European Statistics, Russian Numbers, and Social Dynamics, 1861–1914

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Recent analyses of the economic impact of the abolition of serfdom mark a major return to quantitative approaches in the economic and social history of Russia. Tracy Dennison, Steven Nafziger, and Ekaterina Zhuravskaya, among others, make wide use of data produced by the *zemstvo* (provincial elected assembly), the Central Statistics Committee (TsSK), the Ministry of Agriculture, and local governors. These figures are particularly crucial with regard to the debate over the impact of the abolition of serfdom and the economic dynamics of tsarist Russia between 1861 and 1914. Indeed, the authors are too quick to consider the data reliable and only concerned about which statistical method should be used. Markevich and Zhuravskaya claim outright: "Historians agree that the quality of the late imperial statistics and governor reports is rather high."[1] Nafziger makes a similar statement regarding zemstvo statistics, which he declares are fully reliable sources.[2] Dennison and Nafziger add: "Zemstvo publications offer a unique window into rural economic conditions in the post-1861 period, but western scholars have only begun to explore them. We consider these household surveys, other zemstvo publications, research by central government and provincial statistical authorities (including the 1897 census), and various secondary sources to develop some "stylized facts" about rural living standards in Iaroslavl′ and Vladimir provinces in the post-1861 period."[3]

Indeed, none of these approaches makes any distinction between sources and data: as in the natural sciences, figures are accepted as such and any critical scrutiny of data as historical sources—that is, using historical and not statistical methodology—is qualified as deconstructionism. One of the central statements of these works consists in opposing "facts" to "opinions," the former being identified with statistical data.[4]

1. Andrei Markevich and Ekaterina Zhuravskaya, "Economic Effects of the Abolition of Serfdom: Evidence from the Russian Empire" (unpublished paper, 2015).

2. Steven Nafziger, "Land Commune and Factor Market Imperfections: Micro Evidence from Late 19th Century Russia" (unpublished paper, 2005); Steven Nafziger, "Peasant Communes and Factor Markets in Late Nineteenth-Century Russia," *Explorations in Economic History* 47, no. 4 (October 2010): 381–402; "Serfdom, Emancipation, and Land Inequalities. New Evidence" (unpublished paper, 2013).

3. Tracy Dennison and Steven Nafziger, "Micro Perspectives on 19th Century Russian Living Standards" (unpublished paper, 2007) available at http://web.williams.edu/Economics/wp/nafzigerMicroLivingStandards_WilliamsWorkingPaper_Nov2007.pdf (last accessed January 19, 2017).

4. See: Thomas Piketty, *Le capital au XXIe siècle* (Paris, 2013), introduction and conclusion.

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This article aims first to include this approach and opposition between "facts" (identified with quantities) and "opinions" in a debate that has been going on since the 18th century about the origin, value and meaning of social and economic statistics. The identification of social "facts" with quantities and the separation between science based on quantities and opinion based on qualities, have been part of this debate.

The second aim is to include Russia in this international debate; the identification of social facts with quantities, already contested in western Europe, took on a peculiar social and political significance in post-abolitionist Russia. In this instance, central institutions (the Central Statistical Committee, the Ministries of Finance and Agriculture), the *zemstva*, academics, and imperial societies linked the debate over methods in the social sciences to social reforms. From this perspective, knowledge was as much an analytical as a normative tool.

In this article, I would like to transcend the opposition between the so-called positivistic and deconstructionist approaches, taking instead the social construction of data as an object of investigation in itself. It can help to explain the interplay between knowledge, politics, and socio-economic practices. The question is not whether zemstvo statistics were reliable in terms of today's statistical definitions. Instead, we seek to understand why and how data were produced and their impact on political and social dynamics.

After recalling the main points of the historiographical debate, I will summarize the European debates over social facts and statistics, before moving on to Russia. I will present the debate concerning social and economic statistics among academicians, and show how it resonated in zemstva activities. We therefore need to start with the construction of information (later data) itself. I will then explain in detail how questionnaires were developed, and how space (land distribution), time, and harvests were measured. These insights will help us to understand not so much statistical "errors," but rather how different actors (local priests, bureaucrats, statisticians, ethnographers) interacted with the peasantry. Discrepancies, possible convergences, and mediation between different notions of time, space, wealth, and health were a social and intellectual construct that had major implications for the economic and social policies to be adopted.

Social Facts and Data

As we have mentioned, recent quantitative analyses of tsarist Russia quickly qualify zemstva's and central tsarist institutions' data as reliable. Indeed, all these sources have been made the object of detailed scrutiny, in soviet as well as in western historiography. An initial debate arose over the relevance of zemstvo data and the possibility of using it as such. All the authors agreed on the need to take into account the relatively subjective construction of the data, its local specificity and the difficulty in determining how representative it actually was. These warnings did not prevent historians from using the data, although they were alerted to the possible pitfalls.[5] At the opposite extreme,

5. Some examples in a huge bibliography: Andrei M. Anfimov, *Krest'ianskoe khoziaistvo Evropeiskoi Rossii, 1881–1904* (Moscow, 1980); Iurii P. Bokarev, *Biudzhetnye obsledovaniia*

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some authors took the radical position that historical statistics, although corrected, always expressed tensions and representations of their authors and institutions and could just not be used to quantify social and economic historical dynamics.[6]

A second debate focused on statistical investigations and statisticians as historical actors. The aim of these studies was not so much to deconstruct statistics but to show the historical, social, and political context in which they were produced and thus assess their impact on the social and political activity of the zemstvo and central statisticians and, indirectly, on the peasantry itself.[7]

This paper supports the latter position, emphasizing context, but without forgetting the first debate. Indeed, this debate about statistics and social facts began at least in the seventeenth century; some have described it as the invention of modern fact.[8] Experimental moral philosophy (from William Petty to David Hume), conjectural history (the Scottish Enlightenment from Dugald Stewart to John Stuart Mill), political economy (classical economics in Britain and France) and statistics (from Jacques Bertillon to Adolphe Que-

krest'ianskhikh khoziaistv 20-kh godov kak istoricheskii istochnik (Moscow, 1981); Viktor P. Danilov, *Sovetskaia dokolkhoznaia derevnia: Naselenie, zemlepol'zovanie, khoziaistvo*, (Moscow, 1977); Viktor P. Danilov, *Sovetskaia dokolkhoznaia derevnia: Sotsial'naia struktura, sotsial'nye otnosheniia* (Moscow, 1979); Ivan D. Koval'chenko, *Russkoe krepostnoe krest'ianstvo v pervoi polovine XIX v.* (Moscow, 1967). Emilia I. Indova, "Urozhai v tsentral'noi Rossii za 150 let (vtoraia polovina XVII-XVIII v.)," *Ezhegodnik po agrarnoi istorii Vostochnoi Evropy za 1965* (Moscow, 1970): 141–55; Liudmila S. Prokof'eva, *Krest'ianskaia obshchina v Rossii vo vtoroi polovine XVIII-pervoi polovine XIX v (*Leningrad, 1981).

6. Yanni Kotsonis, *States of Obligation: Taxes and Citizenship in the Russian Empire and Early Soviet Republic* (Toronto, 2014); Kotsonis, *Making Peasants Backward: Agricultural Cooperatives and the Agrarian Question in Russia, 1861–1914* (London, 1999); Igor Khristoforov, *Sud'ba reformy: Russkoe krest'ianstvo v pravitel'stvennoi politike do i posle otmeny krepostnogo prava (1830–1890 gg.)* (Moscow, 2011).

7. Bokarev, *Biudzhetnye obsledovanie*; Al'bert L. Vainshtein, *Oblozheniia i platezhi krest'ianstva v dovoennoe i revoliutsionnoe vremia* (Moscow, 1924); Mikhail V. Ptukha, *Ocherki po istorii statistiki v SSSR*, 2 vols. (Moscow, 1955, 1959); Timon V. Riabushkin, V.M. Simchera, E.A. Mashikhin, *Razvitie statisticheskoi nauki v SSSR. Voprosy metodologii* (Moscow, 1985); Esther Kingston-Mann, *In Search of the True West: Culture, Economics, and Problems of Russian Development* (Princeton, 1999); Alain Blum and Martine Mespoulet, *L'anarchie bureaucratique: Pouvoir et statistique sous Staline* (Paris, 2003); David Darrow, "Statistics and 'Sufficiency': Towards an Intellectual History of Russia's Rural Crisis," *Continuity and Change*, 17, no. 1 (May 2002): 63–96; Steven Hoch, "Famine, Disease and Mortality Patterns in the Parish of Boshervka, Russia, 1830–1912," *Population Studies*, 52, no. 3 (1998): 357–68; Steven Hoch, "On Good Numbers and Bad: Malthus, Population Trends and Peasant Standard of Living in Late Imperial Russia," *Slavic Review*, 53, no. 1 (Spring 1994): 41–75; Alessandro Stanziani, *L'économie en revolution: Le cas russe, 1870–1930* (Paris, 1998); Alessandro Stanziani," Statisticiens, zemstva et État dans la Russie des années 1880," *Cahiers du monde russe et soviétique* 32, no. 4 (October–December 1991): 445–67; Alessandro Stanziani "Les statistiques des récoltes en Russie, 1905–1928," *Histoire et mesure* 7, no. 1/2 (1992): 73–98; Alessandro Stanziani, "Les enquêtes orales en Russie,1861–1914," *Annales. Histoire, Sciences Sociales* 55, no. 1 (2000): 219–41 ; Robert E. Johnson, "Liberal Professionals and Professional Liberals: The Zemstvo Statisticians and their Work", in Terence Emmons and Wayne S. Vucinich, eds, *The Zemstvo in Russia: An Experiment in Local Self-Government* (Cambridge, 1982), 343–63.

8. Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (Chicago, 1998).

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telet and then Karl Pearson)—converged into a single epistemological enterprise giving birth to the "empirical fact." Pierre Simon Laplace (1749–1827) is generally considered one of the fathers of (inverse) probabilities, mainly applied to astrophysics. The application of probability to social sciences was mostly due to the Belgian Adolphe Quetelet (1796–1874). As a follower of the law of large numbers, he supported the general census rather than studies using what he considered an arbitrary selection process. He was reluctant to group together data that he believed was not homogenous. Social scientists were thus encouraged to gather as much as data as possible. Quetelet's name is closely tied to the notion of the average man: the statistical average was turned into an ideal social type, such as the average height of a soldier, the average income, and/or age of a criminal or drunk. He used probabilities to estimate the propensity of the average man to commit a crime. Quetelet saw in the regularity of crime the proof that statistical social laws are true when applied to society as a whole, although they may be false for a single individual.[9] This approach reflected the nineteenth-century positivistic ideal of a science capable of managing society; the liberal notion of equality is also reflected in the average man. In principle, no a priori distinctions are made between individuals but their social attitudes, as "scientifically" proven, can prevent society from deviance. Deviations from the average (and from "normality," as Emile Durkheim added in 1895) cancel each other out when the number of cases considered is large enough. In this view, statistics confirmed the stability of bourgeois society (Quetelet wrote about this immediately after the 1848 revolution), while trying to identify regularities in the apparent chaos following the fall of the *Ancien Régime* and the industrial revolution.[10]

However, since the 1860s and even more during the last quarter of the nineteenth century, increasing criticism of positivism led to attacks against social and statistical determinism. Individual free will was opposed to "social laws" and statistical averages; Wilhelm Lexis (1837–1914) and Georg Friedrich Knapp (1842–1926) in Germany and their students, as well as most Russian statisticians, criticized universal statistical laws. They identified national paths of economic and demographic growth and while stressing the role of individual freedom in social dynamics. According to Knapp, as every individual is different from the others, the notion of variation should replace that of statistical error.[11]

Closely linked to national specificities, regional and monographic analysis enjoyed increasing success from the last quarter of the nineteenth century onwards. These studies were mostly developed in Germany and Russia, where federalism (in the former case) or local governments (the zemstva, in the latter case) encouraged studies of local economic conditions. From a theoretical point of view, however, these studies raised a serious problem: in the absence of a regular, homogenous census, academic statisticians were rather skeptical

9. Adolphe Quetelet, *Du système social et des lois qui le régissent* (Paris, 1848).

10. Theodore Porter, *The Rise of Statistical Thinking, 1820–1900* (Princeton, 1986); Alain Desrosières, *La politique des grands nombres: Histoire de la raison statistique* (Paris, 1993).

11. Georg Friederich Knapp, *Theorie des Bevölkerungs-Wechsel: Abhandlungen zur angewanden Mathematik* (Brunswick, 1874).

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about inferences drawn from samples obtained most often by (usually local) administrative statistical offices. Roughly outlined by the Norwegian statistician Anders Kiaer (1838–1919) in the 1890s, but not fully developed until 1934 by John Neyman, traditional histories of statistics tell us the theory of sampling. In fact, the theory and practice of sampling was first developed in Russia, where several statistical offices of local self-government organizations (the zemstva) began producing monographic enquiries concerning the local population in the 1870s. Most of the studies were "partial" in that they pertained to only part of the population. In the following years, the best method for selecting samples was discussed at the meetings of Russian statisticians and in their main publications. The first solution envisaged was completely random selection; unfortunately, this approach required an up to date general census to test how representative it actually was.[12]

In Russia, these debates took place in a particular context: the period of the "great reforms" and its aftermath in which the political economy played a public role. Almost all Russian economists opposed the methods of the natural sciences as well as of economics, which was considered a social science.[13] From this point of view, they criticized not only Léon Walras and neoclassical economics, but also Auguste Comte's general positivistic paradigm. According to Aleksandr Chuprov, induction alone, based on empirical observation, cannot determine economic laws inasmuch as social events, unlike natural sciences, are related to multiple and often concomitant causes.[14] In his view, statistics could be used as a scientific tool only if they complied with Adolphe Quetelet's law of large numbers.

This was not the opinion of Iulii Ianson, a professor of economics and statistics in Saint Petersburg, who strongly criticized Quetelet's theory: "A great number of observations of doubtful homogeneity are of uncertain scientific and statistical value." Ianson maintained that social phenomena are not the result of multiple, simple causes but of webs of "complex, multiple causes." He thus criticized Quetelet's notion of the *individu moyen* and more generally of any statistical mean. He drew a distinction between "typical" and a-typical" (arithmetical) averages. The former results from variations of the same object, such as the heights of a building at different times. The latter expresses the variation of different objects, like the heights of buildings on a given street. Ianson considered the first type of average a useless fiction for social science. He therefore adhered to the theory of probability in its classical version (La-

12. Stephen Stigler, *The History of Statistics: The Measurement of Uncertainty before 1900* (Cambridge, Mass., 1986).

13. Aleksandr I. Chuprov, *Kurs politicheskoi ekonomii (*Moscow, 1885, reprint, Berlin, 1924), 1, 2, 20; Andrei A. Isaev, *Nachala politicheskoi ekonomii,* 3rd ed. (Saint Petersburg, 1898 [1894]), 23; Aleksandr I. Skvortsov, *Osnovaniia politicheskoi ekonomii* (Saint Petersburg, 1898), 26; Sergei N. Bulgakov, *Kapitalizm i zemledelie,* 2 vols. (Saint Petersburg 1900), 1:319; Nikolai Karyshev, "Predmet i zadachi politicheskoi ekonomii," in Nikolai.I. Kareev, ed., *Vvedenie v izuchenie sotsial'nykh nauk. Sbornik statei* (Saint Petersburg, 1903), 78; Aleksandr Bogdanov, *Nachal'nyi kurs politicheskoi ekonomii* (Moscow, 1904 [1897]), 4; Mikhail I. Tugan-Baranovskii, *Osnovy politicheskoi ekonomii,* 2 vols. (Saint Petersburg, 1905–1911), 1:1.

14. Isaev, *Nachala*, 26–29; Chuprov, *Kurs politicheskoi ekonomii*, 3, 17, 20, 37, 40, 45.

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place) and to the subsequent theory of sampling as a level of representativeness starting from a given population.[15]

At the turn of the nineteenth century, probability theory underwent significant development, particularly in Russia, where several authors gave birth to a new approach—induction in probability—based on ex-ante probability and Bayesian theory.[16] These improvements had considerable influence on the theory of sampling: hypotheses had previously been made to justify the selection of an area, a village, or households. Henceforth, the use of random selection became the best way to avoid observer bias.[17] How were these different approaches to statistics used in local enquiries?

What about Russia?

A considerable number of surveys and studies of ethnography and statistics were produced in Russia between 1861 and 1914. Intellectual societies, universities and academies, the state apparatus and the zemstva all contributed to the flowering of these studies. Several factors justified this interest: the abolition of serfdom in 1861, then the "agrarian question" and the political and intellectual debates related to them. Central and local administrations were therefore ready to finance surveys with fiscal, military, or socioeconomic aims.[18]

At the same time, this trend would have been inconceivable without the influence of Europe. This influence was expressed in epistemology and scientific theories, as well as in the new role science and scientific rhetoric was called to play in the public sphere.[19] Thus, surveys and investigations "in the field" gained increasing importance in ethnography, sociology, and statistics. The production and interpretation of these sources raised specific problems. Regarding production, two solutions were available: either statisticians organized their own expeditions or they used a network of correspondents. The first solution could be practiced only on a limited scale, whereas the second was indispensable for large or reiterated studies. The first option was already widespread in the eighteenth century and provided a detailed picture of a given area at a given moment. The second solution was linked to other uses of surveys: taxes, military planning, and the study of social differentiation. Expeditions became widespread at a time when public policies focused on territorial exploration and expansion; surveys enjoyed increasing success with the rise of the welfare state. Through expeditions, scientists oversaw

15. Iulii Ianson, *Teoriia statistiki*, 3rd ed. (Saint Petersburg, 1886).

16. Alessandro Stanziani, "Statistics", in John Merriman and Jay Winter, eds., *Europe 1789–1814: Encyclopedia of the Age of Industry and Empire* (Detroit, 2006).

17. Vasilii A. Kosinskii, *K agrarnomu voprosu* (Odessa, 1906), 46.

18. Stanziani, *L'économie en révolution*; Martine Mespoulet, *Statistiques et révolution en Russie: Un compromis impossible*, 1880–1930 (Rennes, 2001); Wayne Vucinich, ed., *The Zemstvo in Russia: An Experiment in Local Self-Governement* (Cambridge, 1982).

19. Eric Brian, *La mesure de l'Etat: Administrateurs et géomètres au XVIIIe siècle* (Paris, 1994); Theodore M. Porter, *The Rise of Statistical Thinking, 1820–1900* (Princeton, 1986); Donald MacKenzie, *Statistics in Britain, 1865–1930: The Social Construction of Scientific Knowledge* (Edinburgh, 1981); Desrosières, *La politique*.

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the collection of information but they had little influence on economic and social policies. Surveys were mostly linked to public policies, but precisely for this reason, political and administrative representatives were eager to keep control over them. Reiterated analyses and surveys implied a very different relationship not only between administrative elites and statisticians but also between central and local powers. For example, Britain experienced an extremely fragmented administrative organization, with uncoordinated local studies and statistical units. France had pursued strong centralization since pre-revolutionary years and even more under Napoleon. Indeed, local statistics offices and regional powers in particular gained increasing power under Third Republic, at least in its first stage (1870–1905), before a new trend toward centralization transferred much of local policymaking to the central government.[20]

The history of statistics and statisticians in Russia brings to the fore several interrelated questions. One is the relationship between specialists and bureaucrats, to use Eugene Weber's term.[21] Another is the political orientation of zemstvo statisticians in the wider political debate.[22] Finally, we need to consider the same group's main theoretical insights.[23] Russian statisticians in the academies and universities such as Ianson and Chuprov were skeptical about the surveys and investigations conducted in zemstva since the 1860s and even more after the 1880s.[24] They argued that because of the lack of a regular general census in Russia (only one was conducted in 1897), as statistical theory suggested, there was no way to judge the representativeness of the sample and therefore the validity of local enquiries and surveys carried out by the zemstva.[25] Following Quetelet, Nikolai Kablukov, a professor of economics and statistics at the University of Moscow, concluded that representativeness was meaningful only when referring to a given district or economic area, but certainly not to individuals or to a single household.[26] That is why, according to those authors, there were so many differences among the economic studies on the Russian peasantry: not only were different areas objectively different in terms of their economic activity and social relationships, but local enquiries were subjective and did not comply with the basic requirements of sta-

20. Alessandro Stanziani, *Histoire de la qualité alimentaire* (Paris, 2005).

21. Kingston-Mann, *In Search of the True West*.

22. David Darrow, "From Commune to Household: Statistics and the Social Construction of Chaianov's Theory of Peasant Economy," *Comparative Studies in Society and History* 43, no. 4 (October 2001): 788–818; Boris B. Veselovskii, *Istoriia zemstva za sorok let*, 4 vols. (Saint Petersburg, 1909–1913).

23. Z.M. and N.A. Svavitskii and Z.M. Tverdova-Svavitskaia, *Zemskie podvornye perepisi 1880–1913 gg.* (Moscow, 1926); Evgenii Z. Volkov, *Agrarno-ekonomicheskaia statistika Rossiii* (Moscow, 1922); Iurii P. Bokarev, *Biudzhetnie obsledovanie krest'ianskikh khoziaistv 20-kh godov kak istoricheskii istochnik* (Moscow, 1981); Nikolai S. Chetverikov, *Statisticheskie issledovaniia: Teoriia i praktika* (Moscow, 1975); Mikhail Ptukha, *Ocherki po istorii statistiki*, 5 vols. (Moscow, 1955–70).

24. Ianson, *Teoriia statistiki*.

25. Aleksandr I. Chuprov, *Kurs politicheskoi ekonomii* (Moscow, 1885).

26. Nikolai A. Kablukov, *Posobie pri mestnyh statistichekkih obsledovaniiakh* (Moscow, 1910), 6–7.

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tistical theories. Depending on one's choice of estates and regions, one could highlight either stagnation or agricultural growth.[27]

The 1894 all-Russian congress of zemstva statisticians was mainly devoted to these problems. Most of the speakers agreed with Chuprov and stressed that the representativeness of samples could not be evaluated without first conducting a census. In this respect, they criticized all those who argued that this problem could be overcome on the basis of economic and social theory. According to this view, a well-established theory of the evolution of peasant agriculture also suggested the most representative areas on which to focus. Thus, populist-oriented statisticians proposed to study black earth areas, while Marxist-oriented analysts focused on urban and rural areas close to industrial sites. Both declared that their selected areas were the most representative of current and future Russian society. Chuprov and his followers observed that such an approach would only provide expected findings; some zemstvo statisticians and Vladimir Lenin replied that Chuprov was using pseudo-scientific arguments to conceal his defense of the peasant commune.

Debates on sampling were not limited to ideology, however, for some Russian specialists presented genuine scientific advances. A way out of the dilemma of selecting a sample without a previous census consisted in developing a random selection of the households and areas. Andrei N. Peshekhonov was the first zemstvo statistician to attempt this solution in his survey of the Kaluga area economy carried out in 1896.[28] The author, a self-educated man, declared his determination to distance himself from both the Moscow and Chernigov schools, from populists and Marxists, from Quetelet, Chuprov and their opponents. He was actually influenced by the zemstvo liberal movement and by socialist and populist thought. In the following years, he first joined the "Liberation Movement" and then became one of the initiators of the Russian Social Democratic Labor Party. When he published his study, he could not yet answer the question of how to judge, ex-post, the representativeness of the randomly selected households and villages, but his intuition encouraged a new generation of Russian mathematicians and statisticians to pursue this path. In the early years of the twentieth century, Aleksandr Chuprov (1874–1926), son of the economist A.I. Chuprov, Pafnuty Chebyshev (1821–1894), and Andrei Markov (1856–1922) all made important contributions to the development of sampling and probability theory (in particular, to the theory of so-called ex-post probability).

These theoretical advances were by no means implemented by zemstvo statisticians, however, as most of them had little background in theoretical statistics. Thus, they continued to select households and villages using their pre-conceived models. All zemstvo investigations could be detailed according to their authors and the areas concerned. Debates on the selection of units are largely available in the archives, in zemstvo bulletins and many journals of the period. These debates over the bias of zemstvo enquiry are surprisingly absent from current economic histories of Russia.

27. Konstantin I. Arsen′ev, *Statisticheskie ocherki Rossii* (Saint Petersburg, 1848).

28. Aleksei V. Peshekhonov, *Statisticheskoe opisanie Kaluzhskoi gubernii* (Kaluga, 1898).

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The years from 1896 through World War I saw the radicalization of political debates and the multiplication of statistical surveys, which were themselves fully embedded in political debates. Thus, studies stressing the strength of the peasant commune opposed surveys showing its disintegration and the advance of capitalism in Russia. The former focused their investigations on central rural areas (more isolated from the markets), the latter on proto-industrial regions; the former selected villages and made classifications according to households (considered the persistent, relevant social and economic unit against capitalistic atomization), while the latter split up villages and focused on individual families and individuals. In particular, starting in the 1880s, Moscow statisticians developed so-called household inventories (*podvornaia perepis'*) in which the household rather than the commune was the basic unit. This approach aimed at overcoming commune-based studies, which in their eyes were unable to reveal differences in economic attitudes and social hierarchies within the household. Moscow statisticians detailed the organizational aspects of each household and the relationship between consumer needs and production. At the same time, data per household was gathered into an average per commune and comparisons were ultimately made on that basis.[29] In the Moscow-type studies, the peasant household was no longer the traditional populist autarchic farm, but neither was it a capitalistic organization.

Unlike the Moscow studies, the statisticians of Chernigov developed another kind of survey much more interested in social dynamics. To this end, they designed combination tables in which different variables were correlated. The household was the basic unit of analysis and comparison, but unlike the Moscow statistics, there was no "average" household representative of a given commune. Chernigov statisticians then sought to compare homogenous groups of households. Groupings could be made according to one or another indicator (amount of land, number of members, and/or quantity of livestock).[30] This operation gave rise to the most controversy insofar as the choice of the main grouping indicator influenced the findings. Populist-oriented statisticians considered the amount of land and the number of consumers to be the basic indicators, while Marxist authors (including Lenin) highlighted capital and labor relations.[31] In other words, even if it was true, for example, that central agrarian areas and proto-industrial regions expressed different historical trends, the statistics and economic analysis froze those differences into a pre-conceived selection of areas, villages, and households to be studied.

29. Svavitskii and Tverdova-Svavtiskaia, *Zemskie Podvornye*; Sergei N. Veletskii, *Zemskaia statistika*, 2 vols. (Moscow, 1899); Vladimir I. Orlov, *Statistichekie svedeniia o khoziaistvennom polozhenii Moskovskogo uezda* (Moscow, 1877); Vladimir I. Orlov, *Sbornik statisticheskii svedenii po Moskovskoi gubernii* (Moscow, 1880); Aleksandr Fortunatov, "Obshchii obzor zemskoi statistiki krest'ianskogo khoziaistva," in Vasilii Pavlovich Vorontsov, ed., *Itogi ekonomicheskogo issledovaniia Rossii po dannym zemskoi statistiki*, 2 vols. (Moscow 1892), 1:iii–iv.

30. Aleksandr P. Shlikevich, *Koletskii uezd: Podvornaia opis' Kozeleskogo uezda*, vol. 5, *Materialy dlia otsenki zemel'nykh ugodii, sobrannye ekspeditsionnym sposobom statisticheskim otdeleniem pri Chernigovskoi gubernskoi zemskoi uprave* (Chernigov, 1882).

31. On this topic, see Stanziani, *L'économie en revolution*.

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Our aim here is not so much to criticize this data per se, but to understand if and how statisticians interacted with the local peasantry on the one hand, and with local and national administrations and political bodies on the other. We therefore need to start with the construction of information (later data) itself. Later on I will explain in detail how questionnaires were developed, and categories such as time and space (land distribution) were constructed.

Statistical Sources: Expeditions, Interviews, and Questionnaires.

Four main types of statistical surveys were conducted in nineteenth century Russia: tax studies related to the registration and value of the land; surveys on the organization of production and the rural communes; surveys per household and reiterated studies on social dynamics. The first category of surveys aimed to identify peasants' access to property, while the three other survey categories sought to grasp the whole social dynamic.

Except for the data concerning emigration available in the files of the district authorities, zemstvo statisticians gathered information themselves. This could be done either by organizing an expedition or through a network of correspondents. Especially during the 1870s and the 1880s, zemstvo statisticians borrowed much of their information from the studies conducted by geographers and ethnologists and relied on expeditions.[32] This solution reflected the training of first investigators (most were geographers) and fit the primary aim of the surveys in those years, which was to build a land registry.

It was not until the 1880s, and especially after the famine of 1891–2, that surveys were carried out by both zemstva and the Ministry of Agriculture (*Glavnoe upravlenie zemleustroistva i zemledeli)*. Rather than a static picture of a whole village or district, statisticians looked for social changes while seeking to provide reliable forecasts of the coming harvest. To achieve this, it was necessary to dispose of frequent data (monthly, bi-monthly) that was incompatible with expeditions. Thus, statisticians had to solve two problems: first, they had to choose the area, the villages and possibly the households to be studied and test their statistical and social representativeness; second, they had to organize a network of correspondents able to fill out the questionnaires. This solution had originally been developed in the 1870s in the U.S., where statisticians randomly selected correspondents among farmers in different regions. In Russia, however, this solution was said to be impossible due to the lack of literacy among peasants. According to the statisticians, only peasant elites were literate and they were not a representative sample of the whole peasantry.[33] They therefore came up with the idea of mobilizing all the local elites (priests, teachers, peasants, traders, official representatives, landowners) as "correspondents." They would visit the countryside, fill out questionnaires and send them to statistics offices.

Most statisticians, however, regarded those elites suspiciously and asserted that they sometimes filled out questionnaires without even visiting

32. Fortunatov, "Obshchii obzor," xvi.

33. For a different perspective, see: Jeffrey Brooks, *When Russia Learned to Read: Literacy and Popular Literature, 1861–1917* (Princeton, 1985).

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the villages, and in any case "distorted" the data according to their own perceptions. Statisticians were particularly suspicious of landowners (*zemskii nachal'nik*) and also, to a certain extent, of priests and rich peasants. Whenever possible, they sought to change the social composition of their correspondent network to increase the presence of people they trusted (teachers, agronomists, "ordinary peasants") and to reduce that of other categories. Thus, in Moscow between 1884 and 1886, the percentage of priests and *d'iakony* (deacons) among the correspondents fell from 29.5% to 23.7%, and the same trend was observable among scribes and *starosti* (village heads), who dropped from 34.6% to 13.5%. On the other hand, the percentage of landowners rose from 15.9% to 18.3% and teachers from 14.2% to 40.2%.[34] The increasing literacy of peasants led to their overwhelming presence among the correspondents: in 1908, in Moscow, there were no longer any noble landowners among the correspondents and the number of priests had fallen to 16.8%. In contrast, 64.2% of the correspondents were peasants. Similar tendencies were visible in other regions.[35]

We may therefore conclude that statisticians did not trust the various correspondents equally; how they viewed them depended on their social origin and the statisticians' preconceptions about the way correspondents were presumed to distort information. This attitude was clear not only with regard to local elites–whom statisticians usually disliked for ideological and political reasons—but towards "ordinary" peasants. Did peasants tell the truth when questioned? If not, why not?

Most Russian statisticians fully developed these questions and answered that peasants tended to underestimate production, the extent of the *nadel'* (the allotment received at the time of the emancipation), and their income.[36] This conclusion may come as a surprise, for it appears to confirm the arguments of the tsarist representatives according to which peasants were not as poor as they seemed and merely concealed part of their harvest and income. In raising this argument, zemstvo statisticians actually came to the opposite conclusion from the one reached by the tsarist officials: they claimed that peasants lied in reaction to excessive fiscal pressure, as well as because of tsarist policies as a whole and the continuing power of landlords despite the abolition of serfdom.[37] This attitude helps to explain why, more surprisingly, some statisticians argued that peasants actually over-estimated their harvests and income, for they had not fully integrated into their evaluation the degraded condition of both agriculture and markets resulting from tsarist policies.[38]

34. Nikolai M. Astyrev, "K voprosu ob organizatsii tekushchei zemskoi statistiki," *Russkaia mysl'*, 1887, no. 5: 43–60.

35. Ibid.

36. Fortunatov, "Obshchii obzor": xix; O-skii, "V Russkoi glushi," *Russkaia mysl'*, 1910, no. 3: 121.

37. O-skii, "V Russkoi."

38. Aleksandr V. Chaianov, *Ocherki po teorii trudovogo khoziaistva* (Moscow, 1912); Aleksandr V. Chaianov, *Organizatsiia krest'ianskogo khoziaistva* (Moscow 1925); Iulii Ianson, *Opyt statisticheskogo issledovanija o krest'ianskikh nadelakh i platezhakh* (Saint Petersburg, 1877); Kablukov, *Posobie*.

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But if peasants lied because of tsarist policies, then why did they do the same with zemstvo statisticians, who were supposed to be on their side?

As Kablukov put it, lack of accuracy in the answers was also the consequence of peasants' lack of education, in that they used non-scientific measurement criteria.[39] Statisticians were therefore required to translate customary criteria into scientific units of measure. This was done in several steps. First, the information delivered had to be submitted for verification within the peasant community itself.[40] When visiting villages, statisticians gathered all the people in front of the *skhod* (village assembly) to compare and verify information. In this process, the statisticians relied on the notion of evidence in oral societies and cultures they borrowed from ethnologists. However, they went even further, considering themselves able not only to decode but also to correct the answers. This attitude was a consequence of the normative influence of economics and of the overall social and political involvement of zemstvo specialists. We find here a crucial challenge for statisticians and local zemstvo activists: the need to "educate" people. It was precisely at this time that several agronomists and zemstvo statisticians sought to encourage peasants to adopt new methods in agronomy and bookkeeping. Itinerant agronomy was inspired by similar practices developed by Italian cooperatives at the turn of the century. Chuprov and later Chayanov made several trips and stayed in northern-central Italy, working with local agronomists.[41] They then exported the practice to Russia. Agronomy as technical, general, and political education was widespread in the main Russian areas both before and after 1917.

At the same time, mediation, construction of information, and practical economic activity was carried out not just by peasants and agronomists; local intermediaries played a major role as well. We have mentioned the fact that statisticians were suspicious of these actors when they were asked to fill out questionnaires. Is there any way to verify this allegation?

Forms of Mediation and Equivalence

In order to answer this question, we need to look at the replies given by correspondents from the same area or village to the questionnaires sent out by statisticians. Most of these cards have been lost, but they are still available for several surveys. Let us take a look at the original cards filled out by correspondents from Vladimir province in the broader studies conducted by Count Tenishev.[42] I have compared these cards, examining both the questions and

39. Kablukov, *Posobie*, 54; *Pamiatnaia knizhka Tavricheskoi gubernii*, vol. 9, *Sbornik statisticeskih svedenii po Tavricheskoi gubernii* (Simferopol', 1899).

40. Fortunatov, "Obshchii obzor," xvi; Kablukov, *Posobie*, 15.

41. Rossiiskaia gosudarstvennaia biblioteka (RGB), fond rukopisei, M 9503/12 (A.I. Chuprov, pis'mo ot Timiriatsev, 1907). See also: 17/ 1/1908 (A.I. Chuprov, K Timiriatsevu, in Konstantin Timiriatsev, *Iz vospominanii o dvukh pokoleniiakh* (Moscow, 1920), 69–77.) A.I. Chuprov, *Reforma zemledeliia v Italii* (Moscow, 1906).

42. On Tenishev, see introduction to B.M. Firsov and I.G. Kiseleva, *Byt' velikorusskikh krest'ian-zemlepashtsev* (Saint Petersburg, 1993).

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different answers provided "in the name of the peasantry" by correspondents filling out the questionnaires.

Among the questions to which the non-peasant correspondents provided the most divergent answers, we find those related to local power. Thus, a government clerk and a *diakon* stressed that the peasants feared the *zemskii nachal' nik* (captain), whereas a priest made the completely opposite assertion that the peasants had a fairly good relationship with him.[43]

Correspondents also offered radically different appraisals of peasant attitudes towards customary and official laws. One state clerk wrote that (again, according to the peasants) customary law and state law were in open contradiction to each other, whereas a diakon named Kamanin declared the opposite. According to the latter, peasants widely appealed to state law and frequently addressed the *volost'* (local court). A priest named Kazanskii claimed, on the contrary, that the peasants disliked the volost' court.[44]

In addition to attitudes towards law and local authority, a third topic gave rise to most divergent replies: the development of a market economy and property rules. According to the priest Kazanskii, peasants considered ownership a family asset, while the diakon of another village stressed that individual property was the rule among peasants.

Correspondents expressed completely different opinions about the well-being of the peasantry and the source of poverty within it. A diakon not only filled out the questionnaires but added newspaper data and supplied his own rough assessment of the well-being of local peasant families. He drew the conclusion that low standards of living were related to poor agricultural management and lack of knowledge in agronomy, not to mention the "bad influence" of towns, which led to increased voluptuary consumption and disintegration of the family. Conversely, a teacher-correspondent declared the peasants agreed that poverty was due to high taxes and lack of land.[45]

In these replies, we find the most radically opposed opinions on the land question that were commonly found in Russia from the reform of 1861 until the October revolution. On the one hand were those who claimed the cause of poverty was the lack of land; on the other hand, those who were convinced that backward agrarian techniques were at the root of peasant poverty. What is most interesting to us is the fact that these opinions were not only expressed in the completed analysis and debates, but also influenced the very collection of information on the peasantry. As we will see in the next sections, the estimated amount of land peasants owned and eventually purchased was calculated through these mediations and negotiations among peasants (families, skhod), data collectors, statisticians, and local and state authorities. Since the very start, peasants under-evaluated their lands, while mediators were prone to accept or refuse (and increase) these figures according to their own beliefs about the fate of the reforms. Most of the huge bibliography on the "agrarian question" in tsarist Russia ignores this process of negotiating information, takes data as such, and finally makes claims about the lack of land

43. Rossiiskii etnograficheskii muzei (REM), fond (f.) 7, opis (op.) 1, dela (d.) 1, 4.
44. REM, f. 7, op. 1, d. 32, list (ll.) 4–8, 28, 73.
45. Ibid., d. 32, ll. 31–39.

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or, conversely, the inadequacy of peasant methods of cultivation according to that or another economic theory.[46] More importantly, this attitude ignores an even more subtle form of mediation between peasants, statisticians, and correspondents who all intervened in the construction of data: the translation of units of measure. We will consider time and space.

Measuring Time

The social construction of time and its standardization has become the subject of a large number of investigations in history, anthropology, and sociology. Social historians in particular produced the main work in this field. Following E.P. Thompson, several studies focused on the transformation of economic time during the industrialization process. The passage from irregular, seasonal daytime to standard industrial time is at the core of this sort of investigation. A second body of literature was inspired by Witold Kula and his study of the gradual standardization of harvests and cultivated surface area in modern Poland.[47] In the following pages we will focus on this latter question, but we will add a debate specific to Russia concerning the time budget. The time budget within the household was one of the main innovations introduced by Russian statisticians. The distribution of time within the household between market and non-market activities was analyzed from the 1880s in the Chernigov surveys and continued in Stanislav Strumilin's studies into the 1930s and beyond.[48] Indeed, before these budgets could be examined in detail, it was first necessary to solve the question of the period of time in question: did the relevant year begin at the harvest or at sowing?[49]

If the first solution was adopted, then the yearly time budget began in July and ended in June. In this case, the business cycle had to distinguish sold production from consumption and from the portions set aside for future sowing. Savings and consumption rather than investment were the crucial variables. The peasant economy resembled Marx' simple market economy or even Chayanov's self-sufficient farm. On the other hand, if one opted for the second solution, then the yearly time budget started with sowing in March-April. This solution took into account credit and the problem of financing production, and thus the important development of credit cooperatives at the turn of the century. In this view, the peasant economy was much closer to

46. This critical use of zemstvo statistics began already in the political debate in Russia between Lenin, the other social-democrats, and the so-called "populist" authors. Then this same debate developed in Soviet Russia, see few names within a huge bibliography: Anfimov, *Krestʹianskoe khoziaistvo Evropeiskoi Rossii*; Ivan D. Kovalʹchenko and L.D. Milov, *Vserossiiskii agrarnyi rynok XVIII-nachalo XX veka* (Moscow, 1974); Boris Mironov, *Istoriia v tsifrakh: Matematika v istoricheskikh issledovaniiakh* (Moscow, 1991). Examples in western countries include Geroid T. Robinson, *Rural Russia under the Old Regime* (London, 1932); Olga Crisp, *Studies in the Russian Economy Before 1914* (New York, 1976); Carol Leonard, *Agrarian Reform in Russia: The Road from Serfdom* (Cambridge, Eng., 2011); Dennison and Nafziger, "Micro Perspectives."

47. Witold Kula, trans. Richard Szreter, *Measures and Men* (Princeton, 1986).

48. For example, see: Strumilin, *Stanislav Gustavovich, Biudget vremeni russkogo rabochego i krestianitsa v 1922–1923 gody: Statistiko-ekonomiceskie ocherki* (Moscow, 1924).

49. Kablukov, *Posobie*, 66.

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market economies. Investigators who adopted the first approach were led to emphasize the lack of land and the excessive fiscal burden. This approach was widespread among most statisticians both before and after the revolution of 1917.[50] The second approach led analysts to stress not so much the lack of land as lack of capital, including management.[51] Both conflicting approaches were sustained for decades: the former dominated between 1890 and 1925, while the latter, after enjoying brief success at Chernigov, won wide support only after 1925, when Chayanov and Bukharin strongly backed the co-operative movement.[52]

In short, statisticians made use of "scientific" notions of time not only to impose urban, academic values on peasants' attitudes, but also to project their own social and political utopias. Reconstructing time was not confined to the past; it influenced future trends and, as such, projected statisticians' images of the "new" world: a perfect peasant economy, a socialist world, or to some extent, a "western" market society. This was where the measure of time met up with two other crucial questions: land distribution and harvest.

Measuring Space

Conventional historiography stressed the limits of reforms, the increasing poverty of the peasantry and the persistent backwardness of Russia.[53] Critics of the reforms, many soviet historians, and later Alexander Gerschenkron and all those who espoused the impoverishment thesis (poor conditions that affected peasants after and because of the reforms), all underscored the fact that peasants were so poor they were unable to redeem their land. More recent historiography has provided a completely different picture. Russia experienced significant social transformation and economic growth between 1861 and 1914; revised population trends show that mortality and birth rates were lower than was previously thought.[54] There was a decline in the pauperization of the peasantry and the number and severity of large-scale famines.[55] The period from 1861 to 1914 was an era of steady improvement in both agricultural production and living standards.[56]

50. Orlov, *Sbornik*; Peshekhonov, *Statisticheskoe*.

51. Stanziani, *L'économie en revolution*.

52. Bokarev, *Biudzhetnye obsledovanie,* 53.

53. Robinson, *Rural Russia Under the Old Regime*; Alexander Gerschenkron, *Economic Backwardness in Historical Perspective* (Cambridge, Mass, 1962).

54. Steven Hoch, "Famine, Disease and Mortality Patterns"; Steven Hoch, "On Good Numbers and Bad"; Steven Hoch, "Serfs in Imperial Russia: Demographic Insights," *The Journal of Interdisciplinary History* 13, no. 2 (Fall 1982): 221–46.

55. Stephen Wheatcroft, "Crisis and Condition of the Peasantry in Late Imperial Russia," in Esther Kingston-Mann and Timothy Mixter, eds., *Peasant Economy, Culture and Politics of European Russia, 1800–1921* (Princeton, 1991), 128–72.

56. Elvira M. Wilbur, "Was Russian Peasant Agriculture Really That Impoverished? New Evidence From a Case Study From the 'Impoverished Center' at the End of the Nineteenth Century," *Journal of Economic History* 43, no. 1 (March 1983): 137–144; Esther Kingston-Mann, "Marxism and Russian Rural Development: Problems of Evidence, Experience and Culture," *American Historical Review* 86, no. 4 (October 1981): 731–752; James Y. Simms, Jr, "The Crisis in Russian Agriculture at the End of the Nineteenth Century: A Different View," *Slavic Review* 36, no. 3 (Fall 1977): 377–98; James Simms Jr, "The Crop

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However, the most recent economic historiography goes much further. Zhuravskaya and Markevich "constructed a proxy for the implementation of the land reform. For this [they] use redemption payments statistics, which report the amounts that peasants were supposed to pay each year in redemption by province." This solution is quite extravagant: we know that in practice the initial redemption amounts were seldom paid. When they were first determined at the turn of the 1860s, they were the result of local negotiations between landlords and local and central reform commissions. When the amounts were again revised after the 1880s, it was also after long negotiations. In the volumes published by the commission itself, the commissioners continually repeated that their data should be taken with great caution as a starting point due to several biases and "pressures." Prices were abnormally low in some cases (when landowners were told they had to pay taxes), but incredibly high for land to be given to the peasantry.[57]

Nafziger also makes considerable use of the land distribution and redemption data produced first by local commissions and later by various actors (zemstva, the Ministry of Finance), which is summarized in Artur Bushen and Nikolai Troinitskii.[58] What do we know about this data? The administration, local elected officials, intellectuals, and elites constantly challenged all of it. This had been the case ever since the discussions of the reform committees.[59] Why was this so? Why were there so many discussions?

Indeed, in the decades before the emancipation act of 1861, noble estates merged; the number of small estates declined while large properties became the rule to such an extent that, in 1857, noble estates with less than 21 peasants accounted for barely 3.2% of all estates. Those with between 21 and 100 peasants made up 15.9%, while the great majority of estates were large: those with between 100 and 500 peasants were 37.2% of the total; those with 500 and 1,000 peasants were 14.9%; and those with even more than 1,000 peasants were 28.7%.[60] This process was linked to the increasing indebtedness of the estate owners and the limited capital markets available to them. Increasing institutional pressure from a tsarist state in favor of peasant emancipation (which we will discuss later) and the growing number of merchants also contributed to the concentration of estates.

Failure of 1891: Soil Exhaustion, Technological Backwardness, and Russia's Agrarian Crisis," *Slavic Review* 41, no. 2 (Summer 1982): 236–50.

57. Rossiia, "Redaktsionnye Kommissii dlia sostavleniia polozhenii o krest'ianakh, vykhodiashchikh iz krepostnoi zavisimosti," *Svedeniia o tsenakh na zemli naselenniia i nenaseleniia*, vol. 14; *Prilozheniia k trudam Redaktsionnykh Kommissii dlia sostavleniia polozheniio krest'ianakh vykhodiashchikh iz krepostnoi za visimosti* (Saint Petersburg, 1860), 7–9.

58. Artur Bushen, *Nalichnoe naselenie imperii za 1858 god*. Vol. 2, *Statisticheskiia tablitsy Rossiiskoi imperii* (St. Petersburg, 1863); *Nikolai A. Troinitskii* (ed.), *Pervaia vseobshchaia perepis naseleniia Rossiiskoiimperii 1897 g.* (St. Petersburg, 1905).

59. John Bushnell, Ben Eklof, and Larisa G. Zakharova, eds., *Velikie reformy v Rossii, 1856–1874* (Moscow, 1992); John Bushnell, Ben Eklof, and Larisa G. Zakharova, eds, *Russia's Great Reforms, 1855–1881* (Bloomington, 1994).

60. Aleksandr Troinitskii, *Krepostnoe naselenie v Rossii po 10 narodnoi perepisi* (Saint Petersburg, 1861), 45.

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The concentration process accelerated during the first half of the nineteenth century, sustained by greater freedom of movement granted to peasants, the effective development of trade, markets and proto-industry, and the intensified economic difficulties of small estate owners. From this angle, we can understand the hostility to emancipation expressed by most provincial small estate owners. Unlike huge estate owners, small landlords barely survived with a few serfs; the abolition of serfdom seemed to spell their final ruin.[61]

Another argument mobilized the opposition of numerous landlords: though partial reforms had taken place in the previous decades, the monopoly on land and the connection between land ownership and the social, political and legal status of the nobility had never been under attack. Now, with general emancipation, there was a risk that "bourgeois," merchants and urban *nouveaux riches* might claim rights to the land.[62]

In this context, the measurement of land to be distributed and its value were crucial. No agreement was reached inside local commissions: many commissions were deeply divided and presented a majority and a minority report. The views and suggestions differed widely from one commission to another. For example, estate owners from central agrarian areas were mostly concerned with the question of how much land they would keep and the labor services peasants would have to provide following abolition. In contrast, in proto-industrial areas, nobles attached the greatest importance to the peasants' actual redemption of their lands and the fees they would have to pay the landlords to gain access to markets, tools and credit.[63]

Despite their divisions and political weakness, the nobles won some concessions; in particular, the amount of land to be given to freed peasants was reduced to a minimum. The provincial nobility also succeeded in ensuring that the state did not provide financial support to emancipated peasants to run their farms. In their eyes, the lack of resources meant the peasants would need assistance from their former landlords and thus perpetuate their dependence. Central state reformers accepted this solution due to the major financial crisis of 1859 and the state's rising public debt.[64]

In practice, the size of peasant land allotments in the local statutes varied greatly depending on soil fertility, population density and agricultural practices. More land was assigned in the steppe and non-black earth lands than in black earth areas, where the land was more fertile and there was greater pressure from the population. Indeed, instead of a fixed amount of land per capita (or per family or per commune), each statute identified an interval within which the final amount of land should be determined. In general, local nobles imposed the shortest possible interval.

61. Terence Emmons, *The Russian Landed Gentry and the Peasant Emancipation of 1861* (Cambridge, Eng., 1968).

62. Emmons, *The Russian Landed Gentry*.

63. David Saunders, *Russia in the Age of Reaction and Reform, 1801–1881* (London, 1992).

64. Steven Hoch, "The Banking Crisis, Peasant Reforms, and Economic Development in Russia, 1857–1861," *American Historical Review* 96, no. 3 (June 1991): 795–820.

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Local statutes also identified the amount of labor or fees peasants had to provide during Phase II. The amount of labor was set at 40 days a year for men and 30 for women, and it had to be performed primarily during the summer and other periods of heavy agricultural work. There was a complex arrangement that varied the amount according to the area, the fertility of land, the size of the allotment, and so forth. Rules for cash dues were even more complicated, depending on the distance from Saint Petersburg, major towns and markets in the vicinity, and the size of the allotment. As peasants were considered indebted until they had completed their redemption, the state and the estate owners retained their rights to restrict mobility and require formal consent for any market operation (selling or offering labor). In practice, in many localities, nobles abused their position and imposed unfair terms on the peasants; in many cases, landlords gave away their worst land and the peasants had to redeem it at the highest price.[65] How high was it, however?

The government itself tried to reach a firm conclusion, but when the state bank launched its operations in 1893, it too was obliged to admit that there was no clear data or information on this topic.[66] Instead, there were four main original sources pertaining to land distribution and redemptions available in Russia at that time. One was data collected by the state bank.[67] Another was data from the Ministry of Finance, collected, as we shall see in a moment, despite the lack of a land registry.[68] Third was data produced by the land division of the MVD (Ministry of Interior); and finally, data issued by the 1903 commission on the land question.[69] The problem is that all this data were severely compromised by the lack of a land registry. Constructing a land registry had been a key factor everywhere in Europe and its colonies since the seventeenth century in order to determine the power and authority of the central state in relation to the church, landlords, peasants, and colonized people.

Ways of measuring were crucial. In late tsarist Russia, a land registry was essential to validate estate properties at a time when the number of transactions intensified, not only between nobles, but also between noble landowners, *meshchanie* (townspeople), and peasants. In turn, the assessment of this process had significant impact on how reforms and current tsarist policies were received. Therefore, central and zemstvo offices attached considerable importance to it. In 1877, the TsSK (Central Statistics Committee) decided to carry out a general survey on estate ownership to provide an initial estimate of the impact of the abolition of serfdom. Due to the lack of resources and a land registry, however, the study could not be completed. In 1893, Sergei Witte,

65. Boris Litvak, *Russkaia derevnia v reforme 1861 goda: Chernozemnyi tsentr 1861–1895 gg*. (Moscow, 1972); Sergei Kashchenko, *Reforma 19 Fevralia 1861 goda na severo-zapade Rossii* (Moscow, 1995).

66. Rossiia Gosudarstvennyi bank, *Otchet gosudarstvennago banka po vykupnoi operatsii s otkrytiia vykupa: po 1 ianvaria 1892* (Saint- Petersburg 1893), 1–4.

67. Rossiia Gosudarstvennyi bank, *Otchet gosudarstvennago banka po vykupnoi operatsii* (Saint Petersburg, 1893–1908).

68. A.E. Reinbot, ed., *Materialy po statistike dvizheniia zemlevladeniia v Rossii*, 25 vols. (St. Petersburg, 1896–1917).

69. Steven Hoch, "Did Russia's Emancipated Serfs Really Pay Too Much for Too Little Land? Statistical Anomalies and Long-Tailed Distributions," *Slavic Review* 63, no. 2 (Summer 2004): 247–74.

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the Minister of Finance, signed two ordinances declaring that estate ownership and land registration had to be recorded by state officials, not by local zemstva. This was necessary, he argued, to ensure the use of uniform criteria throughout Russia. Zemstvo and liberal opponents replied that the real reason was to hide the consequences of the reforms and current policies while reducing the power of the zemstva in local affairs.[70] Yet in order to coordinate state records, Witte had to choose between two criteria already developed by zemstvo statisticians in previous years. On the one hand, those employed, for example, in the province of Kursk by Ippolit Verner, who had determined the value of land and thus the fiscal burden based on the existing lease, sale, or procurement contracts. Verner concluded that peasants were being forced to pay excessive prices and rents given the value of the land. Zemstvo officials who had commissioned the survey accused Verner of "false and tendentious" conclusions and removed him from his post.[71]

Another solution was offered by Nikolai Annenskii and his team in Nizhnii Novgorod. They did not rely on contracts but decided to verify the size and value of estates "in the field." For this purpose, he visited most of the farms in the province (*guberniia*) and collected data for each farm concerning labor expenses and time, capital, credit, prices, livestock, "natural fertility" of land, and rainfall.[72] In his ordinances of 1893, Witte adopted these criteria in building "his" land registry. He sent out detailed circulars to make all his orders clear. By 1899, however, only a few provinces had completed their land registration. The following year, a new ordinance modified the tax burden criteria and with them the value of land. The already completed registries lost most of their usefulness and in 1902 Viacheslav von Plehve, the new State Secretary and Interior Minister, in response to peasant unrest, went so far as to prohibit any enquiry regarding land ownership conducted by zemstvo or state organizations, whatever their results, because he believed they would exacerbate conflict.

It does not make sense, therefore, to use this data to evaluate the effect of the progress and implementation of reforms on economic dynamics. This was not necessarily the real value of estates based on innovations or real productivity resulting from local and central negotiations. Instead, all the data provide extraordinarily rich material to study how the value of land became the subject of negotiation and created tensions between the actors involved. Fiscal, social, and political concerns were the real stakes here, as Yanni Kotsonis demonstrates perfectly.[73]

The revolution of 1905 made this approach obsolete and, in response to the unrest, the new director of TsSK, Andrei Zolotarev, a former student at the Petrovskii Academy, submitted a project for a census of land and buildings to the new State Secretary. Initially rejected, the project was finally approved in 1906 in connection with Stolypin's reforms and the urgent need to have

70. Veletskii, *Zemskaia*, vol. 1, 155–57.

71. Ippolit Verner, "Statistika pered sudom kurskogo zemstva," *Russkaia mysl'*, 1887, 7: 152–76.

72. Statisticheskoe otdelenie Nizhegorodskoi gubernoi zemskoi upravy, *Sel'sko-khoziaistvennyi obzor Nizhegorodskii gubernii* (Nizhnii Novgorod, 1892–1903).

73. Kotsonis, *States of Obligation*.

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a detailed map of estate ownership.[74] At the outbreak of World War I, however, only some provinces of European Russia had completed the process of land registration. This gap left the door open to zemstvo estimations of estate property and their distribution. Measuring land became a crucial intellectual challenge and political issue. As usual, statisticians put the accent on the discrepancies between "customary" and scientific units of measurement. When they questioned peasants on the size of their fields, they often received rather vague answers, such as "from here to the top of the hill." According to the statisticians, those answers, like the ones concerning harvests, stemmed not only from the peasants' desire to hide part of their real available land (especially rented and purchased lands) for fiscal reasons. In general, they were unable to express the size of their possessions in invariable units such as the *desiatina* (one desiatina=1.10 hectare).[75] For most peasants, unlike statisticians or bureaucrats, the desiatina was a variable unit. It was not an abstract, geometrical measure, but a rectangle whose size changed according to the quality of the land. The poorer the land, the larger the desiatina. This was linked to the fact that the commune redistributed lands according to the size of the family, the quality of the land and its distance from the village. Land was thus measured by its quality and quantity and its capacity to feed the family.

Russian statisticians did not limit land registration to the existence of these measurement criteria but sought to convert them into scientific units. In itself, this was not a novel approach; it had been widely used in Europe at least since the seventeenth century with the rise of state land registries and the overall attempt of urban elites to impose specific forms of knowledge on the countryside.[76] In turn-of-the-century Russia, this operation assumed special significance: statisticians sought not only to impose "scientific" criteria on the peasantry, but also to show political elites that peasants suffered from lack of land. For this reason, most of the zemstvo statisticians questioned peasants about the nadel′ while ignoring lands peasants had individually or collectively purchased from the state or noble estate owners.

Kablukov explicitly justified this attitude by asserting that once a peasant had purchased new lands, he was no longer a peasant (from a sociological point of view) but a *meshchanin* (townsperson). He thus classified all peasants that had purchased lands in another category. By definition, peasants owned only the nadel′.[77] This view was shared by most statisticians, Marxists as well as populists, and it has helped to strengthen the image of Russian peasants up to today.

Yet the collected data said something different. Peasant land possessions more than doubled between the 1870s and World War I, and increasingly individual households and not only land communes made acquisitions. Between

74. Rossiiskii gosudarstvennyi istoricheskii arkhiv (RGIA), f. 1290 (TsSK), op. 2, d. 628; Andrei Zolotarev, "La propriété foncière dans 50 gouvernatorats de la Russie d'Europe en 1905," in *Bulletin de l'Institut International de Statistique* 17 (Copenhagen 1908): 176–208.

75. O-skii, "V russkoi glushi," 105–11; Fedor Shcherbina, *Krest′ianskie biudzhety* (Voronezh, 1900); Orlov, *Sbornik*.

76. Roger Kain and Elizabeth Baignet, *The Cadastral Map in the Service of the State: A History of Property Mapping* (Chicago, 1992).

77. Kablukov, *Posobie*, 8–10.

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1863 and 1872, Russian peasants bought lands to add to their communal allotments. Over three-quarters of all peasant acquisitions on the open market were made by individuals. This trend accelerated with the foundation of the Peasant State Bank, intended to encourage loans to peasants seeking to buy land. There was a twofold increase in peasant land ownership between 1877 and 1905. In 80% of the cases, the transactions were made by the peasant commune or by peasant associations. During the following years, between 1906 and 1914, the state sold 1.5 million *desiatins* to peasants; landlords sold them one-fifth of their land, or 10.2 million out of 49.7 desiatins. Two-thirds of the purchases were made by peasant associations and land communes and one-third by individual households. Cossack and peasant ownership increased by 9.5 million desiatins, reaching a total of 170.4 million.[78] Clearly, contrary to what Kablukov and many others since (Gerschenkron, Robinson) have tried to prove, peasants were actually purchasing increasing amounts of lands.

Statistics and Historical Dynamics

As peculiar as it is, the history of economic statistics in Russia offers a wonderful heuristic method to examine a global (not only Russian) question: from the mid-eighteenth century to today, empirical statistics, presumably falsifiable, and economics have been called upon to play a role in current politics. By providing supposed objectivity, figures serve a crucial purpose in political life. As such, do they provide a descriptive or rather a normative tool? Are the trends they construct the result of past behaviors or the projection of preconceived models?

Economic historians recall the huge rate of growth Russia experienced after 1861 because of the emancipation of the serfs; this growth, we are told, was comparable to that of western Europe.[79] If any limitation persisted, it was due to the continuing strength of the peasant commune, which impeded efficiency and the optimal use of production factors.[80] This interpretation stems from blind confidence in the figures produced at the time.[81] Even worse, economic historians and economists tell us which institutions limited the economic growth of Russia and which reforms should had been adopted. This kind of economic history, directly derived from economics, is highly normative.

The first problem underlying these studies is the model itself: they mostly refer to neo-institutional economics according to which "institutions" matter. Thus, property rights, efficient law enforcement, corporate governance and the like strongly influence economic dynamics. From this standpoint, not only serfdom until 1861, but also the peasant commune and subsequent tsarist limitations on free market activities had an adverse effect on Russian economic

78. *Ezhegodnik Glavnogo upravleniia zemleustroistva i zemledeliia po Departmentu zemledeliia i Lesnomu departmentu* (Saint Petersburg, 1908–1916).

79. Paul Gregory, *Russian National Income, 1885–1913* (Cambridge, 1982).

80. Gerschenkron, *Economic Backwardness*; Dennison, *The Institutions*; Nafziger, "Land Commune."

81. William H. Sewell, *Logics of History: Social Theory and Social Transformation* (Chicago, 2005).

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growth. The major difference, in relation to previous approaches, is that the list of development factors is drawn up solely on the basis of efficiency and minimized transaction costs (a cost incurred in making an economic exchange or participating in a market). The same model used to describe serfdom in Russia or fairs in Europe in the modern period is employed to talk about the market in nineteenth-century Africa. It is no accident that neo-institutional economics speaks less about capitalism than about the market economy. This approach calls into question the classifications of economic systems proposed by traditional neo-classical and Marxist literatures (capitalism, peasant economy, feudalism). Instead, we find a typology of organizations that evolve strictly in relation to the institutional context. Hence, the approach cannot explain the relationship between institutional changes and forms of market organization: are institutions the result or the source of economic behavior?

This is where data intervenes. To answer the question, a quantitative assessment is necessary; the problem is that new quantitative studies consider figures as data and not as sources to be put under historical scrutiny. These studies fully decontextualize data; they ignore the social construction of statistics and assess data only according to statistical and economic theories.[82] Indeed, in nineteenth-century Russia and Europe, statistics, their production and usage, were already political and normative tools. The nineteenth century was a period of increasing enthusiasm for statistics as a tool for the scientific management of politics. The positivist ideal and the reformist attitude of most European governments contributed to this success. International conferences sought to offer the image of an international "objective," homogenous science, and as such, appealed to the desire to "scientifically" manage national politics. Statisticians complained about the "ignorance" of professional politicians and the differences in the organization of national statistics. In most nineteenth-century societies, this problem was aggravated by the fact that statisticians generally came from a different social group than senior bureaucrats and politicians.[83]

Russia, with its continuing *soslovie* (estate) system, expressed an extreme version of these tensions. As Iulii Ianson, a Professor of Statistics at the University of Saint Petersburg, put it, to produce reliable censuses and surveys, it was necessary not only to centralize all statistical activity under TsSK supervision, but also to appoint qualified people to head the administrations involved. To support this, Ianson relied on the resolutions adopted by international congresses of statistics between the 1860s and World War I, which all emphasized the need to centralize statistical production under the supervision of central bureaus of statistics and leave statisticians free from the influence of "ignorant bureaucrats."[84] In Russia, contrary to Weber's theory,

82. George Steinmetz, ed, *The Politics of Method in the Human Sciences: Positivism and Its Epistemological Others* (Durham, 2005).

83. Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, 1995); Blum and Mespoulet, *L'anarchie bureaucratique*; Kotsonis, *Making Peasants Backward*.

84. Institut international de statistique, *Bulletin* (Brussels, 1866–1896); M.F.X de Neumann-Spallart, "La fondation de l'Institut international de statistique," in *Bulletin de l'Institut international de statistique* 1, (Rome 1886): 1–34.

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conflicts between "specialists" and "bureaucrats" were political and professional at the same time: statisticians criticized their superiors for their lack of competence and for the fact that they mostly belonged to other soslovie and supported autocracy and its reforms. In this context, it is not surprising that statistical data reflected the normative ambition of their authors: local authorities, mediators and statisticians all translated space, time and peasant land and organization into categories and data that fit their own preconceptions and political ambitions. Thus, those who criticized tsarist reforms and advocated the urge to mobilize the peasantry tended to accept the peasants' underestimations of land and harvest and sometimes even excluded land purchased by peasants from their figures. In contrast, supporters of reforms looked for areas, villages, and information that confirmed the progress of reforms and the increasing well-being of the peasantry. If we take these data at face value, we not only provide a false picture of the rural economy but we miss a major historical phenomenon: the emerging role of economic knowledge in the political arena.[85]

This does not mean that we reject all quantitative information produced in tsarist Russia (or elsewhere). Instead, we consider that statistical sources, like any other sources, must be put under the scrutiny of historical tools: we need to know who produced the source, when, how and why.[86] Then we need to compare sources, including archives. To this end, we may rely on two bodies of literature: on the one hand, accurate analyses of data—such as those provided by Hoch, which we have completed here—can give us a more realistic picture of the countryside. On the other hand, historical analyses of statisticians, their methods, their interrelation with the peasantry and the state—as developed in above following previous works by David Darrow, Yanni Kotsonis, Igor Khristoforov, and Theodore Porter among the others—do not oppose "facts" (identified with quantities) to "opinions," but reconstruct their historical meaning and the role statistics and statisticians played in historical dynamics. Together, these two approaches enable real historical scrutiny of social and economic dynamics that can open our minds instead of supplying predetermined answers.

85. This same epistemological approach—avoiding any opposition between quantities-facts and "opinion"—is well developed in the works of Darrow, Kotsonis, Khristoforov, and Blum mentioned in previous sources. It is also widespread in other fields. Among the best outcomes: J. Adam Tooze, *Statistics and the German State, 1900–1945: The Making of Modern Economic Knowledge* (Cambridge, Eng., 2001); J. Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy* (New York, 2007); Jean-Claude Perrot, *Une histoire intellectuelle de l'économie politique, XVIIe-XVIIIe siècle* (Paris, 1992); Mary Poovey, *A History of the Modern Fact*; Desrosières, *La politique*.

86. Sewell, *Logics of History*.

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