed in his 1890 article (Tugan, 1924, [1915], p. 57). Tugan reveals that Stoloyarov gives a general proof in support of his thesis with the help of "higher mathematics (differential calculation)" and that a less strictly mathematical proof is supported by Guirshfeld (1909) (Tugan, 1924, [1915], pp. 47–48)¹⁰.

With Dmitriev, however, things appear somewhat more complex and, without going into details, I would nevertheless like to make the following digression¹¹: In his book of political economy (Tugan, 1924, [1915]), Tugan mentions Dmitriev's analysis twice: first on p. 57, where he says that Dmitriev presents an analysis "similar" to his own in his (Dmitriev's) interesting book and second on p. 425 saying that Dmitriev, followed by Struve, accuse him unjustly. It is my belief that in most general terms, the difference between Dmitriev's and Tugan's "syntheses" lies in that the first, being a mathematician and a positivist, is much closer to the Ricardian models of production costs, (Dmitriev was also influenced by the Walras' theory of general equilibrium), and looks for the source of value and price *within* the economic system. On the other hand, Tugan is exceptionally complex in terms of methodology and, as we have already noted, looks for the ultimate source of value *outside* the economic system in the system of ethics. Tugan is neither a positivist nor a rationalist; his theory of distribution for instance is sociologically and historically determined unlike that of Dmitriev who tries to determine wages and profit within the framework of the general equilibrium (stepping on the so-called "Iron Law of Wages"). For example, Tugan brings an example of wages and profits both increasing in parallel with growing labor productivity, which Dmitriev believes is impossible; Dmitriev believes that wage and profit are locked in a zero sum game. In this, Tugan is closer to Böhm-Baverek's ideas on profit, while Dmitriev is closer to Ricardo's.

We now refocus on our main topic — Tugan's synthesis. According to Tugan, each economic activity ("the principle of economic activity, *hozyaistvo*"¹², [*princip hozyaistvennoi deyatelnosti*]) entailed two categories: cost [*stoymost*] and value [*cennost*]. Cost [*stoymost*] was a means whereas value [*cennost*] was the purpose

¹⁰ Dmitriev in turn writes a review of Tugan's book (1909 edition), which unfortunately I am unable to provide (Dmitriev, 1909).

¹¹ See Шапошников (2001, [1914]), Nuti (1974), Скоуртс (2001, [1986]), and Клюкин (2005) for more details.

of economic activity regardless of the concrete form of an enterprise, such as whether it was capitalist or socialist. While value was the attitude of the subject (consumer), to a given good, cost always pertained to labor; it was a relationship between the producer and the good. (In capitalism, from the point of view of capitalists, it was seen as expenditure.) In *Основы политической экономии* [*The Fundamentals of Political Economy*], Tugan's textbook dedicated to Quesney, Gossen and Marx, we read the synthesis of Tugan's proposal:

The basic logical categories of an economy are value [*cennost*] and cost [*stoymost*]. Both categories stem from the nature of the economic process which, on the one hand, always pursues the external end of adapting external nature to our needs, while on the other, attains this end solely through expenditure [*zatraty*] which thus comprises the means of attaining the end. And so, the means and the end, expenditure and attainment (or benefit), are the twin poles between which is locked all economic activity. In accord with this, the economic principle has also a dualistic character: to attain the greatest economic utility [*polza*] with the least expenditure [*zatrata*]. Each economic activity strives to be in concert with these twin requirements of the economic [*hozyaistvo*] principle; requirements in which find expression the two basic logical categories of an economy: cost [*stoymost*] (expenditure [*zatraty*]) and value [*cennost*] (attainment [*polutchka*]). The entirety of economic [*hozyaistvo*] activity, regardless of its exceptional complexity, is included within these two basic categories of the economy, in the same way in which the operations of each economic undertaking, whatever its nature, are exhausted within the mere two accounting categories of assets and liabilities. (Tugan, 1924, [1915], p. 37)¹²⁾

According to Tugan, MUTV (Carl Menger) underestimated the objective factors of production and most of all, of labor, while TLV (David Ricardo) underestimated the subjective aspects of valuation. The two were taken to be

¹²⁾ I note that the category *hozyaistvo* is distinct from economy. *Hozyaistvo* refers to the economy in the "large sense," and is socially embedded. Enterprise combines within itself not only the economic but also political, legal, cultural, and other aspects. There is no doubt that the lack of linguistic distinction between "economy" and "*hozyaistvo*" in English-language literature forces authors who sense the need for such a distinction to adopt circumlocutory and much more involved routes in order to express it (Karl Polanyi is an example of this). While *hozyaistvo* is most of all an economy refracted through the prism of what is non-economic, that which is *social* is the equality of the economic and non-economic; it is human action taken in its entirety. At the beginning of the twentieth century, Sergei Bulgakov published his monumental work on *hozyaistvo*, *Философия хозяйства* [*The Philosophy of Hozyaistvo*] (1990, [1912]) and today his ideas are actively developed by Yuri Osipov and his school at the Moscow University (Осипов, 2003). See also Булгаковъ, 2007, [1900/1917]. Similar terminological differentiation exists in Japanese; for details see Yagi (1995).

¹³⁾ Similar differentiation between logical categories and their historical manifestation is found in Marx.

mutually exclusive yet this was a “great misunderstanding,” and Tugan was convinced that “the theories of marginal utility and of labor theory, while undoubtedly opposed, are in no sense mutually contradictory” (Tugan, 1924, [1915], p. 46). Hence, the problem for the researchers of value is formulated as looking for utility maximization under the best distribution of labor:

We know that the specific utility of an economic object falls along with the increase of its output. To satisfy our needs, we require products of differing labour cost [*stoymost*]. In what proportion ought we to distribute labour between producing these products so as to attain the greatest utility? (Tugan, 1924, [1915], p. 47)

The answer to this optimization problem gives us Tugan’s Theorem, which in its original form is as follows:

... the utility of the ultimate units of freely reproducible products of each type — their marginal utility — must be in inverse proportion to the relative quantity of such products produced per unit of labour time. Putting it otherwise, it must be directly proportional to the labour cost [*stoymost*] of such products. (Tugan, 1924, [1915], p. 47)

Thus, before proving the theorem, we can present Tugan’s model of value with the help of Figure 1. Tugan’s model of value could be interpreted in most general

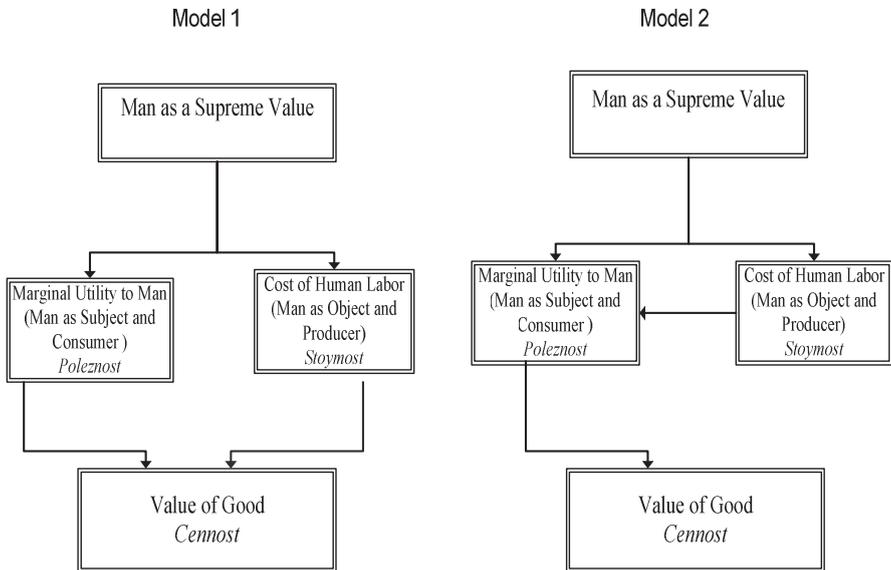


Figure 1: Tugan’s Synthetized Value Models

terms in the following way: the supreme value (i.e., man) determines the cost (man as producer and object) and utility (as consumer and subject) as the basic determinants of the value of goods. The difference between the two models in Figure 1, which we will discuss further, lies in the different configurations of the cause-and-effect nexus between cost and utility, which are found in Tugan's text and which yield criticism.

Tugan's Proofs

Tugan offers two proofs of his theorem, one being theoretical and logical, and the other, formal and mathematical. I will present them here in detail as they have been rarely presented in literature. The logical proof is as follows:

Marginal utility — the utility of the last units of any type of product — varies in accordance with the extent of output. We may increase or reduce marginal utility through increasing or curtailing output. And the reverse: the labour cost of a unit of product is an objective attribute independent of our will. Hence, it follows that in comparing economic plans, labour cost ought to become the determining aspect, while the determined aspect ought to be marginal utility. Speaking mathematically, marginal utility ought to be a function of labour cost. If we were to produce at once several products with different labour costs, then the economic principle would call for the marginal utility extracted from the labour of the last units of time to be equal for all output lines; for, were it not so, if the last unit of labour in line *A* yielded more utility than that in line *B*, then it would be reasonable to increase production of line *A* and curtail that of line *B*. The greatest utility would be attained when the last unit of labour in producing any type of product yields marginal utility. (Tugan, 1924, [1915], p. 47)

The mathematical proof of the theorem using “simple arithmetic, basic mathematics” was performed by Tugan himself (while his aforementioned contemporary Stolyarov offered it in a significantly improved form). Tugan's reasoning took the route shown below (I have taken the liberty of précisising the deliberations in Tugan, 1924, [1915], pp. 47–48.)

Let us take the two notional product lines *A* and *B* with identical marginal utility scales (according to Menger) in a reducing order of 10, 9, 8, 7, 6, 5, 4, 3, 2, and 1, and different labor costs, thus, ensuring that making *A* requires twice the labor time taken to make *B*. Henceforth, all depends on how much labor we have available — labor is limited. If we have two hours, then the economic principle dictates that we should deny ourselves *A* and produce two units of *B*. If we produce a unit of *A*, we shall get a utility rating of 10, whereas by making two units of *B*, we shall get the overall utility for these two hours as 19 (10 + 9; this being the sum of the marginal utilities of the first and second units of *B*).

If labor time were to increase to six hours (labor resource constraint tripled),

we would be able to produce six units of B. In this case the *arbitrage* for the last two hours is as follows: through producing B, we would obtain an overall utility rating of 11 (6 + 5; this being the sum of the marginal utilities of the fifth and sixth units in the order), whereas with a single A, we would have an overall utility of 10.

The drivers of choice change given a further increase in labor time, this time by two hours. In producing the seventh and eighth units of B, the overall utility derived from these two hours would be 7 (4 + 3), while with the two extra hours we could produce a single A with a utility rating of 10. In the last case, overall maximum utility from the entire duration of labor time would be attained by making 6 B and 1 A. This is precisely where the Tugan Theorem is proven, inasmuch as the marginal utility of the sixth unit of B is 5, whereas that of the first unit of A is 10; i.e., they are in proportion with the amount of labor necessary for their production (since A requires double the labor time).

What has been said thus far could be reduced to a simple formula. If we were to designate the marginal utilities of A and B as U_A^m and U_B^m , respectively, and if L_A and L_B , respectively, represented their labor costs, then the Tugan Theorem, according to which the marginal utility of the last units of every type must be directly proportional to the units' labor cost, takes the form

$$\frac{U_A^m}{U_B^m} = \frac{10}{5} = \frac{L_A}{L_B} = \frac{2}{1}.$$

For Tugan, the same *economic (hozyaistvo) principle*, i.e., the same theorem, is also obtained in a future socialist society. In *Socialism as a Positive Doctrine* (1918), he writes

The purpose of economic activity, to satisfy needs, cannot be achieved without expending economic labour; hence value [*cennost*], alongside labour cost [*stoymost*], must be recognised as a basic and immutable category of any economic activity, whatever it may be. (Tugan, 2003, [1918])

This is how the Tugan Theorem was formulated for application within a socialist community (I shall again précis the original in Tugan, 2003, [1918]).

Tugan assumes a choice between producing two types of consumer merchandise: potatoes and cucumbers. The Menger utility scales for potatoes are 9, 8, 7, 6, 5, 4, 3, 2, 1, and 0, while for cucumbers they are 4, 3, 2, 1, and 0. The need for potatoes is more than that for cucumbers and hence the cited numbers are 9 and 4, after which, the marginal utility of potatoes and cucumbers, respectively, falls as production increases. Tugan also assumes that the labor cost of cucumbers is twice that of potatoes and that the socialist community has four units of labor available. If this labor were expended to make four potatoes, then the overall

utility rating would be 30 (9 + 8 + 7 + 6). If half the labor went on potatoes and half on cucumbers, this utility rating would be 21 (potatoes 9 + 8; cucumbers 4). Alternatively, if all labor were expended on cucumbers, the community would receive the least utility — just 7 (4 + 3). It turns out that only potatoes may be produced.

Yet, if another six units of labor were to be made available, making the total 10, things change. The most efficient distribution is now that of 8 potatoes and 1 cucumber: overall utility 48 (potatoes 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2; cucumbers 4). If only potatoes were produced, overall utility would have been 45 (9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 + 0); on the other hand, if 6 potatoes and 2 cucumbers were produced, overall utility would have been 46 (potatoes 9 + 8 + 7 + 6 + 5 + 4; cucumbers 4 + 3). In this case, with 8 potatoes and 1 cucumber, we get the following:

$$\frac{U_{CUCUMBERS}^m}{U_{POTATOES}^m} = \frac{4}{2} = \frac{L_{CUCUMBERS}}{L_{POTATOES}} = \frac{2}{1}.$$

In the combination of 6 potatoes and 2 cucumbers, the above equation is breached and forces appear that restore it through *arbitrage*.

$$\frac{U_{CUCUMBERS}^m}{U_{POTATOES}^m} = \frac{3}{4} < \frac{L_{CUCUMBERS}}{L_{POTATOES}} = \frac{2}{1}.$$

Tugan expressly explains that the above equation is only an “ideal” that can never be attained (Tugan, 1924, [1915], p. 49) and is necessary merely as an analytical construct. In this sense, Tugan is close to the principles of the Austrian School that regarded economics as an eternally unbalanced process, rather than as a mechanical equilibrium.

Some more clarifications are necessary, especially those that relate to the category of cost [*stoymost'*] or the “general theory of cost [*obschee uchenie o stoymosti*]” (Tugan, 1924, [1915], pp. 50–60). Tugan considered that it was solely labor cost [*stoymost'*] that was an *absolute* cost [*absolutnaya stoymost'*]: it was solely labor (in the ultimate instance, so to speak) that had any cost, for other things were gifts of nature that were not the product of human effort and hence had no cost. The means of production had a *relative* cost, being midway between absolute cost (that of labor) and the object of consumption (the ultimate purpose of production). A means of production was a value that was a means of comparison with another value (e.g., a comparison of the value of one object by reference to another object).

According to Tugan, the category of labor cost was inversely proportional to labor productivity. If a were the amount of labor expended to produce amount b , then the cost of labor would be a/b and its productivity would be b/a . According to Tugan, human labor represented “a spending of the human personality, of man

himself;” further, labor cost was based on ethics and derived from Kant’s principle of supreme value. It was precisely this principle, the idea of the supreme value of man, which offered the opportunity for diverse forms of labor to be compared within the framework of overall social labor [*obshchestvennoy trud*] (Tugan, 1924, [1915], p. 55).

After Tugan, the error of Marx was in his failure to distinguish between the twin categories of cost and value, thus arriving at the celebrated contradiction (both logical and mathematical) between the formation of “exchange-value” (*Das Kapital*, Vol. I) and “the cost of production” (*Das Kapital*, Vol. III):

In place of a theory of the absolute cost of labour [*absolutnaya stoymost truda*], Marx offers a theory of absolute labour value [*absolutnaya cennost truda*]. The result is the perfect methodological impropriety of admixing two different theories: to the correct thought that product may be regarded solely as the result of human labour, we have added the entirely incorrect thought that it is solely labour which creates the value of a product. (Tugan, 1924, [1915], p. 58)¹⁴⁾

Thus, according to Tugan, value was a function of labor cost (1) and marginal utility (2). MUTV illuminated the subjective aspects of value¹⁵⁾, while LTV illuminated their objective aspects. Tugan points to a number of economists (such as Lexis) who agree with the theory of labor cost without agreeing with the theory of labour value.

In some passages, Tugan argued that marginal utility itself was a function of cost [stoymost] (“in comparing economic plans, the determining aspect ought to be labor cost, whereas ultimate utility ought to be the determined aspect;” Tugan, 1924, [1915], p. 47), which led to the addition of a new causal link shown in Model 2 of Figure 1. These additions lay the grounds for Bukharin’s criticism which we shall address.

Bukharin’s Critique

Bolshevik economists were strongly critical of Tugan, especially after his evolution in the direction of “revisionism” and collusion with the views of Edward Bernstein; yet, they rarely subjected his synthesized theory of value to analyses. Lenin had noted Tugan’s deviations from Marxism even earlier, as for instance in his 1898–9 article in which he draws up a comparative analysis of Bulgakov and Tugan’s theory of capitalist markets (Ленинъ, 1898/1899).

Nikolai Bukharin is perhaps the sole Marxist who knew MUTV first-hand

¹⁴⁾ Tugan points to a number of economists (such as William Lexis) who agree with the theory of labor cost without agreeing with that the theory of labor value.

¹⁵⁾ Tugan notes that LTV is intrinsically economic, while MUTV is significantly broader, being socio-psychological (Tugan, 1924, [1915], p. 50).

(having listened to Eugen von Böhm-Bawerk's lectures in Vienna and Nikolai Shaposhnikov's lectures in Moscow), along with LTV. It is beyond doubt that in Bukharin's book offering a critique of MUTV (mostly in its Austrian version), it is Tugan who is the subject of attacks and critical remarks (Бухарин, 1988, [1925]). In the appendix to the 1925 edition, Bukharin included an annex under the ambiguous heading, Теоретическое примиренчество. Теория ценности г. Тугана-Барановского [Theoretical defeatism: Mr. Tugan-Baranovsky's Theory of Value] (Бухарин, 1988, [1925], pp. 176–185), which comprised an article written much earlier for the *Prosveshcheniye* journal. Bukharin placed Marx's thought that scientists "who attempt to achieve unison between the political economy of capital and the requirements of the proletariat ... arrive at giftless syncretism" as the motto of his article (Бухарин, 1988, [1925], p. 176). He referred to the second printing of *Основы политической экономии* [*The Fundamentals of Political Economy*] of 1911¹⁶⁾.

Bukharin criticized Tugan on two aspects. First, there came a certain inner contradiction. In fact, as I pointed out, Tugan presented two models of value formation that genuinely contradict each other, something that does not escape Bukharin's attention. These models may be seen in Figure 1 where they may be distilled to forming value through links (1) and (2), and a model that is implied in link (3), according to which labor cost ultimately lies at the base of marginal utility. According to this last model, labor was the basis of value and LTV was confirmed, i.e., synthesis was partial and thus somewhat transient inasmuch as LTV was not rejected. With regard to the supreme ethical value, Bukharin called it *этическая болтовня* [ethical clap-trap].

Bukharin's second criticism was more substantial and comprised the following: according to Bukharin, labor cost could be interpreted as social (socially necessarily) or individual. According to Marx, it was social; at the individual level, it would be nonsensical. On the other hand, according to Bukharin, marginal utility, "if it has any sense at all," existed only at the individual level. Thus, according to Bukharin, it was improper to place an expression obtained solely at the social level in the same formula with an expression obtained solely at the individual level. Yet, even if we were to assume that labor cost was an individual category (although Bukharin considered it not to be so), we would arrive at a purely empirical conflict with the individualist capitalist economy. Capitalism was not interested, felt Bukharin, in this cost, but rather in the general expenditure for production, which included labor expenditure. In this sense, Bukharin claimed, Tugan confused the different levels of analysis and failed to draw a distinction between the economy and the capitalist economy. In other words, Tugan, Bukharin claimed, did not differentiate between the logical and historical meaning of the category "cost." (Although, as I have pointed out, Tugan explicitly states

¹⁶⁾ Another criticism Bukharin leveled at Tugan pertained to the ratio of development in Russia with regard to the sector producing the means of production and the means of the objects of consumption (see Salter, 1992).

that he would strictly restrict himself to this cognitive differentiation.) I will also recapitulate that Marx does provide two levels of analysis: rate of surplus value and rate of profit, with the latter being a “mutated, transfigured form” [*verwandelte Form*] of the former.

Ideas on Distribution and Cooperatives (Forms of Tugan’s Synthesis)

The critique that Tugan directed at Marx (for using labor cost theory [*trudovaya teoria stoymosti*] for labor value theory [*trudovaya teoria cennosti*]) and the synthesis he offered leave no doubt that Tugan would not have accepted Marx’s theory of surplus value and exploitation (ТБ, 1924, [1915], pp. 99–127, 334–386). Unlike Marx, who drew a strong distinction between labor and work force and based his theory of surplus labor and surplus value, which later become the basis of profit distribution between different types of capitalists, on this distinction, Tugan did not differentiate between labor and work force. (Indeed, he often enumerated them one after the other, as synonyms.) For Tugan, man was an indivisible supreme value and labor cannot be separated from man, the latter being a unity of physical and spiritual forces¹⁷⁾. According to Tugan, the role of spiritual energy and mental labor was increasing unlike ever before, and distinct from Marx, he considered that mental labor had a price and created value. Tugan also analyzed labor distribution, whose bounds he saw as set by the interests and development of the human personality. Labor, according to Tugan, was mostly pleasant, rather than tedious: he notably distinguishes between work and play, claiming that there are ways of increasing the pleasure of working through the introduction of some aspects of play such as singing or dancing¹⁸⁾.

The theory of the integrity of the human personality (which, as in Marx, could not be split into exchange value and use value) logically led Tugan to his own theory of distribution, wages, and profits, and also to his own theory of exploitation. Tugan considers that

Marx attempts to prove the existence of exploitation in an extremely artificial manner stemming from his entirely unconvincing theory of absolute labour value. Thereafter, he arrives, setting out from this theory, at the entirely false doctrine that wages tend to the existential minimum. (Tugan, 1924, [1915], p. 355)

¹⁷⁾ In a certain sense, the nexus he drew between labor and the human personality was rather similar to the early ideas of Marx on alienation; see Aron (2002, [1962]) and Ellul (2003, [1947/1979]).

¹⁸⁾ Labor was obtained when man’s action was directed at nature, whereas play was labor without nature: labor for its own sake. Tugan also formulated the non-linear link between labor and the degree of its “agreeability,” for purposes of gaining mastery over tasks and their duration (Tugan, 1924, [1915], p. 100).

Distancing himself from Marx, Tugan approached, as he himself admitted, Ricardo's theoretical model of distribution; Tugan named his own theory the "social theory of distribution." The problem of distribution in Tugan was not genetically tied to production; it was more of a social issue, resulting from the distribution of forces of separate groups in exchange. Wages, for instance, were not tied to value (as in Marx) or to the productivity of the marginal worker (as in Clark) but were socially determined (in what Tugan called "the social theory of wages") by two basic factors: the productivity of social labor (that which was subject to sharing) and distribution of the social forces of workers and capitalists (the sharing itself) (Tugan, 1924, [1915], p. 372). Wages did not result from a simple act of exchange but from a complex social struggle for a share of the social product¹⁹⁾.

Exploitation was not defined as the appropriation of surplus labor or surplus value but as the inequality of labor costs at exchange. According to Tugan, exploitation was invariably obtained when an object with a lower labor cost was exchanged for one with a greater labor cost. The general ethical principle of the equality of man was again the determinant. In 1915, Tugan wrote

In the exchange of labour equivalents, exploitation is absent. Yet, if one man gave another man less of his labour than he were to receive in exchange, this would breach the principle of the equality of man, and we could then speak of exploitation of man by man and hence of something which was morally inadmissible. The idea of the equal value of man comprises, therefore, an immutable ethical element in the doctrine of labour exploitation. (Tugan, 1924, [1915], p. 352)²⁰⁾

As I have pointed out, Tugan's synthesis of value, as well as his ideas on labor, distribution, and exploitation, were not an abstract exercise, but rather the basis upon which he interpreted and explained different economic forms, or as he called them, "manifestations of the economic (*hozyaisvennyi*) principle."

Cooperatives were the most essential of such manifestations, and Tugan devoted a number of his theoretical and empirical works to cooperatives. He was an adherent of diversity in institutional forms, seeing the economic principle as the thread that ran through all of them, having found its expression in the principle of the supreme value and most of all in the theorem presented above on the relationship (framework of value) between marginal utility and labor cost. Alongside the development of industry (as in his original analysis of Russian factories), Tugan paid special attention to the emergence and diffusion of

¹⁹⁾ A similar theory (nevertheless, in the different economic reasoning of general equilibrium) could be found in the writings of the Japanese scholar Yasuma Takata (1883–1972); see Takata (1935, 1936) and Yagi (1995).

²⁰⁾ This is as compared to the theory of symmetrical exploitation (spoliation) developed by Vilfredo Pareto (Pareto, 1963, [1926]).

cooperative forms of manufacture, labor, and consumption, which gained popularity in the late nineteenth and early twentieth centuries, initially in Western Europe and then in Russia. Tugan conducted a significant theoretical and historical study of the cooperative movement, publishing its final results in Социальные основы кооперации [The Social Fundamentals of Cooperatives], a book which was reprinted and updated on many occasions (1989, [1915, 1917, 1919]), while at the same time being closely involved in the practical aspect of Russian cooperatives (since 1909, he edited the *Vyestnik Kooperatsiy* [The Cooperative Journal])²¹. Tugan believed in a “cooperative ideal” (Tugan, 1989, [1915] p. 433) that combined (“without this amounting to a compromise!”) efficiency and moral principle.

The cooperative form of organization attracted Tugan with the possibilities of an organic fusion surmounting the great dichotomy between capitalism and socialism, of seeking new forms, and of (to coin a phrase) “a liberal, self-organizing, spontaneous, free” socialism. Tugan kept returning to diverse forms of utopian, syndicalist, and anarchic socialism, analyzing their function in detail (see Tugan, 1913).

In a certain sense, Tugan dimly foresaw the emergence of the New Economic Policy, although he did not live to see it, dying in 1919. Regardless of the fact that he never clearly stated this, I am convinced that Tugan saw the principles of cooperatives as the concrete institutionalized incarnation of the theoretical synthesis he drew within the framework of theoretical political economy (marginal utility and labor cost) by uniting the “theories” of the two basic groups of capitalists and workers.

Neither pure egotism, nor pure altruism, but rather solidarity of interests: this is the spiritual strength of the cooperative. Egotism lies at the basis of capitalism and altruism at that of Socialism, yet cooperatives combine egotism and altruism in a realisation as to the solidarity of common and private interests. (Tugan, 1989, [1915], p. 93)

Tugan’s book on cooperatives is also interesting for a number of theoretical insights that were formulated by other authors much later and that today form an indivisible part of institutional analysis, institutional change, transaction costs, asymmetry of information, and other concepts.

Thus, in analyzing the principles and history of credit cooperatives (Raiffeisen-type farming cooperatives and Schulze-Delitzsch popular banks, with all the differences between them), Tugan dwells particularly on the possibilities of overcoming and reducing the asymmetry of information: adverse selection and moral hazard.

²¹ See also the chapter on cooperatives in Tugan’s textbook (Tugan, 1924, [1915], pp. 300–329).

The peculiar feature of farming credit ... is the necessity for the credit institution to know the personality of the debtor most closely. Without such knowledge, the credit institution risks to make a loss on its credit unless the debtors were able to secure the loan with his property. Yet, for advantage to be taken of this, the credit institution's area of trading must be limited. ... In this case we observe not only complete knowledge of everyone by everyone, but also complete awareness of the state of everyone's farm; it is not difficult to ascertain the truth of declarations made by this man or that when seeking loans. If, for instance, a certain man were to declare that he required a loan in order to purchase a horse, it would not be difficult for us to convince ourselves whether this man genuinely needed a horse and how he could profit by purchasing one. ... In conditions of such close knowledge, it is not difficult to disburse loans without any risk of default whatsoever. Yet, there is one more very substantial benefit ... in this way, the diversion of debtors from the performance of their dues is rendered exceptionally difficult; a default by one person causes harm to all members of the community, and those members have thousands of ways at their disposal to make their fellow-villager sense their displeasure. In this way, failure to service loans threatens the debtor with the gravest of trouble. (Tugan, 1924, [1915], p. 238)

Tugan saw the problems of Russian credit cooperatives as stemming precisely from the breaches of the principles of overcoming the asymmetry of information; Tugan also saw many other problems related mostly with the incentive stimulus of the participants. Tugan saw that cooperatives were unstable forms that could not exist without other forms such as public enterprises and nor could they survive outside a particular legal framework (see also Сорвина, 1992). Therefore, in his model of socialism, cooperatives exist along with state enterprises with market and monetary mechanisms between them being preserved. This is most thoroughly elaborated in his book *Socialism as positive science* (2003, [1918]). Tugan showed the importance of cooperatives for Russian life from a historical perspective as an outcome of the evolution of Russian economy where much like there no bourgeois or petty bourgeois (as in Europe), the phase of town economy was not observed. Tugan believed that Russian intelligentsia also assumed specific features bringing them closer to cooperative ideas and cooperative socialism.

With regard to institutional analysis, I will note only Tugan's observation of the nexus between technical innovation and labor organization. The text below is of particular interest as it shows the emergence of the optimal size of the enterprise in terms of transaction costs, information asymmetry, and the evolution of economic institutions in general. In analyzing butter-producing dairy cooperatives in Denmark, he wrote

To understand the rapid growth of Danish butter-making cooperatives,

one needs to take into account the historical situation in which this evolution has taken place. The invention of the separator [separator is a machine for milking cows, *my note*] completely transformed the technicalities of butter making. At first, the separator gave a decisive advantage to capitalist dairies compared with farmers' ones, since an individual peasant could not afford to purchase a separator. Yet, the cooperative organisation of butter-making gave the opportunity to peasants to use this invention ... by adopting the separator, village cooperative butter-making rapidly displaced its capitalist equivalent ... True, a capitalist butter-making plant could also use the same machines as a cooperative ... having purchased from the peasants the milk from which butter is derived. The weakness of such a purchase is ... that the plant has no possibility of controlling milk making where, incidentally, even the smallest error in production and storage (such as keeping milk in dirty vessels) can suffice to spoil the quality of the milk. ... In other words, both capitalist and village butter-making became equally irrational after the appearance of the separator. The sole rational form of butter-making is the cooperative one, for in it butter-making can take place on a large scale using machines, while at the same time offering the enterprise the ability to control milk production, since the cooperative owners are milk producers. (Tugan, 1924, [1915], pp. 268-269)

A careful perusal of the work enables the reader to discover almost all future directions of institutional and evolutionary economics, company theory, and other aspects. In this respect, Tugan's work is definitely interesting as a subject of future in-depth analyses, which must restore him among the pioneers of institutional and evolutionary economics.

General reflexions on Tugan's model

Tugan made an attempt to construct his own independent theoretical model of value based upon a synthesis of labor theory and the theory of marginal utility, thus enabling himself to interpret not only the other analytical economic and social categories but also concrete economic forms and diverse economic institutions (cooperatives for example). His "social ideal" — humanistic and cooperative socialism — is also organically linked to his basic theoretical model.

As any theoretical synthesis, and indeed theory (especially his, which deals with the problems of value), goes, Tugan's model was as successful and even as true as that of any of its peers. Nevertheless, many criticisms can be raised. Some critiques centre on the internal contradictions in the logic system (such as the presence of causality between labor value and marginal utility; chart 1) that are stressed by Bukharin, while others relate to the incompatibility of the theory and empirical facts (significance of overall production expenditure rather than the individual expenditures of capitalist companies or capitalists), which too has been stressed by Bukharin.

Yet others are to do with the ideology (for instance, Communist-period critiques) or with the fact that Tugan removed a certain spiritual value beyond the system (none other than the “equality of the human personality”). In reality, Tugan himself constantly stressed the links between a given economic and social theory and the interests of a set class or grouping. Despite claiming in certain passages that his theory defended the interests of workers and laboring people in its entirety, in reality his synthesized model was an attempt to discover an organic synthesis between the interests of workers and capitalists. In dedicating a given theory of political economy to the interests of a certain grouping, Tugan was undoubtedly close to Marx and most Marxists (thus, Bukharin claimed that MUTV in its Austrian version was the political economy of the rentier, as indeed his book's subtitle shows)²²⁾.

What could we add here?

Essentially, Tugan's model is an optimization model, where the utility function is maximized under the resource constraint. (In Tugan's model, this only includes labor.) The one-factor production function mathematically yields the Tugan formula, which is a simplified version of the formula given in microeconomics textbooks. Things however are not quite the same.

First, we can notice at once that with regard to utility, we have a comparison of marginal quantities, while with regard to resources and labor costs, the comparison is made between mean quantities. (Because although he does not explicitly mention it, Tugan adheres to Marx's mean-quantities model.) We know that in the familiar optimization problem, marginal quantities also appear on the side of costs (which include other costs in addition to labor). This inconsistency is the major problem of the model because the shortcoming of Marx's model is preserved, although within only one of the value formation elements (in this particular case, cost). This shortcoming, which is criticized by the Austrian School, consists of an impossibility with regard to the measurement and comparison of the types of labor under Marx's hypotheses of average and socially necessary human labor.

As we know, in Marx's model of exchange (and capitalist) economy, the concrete, private labor is reduced to the abstract “socially necessary labor” (complex versus simple labor) through the mechanism of market, prices, and money. With regard to the future communist society, Marx mentions that the reduction of labor would take place “naturally” but he does not offer any particular mechanism for the same; hence, the Austrian criticism of the impossibility of calculation under socialism is to the full effect. It could be surmised that while with Marx's model, reducing and commensuring labor is through the market, with Tugan's, this is (*also*) done through the supreme ethical value transcending the scope of economy — “the equivalence of all human beings” — which is exactly what places the different types of labor on equal footing. The particular manner in

²²⁾ Here, we also find similarity with the ideas of the leading place of ideology in political economy as developed by Aleksandar Bogdanov (Богданов, 2007, [1922, 1919]).

which this is to be achieved is still unclear.

Second, (here, I will make a digression), in 1918, Tugan made an in-depth analysis of the future socialist society, where he suggests some interesting ideas of its functioning. Under this society, within the cooperatives and state enterprises, Tugan presumes, money will become ideal money, a pure mean of measurement. As a means of exchange (in dematerialized form such as paper, clearing, etc.), money would manifest *only* in the exchange between different cooperatives and between cooperatives and the state sector. That is, money in the future is seen *mostly* as a means of measurement, weighing up, and comparison and not for exchange or transfer of value. Money is *intrinsically* a sign, not a commodity; *first and foremost* it has a nominal meaning, not a real one.

In socialist society the whole progress of expressing prices into monetary units will be ideal by character as the monetary unit itself will become entirely ideal. (Tugan, 1996, [different years])²³⁾

Of course, the transformation of money into an ideal measure will be a long process, and therefore money as a means of exchange, along with prices and market, will continue to exist for a long time. Tugan believes that it would be conducive if monetary units during socialism retain their past nomenclature, for example, rouble, franc, etc. Further, he believes that it would not be conducive to give these monetary units labor names (such as labor hour, etc.) as prices in a socialist society would not correspond to the labor cost of products and hence, such “labor” names would be misleading. Factors such as the ideal character of money, the nominal and holistic essence of socialist monetary units, epitomizing the socium, are quite common with some of Kant’s reasoning. Kant defines the basic principle of metaphysics, according to which “I ought to behave only in such a way so as to demand my maxim be acknowledged as universal law.” According to Kant, this law is similar to money: money is much like the law; once it becomes universal, it stops existing (Kant, 2008, [1785, 1797], p. 61). That is, money becomes ideal; it becomes a sign. I believe that the above similarity places money as a sign outside the economic sphere on equal footing with the supreme value of human personality. Perhaps this is the reason why the Japanese economist Kiichiro Soda (1881–1927), who ranks money *above* the value of goods, viewing it as some external and premise category, does that because he happens to be Kant’s follower (Shionoya, 2008), much like Tugan. Tugan’s monetary model could be an interesting facet of future research.

Third, with regard to the equilibrium mechanism in the optimization problem in capitalist and socialist societies, Tugan fails to see some fundamental time and

²³⁾ It should be noted that the theories on money that viewed money as a sign or as *ideal*, have a long-standing tradition in the Russian monetary thought; such nominalistic views could be found in the work of the first Russian systematic economic author Ivan Pososhkov (Pososhkov, 1987, [1724]).

logical differences. Although he dedicated a whole book to socialism, Tugan did not show the specifics of the optimization carried out by a central planning authority. To him, this authority should *simultaneously* outline the utility and cost curves for each product, which is most clearly expressed in the following way:

... in drawing up its economic plan a socialist society should strive to distribute social labour among the various types of production so that the marginal utilities of products are proportionate to their labour cost. (Tugan, 2003, [1918])

There is sufficient reason to presume that Tugan did not realize that the equalization of marginal utilities should *precede* the social planner's distribution of labor resources. In this sense, and in general, Tugan's model of optimization under socialism falls under the blows of the well-known critique of the impossibility of calculation under socialism.

Other flaws and inconsistencies can also be found in Tugan's value theory. Certainly, Tugan's theoretical model is problematic, as is *any synthetic model*. Nevertheless, there is no doubt (at least for me) that Tugan's synthesis is original and that it offers an example of how theories that appear to be entirely mutually incompatible can be linked in a common model to offer a basis for a number of practical applications and raise interesting issues for future research²⁴⁾.

A perusal of Tugan's diverse studies inclines the reader to think of him not so much as a representative of the historical, Marxist, or Austrian (however, correct that may be)²⁵⁾ but rather as a "broad" social scientist in the tradition of Max Weber, Werner Sombart, Vilfredo Pareto, and Joseph Schumpeter, or akin to the Japanese scholars such as Kiichiro Soda or Yasuma Takata.

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²⁴⁾ See for instance Hong (2000) on the similarities between the theories of value of Marx and Menger.

²⁵⁾ In his biographical essay, Nikolay Kondratiev presents Tugan as a representative of the “intuitive stream in economic science,” which in actual terminology should be classified as comprehensive economic sociology.

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