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Statistics and ‘Sufficiency’: Toward an Intellectual History of Russia’s Rural Crisis

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Accepted version of paper published in *Continuity and Change: A Journal of Social Structure, Law and Demography in Past Societies*, Vol. 17, No. 1 (May 2002): 63-96. Copyright © 2002, Cambridge University Press.

Crises are, by definition, interpretive issues, if for no other reason than assessments of their existence or magnitude often become causal explanations for change. The debate over peasant standard of living in late imperial Russia—the “crisis” of Russia’s rural economy—is an interpretive issue tackled by historians from a number of different perspectives and with varying degrees of success. Recent work casting doubt upon the decline of peasant living standards highlights the inadequacies of historians’ selected assessment tools and suggests that better (demographic) measures will not only expose the crisis as non-existent but reveal ‘the heretical possibility that the reforms of the 1860s might have actually bettered the peasant’s lot’.¹ But it is one thing for historians to demonstrate that the crisis was non-existent and quite another to explain why contemporaries saw the peasant economy as a crisis-ridden institution. At first glance, the answer to this question appears obvious. Peasant ‘backwardness’, the constraints of communal tenure, and tax arrears all pointed to an economy unable to meet its obligations. At the same time, post-emancipation descriptions of peasant life—culminating, perhaps, with A. I. Shingarev’s *The Dying Village* (1907)—offered an image of peasant life so dire and radically at odds with that of the Empire’s westernized elite that few in educated society could look upon the village and its economy and see anything other than crisis (even though they might disagree among themselves as to its cause).² However, given the fact that historians (like Russian statisticians and

agronomists before them) devote so much attention to measuring peasant standard of living it is surprising that none address the impact of the 'rise of statistical thinking' and attendant forms of economic measurement on the creation of this crisis perception.³ A growing emphasis on measuring the sufficiency of peasant land allotments in terms of assessed land values (the application of cadastre measurement) created a statistical portrait of rural crisis. Statistical measurement—the conversion of economic phenomena into numbers—objectified the crisis and surrounded it with the aura of 'scientific' objectivity.⁴ The melding of this new cadastre measure of 'sufficiency' with traditional paternalism made peasant living standards appear desperate and the state's failure to protect its subjects deplorable.

Statistics and Sufficiency

The state began enumerating its taxable assets with the first of a series of tax censuses (*revizii*) in 1720-1721.⁵ By the mid-eighteenth century, spurred by the Free Economic Society, magnate serf owners and their managers were using improved record-keeping practices to compile systematic serf household inventories. Enumeration implied control and maximum exploitation of these assets. For the state and its noble servitors alike, 'high revenues rested on the ability of estate administrators to make each serf *tiaglo* (labor team) equally capable of cultivating the land without exhausting the peasants or their draft animals'.⁶ Proper analysis of estate production might also reveal paths to more efficient serf management and asset allocation, such as one author's conclusion that serfs tilling improved land produced greater income.⁷ In areas less conducive to agriculture, estate managers and bureaucrats focussed on the

totality of peasant household economic activity—farming, trades and wages—in order to discover possible insufficiencies, and duly recorded each household's endowment of labor, inventory, and non-agricultural earnings.⁸ Managers, assisted by communal elders, maximized income by ensuring that each household had sufficient resources to meet obligations to lord, commune and state. They apportioned estate lands evenly between peasant household labor teams, and evidence indicates that other assets remained rather evenly distributed on the basis of ability to work and pay. As historian Peter Czap noted, 'the commune and/or estate administration achieved a high degree of success in controlling [the distribution of horses and land,] and in this way enforced their own criteria for a minimum standard of living among all the households on the estate'.⁹

It is difficult to imagine that all serf owners operated as efficiently as the Gagarins, Sheremetevs, or other magnates. One also suspects that even the most diligent estate stewards failed to control all sources of peasant income through enumeration. Yet, managers of serfs and state peasants knew that their income depended on maintaining their productive assets—on ensuring that each household had sufficient resources to engage in agriculture, trades, wage labor, or some combination of employment. As historian Steven Hoch noted, estate bailiffs 'did not ruthlessly exploit their peasants for short-run gains', realizing that 'the profitability of the estate was directly related to the peasants' material well-being'. Such paternalism was 'more self-serving than benign'. This concept of sufficiency emerged in public discussions of estate management. Managers well knew the allotment size necessary, under given environmental conditions, to maintain the estate's servile assets and produce revenue.¹⁰

This traditional concept of 'sufficiency' was a 'moral economy' in which masters gauged the health of their assets (and the extent to which they could exploit them) not in terms of land productivity, but in terms of each household's total income from all sources. This paternalistic model manifested itself in a number of nineteenth-century peasant reforms, including the serf emancipation of 1861.¹¹

From this perspective, peasant households were not participants in a single market economy, but autarkic units (the commune a collection of such units) existing within a separate natural economy that, hopefully, met their material needs, and at the same time guarantee their ability to pay a variety of obligations and taxes. Peasants were economic assets to be maintained and exploited by state, court, or—prior to 1861—serf owner. The rural economy thus consisted of two sectors—peasant and noble (*pomeshchik*). This conception of a dual rural economy became codified in the emancipation process, in which officials hoped that land allotments would provide for basic peasant needs and that compensation provided to former serf owners would lead to the intensification of noble agriculture. Combined with the granting of land allotments, reformers believed that strengthening the commune in the emancipation process (and afterwards) would permanently guarantee peasants access to sufficient resources and immunize them from proletarianization. Thus, 'in Russia, from the mid-seventeenth century, being a peasant (with few exceptions) implied an entitlement to land'.¹²

This paternalistic emphasis on sufficiency or well-being (much in line with other European states' increasing activism in the name of public welfare) persisted until the empire's demise in 1917 (to be taken up in modified form by the Bolsheviks). However,

this posed the question of what sort of measurement best suited these goals. By the 1830s, reformers who envisioned an Empire based on the rule of law and the rational administration of Russia's agrarian resources were already familiar with a European technique that appeared to be ideally suited for measuring an agrarian economy: a cadastre. Cadastral surveys performed a number of tasks for European states—from facilitating land reclamation in Holland through recording the results of land reforms and creating ordered colonial settlement patterns. Their most significant role in administration, however (dating from the financial burdens of the Thirty Years' War and regularized in much of Europe under Napoleon) lay in land taxation.¹³ Cadastres rested on the assumption that all farmers lived as “economic men” seeking maximum profits. The main variable and principal object of measurement in any economic assessment, therefore, was the land itself. By assessing soil fertility (type), average production costs for various types of grain, and location (distance to market), one could arrive at a property's objective value. Europe's economists, statisticians and state servitors believed that cadastral surveys were so crucial to rational administration that when their representatives met in Brussels in 1853 for the First International Statistical Congress, cadastres topped their agenda. The Congress' subsequent resolution noted that cadastres not only provided a rational basis for state fiscal operations, but also supplied individual property owners with a means to trace and demonstrate their ownership. State and liberal goals could be mapped simultaneously.¹⁴

A cadastre offered Russian officials a systematic portrait of the Empire's land assets and productive capabilities that would allow them to foster more general prosperity by developing infrastructure and adjusting taxes (up or down) to reflect

income. Furthermore, it provided a measure that was especially useful because it universalized the agricultural economy. Differences between peasant and non-peasant levels of production were simply attributed to the 'irrationality' of the benighted masses. The Empire's rural economy was thus heterogeneous only in the sense that it covered a wide and diverse territory. This cadastre paradigm projected an image of Russia as a society of rational actors in which (ironically) the estate-based particularism of the old regime would ultimately disappear.¹⁵ From this perspective, the cadastre as a form of measurement reflected modern, universalistic assumptions about Russia's rural economy and society. Its focus on land and its elimination of the human factor promised a rational basis of administration and an objective basis for taxation. Cadastral maps and tables would allow officials to 'see like a state,' and thus bring Russia's vast land resources under their control.¹⁶

Officials' increased desire and ability to enumerate and tabulate--especially in cadastral terms--created a statistical image of a peasant economy mired in crisis. Combined with a tradition of maintaining peasants as productive serf assets and the emancipation's goal of creating an autarkic peasant economy, calculating land value by such bookkeeping means implied that peasant household sufficiency could now be objectively measured in terms of land productivity and assessed value. As renowned geographer and statistician P. P. Semenov argued during debates on the serf emancipation process, this assumption was erroneous for two reasons.¹⁷ First, cadastres were instruments designed to equalize the distribution of land taxes. They did not provide the actual value of the land, but only its relative value (i. e., its value for tax purposes in relation to that of other properties). Thus it was possible that, 'by the

rules of a cadastre the incomes on some estates increase and others decrease by 10, 20, 30 and more percent'.¹⁸ Second, Semenov noted that a cadastral system contradicted the dual rural economy—with peasant and noble components—being constructed in the serf emancipation process:

If the land remaining...in peasant use as a guarantee of their life served them like capital...then...reassessments [cadastral surveys] would not be excessively burdensome for peasants. But for them remains, and with several reductions, their existing allotments—only that guaranteeing their existence. Almost all production from the land given out to the peasant goes directly to feed him and not for trade speculation.¹⁹

Thus, as a measure, cadastres were unsuited both for determining actual land values and measuring peasant well-being. As the agrarian economist A. V. Chaianov later noted, using 'a series of conventional methods, pricing family labor at wage rates, and so on, you can, of course, calculate "capitalist rent" in the economic sense.... But these exercises...*will have no social and economic content*'.²⁰ Or, as the English observer Donald MacKenzie Wallace observed in the 1870s:

The rural life, and...economic organization, of Russia is so peculiar...that even the fullest data regarding the quantity of land enjoyed by the peasantry, the amount of dues paid for it, the productivity of the soil, [and] the price of grain...would convey to the Englishman's mind no clear conception of the peasants' actual condition.²¹

Nonetheless, although lords, state officials like Semenov, and others (zemstvos²² and their employees) interested in the peasant economy certainly knew that the peasant

economy was different—that it was a ‘natural economy’ with little connection to the market—few suggested until the mid-1880s that peasant economic activity (well-being) could not be measured and evaluated in market terms via the cadastral process. The state found such universalism convenient--a way to simplify the process of collecting taxes.²³ In addition, Adam Smith and the works of the so-called Manchester School found a ready audience in Russia, even if Russian readers tended to interpret them in a manner that could only make true believers in *laissez faire* cringe. The extent to which peasants (and their economic activity) strayed from the path of rational economic activity could be explained by either their own benightedness or the institution of communal land tenure.²⁴ Thus, as the chair of the Main Committee on Peasant Affairs, Ia. I. Rostovtsov, argued early in the serf emancipation process, the emancipation ‘must lead the peasant both to a freedom of labor, as a source of his further spiritual development, and to an improvement in his material well-being’.²⁵ Emancipation would remove a key obstacle preventing peasants from developing into rational economic actors like everyone else.

By the mid-1880s statisticians employed to perform tax assessment work for many of Russia's zemstvo institutions—filled with a healthy dose of historical economics from Germany and a populist faith in the historical mission of Russia's peasantry—had before them enough data to conclude that an accurate assessment of peasant land income required consideration of ‘social factors’ beyond market data.²⁶ Average market figures for production costs and sale prices did not reflect the natural character of a peasant household economy that produced with its own labor and inventory and consumed the majority of its produce. Yet, in spite of this insight—which led to the

compilation of household inventory and budget data—zemstvo statisticians continued to assess peasant well-being in market (i.e., cadastre) terms by assigning market values to budget components and comparing these to figures on peasant tax and redemption payments. The results—especially when researchers assigned a market value to the actual labor peasants invested on their plots—nearly always resulted in a negative bottom line. Measuring peasant economic activity in market terms failed to account for the peculiarities of natural (subsistence) economies. As the discussion below indicates, they were not alone in this practice, even though they and others remained uneasy about the results. Only the advent of the Organization and Production School of economics—which measured well-being relative to a household's structure, consumption needs, and organization of production (and considered the marginal utility of each unit of labor in a subsistence economy)—provided a means of measuring well-being within the non-capitalist peasant economy that did not portray peasant households as perpetual money-losing (and hence, crisis-ridden) enterprises.²⁷

Thus, as officials grappled with the task of reforming peasant life throughout the post-emancipation period their concerns about peasant household sufficiency (well-being) constantly collided with a modern vision of the Empire's rural economy that could be measured, mapped and taxed solely in terms of the productivity of the soil or land value. The collision stemmed largely from the fact that book-keeping methods associated with a cadastre increasingly came to be seen as a measure of household sufficiency. 'Sufficient' peasant land allotments became 'insufficient' when observers focussed accountant's eyes on peasant allotments. This combination of a traditional concern for sufficiency with a measurement instrument designed for tax assessment

created the impression that the state had cheated peasants in the emancipation process and, in doing so, doomed the peasant economy to perpetual poverty. This crisis perception colored state peasant policies until the end of the old regime.

Sufficiency (Ability to Pay) and Land Value in Kiselev's Reforms and the Emancipation

The first attempt at cadastration came in the 1840s under the auspices of A. P. Zablotskii-Desiatovskii's Statistical Section of the Ministry of State Domains' Department of Rural Economy. Work began in 1842 as part of Minister of State Domains Count P. D. Kiselev's reform of the state peasantry. Preliminary research indicated that, although the state assigned each commune a collective tax burden based on the number of taxable male inhabitants, the commune attached this burden to land; when communes repartitioned their lands, they also repartitioned tax burden. The main problem with this system, Kiselev noted, was the disproportion of taxes with land revenues. Thus, improving the state peasantry's lot and regularizing tax receipts required shifting tax burden from persons to land. A cadastre seemed the most logical means of achieving all of these goals.²⁸

Between 1842 and 1856, cadastral commissions surveyed state peasant lands in twenty-five provinces, classifying these holdings according to fertility, calculating the labor necessary for cultivation, and compiling series data on local grain prices.²⁹ However, regional variations in Russia's rural economy soon confronted officials with a perplexing problem. Land evaluation proved adequate for fertile black-soil regions, but in the north and other areas where cottage industry and wage labor comprised the bulk

of peasant income, the cadastral system failed. Although poor soils often failed to meet basic consumption needs, peasant incomes in these areas were nonetheless high. These circumstances forced officials to collect data on non-agricultural incomes, thereby converting *obrok* (quitrent) into “a crude income tax rather than a land tax.”³⁰ Thus, they measured not only the land’s ability to yield an adequate income, but also the adequacy of the household’s total income. As a result of these endeavors the government was able to equalize the tax burden for most state peasants and increase its annual revenues by six million rubles without increasing the tax rate. Reformers also succeeded in allotting additional land to peasants whose parcels, measured by cadastral means, appeared insufficient.³¹ However, they also discovered the limitations Russian conditions imposed on a cadastral process. Total income (ability to pay) prevailed—both as a gauge of peasant sufficiency and state efficiency.

The process of granting a landed emancipation to twenty-two million serfs exacerbated the tension between the old concept of sufficiency (overall ability to pay) and the emerging new concept of sufficiency framed in cadastre terms (the actual value of peasant land allotments). Alexander II’s initial parameters for a landed emancipation were ambiguous. Imperial Rescripts stipulated a landed emancipation, but gave no direction as to the composition or permanency of peasant allotments.³² However, his appointment of Ia. I. Rostovtsev as head of the Editing Commissions charged with drafting the emancipation statutes ensured that the Rescripts’ “great principles”—that peasants would perceive an improvement in their lives and receive an allotment with which to maintain themselves and fulfill their obligations—would find a place in discussions. These principles, in Rostovtsev’s mind, came to mean sufficiency in the

traditional paternalistic sense (i. e., an ability to pay); the emancipation statute not only needed to guarantee peasants a sufficient quantity of plowland, but also access on some level to other resources necessary for households to meet their subsistence requirements and obligations to the state (i.e., access to the pasture, forest and other resources to which they were accustomed). For 'personal liberty' to be meaningful, emancipated serfs needed a sufficient quantity of all resources necessary for maintaining their livelihoods.³³

Based on these principles, the Editing Commissions' Economic Section resolved that peasants could reject allotments only if other means existed to guarantee their livelihood.³⁴ It also argued forcefully (especially in the absence of reliable data) for giving peasants allotments in their current sizes. Noble landowners on the provincial committees, concerned with the pace at which their assets appeared to melt before their eyes, countered that the use of current allotment size would benefit those who had granted miserly allotments, penalize those who had been generous, and strip serf owners of all their land in northern and steppe areas where typically serfs had access to the entire estate and paid *obrok*.³⁵ Only allotments based on 'artificial norms' (i. e., not existing allotments), 'and besides this [ones of] the smallest possible size' could 'lead to the swift and natural substitution of compulsory labor by free labor in rural life'.³⁶ To make this selfish proposition more attractive, they also averred that an artificial norms would create uniformity conducive to tax assessment. Finally, in response to accusations that defining an artificial allotment would be an arbitrary process, nobles proposed that existing allotments, 'established exclusively under the influence of serfdom', were no less arbitrary.³⁷

Both Rostovtsev and the Economic Section rejected these arguments (although they sympathized with the predicament presented by northern and steppe *obrok* estates). For Rostovtsev, any 'cut-offs' (*otrezki*) necessary to remedy the varied conditions of serf allotments could not deprive peasants of 'their current means of existence'.³⁸ The Economic Section noted that reducing allotments contradicted state goals. It also disagreed that existing allotments were arbitrary, noting that 'with few exceptions' they rested 'on the strength of the centuries-old relations and mutual benefits of one and another *soslovie* [social estate] placed upon the *pomeshchik*, and the moral and material necessity of maintaining in sufficient sizes the life of his peasant'.³⁹ Other considerations also favored maintaining the past conception of sufficiency after the emancipation. The task of devising an 'artificial' allotment norm was prohibitively complex. It would require the state to 'define with desired accuracy the very needs of the peasant in each locale', including 'the actual productivity of the land allotment' and 'the degree of benefit each peasant obtained from primary, and in particular, auxiliary, trades that serve as supplementary income to that received from the land'. The state barely had means to survey existing allotments, let alone new ones.⁴⁰ The Economic Section also suggested that artificial norms would ultimately undermine both peasants and nobles because resultant peasant dissatisfaction might exceed the state's ability to maintain order.⁴¹

To avoid penalizing serf owners who previously granted large allotments, the Economic Section planned to define "existing allotments" not as they actually were, but as a range of sizes deemed average for a given locale. Peasants with current allotments outside of this norm received either additional land or a reduction. Peasants

eligible for additional land (those whose current allotment size fell below the minimum for the area) received it only if they agreed to assume the additional obligations attached to it, and only if supplementing peasant allotments did not shrink the *demesne* to less than one-third of its current size.⁴² The Economic Section also acted to ensure 'sufficiency' for both *sosloviia* when it chose to rely on past custom to specify peasant access rights to pastures and forests.⁴³ However, the commitment to compensate nobles at some level (thus providing capital to intensify cultivation on the remainder of their estates); the inability to do so from state coffers because of a banking crisis; and the subsequent need to determine how much peasants would have to pay to redeem their allotments (redemption payments—*vykupnye platezhi*) raised the issue of the actual value of peasant allotments. The state's self-assigned role as banker for the redemption operation gave it a vital interest in determining the actual value of the lands for which it soon held forty-nine year mortgages.⁴⁴

The market provided reformers with little assistance. Serf-owners could not sell land without its attached labor supply, and thus market prices (to the extent that they existed at all) provided little indication of land value. The Editing Commissions, of course, received voluminous assistance from serf owners themselves (members of the provincial committees), for whom the prospect of losing their servile labor supply necessitated a reconceptualization of the value of their assets (i.e., what the land and serf labor cost individually).⁴⁵ Thus it is not surprising, given heightened noble concern with the value of their assets, state concerns about its proposed credit operation, and several participants' involvement in Kiselev's reforms, that the idea of determining land values by cadastral means entered the discussion. Reformers soon concluded that a

lack of reliable information and the state goal of improving peasant life necessitated using current obligations as a basis for calculating post-emancipation obligations.⁴⁶

However, this solution satisfied few completely, and several provincial committees and Editing Commission members recommended a periodic re-evaluation of peasant obligations in light of current average grain prices or a cadastre.

P. P. Semenov—a person eminently knowledgeable in the realm of statistics—labeled the first action unjust and the second impractical. Using a “grain rent” formula in Russia was unjust because poor infrastructure and long distances to markets created imperfections in Russia’s grain market.⁴⁷ Creating a cadastre also presented problems. The French cadastre begun in 1807 was expensive and hardly perfect. The Austrian cadastre initiated in 1817 was still not done. Prussia completed cadastres only in its Westphalian and Rhine provinces.⁴⁸ Classifying land by whole areas instead of single estates—a method eventually adopted during Kiselev’s reforms—simplified the process. However, in this situation, Semenov argued, such a method could only lead to unsatisfactory results. In particular, in 1842 the Ministry of State Domains found it necessary to use ‘more accurate methods of enumeration’ (i. e., to collect data on non-agricultural income). In short, repeating the process for the lands used by serfs would be an even larger project—a task for which the state had neither sufficient means nor time.⁴⁹ Furthermore, Semenov argued, as instruments designed for equalizing the distribution of land taxes, cadastres did not provide the actual value of the land, but only its relative value. This made such a method unsuitable for determining peasant obligations (and *pomeshchik* compensation) because ‘with a cadastre, *obrok* would be either very low (to the disadvantage of the *pomeshchik*) or so high that paying it would

be disastrous for peasants'.⁵⁰ The 'shock' to the values of pomeshchik estates would be especially great in non-black soil regions and the increase in peasant payment burdens would be onerous in agricultural areas. From this it followed that, while using a cadastre to determine peasant payments did not meet the Editing Commissions' goals of guaranteeing peasant livelihoods and establishing nobles as capitalist farmers, the 'existing fact' of current payments did.⁵¹

Because of the complications involved in obtaining (in a timely fashion) and interpreting necessary data and the fact that the emancipation process contributed to the creation of a separate peasant economy based on subsistence, the drafters of the redemption procedures followed the lead of Prussia and Austria by using average local *obrok* (quitrent) as a basis for assigning value to the allotments. The commission calculating land values capitalized *obrok* payments at six percent.⁵² Thus, difficulties surrounding the emancipation resulted in redemption payments that, again, said more about the ability of peasants to pay than about the actual value of the allotments. By 1878, 7,747,265 'revisional souls' (peasant tax units) were redeeming 27,630,467 *desiatiny* of land with redemption payments totaling 43,741,493 rubles.⁵³

However, in spite of basing redemption payments on existing obligations, the abolition of serf status, the Rescripts, and the redemption operation implied something quite different, namely that: a) the allotment should guarantee peasants' subsistence needs and; b) that the allotment should also yield an income sufficient for meeting payment obligations—including redemption payments. In essence, the government caught itself in the emancipation's ambiguity. Capitalizing *obrok*—the peasant's ability to pay—manifested continuance of the serf economy, whereby sufficiency meant

guaranteeing the existence of human assets as a means of guaranteeing income. However, the emancipation process, including the redemption operation, inserted something quite different into this equation: the concept that land had a value in and of itself. This was a somewhat novel idea in a country where land surplus and labor shortage had linked land and labor in the institution of serfdom. It seemed quite reasonable to many that the increasing availability of data on the agrarian economy made it possible to measure whether or not the emancipation met its own goals by calculating allotment values and comparing them to payments.

Statistical Research and the “Insufficient Allotment”

The most prominent investigation, St. Petersburg University professor of statistics Iu. E. Ianson's study of peasant land allotments and payments, appeared in 1877.⁵⁴ This first edition received simultaneous praise and criticism for suggesting that peasants received insufficient allotments in the course of the emancipation. Feeling compelled to respond to critics—most notably Dmitrii F. Samarin—Ianson issued a second edition of his work in 1881.⁵⁵ In addition to denying his invention of any ‘theory of insufficient allotments’, and offering readers a chance to judge the book for themselves, Ianson argued that the book was an important guide to economic policy, especially in Russia. Statistical study was crucial to the state’s paternalistic duty to foster economic sufficiency and development:

That which in Western Europe is now only propagandized as the highest principle of economic science—the state’s leading significance in the attainment of public welfare—has historically entered into public life here. State power

stands here not only by the controls of the administrative mechanism, but at the helm of economic success and progress. ...[U]nder these conditions the study of economic life comprises a necessary prerequisite of correct state action....⁵⁶

Ianson presented a cautious study. By necessity, the work used average figures that could not be applied to specific peasant allotments. This bothered him for methodological reasons. He regretted the work's limited source base (mainly the Valuev Commission's published work) and noted that he had avoided a large volume of anecdotal evidence related to peasant land rental and purchase because he saw 'no significant strength of proof in such non-statistical data'.⁵⁷ Yet, he stood by his conviction that the book depicted 'one of the many causes...of the unfavorable economic condition of a significant number of former serfs'—namely that in spite of the state's intentions, the landed emancipation left peasants without sufficient means to feed themselves and meet payment obligations.⁵⁸ Income derived from peasant allotments did not correspond to payments levied against them. Ianson's work, which carried the scientific prestige of his university chair, thus converted the cadastre into a new measure of household sufficiency. It suggested that the state's paternalistic duty required new legislation that considered actual land values, rather than total household income.

Beginning with an examination of allotments and payments in non-black soil provinces, Ianson acknowledged that allotments could not themselves be sufficient in these areas.⁵⁹ However, while noting that peasants in these areas had a long history of supplementing their incomes with non-agricultural pursuits, his analysis of consumption

needs, production costs, and harvests also pointed out that these allotments were insufficient even for feeding peasant families. 'Given the insufficiency of allotments', he noted, 'it is understandable that not only all taxes, but even redemption payments cannot be paid from the land's income'. Redemption payments two to three times the *obrok* payments of local state peasants exacerbated the situation, especially as local wages were often so low that they failed to ameliorate the situation. Data collected for zemstvo tax assessments, which calculated average income for an extended period of time, confirmed this.⁶⁰

His analysis of black-soil provinces revealed that even in this fertile region, generally considered profitable for farming, peasant allotments did not fulfill the emancipation's goal of providing peasants with sustenance and the ability to make payments.⁶¹ Using official data, Lanson posited a series of average peasant families and proceeded, again, to calculate net allotment income by subtracting consumption needs and production costs measured in market prices. The end result was virtually the same as in non-black soil areas. While, on paper, peasants could generally feed themselves from their allotments, the land did not generate a surplus for redemption and other payments.⁶² In part this was because even though redemption payments in nine black-soil provinces were from 14% (Orel) to 48% (Riazan') less than pre-emancipation quitrents, post-emancipation allotments were smaller in all provinces but three. In addition, he argued, 'cut-offs'—deprivation of free access to pasture and firewood—also negated much of the benefit of lower payments. These items now had to be purchased from the local lord and thus constituted a further strain on peasant budgets.⁶³ Thus, in many cases peasant economic conditions were 'worse than under

serfdom'. Current land allotments, 'without other guarantees of their welfare' not only could not protect peasants 'from poverty and proletarianization, but sometimes even deprived them of their daily bread'. Calculated in market terms, peasant income was 'fictional'.⁶⁴ By 1895 lanson's argument—which confirmed the suspicions of the populist intelligentsia—was immortalized in late imperial Russia's most authoritative reference work, Brokgauz and Efron's *Entsiklopedicheskii slovar'*. According to the encyclopedia, lanson's work 'had established beyond a doubt the inadequacy of peasant land allotments and their excessively high assessments.'⁶⁵

Dmitrii Samarin, a landowner and commentator on peasant affairs, attacked lanson's work by noting that redemption payments had never been intended to correspond to the actual value of the land, and therefore could in no way be connected to the size or actual value of peasant allotments. Redemption payments were simply another tax—a personal obligation to the state. However, this point tended to be ignored, as other research supported lanson's conclusions. As an increasing number of Russia's zemstvos turned to collecting statistical data for local tax assessment, these data (which also calculated allotment income using market prices) supported lanson's conclusions and further disseminated the notion of insufficient allotments among the reading public.⁶⁶ Moscow statistician V. I. Orlov noted in his study of the peasant economy that the lack of correspondence between payments and allotment income was one of the chief factors contributing to peasant abandonment of allotments and frequent communal repartitions. These actions increased the burden on other villagers who, because of the principle of collective responsibility, became responsible for the

additional dues. Tver' statistician V. I. Pokrovskii reached similar conclusions after an analysis of hypothetical family budgets revealed average deficits of nearly sixty rubles.⁶⁷

Other research from the academic community also supported Ianson's conclusions. I. I. Vil'son, a respected representative of Russian statistics within the Imperial Russian Geographic Society, noted in his study of the redemption operation that the main cause of arrears (outside of fires, crop failures and other 'temporary' setbacks) was the fact that in many regions soil quality and other geographic factors precluded any correspondence between redemption payments and income from peasant allotments.⁶⁸ The economist L. Khodskii, arguing against Samarin, agreed. According to Khodskii's calculations the biggest discrepancy was in Perm' province, where redemption payments exceeded 'bank value' by more than 70%. Peasants received the best deal in Astrakhan province; there the land's bank value exceeded redemption payments by nearly 178%. At times, provincial figures obscured regional variations in soil quality. Thus even though bank value exceeded redemption payments by around 20% and 90% for Chernigov and Kursk provinces respectively, a closer examination revealed that all peasants in these provinces did not share this good fortune.⁶⁹

Thus, in spite of the fact that redemption payments were based (out of necessity) on peasants' ability to pay, by the end of the 1870s an increasing number of statistical studies focused attention instead on allotment value itself—a cadastre measurement of peasant well-being—rather than total peasant household income. These studies turned agrarian crisis into an established fact, especially in terms of providing an explanation for what officials saw as a key indicator of crisis: the increase in tax and redemption

payment arrears.⁷⁰ Rural poverty now had a 'scientifically' determined cause.

Literary descriptions of the countryside as cesspools of poverty and despair put a human face on these cold numerical facts.⁷¹

Redemption Payment Reductions

In this atmosphere the government began the task of reviewing the redemption process. Law required the government to either force redemption or re-assess the *obrok* payments of so-called 'temporarily-obligated' peasants after twenty years. This term expired in 1881. The redemption operation's profitability also convinced some officials that the government had a moral obligation to reconsider redemption amounts. Furthermore, a commission reviewing tax codes believed that tax reform made sense only after review of other obligations.⁷² The process of reducing redemption payments reveals the increasing application of cadastre measurement principles to the peasant economy, a process that reinforced the idea that the emancipation statute, rather than providing a patriarchal guarantee of sufficiency and an improvement in peasant life, had overcharged peasants for their land and plunged peasant agriculture into crisis.

A Finance Ministry commission reviewing the redemption operation reached a similar conclusion. Data from several sources indicated that, although random catastrophes (fires, epidemics, crop failures) initiated the cycle of decline, the incongruency between redemption payments and allotment income guaranteed the perpetual impoverishment of many villages. A vicious cycle ensued, whereby arrears led to a depletion of assets (sale of livestock and hence, fertilizer), and more arrears. Non black-soil regions, which required regular and substantial amounts of manure,

suffered most acutely. Collected data also led the commission to the conclusion that 'cut-offs' exacerbated this condition. Emancipated peasants thus no longer had sufficient means to make payments of their previous size.⁷³ Furthermore, the commission's own comparison of redemption values and current land prices revealed a large discrepancy. For example, land in Smolensk province valued at 27.33 rubles/*desiatina* for redemption purposes had a current market value of only 15.80 rubles/*desiatina*. The Editing Commissions had assumed that all land yielded an income of at least five percent on capital. In the case of Smolensk province this meant that redemption payments of 1.64 rubles/*desiatina* should in reality be only 0.79 rubles/*desiatina*—a 52.1% reduction. These figures, as well as those for twenty-two other provinces, indicated that redemption payments could be aligned with actual land values only by reducing them to 41.5% of the current annual assessment (i.e., reducing total collections from 20,045,450 to 8,327,268 rubles).⁷⁴

The idea that redemption payments exceeded actual allotment value became axiomatic as discussion passed through yet another commission to the stage of policy formation. The new commission included a number of peasant affairs 'experts' from Russia's *zemstvos*.⁷⁵ Their opinions provided a basis for the reduction statutes enacted in December 1881. The commission majority took what it believed to be a strict constructionist approach to the redemption issue. It argued that it was 'impossible' to consider former serf *obrok* payments (or *barshchina*—corvée—converted into cash) as anything like rent and quoted the Editing Commissions' work to the effect that there was little correlation between allotment size and the size of obligations. Furthermore, although the majority (led by Dmitrii Samarin and Prince A. A. Shcherbatov) agreed that

there was a crisis in rural Russia, it also believed that as the emancipation statute concerned the empire as a whole, morally the state could only adjust the terms of emancipation in such a way that all peasants were treated equally. Linking payments to allotment income would be merely an economic move; the 'personal element, which comprises its [the redemption relationship's] main basis' demanded that the state ensure that obligations did not exceed the 'paying powers of the peasant' from all sources of peasant income. The majority extended this argument to include a call for tax reform (especially abolishing the poll tax) and equalizing taxes among all categories of peasants.⁷⁶ The majority opinion reflected the traditional patriarchal approach to the peasantry maintained by government and serf-owner alike—the idea of sufficiency as total household income rather than actual allotment value.

The commission minority agreed with the majority's interpretation of the emancipation statute, but argued that the majority's case ignored other aspects of the redemption process and presented a static view of the issue. According to the minority report, although the original spirit and method of calculating redemption payments pointed towards defining them as personal obligations, other aspects of the redemption program, including the actual redemption process, pointed towards a different conclusion. 'Obrok', noted the minority report,

represents a permanent payment...that can be raised or lowered over a defined time period according to *pomeshchik* or peasant demands.... Redemption payments are limited payments, restricted to a set number of years and including a component absent in *obrok*, namely a percent of remittance. This radical

difference between the two types of payments directly demonstrates that it is impossible to attach the same meaning to redemption payments as to *obrok*...⁷⁷

Redemption payments, in reality, were akin to payments on a loan. The minority report also argued that peasants recognized ‘very clearly and forcefully...the difference existing between redemption payments and other collections levied upon them’, knowing well how many payments remained until the land was fully redeemed. As such, the redemption operation was unlike tax reform, and any decision to lower payments should be based on financial criteria related to the actual redemption process.⁷⁸ In other words, although ‘ability to pay’ and ‘the improvement of peasant life’ guided the Editing Commissions as they developed the redemption process, a system based on substantially different criteria—land value—resulted from their deliberations. The minority proposed that redemption payments be brought in line with allotment income on a province-by-province basis. Zemstvo land assessment figures and other data could provide information for this purpose. Areas deemed especially needy deserved reduction priority. The minority recommended a general ten percent reduction only after adjusting redemption payments to correspond with assessed value.⁷⁹ Thus the minority, by using the cadastre conception of sufficiency, kept alive the main idea behind the perception of agrarian crisis—namely the idea that there should be a closer correlation between the size of redemption payments and the value of the allotments being redeemed.

This idea appeared in the final text of the reduction statute. The law incorporated the majority’s view that the reduction should be empire-wide, including most of European Russia and western Siberia, and increased the initial reduction sum to twelve

million rubles. At this point, the influence of the minority report and the idea of crisis came into play. The law earmarked part of the twelve million rubles for a general reduction of redemption payments. Part of the sum, however, was set aside for a supplemental reduction (*dobavka*) for villages with economies in 'disorder' (*razstroistvo*). The most important indicator of disorder (and hence, eligibility for a supplemental reduction) was a discrepancy between redemption payments and allotment values.⁸⁰ This aspect of the program colored the entire process, especially as—by involving all of Russia's zemstvo institutions—implementing the supplementary reductions became a very public affair. In addition, supplementary reductions rested on a much tighter correlation between redemption payments and allotment income than the majority's conception of redemption payments (redemption of obligations) allowed. Implementing the supplemental reduction highlighted the tension between 'sufficiency' in a traditional sense and sufficiency as measured in cadastre terms, and further implanted the notion of peasant economic crisis.

The Supplemental Reduction

The zemstvo experts also considered reduction fund allocation methods. Because the majority considered the reduction process as correcting tax inequalities, it recommended that the peasant's ability to pay be gauged by a wide variety of economic indicators. Its list included the percentage change in population, average allotment size and value, soil quality, the rise or fall of non-agricultural employment opportunities, and total arrears. The majority acknowledged that such a list precluded the 'mathematical accuracy' of calculating allotment income, but noted that 'such accuracy is often

misleading'. The primary goal of equating payments with total ability to pay dictated that supplementary reductions be assigned after collection and consideration of a broad spectrum of economic factors.⁸¹

Since the minority advocated reductions only on the basis of discrepancies between redemption payments and allotment value (i.e., that the reduction operation was a refinancing of debt based on new information, not tax relief), it recommended indicators related to land values, particularly zemstvo tax assessment figures.⁸² In a special opinion, Prince A. I. Vasil'chikov, an expert on peasant agriculture, gave qualified support to the minority's view. He noted that consideration of outside sources of income was superfluous to the business at hand, and would soon be taken into account in the process of tax reform. Even though land value could be figured only imperfectly, when combined with other (also imperfect) indicators such as livestock numbers, it remained the best available indicator of whether or not excessive redemption payments caused economic distress.⁸³ Thus, the original tension between competing definitions of redemption payments manifested itself again when it came to recommending supplemental reduction criteria (i.e., measures of 'sufficiency'). Although the general reduction reflected state recognition that redemption payments were more than mortgages, the implementation of the project emphasized the opposite idea (i.e., a close correlation between redemption payments and land values).

With these recommendations in hand, the Central Statistical Committee (TsSK) began collecting data on three forms in the second half of 1881. Form 2 requested information on temporarily obligated peasants' *obrok* payments and arrears as of January 1, 1881.⁸⁴ The TsSK then asked that zemstvos use information from Forms 1

and 2 to complete Form 3. When completed, this form listed villages whose economic 'disarray' required a supplementary reduction. In defining 'disarray', the TsSK asked that zemstvos consider only systemic causes related to the quality of land allotments, such as the fact that redemption payments exceeded actual income in normal years. Land shortages and other 'temporary' setbacks (fire, crop failure, etc.) were not grounds for inclusion on Form 3, since the state was mostly concerned that redemption payments reflected the true worth of peasant allotments.⁸⁵ Thus, although questions on Forms 1 and 2 pertained to collecting a broad base of information for determining the peasant's ability to pay (in line with the majority), the minority's emphasis on value prevailed on Form 3.

The TsSK used information from all three forms to award supplementary reductions. The award process illustrates the general acceptance of a cadastre paradigm (i.e., that peasant allotment land could be measured like any other) and the pervasiveness of the view that rural crisis stemmed from an imbalance between redemption payments and land values—from a new conception of sufficiency that defined the ability to pay (i.e., measured peasant well-being) solely in terms of land productivity and market criteria. What seemed sufficient to emancipators, or even the zemstvo expert majority (ability to pay), became increasingly less so when zemstvos had to justify supplemental reductions. The TsSK's evaluation of property for supplemental reductions in terms of soil quality and other criteria reflecting allotment value gives credence to this interpretation.

The Riazan' province report provides a good example, for it was TsSK director P. P. Semenov's home province and the subject of his own recent research (1878-1879).⁸⁶

In addition, the issue erupted into open dispute in the Dankovsk district zemstvo. Two deputies demanded that the governing board omit land shortage from the factors that qualified villages to be included on Form 3. Considering land shortage, they argued, implied that the emancipation had cheated peasants. Another deputy disagreed, and his argument illustrates how the idea of crisis, both in terms of land shortage and excessive redemption payments, had permeated society. Pointing to lanson's work, N. I. Kotov argued that the question of insufficient peasant land allotments had already been demonstrated "in the sense that the size of allotments has been recognized as insufficient both for sustenance and for the fulfillment of tax obligations." He also noted that the zemstvo itself had reached this conclusion ten years earlier while considering government tax reform proposals.⁸⁷ The deputies resolved to consider all of these factors.

Compared to other Riazan' province districts, Dankovsk peasants enjoyed above-average economic conditions. Although the average number of cattle per household (0.8) indicated certain insufficiencies, the number of horses and adult male workers per household (1.5 and 1.7, respectively) and average *per capita* allotment size (2.2 *desiatinas*) were at or above provincial averages.⁸⁸ Redemption payment arrears totaled only sixteen percent of annual collections. The zemstvo, however, listed more than half (121) of the districts 237 villages as being in a state of economic disorder. According to the zemstvo's information, twenty-four of the 121 villages were on the list by virtue of the quality of their allotments. The rest owed their spot to a variety of other causes. For the TsSK, however, most of these other maladies did not address the point, which was allotment value as reflected in its ability to produce an income. The

TsSK did not doubt that the zemstvo raised a number of valid concerns. It noted, however, that problems such as shortages of land, employment opportunities and credit were difficult to measure and, in fact, characterized the whole district.⁸⁹ The zemstvo's only credible case was what could be measured—the value of allotments as compared with redemption payments. This indicator could rightly serve as a basis for a permanent reduction of redemption payments, while the other causes could, at best, serve as a basis for temporary relief. Thus, the TsSK only awarded supplementary reductions to the twenty-four villages where the zemstvo demonstrated that allotment income fell short of the sum charged for redeeming the plots.⁹⁰ Land value compared to redemption payments became a measure of the condition of peasant villages.

The Bezhetsk district (Tver' province) report also exemplified a cadastre measure of 'sufficiency'. Based on previous zemstvo statistical work and other data, the zemstvo concluded that it was 'impossible not to recognize that existing redemption payments...in several townships do not correspond to the land's productive capabilities...'. This meant that any reduction in payments 'should not in any way be equal for all locations, but should correspond to the quality and productive capabilities of the soil'. To remedy the situation, the zemstvo asked the TsSK to accept the land values it derived through statistical investigation. These values, calculated by subtracting production costs from gross income, indicated that redemption payments for two groups of villages required reductions of twenty-five and fifty percent in order to correspond to actual allotment value.⁹¹ The TsSK concurred that poor soil quality created a large disparity between income and payments. It split the difference between

the zemstvo's reduction requests, granting villages with the greatest discrepancy between payments and income a thirty percent supplementary reduction.⁹²

The case of Solikolamsk district (Perm' province) adds another layer of understanding to this process. The zemstvo argued that, based on 'experienced data' (i. e. data obtained from deputies' own agricultural endeavors), redemption payments exceeded net allotment land income per *desiatina* over a four-year period.⁹³ Only villages with hayfields, key to maintaining livestock herds and fertilizer supplies, had profitable allotments.⁹⁴ One might wonder why no accounts of mass starvation accompanied the report, given the absence of peasant income for four years. The lack of such reports can be explained by the fact the zemstvo deputies saw the peasantry through the cadastre paradigm. Deputies calculated average income based on their own experience, that is, as if the same notion of profit driving their own economic activity also motivated neighboring peasants.

The Stavropol' district zemstvo (Samara province) submitted a more sophisticated analysis which also presented a contradictory portrait of the local economy. As with the example above, the contradiction stemmed from the zemstvo deputies' view of the peasant economy as little different from their own farming. After completing an inventory of the district's 105 peasant communities, deputies calculated average figures for family composition, livestock inventory, land tilled, harvests, and expenses (including taxes). They used these figures to create a hypothetical 'average' peasant family budget. The compilers attempted to account for every possible income and expenditure, including arrears. The final figure in the expense column totaled

nearly forty-two rubles more than the hypothetical 'average' peasant family's calculated income.⁹⁵

But, once again, there were no reports of starving villages. The zemstvo conceded that none of the villages inhabited by their average peasant were in a state of 'disorder'. Deputies argued, however, that 'because of small allotments in Stavropol' district, redemption payments seem higher, and thus seem to correspond less to the advantages extracted from the lands of the province as a whole'.⁹⁶ Thus, the discrepancy between income and expenses should make at least four villages eligible for a supplemental reduction. The TsSK conceded the detailed nature and proper foundation of the zemstvo's case, but hesitated to grant a supplemental reduction because of the area's soil quality. Semenov and his co-workers believed that, given the district's high fertility, the 14% general reduction would be sufficient to align income and payments. However, the TsSK—acknowledging that the relationship between payments and allotment income resulted from the quality of particular allotments—gave the Samara provincial zemstvo great latitude in distributing the province's supplemental funds in accordance with local surveys. Stavropol' ultimately received 3,281 of the province's 12,660 ruble reduction funds. As with the case in Solikolamsk district, the fact that *pomeshchiki* calculated peasant income as if peasant economic behavior differed little from their own led to an incongruity between the data and reality. The TsSK and the provincial zemstvo ultimately supported these figures, bolstering both the idea that sufficiency could be measured in cadastre terms and the notion of rural crisis.⁹⁷

In the rare case where a zemstvo argued for a supplemental reduction on the basis of peculiarities in peasant agriculture, the TsSK ignored that evidence and emphasized a reduction based on soil quality and allotment value alone. The report for Saratov's Kuznetsk district argued that, although local land values were high, this did not reflect the true value and income potential of *peasant* land. The zemstvo asked for a blanket reduction of twenty-five percent for all of the villages listed on Form 3, noting that certain aspects of peasant agriculture, such as the "stretching" of allotments into elongated strips, hindered animal husbandry and required 'a double or triple expenditure of labor for tillage'. This reduced the value of such land in comparison with non-peasant lands of equal fertility. The zemstvo received its reduction, but not on the basis of this argument. The TsSK justified granting the zemstvo's request, once again, on the basis of soil quality. Added evidence of high redemption payment arrears convinced the committee that there was a discrepancy between payments and the clay soil's ability to produce an income.⁹⁸ Sufficiency in terms of value prevailed.

Conclusion

Only further demographic and consumption research will ultimately reveal the existence or extent of Russia's agrarian crisis. What the above narrative suggests is the role of continuity and change in history. The paternalistic conception of sufficiency developed within the serf economy and embodied in the 'great principles' of the emancipation process—combined with the increasing application of capitalist measurement to a non-capitalist economy (i.e., one where family subsistence needs supercede profit considerations)—created the perception of a rural crisis rooted in the

insufficiency of peasant allotments. Thus, although we now have reason to question the actual existence of crisis (e.g., peasants seldom defaulted on redemption payments), the pre-1861 serf economy ironically emerged to contemporaries as a golden era where access to adequate resources enabled peasants to meet subsistence needs and payments.⁹⁹

The emancipation process itself laid the groundwork for a perception of rural crisis. On one hand, it acknowledged and set out to perpetuate a subsistence-oriented peasant economy and a market oriented noble economy—at least until such a future time that enlightenment integrated the benighted peasantry into the market. Furthermore, Samarin and the majority of zemstvo experts were correct in seeing the emancipation as a process that involved interests beyond those of the peasantry. However, at the same time the emancipation (like Kiselev's earlier reforms) raised the issue of the value of peasant land allotments. Although emancipators relied on peasant ability to pay as a means of determining redemption payments (rejecting a formal cadastre as impractical), the state's plans to compensate pomeshchiki and charge peasants pushed those involved to conceptualize Russia's rural economy in cadastre terms (i.e., as a single rural economy that could be measured by market criteria). The emancipation combined traditional paternalism and its conception of sufficiency as total household income (the 'great principles') with a new measure of sufficiency as land value. Thus, as increasing data on peasant income became available in the emancipation's wake, Ianson's and others' studies of peasant income and payments all applied a cadastre measure to gauge the condition of the peasant economy. Their discoveries attributed peasant distress to the insufficiency of peasant allotments—

specifically a non-congruence between redemption payments and allotment value.

These works gave the idea of crisis a new statistical reality and covered it with a thick scientific veneer. The emancipation appeared in a new and more sinister light: not only had the peasantry been deprived of all the land, but the land they received was over-priced.

Although statutory and practical issues led to reconsideration of redemption payments, a sense of crisis—embodied in alarming data on arrears—added urgency to the project. Here, as with the original emancipation process, a tension emerged between peasant ability to pay (the position of the zemstvo expert majority) and the actual value of allotments (the concerns of the zemstvo expert minority). Although the reduction process made allowances for non-agricultural income (ability to pay), Semenov and the TsSK increasingly attached primary significance to allotment value as a measure of peasant household sufficiency—especially in the allocation of supplemental reductions. The non-correspondence of allotment value and redemption payments was a primary indicator of economic ‘disorder’. This was a cadastre view of the peasant economy, a paradigm of a single rural economy (rather than separate peasant and *pomeshchik* spheres) wherein the value of agricultural land was universally determinable by subtracting market production costs from commodity prices. In this way the government’s own procedures in the reduction process, based on the idea that peasant land value could be calculated in market terms, perpetuated a cadastre conception of sufficiency and the notion of crisis. This perception persisted as a motivation behind state agrarian policy for the remainder of Empire’s existence.

¹ Steven L. Hoch, 'On Good Numbers and Bad: Malthus, Population Trends and Peasant Standard of Living in Late Imperial Russia', *Slavic Review* 53, no. 1 (1994), 41-75 (quote 41); Paul R Gregory, *Before Command: An Economic History of Russia From Emancipation to the First Five-Year Plan* (Princeton, 1994); John Bushnell, 'Peasant Economy and Peasant Revolution at the Turn of the Century: Neither Immiseration nor Autonomy', *Slavic Review* 46, no. 1 (1987), 75-88; and David Kerans, 'Toward a Wider View of the Agrarian Problem in Russia, 1861-1930', *Kritika* 1, no. 4 (2000), 657-78—all of which summarize and critique the previous literature.

² A. I. Shingarev, *Vymiraiushchaia derevnia. Opyt sanitarno-ekonomicheskago izsledovaniia dvukh selenii Voronezhskago uezda* (St. Petersburg, 1907). See also discussions of A. N. Engel'gardt, G. I. Uspenskii, N. N. Zlatovratskii and others in: Richard Wortman, *The Crisis of Russian Populism* (Cambridge, 1967); Cathy A. Frierson, *Peasant Icons: Representations of Rural People in Late 19th Century Russia* (Oxford, 1993).

³ Theodore M. Porter, *The Rise of Statistical Thinking, 1830-1900* (Princeton, 1986); Ian Hacking, *The Taming of Chance* (Cambridge, 1990); William Alonso & Paul Starr, eds. *The Politics of Numbers* (New York, 1987); Alessandro Stanziani, *L' économie en révolution: Le cas russe, 1870-1930* (Paris, 1998); David W. Darrow, 'The Politics of Numbers: Statistics and the Search for a Theory of Peasant Economy in Russia, 1861-1917' (Ph.D. diss., University of Iowa, 1996); M. R. Echlin, 'The Statistics of the Russian Peasantry in the Nineteenth Century: A History' (D.Phil. Thesis, St. Anthony's College Oxford, 1990).

⁴ Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, 1995).

⁵ E. V. Anisimov, *Podatnaia reforma Petra I. Vvedenie posushnoi podati v Rossii* (Leningrad, 1982); V. M. Kabuzan, 'Censuses in Russia and the Soviet Union', in *The Modern Encyclopedia of Russian and Soviet History* 6 (Gulf Breeze, FL, 1978), 153-7.

⁶ Steven L. Hoch, *Serfdom and Social Control: Petrovskoe, A Village in Tambov* (Chicago, 1986), 118.

⁷ N. Dubenskii, 'O proizvoditel'nosti, dokhodnosti i tsennosti zemel' Vladimirskoi gubernii', *Sel'skoe blagoustroistvo*, nos. 1-2 (1859), 91-128.

⁸ Hoch, *Serfdom and Social Control*, 7, 9; Michael Confino, *Domaines et Seigneurs en Russie vers la Fin du XVIIIe Siècle: Étude de Structures Agraires et de Mentalités Économiques* (Paris, 1963), 45-60, 131-7, 259-61; idem, *Société et Mentalités Collectives en Russie sous l'Ancien Régime* (Paris, 1991), 75-9; B. G. Litvak, *Ocherki istochnikovedeniia massovoi dokumentatsii XIX nachala XX vv.* (Moscow, 1979), 60-74; N. M. Druzhinin, *Gosudarstvennye krest'iane i reforma P. D. Kiseleva* (2 vols; Moscow, 1958); L. R. Gorlanov, *Udel'nye krest'iane v Rossii, 1797-1865* (Smolensk, 1986); John Bushnell, 'Did Serf Owners Control Serf Marriage? Orlov Serfs and Their Neighbors, 1773-1861', *Slavic Review* 52, no. 3 (1993), 419-45; E. Melton, 'Enlightened Seigniorialism and Its Dilemmas in Serf Russia, 1750-1830', *Journal of Modern History* 62, no. 4 (1990), 675-708; idem, 'Proto-Industrialization, Serf Agriculture and Agrarian Social Structure: Two Estates in Nineteenth-Century Russia', *Past and Present* 115 (1987), 69-106; Peter Czap, 'The Perennial Multiple Family Household, Mishino, Russia 1782-1858', *Journal of Family History* 7, no. 1 (1982), 5-26.

⁹ Czap, 'The Perennial Multiple Family Household', 18-19. Quoted in David Moon, *The Russian Peasantry, 1600-1930: The World the Peasants Made* (London, 1999), 311. See also *ibid.*, 199-200, 214-15; Hoch, *Serfdom and Social Control*, esp. 86-90, 123-32 and chpt. 4.

¹⁰ Hoch, *Serfdom and Social Control*, 11 (quote), 23-5, 65.

¹¹ Moon, *The Russian Peasantry*, 89; E. P. Thompson, 'The Moral Economy of the English Crowd in the Eighteenth Century', in his *Customs in Common* (London, 1991), esp. 193.

¹² Steven L. Hoch, 'The Serf Economy and the Social Order in Russia', in *Serfdom and Slavery: Studies in Legal Bondage*, ed. M. L. Bush (London & New York, 1996), 312.

¹³ Roger J. P. Kain and Elizabeth Baigent, *The Cadastral Map in the Service of the State: A History of Property Mapping* (Chicago & London, 1992).

¹⁴ Ibid., 342.

¹⁵ On particularism see F. W. Wcislo, *Reforming Rural Russia: State, Local Society, and National Politics, 1855-1914* (Princeton, 1990).

¹⁶ James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven & London, 1998).

¹⁷ W. Bruce Lincoln, *Petr Petrovich Semenov-Tian-Shanskii: The Life of a Russian Geographer* (Newtonville MA, 1980); O. B. Mel'nikova, 'P. P. Semenov-Tian-Shanskii i rossiiskaia statistika', *Vestnik Moskovskogo Universiteta. Seriya 8-ia. Istorii*, no. 1 (1988), 46-56; I. V. Kozlov and A. V. Kozlova, *Petr Petrovich Semenov-Tian-Shanskii, 1827-1914* (Moscow, 1991), 73-85

¹⁸ *Pervoe izdanie materialov Redaktsionnoi Kommissii dlia sostavleniia polozhenii o krest'ianakh vykhodiashchikh iz krepostnoi zavisimosti* (18 vols.; St. Petersburg, 1859-1860), Chast' XIII (Zhurnaly Nos. 131 & 132, 1860), 27 (hereafter *PIMRK*).

¹⁹ Ibid., 30-1 (quote).

²⁰ A. V. Chaianov, *Peasant Farm Organization* (Moscow, 1925), in A. V. Chaianov, *The Theory of Peasant Economy*, ed. Daniel Thorner, Basile Kerblay & R. E. F. Smith (Madison, WI, 1986), 229.

²¹ Donald MacKenzie Wallace, *Russia: Its History and Condition to 1877*, 1st ed. (2 vols.; London, Paris & New York, 1877), vol. 2, 345. As quoted in Moon, *The Russian Peasantry*, 282.

²² The state established zemstvos—institutions of local government—in 1864 to replace many of the local functions once carried out by serf owners.

²³ Scott, *Seeing Like a State*, 30-3.

²⁴ Esther Kingston-Mann, *In Search of the True West: Culture, Economics, and the Problem of Russian Development* (Princeton, 1999), ch. 3, esp. 62-70 and ch. 4.

²⁵ *PIMRK*, Chast' I (Prilozheniia k zhurnaluu No. 2-i. 'Iz vlechenie iz vsepoddanneishikh pisem General-Ad'iutanta Rostovtsova, chlena Glavnago Komiteta po krest'ianskomu delu', 1859), 4.

²⁶ N. F. Annenskii, 'Zemskii kadastr i zemskaia statistika', *Trudy podseksii statistiki IX s"ezda russkikh estestvoispytatelei i vrachei. Moskva. 3-11 ianvaria 1894 goda* (Chernigov, 1894), 17-44; Kingston-Mann, *In Search of the True West*, ch. 5; Stanziani, *L' économie en révolution*, chs. 2-3; David W. Darrow, 'The Politics of Numbers: Zemstvo Land Assessment and the Conceptualization of Russia's Rural Economy', *The Russian Review* 59, no. 1 (2000), 52-75; idem, 'From Commune to Household: Statistics and the Social Construction of Chaianov's Theory of Peasant Economy', forthcoming in *Comparative Studies in Society and History*.

²⁷ Chaianov, *Peasant Farm Organization*; Basile Kerblay, 'A. V. Chayanov: Life, Career, Works', in A. V. Chaianov, *The Theory of Peasant Economy*, ed. Thorner, Kerblay & Smith, xxv-ixxv; Teodor Shanin, *The Awkward Class: Political Sociology of Peasantry in a Developing Society: Russia 1910-1925* (Oxford, 1972); Susan Gross Solomon, *The Soviet Agrarian Debate: A Controversy in Social Science, 1923-1929* (Boulder, 1977); Stanziani, *L' économie en révolution*, chs. 4-5.

²⁸ A. P. Zablotskii-Desiatovskii, *Graf P. D. Kiselev i ego vremia. Materialy dlia istorii Imperatorov Aleksandra I, Nikolaia I i Aleksandra II* (4 vols.; St. Petersburg, 1882), vol. II, 54, 57 (quote); Druzhinin, *Gosudarstvennye krest'iane*, esp. 299-311; W. Bruce Lincoln, *In the Vanguard of Reform: Russia's Enlightened Bureaucrats, 1825-1861* (DeKalb IL, 1982), 122; Bruce F. Adams, 'The Reforms of P. D. Kiselev and the History of N. M. Druzhinin', *Canadian-American Slavic Studies* 19, no. 1 (1985), 28-43; Olga Crisp, 'The State Peasants Under Nicholas I', in idem, *Studies in the Russian Economy Before 1914* (London, 1976), 73-95, esp. 85-6; Walter M. Pintner, *Russian Economic Policy under Nicholas I* (Ithaca, 1967), 153-83; S. Frederick Starr, *Decentralization and Self-Government in Russia, 1830-1870* (Princeton, 1972); 'Pamiati A. P. Zablotskago', *Ruskaia starina*, XXXIII, no. 2 (February 1882), 531-60.

²⁹ Ministerstvo Gosudarstvennikh Imushchestv, Departament Sel'skago Khoziaistva. *Khoziaistvenno-statisticheskiia materialy, sobiremye Kommissiiami i Otriadami uravneniia denezhnykh sborov s gosudarstvennykh krest'ian* (2 vols.; St. Petersburg, 1857); idem, *Istoricheskoe obozrenie pirtidesiatiletnei deiatel'nosti Ministerstva Gosudarstvennykh Imushchestv, 1837-1887. Chast' II. Popechitel'stvo. Pozemel'noe ustroistvo* (St. Petersburg, 1888), Otdel II, 1-64.

³⁰ Pintner, *Russian Economic Policy*, 165.

³¹ Lincoln, *In the Vanguard of Reform*, 122; Moon, *The Russian Peasantry*, 78, 93, 107-8; Adams, 'The Reforms of P. D. Kiselev', 35-8; Pintner, *Russian Economic Policy*, 165.

³² Terence Emmons, *The Russian landed Gentry and the Peasant Emancipation of 1861* (Cambridge, 1968), 52-68; Daniel Field, *The End of Serfdom: Nobility and Bureaucracy in Russia, 1855-1861* (Cambridge & London, 1976), 83-101, esp. 84.

³³ *PIMRK*, Chast' I (Prilozhenie k Zhurnalu No. 2, 1859), 47.

³⁴ *Ibid.*, Chast' II ('Doklad Khoziaistvennago Otdeleniia No. 8. O prave pol'zovaniia krest'ian otvodimym im nadelom', 1859), 44-8; Chast' XIII (Zhurnaly 128-30, 1860), 212.

³⁵ See, for example, *Ibid.*, Chast' II ('Doklad Khoziaistvennago otdeleniia No. 1. Osnovanie i razmer nadela', 1859), 18-19; Chast' IV ('Dopolnitel'nyi doklad Khoziaistvennago otdeleniia k No. 1. Osnovanie i razmer nadela', 1859), 3-12.

³⁶ *Ibid.*, Chast' II ('Doklad Khoziaistvennago otdeleniia No. 1. Osnovanie i razmer nadela', 1859), 19.

³⁷ *Ibid.*, 19-20 (quote).

³⁸ *Ibid.*, Chast' IV (Zhurnal No. 79, 1859), 2.

³⁹ *Ibid.*, Chast' II, ('Doklad Khoziaistvennago otdeleniia No. 1. Osnovanie i razmer nadela', 1859), 22.

⁴⁰ *Ibid.*, 22-3.

⁴¹ *Ibid.*, 23.

⁴² *Ibid.*, 31-3. The state set minimum and maximum allotment sizes by region (local boards assigned a specific size within this range). In non-black soil regions, maximum allotments ranged from 3 to 7 *desiatinas* (one *desiatina*=2.7 acres), and minimums from 1 to 2.33 *desiatinas* per soul. In black soil regions allotments ranged from less than 1 to 6 *desiatinas*, and in steppe provinces (Samara, Saratov, Orenburg) from 6 to 12 *desiatinas*. P. A. Zaionchkovskii, *The Abolition of Serfdom in Russia*. Ed. & Trans. S. Wobst (Gulf Breeze FL, 1978), 83-7; Field, *The End of Serfdom*, 351-4; Emmons, *The Russian Landed Gentry*, 321-4.

⁴³ PIMRK, Chast' II, ('Doklad Khoziaistvennogo otdeleniia No. 3. Ugod'ia, postupaiushchiia v krest'ianskii nadel', 1859), 10, 13-17, 21, 27-8, 32-44, 46-8.

⁴⁴ Steven L. Hoch, 'The Banking Crisis, Peasant Reform, and Economic Development in Russia, 1857-1861', *American Historical Review* 96, no. 3 (1991), 795-820.

⁴⁵ PIMRK, Chast' I (Prilozhenie k Zhurnalom Nos. 4 & 5. Glava VI. 'Povinnosti krest'ian', 1859), 1-31; Chast' II ('Doklad Khoziaistvennogo Otdeleniia No. 5. Povinnosti krestian,' 1859), 13-14.

⁴⁶ *Ibid.*, Chast' XIII (Zhurnaly Nos. 131 & 132, 1860), 2.

⁴⁷ *Ibid.*, 19-25. The logic here is strained, as the availability of, and distance to, markets are certainly factors related to land values.

⁴⁸ Kommissiia dlia peresmotra sistemy podatei i sborov, *Trudy Kommissii Vysochaishe uchrezhdennoi dlia peresmotrasistemy podatei i sborov* (23 vols.; St. Petersburg, 1866-1880).

⁴⁹ PIMRK, Chast' XIII (Zhurnaly Nos. 131 & 132, 1860), 25-6 (quote).

⁵⁰ *Ibid.*, 29.

⁵¹ *Ibid.*, 30.

⁵² P. Kovan'ko, *Reforma 19 fevralia 1861 goda i eia posledstviia s finansovoi tochki zreniia. (Vykupnaia operatsiia 1861 g.-1907 g.)* (Kiev, 1914), 231; Zaionchkovskii, *The Abolition of Serfdom*, 91-4; Hoch, 'The Banking Crisis', who notes that the redemption process included a reserve fund (p. 811).

⁵³ P. P. Migulin, *Vykupnye platezhi. K voprosu o ikh ponizhenii* (Khar'kov, 1904), 12, 14.

⁵⁴ Iu. E. Ianson, *Opyt statisticheskago izsledovaniia o krest'ianskikh nadelakh i platezhakh*, 1st ed. (St. Petersburg, 1877).

⁵⁵ Samarin's critique originally appeared in the newspaper *Rus'*, Nos. 1-3 (1880). See D. F. Samarin, 'Teoriia o nedostatochnosti krest'ianskikh nadelov, po ucheniiu professora Iu. E. Ianson', *Sobranie statei, rechei i dokladov. T. 1. Krest'ianskoe delo* (Moscow, 1903), 29-95.

⁵⁶ Iu. E. Ianson, *Opyt statisticheskago izsledovaniia o krest'ianskikh nadelakh i platezhakh*, 2nd ed. (St. Petersburg, 1881) x-xi.

⁵⁷ *Ibid.*, vii-viii (quote).

⁵⁸ *Ibid.*, xi.

⁵⁹ *Ibid.*, 5-10.

⁶⁰ *Ibid.*, 29-36, 38-43 (quote, 34-5).

⁶¹ *Ibid.*, 67-8. For the Valuev commission see Kommissiia dlia izsledovaniia polozheniia sel'skago khoziaistva i sel'skoi proizvoditel'nosti, *Doklad Vysochaishe uchrezhdennoi Kommissii dlia izsledovaniia nyneshnago polozheniia sel'skago khoziaistva i sel'skoi proizvoditel'nosti v Rossii* (St. Petersburg, 1873).

⁶² Ianson, *Opyt statisticheskago izsledovaniia o krest'ianskikh nadelakh i platezhakh*, 2nd ed., 71-2..

⁶³ *Ibid.*, 74.

⁶⁴ *Ibid.*, 73 and 86 (quotes).

⁶⁵ F. A. Brokgauz and I. A. Efron, eds., 'Krest'iane', *Entsiklopedicheskii slovar'* vol. 33 (XVI A) (St. Petersburg, 1895), 723-4.

⁶⁶ Darrow, 'The Politics of Numbers: Zemstvo Land Assessment and the Conceptualization of Russia's Rural Economy', 52-75

⁶⁷ *Sbornik statisticheskikh svedenii po Moskovskoi gubernii*. T. 4. *Krest'ianskoe khoziaistvo*. Vypusk I. *Formy Krest'ianskago zemlevladieniia v Moskovskoi gubernii*. Sost. V. I. Orlov (Moscow, 1879), 14, 200-1; V. I. Pokrovskii, *O platezhnykh sredstv naseleniia Tverskoi gubernii* (Tver', 1878), 53-9, 79-81, 140-50.

⁶⁸ I. I. Vilson, 'Vykupnye za zemli platezhi krest'ian-sobstvennikov, byvshikh pomeshchich'ikh, 1862-1876', *Zapiski Imperatorskago Russkago Geograficheskago Obshchestva*, T. V, (St. Petersburg, 1878), 317-18.

⁶⁹ L. Khodskii, 'Po voprosu o ponizhenii vykupnykh platezhei', *Russkaia Mysl'*, kn. 9 (1881), 395-418, esp. 399, 412-13; idem, *Pozemel'nyi kredit* (Moscow, 1882), 141-2.

⁷⁰ Russian State Historical Archive (RGIA) f. 1290 (Tsentral'nyi Statisticheskii Komitet pri MVD), op. 2, d. 142, ll. 9, 28; Kovan'ko, *Reforma 19 fevralia*, 216, 223. The commission reported the following provincial figures for accumulated arrears as a percentage of required payments as of 1 January 1880: Smolensk, 204%; Novgorod, 154%; Chernigov, 152%; Olonets, 126%; Moscow, 92%; and Pskov, 90%. Two Chernigov districts reported arrears of 350% (Mglinsk) and 577% (Surazhsk). The average for the twenty-three provinces studied was 63.4% of total collections. By 1881 arrears totaled more than 23 million rubles, in spite of periodic refinancing.

⁷¹ Gregory, *Before Command*, 38; Wortman, *The Crisis of Russian Populism*; Cathy A. Frierson, ed. & trans., *Aleksandr Nikolaevich Engelgardt's Letters from the Country, 1872-1887* (New York and Oxford, 1993).

⁷² *Polnoe Sobranie Zakonov Rossiiskoi Imperii (PSZRI)*, II-oe Sobranie, no. 36,662, art. 185-6; no. 36,663, art. 191-2; RGIA f. 1290, op. 2, d. 142, ll. 10, 29; Kovan'ko, *Reforma 19 fevralia*, 210-29; Hoch, 'The Banking Crisis', 811-12; idem, 'On good Numbers and Bad', 44-5, 73; Ananicha, 'K istorii otmeny podushnoi podati v Rossii', *Istoricheskie zapiski* 94 (1974), 183-5; Linda Bowman, 'Russia's First Income Taxes: The Effects of Modernized Taxes on Commerce and Industry', *Slavic Review* 52, no. 2 (1993), 257.

⁷³ RGIA f. 1290, op. 2, d. 142, ll. 46-8; Kovan'ko, *Reforma 19 fevralia*, 217, 219.

⁷⁴ *Ibid.*, 221-2. Smolensk required the largest, and Perm' the smallest—24.9% (compare with Khodskii). Payments by district were more disjointed, particularly in Novgorod, Tver' and Kostroma provinces. Here the commission estimated a need for 70-76% reductions.

⁷⁵ *Ibid.*, 226-30; RGIA f. 1290, op. 2, d. 141, ll. 111, 186; d. 142, ll. 1-4, 15-20, 46-8, 139; d. 143, ll. 1-7. Experts included: Z. I. Bekariukov, Prince A. I. Vasil'chikov, G. P. Galagan, I. A. Gorchakov, A. D. Dashkov, F. M. Dmitriev, V. V. Kalachev, N. P. Koliupanov, D. A. Naumov, N. P. Olenin, D. F. Samarin, I. N. Shatilov, and Prince A. A. Shcherbatov.

⁷⁶ *Ibid.*, d. 142, ll. 201-19; Kovan'ko, *Reforma 19 fevralia*, 234. The majority argued that the emancipation simply converted personal serf obligations (*lichnaia povinnost'*—*obrok*) to personal property (*votchina*—redemption payments). Equalizing

taxes among categories of peasants referred to discrepancies between state peasant *obrok* taxes and former serfs' generally higher redemption payments.

⁷⁷ RGIA f. 1290, op., 2, d. 142, l. 220.

⁷⁸ Ibid., ll. 220-2.

⁷⁹ Ibid., ll. 227-8, 235-7; Kovan'ko, *Reforma 19 fevralia*, 234.

⁸⁰ *PSZR*, III-oe Sobranie, No. 577 (St. Petersburg, 1885), esp. art. 1. 3, 5.

⁸¹ RGIA, f. 1290, op. 2, d. 142, ll. 205-6, 215-21.

⁸² Ibid., ll. 225-6, 228.

⁸³ Ibid., l. 233.

⁸⁴ Ibid., d. 143, ll. 137, 321, 323.

⁸⁵ Ibid., l. 137, 325; d. 145, l. 74..

⁸⁶ *Sbornik materialov dlia izucheniia sel'skoi pozemel'noi obshchiny. Izdanie Imperatorskikh Volnago Ekonomicheskago i Russkago Geograficheskago Obshchestv pod redaktsiei V. L. Barykova, A. V. Polovtsova i P. A. Sokolovskago* (2 vols.; St. Petersburg, 1880).

⁸⁷ RGIA f. 1290, op. 2, d. 167, l. 8.

⁸⁸ Ibid., f. 573 (Ministerstvo finansov, Departament okladnykh sborov), op. 18, d. 27681, l. 370.

⁸⁹ Ibid., ll. 372-3.

⁹⁰ Ibid., l. 373.

⁹¹ Ibid., d. 174, ll. 16 (quote)-17.

⁹² Ibid., f. 573, op. 18, d. 27681, l. 508.

⁹³ Ibid., f. 1290, op. 2, d. 163, ll. 60-1.

⁹⁴ Ibid., ll. 61-2.

⁹⁵ Ibid., d. 168, ll. 78-80.

⁹⁶ Ibid., l. 157.

⁹⁷ Ibid., ll. 80, 160-1; f. 573, op. 18, d. 27681, l. 400.

⁹⁸ Ibid., l. 421; f. 1290, op. 2, d. 169, l. 29.

⁹⁹ Hoch, 'On Good Numbers and Bad', 44-5.