

Russia-West-Russia: Georg von Charasoff, the “Humane Economy”, and the Critique of Marx’s Theory of History



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I therefore already in advance do not expect too much success from my attempt to develop Marx’s, or more generally, the classical economic theory in a positive direction and to round it off. A purely destructive “critical” work could certainly reckon on more recognition, and this the more so, the fewer original ideas it contained and the closer it fell in line with the already familiar critical works.
(Charasoff 1910: vii)

1 Introduction

It is not immediately obvious how the remarkable scholar whose ideas will be discussed in this essay could possibly be introduced so as to fit neatly into a volume entitled “Russian and Western Economic Thought: Mutual Influences and Transfer of Ideas”. Georgy Artemyevich Kharazov, who was born in 1877 in Tiflis, the Georgian capital, regarded himself as a “Russified Armenian”—not as a Russian. Moreover, he was not an economist but a self-taught private scholar with an academic background in mathematics and physics. Still more importantly, he can neither be said to have significantly influenced the economic discourse in Russia by the import of Western ideas nor to have contributed to the development of economic theory in the West by the transfer of economic ideas deriving from Russian traditions. This is so because the innovative concepts and original ideas he presented in *Karl Marx über die menschliche und kapitalistische Wirtschaft* (1909) and *Das System des*

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Marxismus: Darstellung und Kritik (1910)¹ were not recognized as such and consequently made no impact on contemporary developments. Charasoff's contributions to Marx's economic theory and its critique in fact had to wait until the early 1980s in order to be properly appreciated.

The present chapter informs about Charasoff's economic work, about some important elements in its formation, and about its reception in the West and in Russia. It opens with a brief account of his life and then turns to the novel concepts and analytical tools that he developed for the determination of relative prices and the general rate of profits. Next, his unorthodox interpretation of the role of the labour theory of value in Marx's theoretical construction is explained and related to the contemporary debates on Marx's economic theory in Germany and Russia. By recalling the extraordinary story of his life, by reconstructing some of the intellectual sources and formative elements of his work in economic theory, and by further situating the latter in the contemporary economic discourse in Russia and the West, the chapter seeks to provide an explanation for the *neglect of original economic ideas* and consequently also for their *non-transfer* across national borders.

2 From Russia to the West: Charasoff's Life and Some Formative Elements of His Work

Georgy Artemyevich Kharazov was born on 24 June 1877 in Tiflis, Georgia, into a wealthy family of Armenian origin. His father was a count and state councillor, who owned factories and landed estates in Armenia and Georgia. Georgij, who appears to have been the only son, attended the classical gymnasium in Tiflis from 1886 to 1890, but after his father's early death was transferred to a boarding school in Odessa. He returned to his hometown in 1893, where he passed the final exam as an external pupil in the following year. He then enrolled at the University of Moscow as a student of medicine, but was expelled during the students' protests of 1896 and forced to leave the Russian Empire in order to continue his studies. Kharazov went to Germany, where he enrolled at the University of Heidelberg, changing his name to Georg von Charasoff and his study fields to mathematics and physics. He finished his studies in February 1902 with a doctoral dissertation in mathematics, entitled "Arithmetische Untersuchungen über Irreduktibilität" (1902). It was a slightly revised version of a paper that had won him a prize essay competition in the previous year. The University of Heidelberg had an excellent reputation, in particular in law, medicine, and the natural sciences, and attracted considerable numbers of students from Russia, often with an aristocratic background and sympathetic to some form or

¹ In the preface to his second book, Charasoff informed his readers that he intended to supplement the two books with a third one, which was to bear the title "Die Probleme der Produktion und der Verteilung" {The problems of production and distribution} and which was to contain "a thorough criticism of the subjective theory of value" (Charasoff 1910: xiv, n.). Alas, this book was never published.

other of socialist/revolutionary ideas. In Heidelberg, Charasoff temporarily shared the same address as the social revolutionaries Abram Gots, Vladimir Zenzinov and Ilya Fondaminsky, and he developed friendships with the brothers Vadim and Michail Reissner,² and in particular with Otto Buek, a student of chemistry, mathematics, and philosophy from St. Petersburg. With Buek he continued to meet and correspond also after the latter had moved to Marburg in 1899, where he wrote his doctoral dissertation under the neo-Kantian philosophers Hermann Cohen and Paul Natorp. In Marburg, Buek actively participated in a neo-Kantian socialist-anarchist group that had formed around Cohen and Natorp and to which also Robert Michels and Kurt Eisner belonged. At the time, all three sympathized with syndicalism and anarchism, drawing inspiration in particular from Tolstoy's works.³ In 1904, Buek moved to Berlin, where he led a bohemian life and earned his living as an editor, journalist, and translator. Buek was well connected in Berlin's intellectual, artistic, and literary circles. Several of his friends were left-wing political activists or anarchists, but he was close also to the pacifist Georg Friedrich Nicolai and for a time used to meet regularly with Albert Einstein in order to discuss philosophical problems with him and to play music together. In 1914, Buek was one of the four signees of Nicolai's anti-war pamphlet "Aufruf an die Europäer!", together with Albert Einstein and Friedrich Wilhelm Förster. In 1933, upon the rise of Nazism, he emigrated to Paris. He died, impoverished, and isolated, in a home for the elderly near Paris in 1966.

In 1905 and 1906, Buek visited Charasoff in Zurich, where the latter had meanwhile settled down, *en route* to a stay in the famous *Monte verità* commune in Ascona, where he attended an international gathering of anarchists and free thinkers. In the summer of 1907, the two of them again spent some time together in a luxurious sanatorium at Lake Constance. The friendship with Buek was important for Charasoff not only because he could discuss his ideas on Marx's economic theory with him, but also because Buek translated his manuscripts (from Russian into German) and helped him with securing a publishing contract for his German books.⁴ Moreover, Buek was later responsible also for the (unauthorized) re-publication of excerpts from his books in the literary-political journals *Die Aktion* and *Der Gegner* in 1918 and 1920/21, when Charasoff had already returned to his hometown and become a

² Michail Reissner studied law at the University of Heidelberg in 1897–98. He later became a professor at the law faculty of Petrograd University in 1917, and was involved in the drafting of the first constitutional law of the Soviet Union. In the 1920s, as a member of the Soviet Ministry of Sciences and Education, he was responsible for the foundation of the "Communist Academy" in Moscow, which became a centre for Marxist social sciences. He was also a founding member of the Russian Psychoanalytical Society in Moscow, where Georg Charasoff delivered two invited lectures in the 1920s.

³ Buek's article on "Leo Tolstoy" (1905) was one of the first examples for the application of neo-Kantian ideas to specifically Russian themes. Otto Buek can therefore be considered as one of the founders of "Russian neo-Kantianism" (Dmitrieva 2016). On Buek's role in the development of an anarchist-socialist variant of neo-Kantianism, merging the neo-Kantian ideas of the "Marburg school" with Tolstoy's pacifism and anti-modernism; see Hanke (1993), Sieg (1994), and Dmitrieva (2007).

⁴ The publisher of Charasoff's books, Hans Bondy, belonged to Otto Buek's circle of friends in Berlin, which included many (now) well-known artists, writers, publishers, and intellectuals.

major contributor to the extraordinary flowering of literary and artistic life that had sprung up in Tiflis during the pre- and post-revolutionary turmoil in the period from 1917 to 1921.⁵

After the completion of his dissertation, as already mentioned, Charasoff had moved to Zurich, where he led the life of an independent private scholar. On the income from his inherited wealth he could live comfortably with his first wife, Marie von Charasoff, néé Seldovic, and his three children, born in 1900, 1902, and 1903,⁶ and freely pursue his multifarious intellectual interests. He persisted in these pursuits also after his wife's early death, which seems to have occurred around 1904/05. In the beginning, and at least until mid-1905, he continued to work on problems in pure mathematics. This can be inferred from some manuscripts he sent to David Hilbert in 1904, and from the fact that he enrolled for courses of mathematics at the University of Zurich in the summer term 1905.⁷ Another major concern of his, until at least 1907 if not beyond, was a serious study of Tolstoy's writings and ideas. This emerges from a number of letters that he wrote, between 1902 and 1908, to Vladimir Chertkov, the major representative of the Tolstoyan movement in the West, who was then living in exile in England. The extant correspondence⁸ opens with a letter of 1902 to Anna Chertkova, in which Charasoff informs her about an article on the exposition of the Marxian system that he intends to contribute to issue no. 4 of *Svobodnoe Slovo*, the magazine published by Chertkov in Britain from 1901 to 1905. In the same letter, he announced a further submission, as a separate article for a subsequent issue, on the critique of the Marxian system. But Chertkov, to whom the first article was passed on by his wife, advised him to further elaborate on it and proposed to send in the meantime some reviews or rebuttals of German publications on Tolstoy's ideas. In 1903, Charasoff indeed prepared some critical reviews of some German and French publications on Tolstoy (including one by Vladimir Posse)—which Chertkov, however, seems not to have published. In one of his letters of 1903, Charasoff then referred to a "book on political economy", which is said to be "almost finished", but when Chertkov invited him to send the manuscript for possible publication (in several instalments) in his magazine, Charasoff repeatedly postponed the delivery. The last extant letter from this period is a Christmas card from December 1903, with no further mention of this project. As his correspondence with Chertkov shows, Charasoff pursued the idea of a publication on the Marxian system and its critique

⁵ Franz Pfemfert, the editor of *Die Aktion*, was a friend of Otto Buek; for the excerpts from Charasoff's books published in these journals, see Charasoff (1918a, b, c, d, e, 1920, 1921).

⁶ Alexander (b. 1900 in Strasbourg) was the illegitimate child of Marie Seldovic's sister, Anna Helena Seldovic, and apparently was adopted by von Charasoff. Arthur (b. 1902 in Zurich) and Helene (b. 1903 in Zurich) were legitimate children of Georg and Marie von Charasoff.

⁷ Charasoff enrolled for the courses of Professor Burkhardt, who at this very time was one of the examiners of Albert Einstein's doctoral dissertation.

⁸ Charasoff's letters to Chertkov and his wife are preserved in the Chertkov Papers at the Russian State Archive of Literature and Art (RGALI) in Moscow. Charasoff seems to have met Chertkova earlier and to have corresponded with her before. He also must have received an invitation to visit the couple in England, because in his first letter Charasoff declined this invitation on the ground that he had to edit the proofs of his doctoral thesis, which was about to be printed.

already immediately after he had completed his doctorate in Heidelberg, and his original plan appears to have been for a publication in Russian.

Before we discuss the renewal of his correspondence with Chertkov in July 1907, a further intellectual fascination of Charasoff in this period deserves to be mentioned: he apparently immersed himself quite deeply also into the study of the works of Sigmund Freud and C. G. Jung, and in the summer term 1907, he also attended lectures on psychoanalysis by Prof. Eugen Bleuler at the University of Zurich.

Charasoff's preoccupation with Marxism and his intensive study of Tolstoy's ideas may well have been related to a fascination with anarchism, but (unlike Buek's) it involved no renunciation of a bourgeois lifestyle. During his residence in Zurich, Dr. Charasoff was known as "a very rich man",⁹ who lived with his family in fairly generous rented apartments, always close to the University library and the "Russian quarters". As in Heidelberg, he was certainly in touch with other Russians in Zurich as well, but very little is known about his personal contacts. At the turn of the twentieth century, large numbers of students from the Russian empire had come to Switzerland, not least because it was one of the first countries to admit also female students. The Russian community in Zurich had a rather mixed (and partly overlapping) composition: it consisted primarily of students and academics, but there was also a considerable Jewish group (often engaged in commercial activities), as well as some exiled political activists of the various fractions of the Russian revolutionary movement. Charasoff seems not to have been affiliated with any particular political group, but in a letter to Chertkov of 1907 (and in his 1909 book), he reports to have lectured on Marx's economic theory and its critique to an audience of some forty listeners over a course of three years. In 1904, Charasoff is also reported to have made a critical intervention at a lecture delivered by Georgy Plekhanov in Zurich on "Scientific socialism and religion".¹⁰ He probably knew personally also Pavel Axelrod, the exiled leader of the Russian Social Democrats: from 1912 to 1915, they lived in the same neighbourhood and could hardly have avoided meeting each other on the street that leads up to their apartments. We also know that during a cure treatment at Lake Constance, in the summer of 1907, he met Vera Figner and Leonid Shishko, the prominent *Narodnaya Volya* activists, as well as Lidiya Petrovna Kochetkova, a member of the Russian Socialist-Revolutionary Party.

Some more information can be provided on Charasoff's studies of economic theory and the gestation of his books. In the Foreword of his second book he noted that he had developed the concepts of "production equations" and "production series" from his intensive study of Marx's writings long before he had first read the contributions of Menger, Böhm-Bawerk, and Walras around 1904/05 (1910: xiv). If this is true, he must have developed the central concepts of his two books already during his student years in Heidelberg. On the actual composition of his two books, however, he appears to have embarked only in the summer or autumn of 1907, after he had changed his original publication plans. The latter seem to have consisted of two closely connected, but separate projects for the presentation of his ideas. There was,

⁹ See "Vormundschaftsakten Kinder Charasoff" (Stadtarchiv Zürich).

¹⁰ See Plekhanov (1976: 56–63).

on the one hand, a plan to publish an article on the critique of Marx's economic theory in the theoretical journal of the German Social Democratic Party, *Die Neue Zeit*. However, Charasoff's article, translated and submitted on behalf of his friend by Otto Buek to the editor, Karl Kautsky, in January 1907, met with a desk rejection. Neither the manuscript and submission letter nor Kautsky's rejection letter are extant, but a letter of Charasoff to Kautsky of 7 February 1907 has been preserved in the Kautsky Papers.¹¹ In this letter, Charasoff informed Kautsky that he did not consider the reasons which the latter had given for his rejection convincing and that he was keen to read a more detailed criticism of his views.¹² Since the manuscript seems to be lost, it is unclear which concepts and ideas from his later books were already contained in it. The article would in any case have been published—had it been accepted by Kautsky—almost simultaneously with Ladislaus von Bortkiewicz's famous two papers on Marx's economic theory.¹³ On the other hand, Charasoff also pursued the idea of publishing a book on political economy in Russia(n) with the help of Vladimir Chertkov. Shortly after he had received Kautsky's rejection letter, Charasoff in July 1907 renewed his earlier correspondence with Chertkov and returned to the issue of the book again, on which he had worked "for almost four or five years", and which (again) is said to be "about to be finished". He acknowledged Chertkov's influence behind the project and asked for his help in finding a publisher in Russia. In his next letter, Charasoff admitted that the book would be "too scholarly" for a general public. At one instance though, being obviously in a good mood due to the perceived success of the lectures he gave along the lines of the book, he is quite positive and adds that it can be popular and would require just a bit of elementary algebra to be digested. Charasoff thus originally intended a book publication in Russia, with the support of Chertkov, who (again) invited him to send his manuscript. After repeated postponements, Charasoff eventually sent a draft version of the first four chapters (according to the indication in the file's cover, in December 1907, but the letter itself is undated), mentioning that the other parts were needed for further elaboration and that "a friend of mine" (no doubt a reference to Otto Buek) is currently preparing a German translation. Interestingly, Chertkov in his reply proposed that the chapters may be shown to Leo Tolstoy—but whether this actually came about is not clear. In his cover letter, Charasoff chose to highlight the main points behind his project. According to him, the aim was to provide nothing less than a new basis for political economy, a basis which he considered to be compatible, and indeed to be fully in line, with Tolstoy's moral teaching.¹⁴ In 1908, Charasoff continued to work on

¹¹ See Kautsky Papers (Correspondence D VII 66, International Institute of Social History, Amsterdam).

¹² For a more detailed discussion of the Charasoff-Kautsky correspondence, see Mori (2007).

¹³ See Bortkiewicz (1906–07, 1907). Bortkiewicz's contributions are discussed by Gehrke and Kurz (2022b, this volume). For English translations of the two papers, see Bortkiewicz ([1907] 1949; [1906–7] 1952).

¹⁴ A more detailed account of the contents of Charasoff's "Chertkov manuscript" and a comparison with the contents of his German books of 1909 and 1910 is beyond the scope of this paper. It is planned to provide such an account, as well as additional information on the Charasoff–Chertkov correspondence, in a joint project of the author with Denis Melnik (HSE Moscow).

his economic manuscripts and eventually must have decided to prepare a publication in German only, to divide the material into three books (of which, however, in the end only the first two materialized), and to abstain from referring explicitly to Tolstoy.¹⁵ The Preface of the first book, *Karl Marx über die menschliche und kapitalistische Wirtschaft*, was completed on “12 October 1908” (Charasoff 1909: page not numbered), and the book was published in February 1909.

For the writing of the second book, Charasoff moved to Clarens at Lake Geneva in February 1909, together with his three children and his future second wife, Marie Kriegshaber, a young Russian medical student with a recent doctorate in gynaecology from the University of Zurich. In August 1909, the Charasoff–Kriegshaber family then moved on to Lausanne, where the couple got married in October. In February 1909, shortly after his arrival in Clarens, Charasoff sent a copy of his first book to Karl Kautsky, together with the manuscript of an article that he submitted for publication in *Die Neue Zeit*. Only one week later, he sent another letter, in reply to Kautsky’s desk rejection, where he noted that although he was “no Marxist in the conventional sense of the term” he was “not ready to concede so easily ... that my construction should be fundamentally wrong”, and that he was awaiting “with great interest” Kautsky’s explanation for the rejection.¹⁶

The main ideas of the 1910 book had certainly been worked out before, but its actual composition and, in particular, the writing of its final part, where Charasoff repeatedly refers to the recently published book of Boudin ([1907] 1909), was clearly carried out only in 1909 in Clarens. There, Charasoff certainly met with other Russians. In the nineteenth and early twentieth century, this part of the “Swiss Riviera” was extremely popular with Russian artists and intellectuals, such as Tolstoy, Tchaikovsky, or Nabokov, and the hotels and restaurants in the Montreux area were continuously filled with (wealthy) Russian guests. Moreover, Charasoff may well have been in contact also with Russian revolutionaries during his stay in Clarens. His rented apartment was within walking distance of the famous Russian library of Nicolai Rubakin, which attracted many exiled social revolutionaries, who temporarily took residence in the nearby village of Baugy-sur-Clarens. The Foreword, and probably also the book, was finished on “24 December 1909” in Lausanne (1910: xxvii). Three months later, Marie von Charasoff gave birth to a son. The book was published at about the same time, and in September 1910 the family returned to Zurich.

¹⁵ Charasoff’s extant correspondence with Chertkov, who in July 1908 left the Tolstoy colony in England and returned to Russia, breaks off without providing any information on the reasons for the collapse of the Russian book project.

¹⁶ See Kautsky Papers (Correspondence D VII 67–8, International Institute of Social History, Amsterdam).

3 Charasoff's Innovative Concepts and Original Findings

Charasoff was one of the first economic theorists to recognize that prices of production and the general rate of profits can be determined by the eigenvector and eigenvalue of the (augmented) input coefficients matrix, respectively. He not only anticipated most of the arguments that were proposed later in the discussion of Marx's "transformation problem", but also noted the duality properties of the price and quantity system, a finding that is usually associated with the seminal paper of von Neumann ([1937] 1945–6). Moreover, in the course of his investigation he defined and made use of the concepts of a "production series" {Produktionsreihe}, "original capital" {Urkapital}, and "basic products" {Grundprodukte}, thus anticipating Sraffa (1960) with regard to the related concepts of a "reduction series to dated quantities of labour", the standard commodity, and the basics/non-basics distinction. In addition, Charasoff also anticipated the so-called Fundamental Marxian theorem of Morishima (1973) and the theorem of the rising rate of profit from the introduction of technical progress, that is, the so-called Okishio theorem, which is generally attributed to Okishio (1961), but is already to be found in Sraffa (1960). Although Charasoff's analytical argument was undoubtedly based on mathematical reasoning, he chose to present it in non-mathematical form, using only simple arithmetical examples in order to illustrate his findings. From a mathematical point of view, it is remarkable that Charasoff failed to make use of (and in spite of a number of shared mathematical interests apparently was unfamiliar with) the recently developed theorems of Perron and Frobenius on eigenvalues and eigenvectors of positive and non-negative matrices (Parys 2014). However, according to Mori (2013), Charasoff in some of his argument in fact anticipated the solution method of the so-called von Mises iteration, which was introduced and further developed by the mathematician Richard von Mises in the 1920s.

Since Charasoff's findings on the determination of production prices and the rate of profits partly resemble results obtained already a decade earlier by Dmitriev ([1898] 1974), it deserves to be noted that there is no indication that Charasoff had read Dmitriev's 1898 essay on Ricardo's theory of value, although he refers to the famous paper by Ladislaus von Bortkiewicz of 1906–07 (which contains a reference to Dmitriev). At any rate, Charasoff submitted his first economic manuscript to Kautsky (which is not extant, but which seems to have contained his main findings with regard to these problems) already in January 1907, so that he can be supposed to have arrived at his findings *before* he was able to study Bortkiewicz's papers.

As opposed to Bortkiewicz (1906/07), who followed Dmitriev in adopting an Austrian production model,¹⁷ Charasoff developed his main argument within the framework of an interdependent system of production, which exhibits all the properties of the later input–output model and is fully specified in terms of the amounts of material inputs and labour needed per unit of output. The central concept of

¹⁷ An "Austrian" production model exhibits a finite number of production stages and presupposes the non-existence of basic commodities. See the chapter on Dmitriev in this volume (Gehrke and Kurz (2022a, this volume).

Charasoff's analysis is that of a "production series" (*Produktionsreihe*): it consists of a sequence, starting with an arbitrary (semi-positive) net output vector (where net output is defined exclusive of wage goods), followed by the vector of the means of production and the means of subsistence in the support of workers needed to produce this net output vector, then the vector of the means of production and the means of subsistence needed to produce the previous vector of inputs, and so on. Charasoff called the first input vector "capital of the first degree" (*Kapital erster Ordnung*), the second input vector "capital of the second degree" (*Kapital zweiter Ordnung*), and so on. This series "has the remarkable property that each element of it is both the product of the following and the capital of the preceding element. Its investigation is indispensable to the study of all the theoretical questions in political economy" (Charasoff 1910: 120).¹⁸

Let y denote the n -dimensional vector of net outputs and A the $n \times n$ matrix of augmented input coefficients, i.e. each coefficient represents the sum of the respective material and wage good inputs per unit of output (in reckoning the wages as capital advances Charasoff followed the classical economists and Marx). Then the "production series" is given by

$$y^T, y^T A, y^T A^2, \dots, y^T A^k, \dots, y^T A^\infty$$

With circular production relations this series is infinite. Tracing it backwards, first all commodities that are luxury goods disappear from view; next, all commodities that are specific means of production in the production of luxuries; then, the specific means of production needed to produce those means of production, etc.. On the implicit assumption (which Charasoff omitted to make explicit) that none of the commodities mentioned enters into its own production, "it is clear that from a certain finite point onwards no further exclusions have to be made, and all the remaining elements of the series of production will always be made up of the self-same means of production, which in the final instance are indispensable in the production of all the different products and which therefore will be called *basic products* {*Grundprodukte*}". Charasoff added: "The whole problem of price boils down ... to the determination of the prices of these basic products. Once they are known, the prices of the means of production used in the production of luxuries, and finally also the prices of the latter, can be derived." (1910: 120–121).

The mathematician then pointed out that a further property of the "production series" deserves to be stressed. The "capital of the second degree" ($y^T A^2$) is obtained

¹⁸ In the Preface of his second book Charasoff emphasized: "With regard to the theory of the production equations and the production series developed by me I would like to point out that in this regard priority claims could be made for the contributions of K. Menger, Böhm Bawerk, Walras and others. I nevertheless regard the entire theory of production stages as my own, since I developed it entirely on my own already several years ago (when I had not yet any knowledge at all of the similar theories of the founders of the subjective method)" (1910: xiv). It needs to be stressed that Charasoff, unlike Menger and Böhm-Bawerk, developed his analysis on the basis of an interdependent production system with circular production relations and thus with an *infinite* number of "production stages".

by multiplying the “capital of the first degree” ($\mathbf{y}^T \mathbf{A}$) by \mathbf{A} : “Yet since the physical composition of a sum of capitals is obviously always a medium between the physical compositions of the summands, it follows that the capitals of the second degree deviate from one another to a smaller extent than is the case with the capitals of the first degree” (1910: 123; original emphasis). Accordingly, the further backwards one goes in the series, the more equal the compositions of the capitals become, i.e. capitals of a sufficiently high degree “may practically be seen as different quantities of one and the same capital: the *original* or *primary capital* {*Urkapital*}”. As Charasoff pointed out, this finding is of the utmost importance for determining the general rate of profits, because it can be shown that “this original type, to which all capitals of lower degree converge, possesses the property of growing in the course of the process of production without any qualitative change, and that *the rate of its growth gives the general rate of profit*” (1910: 124; emphasis added). The rate of profit can thus be ascertained in terms of relating to one another two quantities of the same composite commodity: the “original capital”.

Let \mathbf{u} designate the n -dimensional vector of an elementary unit of the “original capital”, $\mathbf{u} \geq 0$, then $\mathbf{u}^T \mathbf{A}$ is the capital corresponding to \mathbf{u}^T , and we have

$$\mathbf{u}^T = (1 + r)\mathbf{u}^T \mathbf{A}$$

with r as the general rate of profit. Von Charasoff emphasized: “The original capital expresses the idea of a surplus-value yielding, growing capital in its purest form, and the rate of its growth appears in fact as the general capitalist profit rate” (1910: 112). These considerations also provide the key to a solution of the problem of price. For, if the various capitals can be conceived “as different amounts of the self-same capital ...”, then prices must be proportional to the dimensions of these, and the problem of price thus finds its solution in this law-like relationship” (1910: 123). Let \mathbf{p} designate the n -dimensional vector of prices, $\mathbf{p} \geq 0$, then we have the following system of price equations:

$$\mathbf{p} = (1 + r)\mathbf{A}\mathbf{p}$$

Thus, while \mathbf{u} equals the left-hand eigenvector of \mathbf{A} , \mathbf{p} is equal to its right-hand eigenvector; and $1/(1 + r)$ is the dominant eigenvalue of the augmented input matrix \mathbf{A} . The solution to the price problem can therefore be cast in a form in which “the notion of labour is almost entirely by-passed” (1910: 112). Given the technical conditions of production and the real wage rate, the general rate of profits and the prices of commodities can be determined without having recourse to labour values.

However, Charasoff by no means concluded from this finding that the labour theory of value is redundant and can be dispensed with. In his understanding, the main task of political economy consists in providing a theory of capitalist development, with technical progress as a main driving force. The classical economists, that is, Smith, Ricardo and Marx, are credited with having put forward such a theory and with having forged instruments for investigating this problem. Charasoff motivated their emphasis on labour values in terms of the fact that human progress must involve

a (partial) liberation of mankind from the struggle for the procurement of its material needs. For Smith, Ricardo, and Marx, the historical progression of the human race must therefore inevitably involve technical change that is associated with a saving of human labour time:

This is the fundamental law underlying the classical law of value. By abandoning this objective basis of the determination of value, the modern subjective theorists have relinquished the only possible explanation of technical progress, and therefore they are without any theory of the technical development of the capitalist economy. (Charasoff 1910: xv–xvi)

4 Situating Charasoff's Contributions in the Contemporary Economic Discourse

Charasoff clearly intended his books as an intervention to the then ongoing debates on Marx's economic theory in Germany. These concerned mainly the relationship between volumes I and III of *Capital* or the so-called transformation problem (of values into prices of production and of surplus value into profit); Marx's law of the tendency of the rate of profits to fall in vol. III of *Capital*; and Marx's theory of history and the breakdown of capitalism (including his crises theory). Charasoff was interested mainly in the latter two sets of problems, and he regarded the correct solution of the "transformation problem", though of course indispensable for a proper treatment of those problems, to be only of limited interest in itself.¹⁹

The main works he cited, and commented on in more detail (apart from Marx's *Capital*, of course),²⁰ are Kautsky's *Karl Marx's ökonomische Lehren* ([1887] 1908), Tugan-Baranovsky's *Theoretische Grundlagen des Marxismus* (1905), and, in the final part of his 1910 book, Boudin's *Das theoretische System von Karl Marx* ([1907] 1909).²¹ Kautsky and Boudin served as Charasoff's scapegoats for presenting, and then attacking, the position of the orthodox Marxists, while Tugan-Baranovsky is introduced as an "important political economist and former Marxist", who sees in Marx's law of value "only the disguised demand for the whole product of labour", and who has turned his back on Marx for the wrong reasons (1909: 26, emphasis added). By arguing that prices are determined merely "by custom and tradition" without any

¹⁹ See his remarks in Charasoff (1909: 65–67), where he relegates the demonstration of his method of price determination to an appendix.

²⁰ There are brief mentions also of other contemporary authors and their views on specific points, including Oppenheimer, Brentano, Eckstein, Hilferding, Lexis, Liefmann, Schmidt, and Sombart, but none of them plays an important role.

²¹ Boudin (Boudianoff), was a Russian-born lawyer and Communist activist based in New York City. The German edition of his *The Theoretical System of Karl Marx in the Light of Recent Criticism* (1907), translated by Luise Kautsky, was published in spring 1909. By attacking Boudin, Charasoff clearly meant to criticize also the views of Karl Kautsky, who had written a favourable foreword for the German translation.

recourse to values, and that the origin of profit is sufficiently explained by the existence of a physical net output, Tugan-Baranovsky had shown his incomprehension of the role of the labour theory of value in Marx's theoretical construction²²:

As regards profit, Tugan argues that its existence can be explained without any surplus value theory by considering that in the production process the mass of iron, corn, coal and so on that can be commanded by society is enlarged and thus a surplus is generated. As one can see, Tugan-Baranovsky firstly confuses the surplus product, that is, quantities of material goods, with the profit, a pure number. Secondly, he seems to be convinced that the surplus product must always exist, even when the economy is guided by wrong economic ideas: He assumes that prices are independent of values and simply determined by "custom and tradition". ... What fruits can such a critique of Marx bear? Only unripe ones certainly, if one does not even comprehend what Marx wanted to tell us with his theory of surplus value. (1909: 27)

What is it, then, that Marx "wanted to tell us with his theory of surplus value"? In Charasoff's understanding, the labour theory of value, while not needed for the determination of normal prices and the general rate of profits, is nevertheless indispensable for a proper understanding of the functioning of the capitalist economic system. In his reading, the role of the labour theory of value in Marx's theoretical construction is not primarily that of providing an explanation for the "origin" or "source" of profit, as countless readers of *Das Kapital* (including von Bortkiewicz) have maintained. Its main purpose in Marx's theoretical system is rather that of showing that a capitalist economy, as opposed to a "humane" one, achieves only imperfectly the ultimate purpose of the development of the human race, which consists in the saving of (human) labour time as a precondition for the attainment of the realm of freedom. The reason for this is that capitalist producers are interested only in the saving of the labour time for which they have to incur costs, that is, the variable capital (or "paid part" of the working day) and the constant capital (or "dead" labour), but not for the surplus labour time (or "unpaid part" of the working day). According to Charasoff, the labour theory of value is indispensable for the analysis of the development of the productive forces in economic systems that are subject to capital accumulation and technological change. In this connection, it is important to note that in Charasoff's understanding the "law of value" assumes a different role in the writings of the classical economists, Smith and Ricardo in particular, and in those of Marx:

The classics understood the law of value to mean that commodities exchange at their values, and they saw in it an unailing means for measuring and saving the entire labour expended in production. Marx pointed out that this is not so, that the labour embodied in commodities is indeed fully reckoned with, but that the not yet objectified living labour not appearing in value form eludes the value calculation. ... For the classical economists, the law of value was synonymous with the saving of the entire human labour time, but not so for Marx. If the classics said that the law of value rules on the market, they meant to assert by this the rationality of the capitalist market. Marx, on the contrary, understands by the law of value this peculiarity of the capitalist market, that not the labour itself, but the commodities, the

²² The final chapter of the 1909 book, entitled "Karl Marx to his bourgeois critics", is written in the form of an imaginary speech by Marx to an audience made up of capitalists. There, Charasoff puts into Marx's mouth the statement that Tugan-Baranovsky "merely poses as my disciple" and that his work is marred with "grave misunderstandings" (1909: 90–91).

labour time incorporated in them *alone*, is evaluated, whereas labour which does not appear in value form eludes the capitalist economy and assumes the form, not of expenses, but of profit. (1909: 30–31)

This unorthodox interpretation of the *analytical role* of Marx's use of the labour theory of value also explains Charasoff's at first sight rather perplexing attitude to the contributions of von Bortkiewicz (1906/07, 1907). He fully approved of von Bortkiewicz's "correction of Marx's fundamental theoretical construction" in terms of a simultaneous determination of prices and the rate of profits without any recourse to values—a solution, which he had indeed confirmed also by means of his own analysis. But he did not share von Bortkiewicz's assessment of Marx's theoretical achievements vis-à-vis those of the classical economists and in particular did not agree with his argument that the only point where Marx had improved on Ricardo's analysis was in showing the "origin" of profit in terms of a "withholding theory" (1909: 57 n.). Charasoff apparently regarded von Bortkiewicz as a "bourgeois" critic of Marx and even associated him with the critique of Marx's doctrines by members of the Austrian school:

Already twenty years ago the representatives of the economic science in the persons of Mr Zuckerkandl and Mr v. Böhm-Bawerk uttered the peculiar idea that Marx had presented his theory deliberately in an unclear and dialectically sharpened form, and just recently this judgement has been repeated anew and held against Marx by a University Professor from Berlin,²³ who maintained that Marx had taken a shine in the role of a Mephisto and meant to provoke and disconcert the learned world with captiously constructed sophisms. Can the critics reveal more clearly their distress and their inability to understand a thinker correctly than by advancing the reproach against Marx that he published his writings only in order to hide his thoughts and to fool his fellow men? (1909: ii)

Karl Kautsky, although his best-selling "primer" (1886) is recommended as "certainly one of the best and most popular expositions" of Marx's economics (Charasoff 1909: Preface), is also chided for having misrepresented Marx's views on the law of value and on the development of the productive forces under capitalism: According to Charasoff Kautsky wrongly attributed to Marx the view that capitalism develops the productive forces and the technology perfectly (1909: 39).

Charasoff's books contain no references to Russian sources, and no explicit references to neo-Kantianism and Tolstoyanism, or to the contemporary debates among German socialists on Tolstoy's pacifistic and anti-modernist ideas.²⁴ It is therefore difficult to reach clarity on Charasoff's stance on neo-Kantianism and Tolstoyanism and its importance for his work. If we associate Hermann Cohen's neo-Kantianism with the view that Kant's categorical imperative implies that humans must be seen as ends in themselves, rather than as means to an end,²⁵ then Charasoff's reference to a

²³ This is unmistakably a reference to a passage in Bortkiewicz (1906/07, I: 4).

²⁴ See Hanke (1993: 117–167) on the debates on Tolstoy's teachings among German socialists and Marxists. Kautsky, in his *Ethik und materialistische Geschichtsauffassung* (1906: 43) had referred to Eisner's neo-Kantian reinterpretation of Marxian ideas as "Gefühlssozialismus" {sentimental socialism}. The assessments of Tolstoy's novels and teachings among German socialists reached from "revolutionary" (Eisner) to "reactionary" (Kautsky).

²⁵ On Cohen's neo-Kantianism, see Hanke (1993: 126–128).

“humane economy” would seem to draw inspiration from both neo-Kantianism and from Tolstoy’s moral teachings. In addition, we can also relate Charasoff’s reading of Tolstoy²⁶ to Otto Buek’s understanding of the great Russian thinker (Buek 1905).²⁷ Buek’s essay, written against the background of the Russian revolution of 1905, combined Cohen’s Kant interpretation with a reading of Tolstoy’s plea for non-antagonism as a truly revolutionary ideal. In Buek’s reading, Tolstoy appears as a revolutionary anarchist, for whom man, as a free and self-determined being, is at the centre of his teaching: “Man *is to be* free, or he is *not* to be at all!” (1905: 541). The guarantor of freedom is reason, which “is not an extrinsic and imposed reason, but intrinsic, spontaneous, autonomous reason. Therefore, the freedom of man is his own law, the law of his being, which can be given to him by no one else than by himself, if he wants to be himself. Freedom is self-determination—is autonomy” (1905: 541). Tolstoy himself, by his own life, had put this ideal into practice. For Buek, however, it is an “irony of history” that Tolstoy, the “boldest advocate and partisan of the autonomy of ethical reason”, sought to ground this autonomy “in heteronomy, in the external determination through the bible and the new testament” (1905: 576). In Buek’s view, Tolstoy had committed a grave error by attempting to ground his teachings in Christian ethics (or rather, he showed through his own life that self-determination is possible and no external moral institutions are needed). Buek was aware of the fact, of course, that Tolstoy’s teaching of non-antagonism had been regarded by theoreticians of the social revolution, such as Kautsky and Lenin, as “reactionary”. Buek disagreed with this view: Tolstoy’s principle of non-antagonism is “the revolutionary principle *par excellence*, without any curtailments and concessions, but not of course as a romantic coup or a flirtation with bloody conspirator fantasies, but as *permanent revolution*, ... as the essence of man itself, revolution as method” (1905: 542). It would perhaps not seem too far-fetched to maintain that Charasoff agreed with these views of his close friend and that his notion of the “humane economy”, which he used in the title of his 1909 book, is related to the neo-Kantian ideas of the Marburg school and to Otto Buek’s reading of Tolstoy.

For Tugan-Baranovsky’s “ethical rationalization” of the theory of value and surplus value, Charasoff had nothing but scorn and contempt. However, he acknowledged Tugan-Baranovsky’s partly correct criticisms of Marx’s analysis of the tendency of the rate of profits to fall and of the crisis theory, and he agreed also with

²⁶ Charasoff outlined his views on Tolstoy in a letter to Robert Michels of 1914. There he noted that Tolstoy is often wrongly regarded as a thinker in the tradition of Jean-Jacques Rousseau, based on the rather superficial observation that both have advanced a critique of modern science and culture. In Charasoff’s reading, Tolstoy should rather be seen as an *antipode* of Rousseau: While the latter obliges the individual to defend the constitution, Tolstoy identified the progress of the human race directly with the progression of the individual towards the renunciation of violence and governance. Tolstoy, Charasoff maintains, substitutes for the Roman law as the foundation of society “Christian love”, by which he means not a sentimental feeling, but social relations of a kind in which society has renounced all demands for force and violence on the part of the individuals.

²⁷ On Buek’s contribution to the “anthropological turn” in Russian neo-Kantianism, see Dmitrieva (2010: 89–90).

his rejection of crises explanations that refer to general overproduction (1909: 82–83). Charasoff indeed showed that the profit rate could fall only if diminishing returns from the limited availability of natural resources (land in particular) à la Ricardo set in, or if real wages rose. Marx's law of the tendency of the rate of profits to fall, he concluded,

is no law at all ..., but a *plain error*. ... According to the principles of the capitalist economy, the profit rate can *never* fall. In order to arrive at a falling rate of profit, we must presume a new method of production that promises to the capitalist who applies it a lower rate of profit already in advance. (1910: 184, 192)

The disproof of Marx's law of the tendency of the rate of profits to fall invalidated not only his crises theory but more importantly, Charasoff maintained, his theory of history:²⁸ Marx's proposition that the fall of the rate of profit must inevitably bring about the breakdown of capitalism and "naturally" lead to socialism had been shown to be wrong:

With the falsification of the law of the falling rate of profit Marxism, insofar as it intends only to be a scientific doctrine and to predict the natural demise of capitalism independently of the human will and of a rational objective, has lost its most secure foundation and cannot be sustained anymore. (1910: 196)

In Charasoff's understanding, the materialist conception of history was an attempt to derive historical developments from purely objective, (quasi-)natural laws. With his dialectical materialism and his claim to have developed an economic theory of "scientific socialism" (as opposed to a "utopian socialism") Marx "wanted to turn political economy into a natural science" (1910: 326). But in this he was mistaken, Charasoff objected, because in political economy "nature and all its laws turn out to be not only matter, but material that can be further transformed by human will, and here the determinism of natural science is never completely applicable" (1910: 325).

Charasoff's critique of the materialist conception of history should not be misinterpreted as a rejection of Marx's economic theory and his entire theoretical system. He advanced the slogan: "Forward, going beyond Marx" (1910: 252), and from his disproof of the law of the falling rate of profit he by no means concluded that Marxism was all washed up. His conclusion was rather that, contrary to Marx's prediction, "socialism cannot emerge from the play of natural forces of its own volition, it must be brought about, must be *produced*" (1910: 324). A "revolution" was needed, but for Charasoff this was to consist not so much in the "socialization of the means of production" by turning the latter into state property, but rather in the development of a quest for autonomy on the part of the workers and an understanding of the necessity of surplus labour for reproduction and accumulation purposes and for the development of technology: "Every man, and consequently also the present worker, must under certain conditions of his existence, feel the need to operate the production process autonomously." (1910: 326).

²⁸ For the conceptual and analytical problems involved in the attempt to scrutinize Marx's theory of history, see Cohen ([1978] 2000).

In the final chapters of *Das System des Marxismus*, Charasoff criticized several statements in Boudin's book *Das theoretische System von Karl Marx* ([1907] 1909). He commented inter alia also on Boudin's statement that the classical economists had been guilty of circular reasoning, explaining prices from prices (1910: 290). Charasoff pointed out that Vilfredo Pareto had "characterized quite well the inadequacy of the classical production cost theories" (1910: 290) when he observed: "Par exemple, le coût de production du charbon de terre dépend du prix des machines, et le coût de production des machines dépend du prix du charbon, par conséquent, le coût de production du charbon dépend du prix de même charbon" (Pareto 1909: 241). Pareto's further observations Charasoff summarized succinctly as follows:

In the determination of prices it all boils down, according to Pareto, to the formulation of the production equations, where it turns out that the unknowns cannot be ascertained separately and each on its own, but only *simultaneously*. But since most authors, due to insufficient mathematical knowledge, were unable to solve a system of simultaneous equations, they invented the vague notion of *value* in order to forcibly break up the spell of the enchanted circle in which they were caught up. (Charasoff 1910: 290–291, note)

Charasoff approved of Pareto's statement, and then turned it against Boudin and Marx—but not in the sense of accusing the latter of having resorted to the labour theory of value as an inadequate *Hilfskonstruktion*. Unlike Pareto (and von Bortkiewicz), who argued that Marx and the classical political economists, had they known how to solve simultaneous equations systems, could have dispensed with the labour theory of value, Charasoff rather pointed out that with circular production relations not only the prices but also the labour values of commodities cannot be supposed to be known—they too first need to be determined from solving a simultaneous equations system:

But is not the same true also with Marx? Does not Marx always assume the value of the means of production to be given, but without ever showing anywhere how this value is to be determined? In Marx, the notion of a "reproduction base" is missing, and without this notion no value can be presumed to be known. (1910: 290)

In the Index of *Das System des Marxismus*, one also finds an entry on "Walras" (1910: 376). The reference is to page 121, where however there is no mention of Walras. However, it is precisely on this page that the system of simultaneous equations for the determination of the "original capital" is set out. Charasoff's reference to Walras is the more remarkable in view of his statement in the Preface, according to which he had developed the concepts of "production equations" and "production series" independently of the modern subjectivist theorists, based solely on his thorough reading of Marx's writings (1910: xiv). If this is true, Charasoff's page reference in the index would seem to imply that although Walras's equations in the *Elements* had not been a source of inspiration for him, he nevertheless clearly recognized, and acknowledged, the similarities between his own equations and Walras' formulation. It needs to be stressed, however, that Charasoff—unlike Dmitriev ([1904] 1974) and von Bortkiewicz (1906/07, 1921)—emphatically rejected the idea of integrating the classical production cost equations into the Walrasian system of equations, attempting thereby a "synthesis" of the objective and the subjective (or marginal utility) theories of value.

5 Contemporary Reactions

Karl Kautsky, the leading economic theorist of the German Social Democrats and editor of *Die Neue Zeit*, did not consider it necessary to react to Charasoff's books in print. The Austro-Marxist Otto Bauer briefly reviewed Charasoff's first book in the May issue 1909 of *Der Kampf*. According to Bauer, Charasoff had rightly pointed out that a central element of Marx's theoretical system is the proposition that capitalism fails to develop the productivity of labour to the highest possible degree, "because the introduction of labour-saving production methods is hindered by the fact that the capitalist only pays for necessary labour, but not for surplus labour" (1908/09a: 380). However, "this correct idea is presented by Charasoff in the clumsiest possible way", so that Marx's important proposition "is distorted by his unfortunate style of presentation to the point of making it appear ridiculous" (1908/09a: 380, 381). Bauer's rather superficial review makes no mention at all of Charasoff's analysis of prices and distribution. This prompted the author to send a reply to Bauer, which the latter refused to publish. He merely provided a summary account of Charasoff's letter in a single paragraph of the July issue of *Der Kampf*, in which he reported that "Charasoff complains about the fact that my review did not discuss his solution of the contradiction between the first and the third volume of *Capital* and his analysis of the relationship between the law of the falling rate of profit and the crisis theory" (1908/09b: 480). Charasoff, understandably, was disappointed, because he rightly felt that Bauer had failed to engage with the parts of his book which contained his most important findings.

In the following year, Bauer also reviewed *Das System des Marxismus* in the March 1910 issue of *Der Kampf*. There he conceded that Marx's transformation algorithm was "incomplete", because Marx had "refrained from showing how the formation of the prices of production must then in turn modify the rate of profit". But this "gap" cannot be filled, he argued, "by simply setting the prices of the basic products {Grundprodukte} equal to their values, and by thus falling back into the errors of the physiocrats" (1910/11: 237). Bauer's objection clearly missed the point of Charasoff's argument, which was to show the incompatibility of Marx's two invariance postulates ("sum of values = sum of prices" and "total surplus value = total profits"). Bauer also failed to understand Charasoff's proof of the proposition that the general rate of profits is determined by the production conditions in the industries producing basic commodities alone.²⁹

The 1910 book was reviewed at some length also by Conrad Schmidt in *Sozialistische Monatshefte*, the revisionist counterpart of Kautsky's *Die neue Zeit*. Schmidt opened his review with a complaint about Charasoff's "tricky sophistry" {verzwickte Rabulistik}, which "demands very hard work from the serious reader" (1910: 850). He then devoted the remainder of his review article to a lengthy defence of his own position on the labour theory of value. According to Schmidt, the labour theory of value must be jettisoned in order to avoid the errors and contradictions into which one is inevitably led by a further adherence to it. Schmidt also contended, without

²⁹ For a more detailed discussion of Bauer's review, see Mori (2007).

providing a proof, that all the important Marxian ideas can be derived by means of an analysis in terms of production prices only. There is no real discussion of Charasoff's work in Schmidt's review article.

A further "review" of Charasoff's 1909 book appeared in *Vorwärts*, the Party newspaper of the German Social Democrats, in the section "Literarische Rundschau". All that the reviewer, Gustav Eckstein, had to say on Charasoff's work is contained in the following passage:

If one wanted to note all the nonsense which is in this book, one would have to transcribe it; if one wanted to set it right, one would have to expound the entire economic system of Karl Marx. There is hardly any notion in Marx's theory which Mr. Charasoff has not misunderstood, hardly any doctrine which he has not distorted. (Eckstein 1909)

No substantial grounds are provided for this judgement.³⁰ Apart from Bauer, Schmidt, and Eckstein no other authors from the camp of the orthodox Marxists or the Revisionists felt compelled to react to Charasoff's books. These were ignored also by the "bourgeois" economists in Germany and Austria. The one contemporary economic theorist who could perhaps have recognized and appreciated Charasoff's important findings, Ladislaus von Bortkiewicz, apparently remained unaware of his books (which is rather surprising in view of the fact that around 1909/10 von Bortkiewicz was engaged in studying Kautsky's edition of Marx's *Theories of Surplus Value* for his articles on Marx's rent theory; he thus could be expected to be interested in the latest literature on Marx).

Even more disappointing were the reactions Charasoff received from Russian economists on his contributions: there were none! Tugan-Baranovsky, if he had noticed Charasoff's severe criticism of his views at all, chose to keep mum. The only contemporary Russian author who referred to Charasoff's books was Nikolai Bukharin in his *Economic Theory of the Leisure Class* ([1927] 1970), but his book, though completed already before the Great War, was published only much later.³¹

Charasoff was rather disappointed by the reception of his work, and in the following years made some further attempts to get some recognition for his findings. Upon his return to Zurich, he in October 1910 enrolled as a student of political economy, apparently with the intention of obtaining a degree. He pursued this goal for two years, taking classes, writing exams, and participating in seminars, but then suddenly terminated his studies after his second wife had poisoned herself with cyanide in 1912.³² His enrolment appears to have been an attempt to get in contact

³⁰ For completeness, it should be mentioned that there was also a short review of Charasoff's book of 1909 authored by Moride (1909), a young French economist who had just finished a doctoral dissertation on Marx and physiocracy.

³¹ Bukharin's book manuscript was completed and first published in German in 1913/14, but the first Russian edition appeared only in 1919, the first German translation of the Russian edition in 1926, and the first American edition in 1927.

³² This is reported in Vormundschaftsakten Kinder Charasoff (Stadtarchiv Zürich). No further information is provided on whether her death was caused by an accident (as a doctor of medicine she may well have worked with poisonous substances) or she had deliberately killed herself (and if so, why).

with academic economists and perhaps even to become one himself. A further attempt to get some recognition for his work he made in 1914, when he was invited by Robert Michels to contribute an entry on “Tolstoy” to the latter’s projected *Handwörterbuch der Soziologie*. In a letter to Michels, he offered to write in addition also an entry on “Marxism”, but with the outbreak of WWI Michels’ editorial project was suspended.

Apart from the fact that contemporary economists often lacked the necessary mathematical training for a proper understanding of his work (Mori 2007), there were also other reasons for the total neglect of his original ideas.³³ First, Charasoff’s choice of the publisher was not very conducive for ensuring a large readership, because the Hans Bondy Verlag existed only from 1908 to 1913 and the books had a very low print run. Secondly, Charasoff lacked any connections, both in academia and in Socialist/Marxist/Anarchist circles, in the German-speaking countries. His only contacts seem to have been those mediated by Otto Buek, who provided him not only with the link to Robert Michels, but in all likelihood was also responsible for the re-publication of extracts from Charasoff’s books in the literary-political journals *Die Aktion* and *Der Gegner* in 1918 and 1920/21. These extracts, however, did not include those parts of his books in which his innovative ideas are to be found.

6 Charasoff’s Return to Russia and His Lectures on Political Economy

In spring 1915, Charasoff travelled to Tiflis in order to take care of some financial business, leaving his four children behind in Zurich under the guardianship of Dr. Max Husmann, a Russian-born friend of the family, whom he had earlier supported in the establishment of a private school. His departure from Zurich may not have been unrelated, however, also to the fact that he was involved in a court procedure, because he had dismissed a housemaid after she had rejected his sexually motivated advances. When Dr. Husmann had no news from Charasoff for several months, he disbanded the family household and placed the four children with various Russian families in Zurich. For several years, he supported the children from his own pocket, but in spring 1919 he asked the Zurich municipality to take over the guardianship of the four children. In the following months, their legal custodian then arranged for their “home transport”, and by January 1920 all four children were “back home” in Tiflis (where they had never been before).

In the period from 1915 to 1921, Charasoff participated very actively in the literary and artistic activities of the futurist movement that had sprung up in Tiflis, and

³³ See Gehrke (2015a, b).

appears to have spent his time and energy mainly with writing, discussing, and interpreting novel forms of poetry.³⁴ In 1918/19, his (landed) property³⁵ was seized by the new (Menshevik) government, and in spite of teaching mathematics at the newly founded University he (and, from 1920, also his two younger children who lived with him)³⁶ suffered from poverty and deprivation. He nevertheless persisted in his literary activities and assumed the role of a leader of a group of poets until the high time of cultural life in Tiflis abruptly came to an end with the invasion of the Red Army and break-up of the Democratic Republic of Georgia in 1921. Like many artists and writers, Charasoff decided to move to Baku in Azerbaijan, where shortly afterwards he began to teach mathematics, physics, and an introductory course on theoretical political economy at the newly founded Polytechnical University.³⁷ In 1924, he authorized the publication (in Russian) of a transcript of his lectures from students' notes, revised, and corrected by himself (Kharazov 1924).³⁸ The book, which is extremely rare and seems not to have circulated widely, consists of some 250 pages and is divided into three parts, each consisting of eight chapters, which are entitled, respectively: "Part 1: The individual economy", "Part 2: Theory of capitalism", and "Part 3: World economy". Charasoff's *Introduction to theoretical political economy* is a rather wide-ranging, disorganized, and challenging book, because its contents go far beyond those of a typical introductory course on political economy. It contains implicit and explicit references to a wide range of scientific fields, including classic Russian and Western literature, philosophy, history, sociology, mathematics, physics, chemistry, psychoanalysis, and, of course, political economy. In Part 1, on "Individual economy", Charasoff introduced his students to the objectivist and the subjectivist theories of value and distribution, with remarks on Ricardo's differential rent theory, Senior's abstinence theory, Böhm-Bawerk's agio theory, and Jevons's labour supply curve based on individual labour-leisure decisions. Part 2, "Theory of

³⁴ Charasoff published several "transrational" or "zaum" poems and also provided psychoanalytical interpretations of Russian poetry, including an influential Freudian interpretation of Tatiana's dream in Pushkin's *Eugene Onegin* (Kharazov 1919a, b). On the literary scene in post-revolutionary Tiflis and Charasoff's activities, see Marzaduri (1982), Margarotto et al. (1982), Janecek (1996), Nikolskaia (1998, 2000), and Ram (2004).

³⁵ He still owned a factory which however had been shut down.

³⁶ The two elder children, Alexander and Arthur, left Tiflis and found employment in Azerbaijan.

³⁷ Interestingly, Charasoff also referred to his earlier contributions to political economy in an auto-graph letter from 1921, dedicated to the actor Nikolay Khodotov, at that time his neighbour in Tiflis. On the front page of this letter is a typed list of Charasoff's books, supplemented with the hand-written quotation (in German): "Regierte Recht, so läget Ihr vor mir im Staube jetzt: Denn Ich bin Euer König." (Schiller: Maria Stuart.) ["Ruling right, you'd lie before me now in the dust: for I am your king." (Schiller: Maria Stuart.)]. On the back page is a poem that he wrote (in Russian) to the memory of the recently deceased Peter Kropotkin, under the title "I won't resurrect".

³⁸ In the preface of the 1924 book, Charasoff notes that he corrected the students' notes of his lectures and "poked out" on his typewriter a compilation of text passages that had been taken from his German books, from a "Summary of Political Economy" published two years ago by a local publishing house, and from some unpublished manuscripts. No copy could be found of the "locally printed" "Summary of Political Economy" of 1922.

capitalism”, covers the social economy, capital, capital accumulation, labour organization, division of labour, and the distinction between the “capitalist” and the “humane” economy. It is introduced with some remarks on the ideas of Kant, Plato, and Tolstoy on the importance of science, education, and passive resistance. The third part, on “World economy”, contains remarks on the relation between the individual and the state, Friedrich List’s ideas on national economic development, Marx’s theory of exploitation, the distinction between production prices and values, a critique of the breakdown theory, and the relationship between Marxian and Aristotelian philosophical ideas.

The Preface, authored by Charasoff himself, is of some interest, because in it he refers to his German books and their reception. It opens with the statement (and citation): “*Moi, je ne suis pas marxiste. K. Marx*” (Kharazov 1924: I). The dominant theme in Charasoff’s Preface is his relationship to Marx, to Marxism, and to various Marxian economists. He approaches this theme by first discussing Bukharin’s references to him in (the German edition of) *The Economic Theory of the Leisure Class* ([1927] 1970). Charasoff notes that Bukharin had referred to him as a “benevolent critic” of Marx,³⁹ whereas the “bourgeois economist” Karl Diehl, in his entry on “Marxism”, had called him a “Marxist”. Charasoff then characterizes himself as someone who has thoroughly studied Marx and holds him in the highest esteem, but this does not prevent him from criticizing Marx’s erroneous views. In *The Economic Theory of the Leisure Class*, Bukharin ([1927] 1970: 56) argued that the Austrian school, with its emphasis on the individual’s consumption choices in a static framework, is ill suited for tackling problems of social dynamics, and he refers approvingly to Charasoff’s statement that the representatives of the Austrian school “are incapable of even formulating, to say nothing of solving, such fundamental questions as the evolution of technique in a capitalist society, the origin of capitalist profit etc.” (Charasoff 1910: 19). Bukharin ([1927] 1970: 127) also quoted approvingly Charasoff’s criticism (1910: xxii) of Böhm-Bawerk’s explanation of profit in terms of the overestimation of present goods. However, he had failed to engage with the issue that Charasoff considered to be of central importance in Marx’s theoretical system:

In this connection it is of course important to me to discuss the competent polemics of Bukharin, in particular because in his great work on historical materialism⁴⁰ he has remained silent on a topic that greatly interests me, namely on the reduction of the working day as the indispensable precondition of the realm of freedom. (Kharazov 1924: 4)

In spite of Bukharin’s approving remarks on some of his statements on the Austrian school, Charasoff was rather disappointed that the latter, like all his other commentators, had not engaged with his fundamental critique of Marx’s materialist conception

³⁹ Charasoff refers to a footnote in the German edition of Bukharin’s *Politische Ökonomie des Rentners*, which corresponds to the following note in the American edition: “Even the “benevolent” critics fail to understand this; cf. George Charasoff, op. cit., pp. 260, 26” (Bukharin [1927] 1970: n 41).

⁴⁰ The reference to Bukharin’s *Historical Materialism* ([1921] 1926) shows that Charasoff also after 1915 continued to study the recent literature on Marx.

of history. To the best of my knowledge, Bukharin made no response to Charasoff's remarks—and probably never saw a copy of his “Baku lecture notes” of 1924.

In 1925, Charasoff appears to have moved to Moscow, where he gave two invited lectures on the psychoanalytical interpretation of literary works at the newly founded Russian Psychoanalytical Society. In the same year, he also published a paper on the refutation of Einstein's relativity theory, which drew some approving comments from the group of “mechanist physicists”. According to a notice in *Izvestia*, Professor Kharazov died on 5 March 1931 near Zaporizhzhia, during a visit of the energy institute Dnieprostroy, which was overseeing the construction of a dam and a hydroelectric power station at the Dnieper.

7 On the Further Reception of Charasoff's Contributions in the West

Excerpts from Charasoff's two books, comprising altogether seven full chapters, were published in 1918 and 1920 in the literary-political journals *Die Aktion* and *Der Gegner*. However, these re-publications probably did not contribute to making his original findings better known among economists, because these texts appeared in non-scientific outlets and did not include the relevant parts of his books containing his novel concepts and analytical findings. Charasoff seems not to have been informed about these re-publications. He probably remained unaware also of some critical comments on parts of his books that were published in Germany in the 1920s and 1930s. He certainly missed the comments by Peter (1933, 1934) and Klimpt (1936), but it is very likely that he remained unaware also of the critical discussions of his contributions by Moszkowska (1929) and Grossmann (1929, [1932/33] 2019b).

Moszkowska⁴¹ discussed Charasoff's analysis of the law of the falling rate of profit and his critique of Marx's crisis theory in her book *Das Marx'sche System. Ein Beitrag zu dessen Ausbau* (1929). However, she made no attempt to provide a serious discussion of Charasoff's determination of prices and the rate of profit. She merely remarked that his calculations are “even more complicated than Tugan-Baranovsky's”, and that “he claims to be able to examine the exchange relations without any relation to Marx's theory” (1929: 31). She then concluded with the observation that, “although our ways are different, the mathematical results coincide” (1929: 31). In her analysis of Marx's law of the falling rate of profit, Moszkowska returned to Tugan-Baranovsky's formulation of the problem and also followed him in constructing a numerical example in value terms. Her remarks on Charasoff's concept of “original capital” (*Urkapital*) show that she failed to understand its analytical role

⁴¹ Natalie Moszkowska, of Polish descent, came to Zurich in 1908 in order to study political economy. She wrote her doctoral dissertation (published in 1917 but completed already in 1914) on workers' savings banks in the Polish coal and steel industry under Heinrich Sieveking's supervision. It seems very likely that she and Charasoff met in Sieveking's seminars at the University of Zurich. On Moszkowska's life and work, see Howard and King (2000).

(1929: 111), and with regard to his discussion of Marx's crisis theory, Moszkowska criticized Charasoff for his neglect of the disproportionality aspect (1929: 139–141).

The originality of Charasoff's ideas was not recognized also by Grossmann, who discussed his critique of Marx's crisis theory against the background of his own "breakdown theory" in his *Accumulation and Breakdown of Capitalism* ([1929] 1992), and also, much along the same lines, in two further articles ([1929] 2019a; [1932/33] 2019b). Grossmann argued that Charasoff had omitted to take into account the repercussions of a rising organic composition of capital on the pace of accumulation and disregarded the resulting demand problems ([1932/33] 2019b: 381). In his critical discussion and attempted refutation of earlier contributions to the so-called transformation problem, Grossmann (2017) did not consider it necessary to discuss also Charasoff's contribution and concentrated only on the contributions of Bauer, von Bortkiewicz, and Moskowska.

In his habilitation thesis,⁴² Hans Peter sought to reconcile the objective and the subjective theories of value and distribution by integrating the "Dmitriev-Bortkiewicz" production price equations into the Walrasian system of equations. Despite his mathematical training, Peter also did not notice Charasoff's original concepts and findings and confined his comments to Charasoff's objections to Marx's law of the falling rate of profit, which he claimed did not go beyond those of Tugan-Baranovsky⁴³:

Tugan and Charasoff object to Marx's statement that the rate of profit must fall when the productivity increases. It is on the contrary with a decrease in productivity that the fall of the rate of profit is associated. With increasing productivity, the rate of profit must rather rise. – It suffices for us to note that both indeed show with their critique the weak point in Marx's theory. The examples on which they base their argument are not chosen deftly and cannot provide a sufficient foundation for the general justification of a positive statement. What they show is only that a parallel movement of productivity and the rate of profit is possible, but not that it is necessary. (1934: 110)

Charasoff's original ideas were not recognized as such also by the mathematician and economist Werner Klimpt,⁴⁴ who was one of the few authors who discussed Charasoff's concept of "original capital" {*Urkapital*}. But also Klimpt (1936: 119), "despite his mathematical background, ... rejected Charasoff's device as highly peculiar, complicated, and confused. Apparently, neither Klimpt nor his doctoral referees Emil Julius Gumbel and Emil Lederer understood Charasoff's innovations" (Parys 2014: 994).

Charasoff's path-breaking work also received no attention in the wake of the discussions on Marx's transformation problem in the 1940s and 1950s, after the essence of von Bortkiewicz's 1906/07 and 1907 contributions had been made available to English-speaking readers by Sweezy (1942). However, as Mori (2007) has

⁴² Peter's thesis was submitted at the University of Tübingen in 1928 and then published in three parts as *Grundprobleme der theoretischen Nationalökonomie* (1933, 1934, 1937).

⁴³ Peter refers to Tugan-Baranovsky (1901, 1905) and Charasoff (1909, 1910).

⁴⁴ Klimpt had studied mathematics and economics in Berlin and Heidelberg in the 1920s. He submitted his doctoral dissertation, published subsequently as Klimpt (1936), at the University of Heidelberg in 1931.

noted, a rather direct line of development can be said to exist, *from a purely analytical point of view*, from Charasoff's contributions to the work of the Japanese scholars Shibata (1933) and Okishio (1961). As Mori shows, there are some striking parallels, with regard to the methods of proof and the findings, between Charasoff's contributions and theirs—but the two Japanese Marx scholars were of course also unaware of his work. Moreover, Shibata's contribution shared with Charasoff's the same fate: it also went completely unnoticed until many years later, both in Japan and in the English-speaking world.

8 The (Re-)Discovery of Charasoff's Contributions in the 1980s

It remains for us to note that in the 1980s the scientific reputation of Charasoff suddenly started to rise, thanks to the (re-)discovery of his economic contributions by Egidi and Gilibert (1984, 1989). In the following years, many other authors studied and appraised Charasoff's work, including Duffner and Huth ([1987] 2013), Kurz (1989), Kurz and Salvadori (1993, 1995, 2000), Stamatidis (1999), Marchionatti and Fiorini (2000), Mori (2007, 2011), Parys (2014, 2018), and Marchionatti (2019). Excerpts from his books have been published by Marchionatti (1998) and also, in an English translation, by Egidi and Gilibert (1989).⁴⁵ It is now widely recognized that Charasoff developed some of the tools and analytical devices that were later rediscovered, independently of him, by von Neumann, Okishio, and Sraffa. His concept of "*Grundprodukte*" bears a close resemblance to Sraffa's "basic commodities", his notion of "*Reproduktionsbasis*" is related to Sraffa's concept of a "subsystem", labour values are computed via an infinite dated labour series, the duality properties of the price and quantity system, emphasized by von Neumann, are clearly perceived by him, and the essential elements of the "Okishio theorem" are already clearly stated by him.

More recently, Charasoff's pioneering work has been recognized and appraised also by scholars in Russia, most notably by Klyukin (2007, 2008), who has placed his contributions in the context of the economic circular flow analyses in the tradition of Dmitriev and von Bortkiewicz, and has also (re)claimed their "Russian heritage".

⁴⁵ Independently of Charasoff, a number of similar findings, including a proof of the duality properties of linear economic systems, have been presented in papers published between 1911 and 1913 by Father Maurice Potron, a French Jesuit and trained mathematician. For Potron's contributions, see Bidard and Erreygers (2010).

9 Concluding Remarks

Georg von Charasoff was an intellectual of great versatility with a sound academic background in physics and mathematics, who could draw on a thorough study of the major Western philosophical and economic works, and who systematically acquainted himself also with the latest developments in several other scientific and artistic fields. In his work on Marx's economic theory he was able to combine a lively literary writing style with a rigorous mathematical analysis, and to come up with important new insights and findings.

Prior to the publication of his two books, Charasoff had studied Marx's economic works and those of the classical political economists intensively for many years. These studies had led him to embark on a publication project already around 1902—a project that at least up until 1907/08 was still closely linked to a discussion and elaboration of Tolstoy's philosophical ideas and intended to result in a book publication in Russia(n). It was apparently only in 1907/08, when Chertkov's support for a Russian publication turned out to be insufficient and an article he had submitted to Kautsky's *Die Neue Zeit* had been rejected, that Charasoff abandoned the idea of a publication in Russia and resorted to the plan of publishing his ideas in the form of books in German, helped in the translation by Otto Buek. His friendship with Buek and his earlier allegiance with Tolstoyanism (if such it was) might suggest that he endorsed some neo-Kantian variant of ethical Marxism, but of this there are no signs in his books. On the contrary, he distanced himself emphatically from the attempts at relating Marx's economic theories to ethical considerations, and in the dispute with the Revisionists, led by Bernstein in Germany and Tugan-Baranovsky and Struve in Russia, he sided with the orthodox Marxists.

With his books, Charasoff sought to contribute to the then ongoing debates among German, Russian, and German-Russian Marxists—but the German orthodox Marxists (Bauer, Kautsky, etc.) were unable to recognize his innovations, the German revisionists (in the person of Schmidt) were interested merely in defending their own position, and Tugan-Baranovsky and other Russian economists and Marxists, with the notable exception of Bukharin, ignored him.

A number of reasons can be given for the limited recognition that his work received in the German-speaking countries. First, Charasoff had no academic position and no connections to economic theorists that were able to appreciate his work. Secondly, he used mathematics but not a mathematical method of exposition, so that the few contemporary mathematical economists were not drawn to study his books.⁴⁶ Third, his unfortunate choice of the publisher and his rather polemical writing style were not conducive to attracting many readers to his books.

Even more obstacles were standing in the way of a proper recognition of his work in Russia. Among the exiled Russian revolutionaries in Germany and Switzerland, Charasoff apparently was not well connected, and he made no efforts to participate in the Russian economic discourse once he had abandoned his earlier publication

⁴⁶ The underlying mathematical reasoning and proofs had to be reconstructed; see Egidi and Gilbert (1984, 1989), Duffner and Huth ([1987] 2013), Mori (2011, 2016), and Parys (2014).

plans with Chertkov. Moreover, he also lacked connections to academic economists in Russia and in particular to the mathematical economists at the Universities of Moscow and St. Petersburg. When he later published the lecture notes of his course at the University of Baku, both the wide-ranging character and disorganized structure of the book as well as the changed intellectual and political climate stood in the way of attaining some attention for his contributions.

Finally, some role for his failure to obtain the recognition for his innovative economic ideas that the latter undoubtedly deserved must certainly be accorded also to Georg von Charasoff's idiosyncratic, self-centred, and difficult personality.

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⁴⁷ The location of the archive sources used in this paper is as follows: the "Vormundschaftsakten Kinder Charasoff" are held at the Stadtarchiv Zürich, the Kautsky Papers at the International Institute of Social History (Amsterdam), the Chertkov Papers at the Russian State Archive of Literature and Art (*RGALI*, Moscow), and the Roberto Michels Papers at the Fondazione Luigi Einaudi (Torino).

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