

# Secrecy and Transaction Costs: The Business of Soviet Forced Labour in the Early Cold War\*

---

Mark Harrison\*\*

Department of Economics, University of Warwick  
Centre for Russian and East European Studies, University of Birmingham  
Hoover Institution on War, Revolution, and Peace, Stanford University

## *Abstract*

In 1949 the Cold War was picking up momentum. The Soviet state had entered its most secretive phase. The official rationale of secrecy was defense against external enemies. One of the Gulag's most important secrets was the location of its labour camps, scattered across the length and depth of the Soviet Union. As this secret was guarded more and more closely, the camps began to drop out of the Soviet economic universe, losing the ability to share necessary information and do business with civilian persons and institutions without disclosing a state secret: their own location. For some months in 1949 and 1950, the Gulag's camp chiefs and central administrators struggled with this dilemma without achieving a resolution. This episode teaches us about the costs of Soviet secrecy and raises basic questions about its purposes.

Keywords: Cold War, Forced Labour, Secrecy, Transaction Costs, Soviet Union.

JEL Codes: K42, L14, M48, N44, P26.

---

\* This is a paper to the national convention of the Association for Slavic, East European, and Eurasian Studies, Los Angeles, November 18 to 21, 2010. Its origins lie in time spent in the Hoover Archive in 2009. The author thanks Richard Aldrich, Golfo Alexopoulos, Yoram Gorlizki, James Heinzen, Emily Johnson, Oleg Khlevniuk, Andrei Markevich, Christopher Moran, Leonora Soroka, and David R. Stone for discussion and advice; the University of Warwick for research leave; the Hoover Institution for generous hospitality; and the staff of the Hoover Archive for excellent assistance.

\*\* Mail: Department of Economics, University of Warwick, Coventry CV4 7AL, United Kingdom. Email: [mark.harrison@warwick.ac.uk](mailto:mark.harrison@warwick.ac.uk).

First draft: October 8, 2010.

# Secrecy and Transaction Costs: The Business of Soviet Forced Labour in the Early Cold War

---

We had to write an essay on “the economic level of security.” Total security led to paralysis, for only if no one said or did anything could nothing be given away. Too little security led to disaster. Where was the golden mean? It was as good, or as pointless, a subject for debate as the medieval argument about how many angels could sit on the head of a pin.<sup>1</sup>

\* \* \*

Stalin died on March 5, 1953. On March 28, on the initiative of its first deputy chairman and interior minister Lavrentii Beria, the USSR Council of Ministers ordered the Ministry of the Interior to hand most forced labour camps and colonies over to the Ministry of Justice (Gorlizki and Khlevniuk 2004, p. 132). Within a few more weeks, hundreds of establishments and millions of lives had changed hands.

For this changeover to take place, Justice Ministry officials had to receive some sort of account of the assets for which they were now to be responsible. Of many questions they might have about the camps and colonies, the very simplest were these: What were they? And *where were they?*

In Moscow the secretariat of Gulag (the interior ministry chief administration of labour camps) compiled lists and, with them, maps. Roughly speaking, there was one list and one map for each of the 150 or so oblasts, republics, and autonomous republics of the Soviet Union at the time. Every map was drawn in pen and pencil by an anonymous hand. Roads, railways, rivers, and coasts were carefully traced; installations were symbolized and place names were artfully lettered.<sup>2</sup> The inference is unmistakable: the Gulag had no printed maps.

---

<sup>1</sup> Frankland (1999, p. 83). The assignment was part of Mark Frankland’s training as an officer in the British Secret Intelligence Service in 1958.

<sup>2</sup> Hoover/GARF, fond R-9414, op. 1, files 119 to 205 contain these documents (also catalogued in Kozlov 2005, vol. 6, p. 94). Some are dated before 1953, suggesting prior preparation; Beria is known to have planned a

Why no maps? The Soviet Union was a poor country, and maps that were accurate enough to be useful were costly to produce and reproduce. But Russia already had a long tradition of cartography. According to the website of the Russian National Library, map-printing “began and came of age” in Russia already in the eighteenth century.<sup>3</sup>

In Russian history, when maps were needed, they were produced. Alexander I created the Imperial Army corps of topographers in 1812. In 1914 the Russian Army entered World War I with a stock of 30 million maps of the border districts of the Empire and its neighbours. In 1941 the Red Army’s early defeats cost it a stockpile of 100 million maps (Losev and Kazakov 1992). By this period, however, Red Army formations had “embedded” topographical units fully equipped with mobile map stores and printing facilities. After the chaos of 1941, and despite the fact that much of the war was fought over vast interior spaces of the country that prewar thinking had considered invulnerable, many millions of maps on a variety of scales were produced and distributed to the troops in each major operation, including specialized maps for the different branches of the armed forces (Voronkov and Zakuvaev 1982).

There is no reason, therefore, to think that Stalin’s bureaucracy could not produce printed maps when required. The Gulag had no maps because it did not want them. The reason it did not want them is that the location of camps was among the top secrets of the Soviet era.

In the first section of this paper I introduce the transaction-cost aspect of secrecy. In the second section I consider the location of camps as a secret in the context of the overall regime of Soviet secrecy. In the third section, I narrate the central story of this paper, which transpired in 1949 and is told here for the first time. The fourth section discusses the transaction and procrastination costs of Soviet secrecy that are revealed in the documentation, and shows how they are related. A final section concludes.

## 1. Transaction Costs and Secrecy

This paper is part of a wider project of research that aims to address the role of secrecy in the Soviet dictatorship. I start from the idea that secrecy had costs and payoffs. This paper is about costs. The costs of secrecy were, in theory, of many kinds: for example, direct costs of administration, opportunity costs (because secrecy may impede or prevent welfare-

---

fundamental reform of the Gulag but was prevented while Stalin lived (Tikhonov 2003).

<sup>3</sup> See “Russian Maps and Atlases in the National Library of Russia” at [http://www.nlr.ru/eng/coll/maps/rus\\_map.html](http://www.nlr.ru/eng/coll/maps/rus_map.html).

improving transactions), and strategic costs (because secrecy may be attacked and resources must therefore be allocated to defend it). In this paper, I consider only opportunity costs.

At the core of the Soviet system was a dictator that sought to control the overall allocation of resources, using a hierarchy of controls. In this hierarchy it was costly to transact business. Every decision required information and attention, took up valuable committee time, and had to be enforced in the face of indifference or criticism, or adapted to objective obstacles. Think of the dictator as aiming to maximize payoffs, net of transaction costs. By implication, the dictator had an interest in transacting business efficiently.

Transaction costs were of two types, corresponding to the vertical and lateral dimensions of hierarchy. In the vertical dimension, commands were issued from above and implemented below. The main transaction costs associated with vertical commands were *control costs* – the costs of ensuring that decisions at higher levels were properly informed and implemented at lower levels. There were also costs of doing business in the lateral dimension. The Soviet economy was partially rather than fully centralized, and the elements of hierarchy, such as ministries, were not self-sufficient. To do their business, they had to undertake lateral (typically bilateral) exchanges with other bureaucratic subdivisions and also external markets. These lateral exchanges also incurred transaction costs that we will call trade costs.

One more distinction must be made. This is the line between authorized and unauthorized transactions. In planning the economy, the dictator authorized the lateral exchanges that improved his payoffs; other exchanges were delegitimized because, even if they would be in the interest of his subordinates, they did not promote the interests of the dictator (or of “society” as the dictator sees it).

While wishing to keep down the costs of authorized trade, the dictator might value measures that made unauthorized trade more costly. Such measures would reduce the diversion of resources from regime goals, or the control costs required to achieve given results, or both. It is known that Stalin was conscious of control costs and took steps to limit them; he did not set out to achieve control at any price (Markevich 2007).

A simple hypothesis is that secrecy was an instrument for raising the costs of unauthorized trade (Harrison 2005, 2008). Economic transactions vary in the degree of information exchange that is required to complete them. Cash is anonymous. Transactions that involve delays between order and delivery, or financial intermediation, are no longer anonymous, because buyer and seller must exchange identities with each other or with the intermediary. When transactions are of this nature, anything that complicates the identification of buyer and seller, for example, or the verification of identity,

creates an additional cost to both buyer and seller. As a result, fewer such transactions are undertaken. Looked at from this point of view, the significance of secrecy is that it creates transaction costs that would otherwise not exist, and so has the potential to act as a powerful inhibitor of exchange. If buyer and seller can verify each other's identities for purposes of authorized trade, but not unauthorized trade, then secrecy is likely to reduce vertical control costs as a result.

This reasoning is not just hypothetical; it is completely speculative as long as we have no systematic evidence on the relationship between secrecy and transaction costs. The purpose of the present paper is to bring evidence to bear. The evidence comes from a single episode in the history of a particular bureaucracy, the Soviet administration responsible for forced labour camps, in 1949/50. This episode is illuminating because it reveals how an exogenous shock to the level of secrecy changed transaction costs so that desired transactions were impeded or foregone as a result. In the present context it also yields a surprise: additional secrecy raised the transaction costs of authorized trade and also control costs. The evidence is limited in scope. It forms a narrative but is not amenable to measurement. It is not a natural experiment, because no group went untreated. It tells us nothing about other payoffs that might have been sought from secrecy, or whether or not they were commensurate with the costs. Despite such limitations, this paper provides the first account, based on historical evidence, of transaction costs of a change in the regime of official secrecy in any country.<sup>4</sup>

## 2. Forced Labour and Secrecy

The scale, scope, and organization of forced labour in the Soviet Union have been a principal focus of research in formerly secret Russian archives since the collapse of the Soviet state. Significant histories and documentary collections are now available, written in various languages and from various disciplinary perspectives (Applebaum 2003; Bacon 1994; Gregory and Lazarev 2003; Khlevniuk 2004; Kozlov 2004/05).

---

<sup>4</sup> That's a challenge to the reader, by the way. Counter-examples are welcome; please send them to [mark.harrison@warwick.ac.uk](mailto:mark.harrison@warwick.ac.uk). In economics there is an extensive literature on information, reviewed by Stiglitz (2000). This literature has much to say about information costs, and about collective and individual choices over concealment and disclosure, notably in corporate governance and monetary regulation. It is silent, however, on the value of artificial secrecy, when information would be relatively freely observable, except for the fact that the ruler chooses to penalize its disclosure by law.

The existence of forced labour was not, initially, a Soviet secret. As of 1927, for example, a comprehensive list of state secrets does not include labour camps (Bone 1999, pp. 81-83). It does cite as “secret,” under “matters of a military nature,” “The dislocation *in toto* of every category of institution and establishment (for example, ... all institutions of higher learning ..., all warehouses, etc.)” According to these rules a comprehensive list of labour camps would have been classified a military secret, but labour camps were not singled out for this, and it was not forbidden to reveal the location of any particular forced labour facility. In fact, in the early 1930s the Soviet press published various sanitized accounts of life behind the wire. The writer Maksim Gor’kii, for example, contributed stories about rehabilitation by forced labour in camps of the far northern Solovetskii islands, the Moscow suburb of Liubertsy, and the White Sea canal project (cited respectively by Davies 1996, p. 36, and Applebaum 2003, pp. 59-62, and 80-82).

Already, however, the fact that something was not listed as secret did not mean that just anyone could freely know it or repeat it. The statistics of forced labour were secret *de facto* at this time, as well as the laws governing their use (Davies 1989, p. 35). In the depth of the Great Depression, moreover, there was an international outcry against the Soviet export of commodities produced by forced labour (Davies 1989, p. 395; Applebaum 2003, pp. 74-76). There was a reinforcing cycle of simultaneous causation, no doubt, that ran from Soviet secrecy on this sensitive matter to anti-Soviet sentiment in the world outside and back again.

During the 1930s the campaign against Soviet exports died away, but the Gulag was increasingly hidden away. Official propaganda of the benefits of “corrective labour” ceased. The works that were previously published were banned, and many of their authors were arrested. This process was complete by 1937 (Applebaum 2003, p. 110). There were no more accounts of life behind the wire until 1962, when Alexander Solzhenitsyn was allowed to publish his fictional account of *One Day in the Life of Ivan Denisovich*, set in an unspecified Siberian labour camp. The facts were held back for another thirty years, leaving ample scope for speculation and error.<sup>5</sup>

The Soviet Union was already one of the most secretive states in the world before World War II broke out. Any hopes that after victory Soviet rule

---

<sup>5</sup> This is not the place for a survey of the pre-1991 literature, for which see Bacon (1994). The most reliable clues were contained in secret sections of the Soviet national economic plan for 1941, seized by German forces during World War II and later published in the United States. The 1941 plan was exploited by Jasny (1951) for an evaluation that turned out remarkably close to the figures revealed in the 1990s.

might become more open were quickly disappointed. The fog of secrecy became even more impenetrable on June 9, 1947 with a Supreme Soviet decree “On responsibility for the disclosure of state secrets and for the loss of documents containing state secrets.” The pretext for this new measure was the “KR” affair – a scandal whipped up around a Soviet husband-and-wife team of biological scientists, Nina Kliueva and Grigorii Roskin, who had – with some official encouragement – shared preliminary results of their research on anti-cancer agents with American specialists (Esakov and Levina 1994).<sup>6</sup>

The 1947 law was notably aimed at offenses that fell short of espionage or treason, for which the most severe penalties were already available.<sup>7</sup> Discussing the law in a draft for *Pravda* (published on September 27, 1947), the USSR State Prosecutor Konstantin Gorshenin pointedly began with two exemplary cases in which offenders were sentenced to long jail terms, not because they were traitors, but because they lost secret documents through negligence. In this postwar narrative there were spies, but these were foreign rather than home grown. Foreign intelligence agencies, Gorshenin suggested, were predators in search of a “habitat” with “willing or unwilling prey.” He claimed that they found their victims especially among those citizens “in whose consciousness such relics of the past as a self-centred attitude to social causes, non-ideological, narrow-minded interests, an egotistical drive towards cheap personal fame, adulatory self-abasement before bourgeois culture, and so forth, were still strong.” Also open to foreign manipulation were “those who, out of their own generosity, trust everyone and anyone, and fail to reckon the cost of their generosity to the interests of the state.” Only vigilance could frustrate the imperialists’ designs, seen in this light.<sup>8</sup>

---

<sup>6</sup> While the Kremlin exploited the KR affair to spread fear of secrecy violations around the country, the British signals intelligence service at GCHQ was listening. In the summer of 2010 The National Archives, HW/75/167, E/T54 (“Party Action on the Anti-State Activities of Two Soviet Professors,” 25 September 1947) released memoranda on the affair that circulated under secret cover between Komsomol organizations in Moscow and Frunze in August and September 1947.

<sup>7</sup> Thus the final downfall of Nikolai Voznesenskii, the wartime economic chief and once Stalin’s favourite, was triggered in March 1949 by discovery of the negligent loss of secret papers in Gosplan, but he was executed in August under the RSFSR Criminal Code, Article 58, for treason and undermining the economy (Gorlizki and Khlevniuk 2004, pp. 83-89).

<sup>8</sup> Hoover/GARF, R-9492/1a/513, folios 8-18 (“Soobshchenie prokuratura Soiuza SSR”).

The implementation of the law of June 9, 1947, provided the exogenous shock to the secrecy regime that yields our data. As a result of the new law, security was tightened further throughout the Soviet bureaucracy. The law prohibited disclosure of a long list of matters, ending with “other information that will be recognized by the USSR Council of Ministers as not subject to disclosure.” The Council of Ministers followed this up on March 1, 1948, with new lists of classified information and new instructions for all aspects of handling information of all kinds and all degrees of secrecy.<sup>9</sup> The spirit of the lengthy instructions, running to 26 printed pages, was: “If it’s been done once, write a rule against it.”

It is symptomatic that the new instructions were classified “top secret” although they covered all levels of classification, meaning that those responsible for documents that were merely “secret” or “for official use only” would not be allowed to familiarize themselves with the instructions. Among government officials it was a particular fear that matters such as plan figures, released a few months previously and already in the public domain, might now be considered secret, making it an offence under the law to repeat them in public (Gorlizki 2002, pp. 722-723).

The change in the law had implications for every part of the Soviet bureaucracy. The leaders of the Gulag followed it up within a few days by circulating a new list of those aspects of “the work of Gulag of the USSR MVD and its peripheral agencies that are state secrets [gosudarstvennaia taina]”; this list is reproduced in full in the Appendix. Item number one in the list was: “The location of corrective-labour and verification-filtration camps, colonies, deportation prisons, and other Gulag subsections.” Applebaum (2003, p. 110) notes that “subsection” was an internal codeword for a labour camp.

### 3. A Matter of Special Importance

The story that follows is taken from a single file in the collection of the USSR MVD (interior ministry) chief administration of places of confinement. The narrative begins in the spring of 1949 and concludes more than a year later. The reader should not expect excitement. This story lacks the defining features of a drama: there is no revelation, no reversal, and not even a dénouement; all the personalities are grey. The main emotions are anxiety and frustration. When the evidence runs out, these feelings have not been discharged; they are still there.

---

<sup>9</sup> Hoover/GARF, R-9492/2/79, folios 2-26 (“Instruktsiia po obespecheniiu sokhraneniia Gosudarstvennoi tainy v uchrezhdeniakh i na predpriiatiakh SSSR,” Moscow, 1948).

The labour camps of the Gulag were not self-sufficient. They had to undertake everyday transactions with civilian suppliers and purchasers, with the railways that shipped supplies to and from the camps, and with the state banking system that recorded debits and credits for camp purchases and receipts. According to our story, in 1949 and 1950, bilateral transactions between the Gulag and its civilian environment began to break down. Reading between the lines, one infers that the breakdown was more threatened than realized; it would have become fully actual, only if all those involved from top to bottom had stuck rigidly to formal rules. Instead, a complete breakdown was avoided to some extent by working around the rules or ignoring them to some degree.

The existence of a gap between rules and realities was not unique to this moment or this context. In fact, rigid adherence to the rules might have made the entire Soviet system unworkable. All Soviet managers were compelled to break rules in order to do their job, even when all they wanted was to be left alone to “sleep peacefully” (Berliner 1957). Their skill lay in knowing which rules to break, and by how much.

The evidence of our story is that Soviet managers saw the gap between secrecy rules and realities as particularly dangerous. It produced more than the usual amount of fear and anxiety. For this reason, although they were willing to work around the rules to some extent, they also took steps to insure themselves against the potential consequences of their own actions, in the form of legal penalties that were theoretically severe. Insurance involved two types of activity, both directed towards their superiors: disclosing the illegal actions they were being forced to undertake, while also giving significant time and effort to lobbying for the rules to be adapted to reality.

### *Background*

Labour camps were given different addresses and designations for different purposes. Specifically, every camp had a “full” or “effective designation” (polnoe or deistvitel’noe naimenovanie) and one or more “conventional designations” (uslovnoe naimenovanie).

The purpose of the conventional designation was to avoid disclosure of the full designation and address. The conventional designation was for non-secret use, most commonly in providing release certificates, enabling personal correspondence between prisoners and their relatives, and in personal correspondence with camp officers and hired employees. While concealment of the full designation and address was the first objective of security, it was particularly important also to avoid disclosing the concordance between full and conventional designations.

Volzhlag, also known as Volgolag (and before that Volgostroi), provides an example. The full designation of this camp was Volzhskii ITL MVD (the MVD Volga Corrective Labour Camp), opened in 1946 and transferred in April 1953 to the Iaroslavl' provincial MVD administration.<sup>10</sup> The camp's full address was "Perebory village, Rybinsk ward (raion), Iaroslavl province (oblast')." Volzhlag also had a unique telegraphic address, "Volga."

Unique letter codes were issued to every camp under MVD decree 001542 of December 25, 1945; for Volzhlag, high in the Russian alphabet, it was "E"; camps lower down the list had codes with two or three letters. Camps were issued with letter-coded stamps and seals (shtampy i pechati) to certify releases and correspond with persons such as prisoners' relatives, Gulag officers, and hired employees. Stamps tended to be articles of convenience that substituted for typed or printed letterheads. Circular seals were more important because without them even signed original documents had no legal force. At this time, meanwhile, camps continued to use their full designations in correspondence with state organizations and state counterparties; they were also issued with stamps and seals giving full designations in order to authorize and notarize such correspondence and financial documentation under MVD decree no. 00249 of April 29, 1949.

Finally, mailbox numbers were issued under MVD decree 0035 of January 15, 1949; these were for use in all non-secret correspondence, so as to avoid fuller identification. For Volzhlag, the mailbox address was "Shcherbakov town, mailbox no. 229."

### *Issues*

Our story begins on February 15, 1949, when Gulag third administration chief Volkovskii forwarded a letter to second administration legal department chief Liamin. The letter was from Moldavian deputy interior minister Babushkin to Gulag chief Dobrynin in Moscow.<sup>11</sup> It reported that the local oil industry supplier was refusing orders for fuel from the local Gulag administration. The reason: these orders were classified secret, as they had to be, given that the delivery address was a state secret. But under the Soviet Union's secrecy regime the fuel supplier was entitled to accept secret orders only from military units. The camps of the Moldavian Gulag were not military units, so their orders were returned without being met. The same difficulty

---

<sup>10</sup> These and following details are taken from the Memorial website entry under "Volzhskii ITL MVD" at <http://www.memo.ru/history/nkvd/gulag/r3/r3-63.htm>.

<sup>11</sup> Hoover/GARF, R-9414/1dop/145, folios 1a, 3.

was affecting supplies of meat, grain, and other food products to the camps, and so was “demoralizing the work of supply.”

A related issue emerged with a letter of April 7 from MVD war supplies administration chief Gornostaev to deputy interior minister Obruchnikov.<sup>12</sup> MVD decree 0035-1949 (see above) ordered that labour camps’ non-secret correspondence should use mailbox numbers as the only form of designation. This created the following problem. Gosbank, the state bank, held its depositors’ full names and addresses, not mailbox numbers. Gosbank was now refusing transfers to or from the settlement accounts of labour camps based on identification by mailbox number, because this did not match the account details that it held. But full designations were now a state secret that could not be disclosed to Gosbank, although Gosbank already held this information in the account details. Payments were being held up and there was a risk of penalty charges for setting up transfers incorrectly.

A note of August 6 from MVD supply administration Moscow office chief Slobodkin to Gulag chief Dobrynin widens this picture.<sup>13</sup> Slobodkin reported a general breakdown in the settlement by labour camps of invoices for equipment and medical supplies. Bank officers were rejecting payments across the board on the grounds that the payer was insufficiently identified. Bank records had not been updated to correspond with depositors’ mailbox numbers. Slobodkin warned Dobrynin, in updating them, to anticipate a problem. Under MVD regulations it was prohibited to extract information from secret documents. If the document that Gulag now provided to Gosbank was a list of camps by mailbox number, labeled “top secret” or “secret,” it would be illegal to extract the necessary information. Slobodkin asked Dobrynin “not to delay a solution.”

Time passed, but similar mismatches between internal rules and external realities persisted. On March 9, 1950, for example, Volzhlag chief Kopaev reported to Gulag secretariat chief Chirkov his anxieties concerning procedures.<sup>14</sup> The root of the problem, he suggested, was a clash between two MVD decrees. No. 001542-1945 gave every camp a letter-coded designation and letter-coded stamps and seals to authorize releases and correspond with private persons. No. 00249-1949 issued stamps and seals giving camps’ full designations, for correspondence with state organizations and state counterparties, and to authorize and notarize financial

---

<sup>12</sup> Hoover/GARF, R-9414/1dop/145, folio 4.

<sup>13</sup> Hoover/GARF, R-9414/1dop/145, folio 8.

<sup>14</sup> Hoover/GARF, R-9414/1dop/145, folios 26-27.

documentation. One problem arose in mailing non-secret correspondence to other government agencies. The letter inside was written on paper headed by the full name of the camp. The envelope, which could be seen by anyone, carried the sender's mailbox number and town. Put the two together and you had a state secret. Similarly, an order issued to an external supplier bore the camp's mailbox number, while the authorizing seal gave its full name. Similar issues arose in dispatching products and making payments. Someone in the secretariat wrote in the margin: "Comrade Rozenberg. We need to speed up agreement on the draft decree. March 17, 1950."

Recall MVD war supplies administration chief Gornostaev, who wrote first to deputy interior minister Obruchnikov on April 1949. He appears in the file twice more, the second time on July 24, 1950, more than a year later, writing to new deputy interior minister Serov.<sup>15</sup> He began by reminding Serov that the matter was not new. MVD decree no. 0035-1949, he continued, did not cover the addressing of rail and river shipments and bank transfers. At present this could be done only by revealing the full names of camps. The MVD war supplies administration had made proposals on how to resolve the issue, Gornostaev complained, but the matter remained unresolved. "Given that the disclosure of the full designation of MVD camps, building sites, and colonies, and their location is impermissible," he concluded, "I ask for your instructions to accelerate the resolution of this question."

### *First steps*

Overlapping with this process were the first steps towards a possible resolution. In May 1949, Gulag second administration deputy chief Nikulochkin reported to Gulag chief Dobrynin that the allocation of mailbox numbers to camps had given rise to unanticipated difficulties with suppliers and bank officers.<sup>16</sup> He proposed a round of consultations with counterparties to identify solutions. But consultations would involve the exchange of information, which required high-level authorization. Nikulochkin asked Dobrynin to authorize the Gulag's financial section chief to visit Gosbank, its transport section chief to visit the transport ministry, and its quartermaster general to visit the ministry of communications.

These visits evidently took place. On July 1, 1949, MVD transport section chief Zikeev reported back that the transport ministry did not need to know details of senders other than mailbox numbers (the report does not discuss

---

<sup>15</sup> Hoover/GARF, R-9414/1dop/145, folio 42.

<sup>16</sup> Hoover/GARF, R-9414/1dop/145, folio 5.

the problem of recipients).<sup>17</sup> The MVD transport section could provide the transport ministry with a daily matrix of shipments by line of origin and destination. The mailbox numbers of camps had to be known to the MVD transport section in Moscow, its local sub-offices along the railway lines, and the station masters. This system already applied to shipments from special-purpose (i.e. secret) construction projects, i.e. camps of the interior ministry's administration for industrial construction, Glavpromstroï.

Six weeks later, on September 21, Gulag acting chief Bulanov proposed two options to deputy interior minister Chernyshov.<sup>18</sup> He began by reviewing the current situation: orders for food, clothing, building materials, equipment and machinery, pharmaceuticals, and published materials, were breaking down. The orders went to suppliers as top secret, and were being rejected and returned unfilled. Suppliers required full addresses to fill orders. But to provide these addresses openly would disclose state secrets. The first option that Bulanov proposed to Chernyshov was to assimilate relations between Gulag establishments and civilian counterparties to the rules that the interior ministry had recently (as of August 6, 1949) applied to the military formations of its internal security troops. In effect, every camp would be reclassified as an army unit (*voiskovaia chast'*) of the MVD. A second option was to re-register every camp with suppliers and banks as an "MVD facility" (*ob"ekt MVD*) with a mailbox number. Either way, private correspondence would continue to go via existing mailbox numbers.

Bulanov's memo is followed in the file by two draft decrees for interior minister Kruglov. The first, "On the introduction of new designations of corrective labour camps," approved the nomenclature "MVD facility, mailbox number XXXX."<sup>19</sup> It authorized camp chiefs to communicate in top secret their true addresses to deposit holders and railheads, and required them to prepare new stamps and seals incorporating the new nomenclature.

The second draft decree, "On the procedure for maintaining correspondence of corrective labour camps and formalization of their documentation on business and financial operations," provisionally dated November 1949 and so most likely prepared separately, approved the alternative nomenclature "army unit no. XXXX" for all camps, except the special Glavpromstroï camps.<sup>20</sup> According to this draft decree, Gosbank

---

<sup>17</sup> Hoover/GARF, R-9414/1dop/145, folio 6.

<sup>18</sup> Hoover/GARF, R-9414/1dop/145, folios 9-13.

<sup>19</sup> Hoover/GARF, R-9414/1dop/145, folios 12-13.

<sup>20</sup> Hoover/GARF, R-9414/1dop/145, folios 14-16.

account holders would register only the army unit number; orders for goods would specify the unit number and railway line and station. This draft decree gave authorizations and requirements to camp chiefs that were similar to the one before, and covered the complexities of secret and private correspondence in more detail.

At this point the MVD second special section stepped in and became responsible for carrying the matter forward. On November 26, second special section chief Filatkin wrote to Gulag chief Dobrynin asking for comments on a revised draft decree "On the procedure for maintaining correspondence," etc. This document is not in the file, but is evidently a revision of the option that sanctioned the renaming of camps as "army units." (the title given is more or less the same with a few extra words).<sup>21</sup> Dobrynin wrote back to Filatkin on December 7 with minor amendments and corrections to the list of camps. Dobrynin and Filatkin jointly sent the agreed composite to Kruglov for signature on December 30.

*One step forward, one step back*

Kruglov did not sign. On January 20, MVD financial department chief Karmanov and chief accountant Zaitsev raised objections to the Dobrynin-Filatkin solution.<sup>22</sup> They pointed out that, under a Gosbank instruction of April 2, 1945, army units could hold only deposit accounts, not settlement accounts. The camps currently held 10.6 billion rubles of Gosplan credits that they would have to give up; replacing this would be beyond the budget of the MVD (more evidence, if more is required, that finance mattered in the Soviet economy). For the proposal to work, Gosbank and Prombank, the state industrial investment bank, would have to agree to alter the instructions so that the "army units" of the Gulag could hold liabilities.

Almost immediately, this interpretation was confirmed by Gosbank. On February 4, 1950, financial service state counsellor Borychev wrote to deputy interior minister Mamulov to make a simple point: renaming labour camps as army units would not preserve secrecy.<sup>23</sup> "Everyone knows," he explained patiently (or was that sarcasm?) that real army units were not funded by Gosbank. The camps had large funding needs. The discrepancy, he pointed out, would attract attention and lead directly to what was to have been avoided: disclosure of the location of camps. It would be better, Borychev

---

<sup>21</sup> Hoover/GARF, R-9414/1dop/145, folio 17.

<sup>22</sup> Hoover/GARF, R-9414/1dop/145, folio 31.

<sup>23</sup> Hoover/GARF, R-9414/1dop/145, folio 30.

argued, to stick to mailbox numbers on a system like that used by the defence industry.

These arguments appear powerful and are not contested in the documentation. Instead, they were ignored. A short background paper from Gulag second administration chief Matevosov, dated May 1950, for example, noted that the “army unit” proposal had been current since September when Gulag first proposed it to deputy interior minister Chernyshov.<sup>24</sup> It envisaged that, while camps would be renumbered as army units for business purposes, the system of identifying camps by a letter designation, which originated with NKVD decree 001542-1945 (see above), would be maintained for non-secret correspondence such as release certificates and correspondence with private persons.

The MVD leadership met on May 9, 1950. The minutes recorded approval “in principle” of Filatkin’s draft decree, but also asked the MVD secretariat, second special department, and legal unit “attentively to review” the issue together one more time.<sup>25</sup> There is no draft decree, but 95 Gulag establishments are listed by name from “A” to “Ia”, each labeled “Army Unit no.” with a space for the number to be inserted.<sup>26</sup> The list is dated December 1949, so it is evidently part of the package originally sent to Kruglov at the end of that month (see above). A sheet attached with a mock letterhead and three seals for correspondence, financial authorizations, and packages respectively, looks as if it has the same origin.<sup>27</sup> The letterhead follows this template:

МВД СССР	MVD USSR
ВОЙСКОВАЯ ЧАСТЬ	ARMY UNIT
№ _____	№ _____
_____ 19 __ г.	_____ 19 __ (year).
№ _____	№ _____
гор. _____	Town _____

The proposal to reclassify labour camps as “army units” was still current in June 1950, when a draft letter from interior minister Kruglov to war minister Vasilevskii enquired whether the Soviet Army would object to the

---

<sup>24</sup> Hoover/GARF, R-9414/1dop/145, folios 22-23.

<sup>25</sup> Hoover/GARF, R-9414/1dop/145, folio 35.

<sup>26</sup> Hoover/GARF, R-9414/1dop/145, folios 36-40.

<sup>27</sup> Hoover/GARF, R-9414/1dop/145, folio 41.

renaming of camps as army units.<sup>28</sup> It is not clear whether the letter was ever sent; no reply is filed. Handwritten across the copy on file are the words: "Comrades Iatsenko and Filatkin. Examine the draft decree one more time for report to the minister for signature. June 8 (signature illegible)."

### *Indecision*

At the back of the file are further draft decrees of the interior minister, one dated 1950 and the other August 1950. The idea of renaming camps as "army units" had gone. Instead, both decrees were based on Bulanov's other option of September 1949: camps were to be renamed "MVD facility" (ob"ekt MVD) with a four-digit number. The first draft decree is a single page followed by lengthy "Instructions" and a model letter for each camp to send to its local Gosbank branch office.<sup>29</sup>

The instructions are more detailed than in previous draft decrees. A key clause states: "The location (of camps) is a document of special importance (osobaia vazhnost', the highest level of Soviet secrecy) ... Reproduction and duplication are prohibited." Previous conventional designations, including letter codes and telegraphic addresses were to be abolished, but mailbox numbers would be retained. Secret correspondence within the MVD would use full designations; secret correspondence with other ministries (including MGB, the security ministry) and non-secret correspondence would use only facility numbers. The instructions deal with many other contingencies, including how to deal with camps that are dissolved, newly established, or moved, and so on.

The last draft decree in the file, dated August 1950 (51-56) again enacts the "MVD facility" solution.<sup>30</sup> Model letters to local railway stationmasters

<sup>28</sup> Hoover/GARF, R-9414/1dop/145, folio 34.

<sup>29</sup> Hoover/GARF, R-9414/1dop/145, folios 43-50. The model letter is not without interest. It is written as if from the Mikhailovskii camp chief to the Sverdlovsk branch office of Gosbank. Headed "Top secret" and "In person only," it reads: "I inform (you) that the Mikhailovskii corrective labour camp of MVD has been given the conventional designation "MVD facility no. 5401. In connection with this I request (you), from September 1, 1950, to change the designation of settlement account no. 258 of the Mikhailovskii camp and rename it: "Settlement account no. 258 of MVD facility no. 5401 in the town of Sverdlovsk." In the top left hand corner is a place marker for "Stamp with full designation of the camp." The words "with the aim of barring disclosure of the location of MVD corrective labour camps" are crossed out from the text of the letter. Too much information, one supposes.

<sup>30</sup> Hoover/GARF, R-9414/1dop/145, folios 51-58.

(57) and bank officials (58) are included. The tone is more practical and bureaucratic than the preceding draft. Much of the content is similar; two additions stand out. Paragraph 6(e) deals with prisoners and their relatives: “Mailboxes of MVD corrective labour and special camps are used only for letters, transfers, and packages addressed to prisoners. Answers to relatives of convicts requesting the location of prisoners ... are to be given out only verbally through the information bureau of the first special department ... indicating the mail address of the prisoner’s place of confinement (e.g. Skvortsov Ivan Petrovich, year of birth 1903, serving punishment – town of Kotlas, mailbox no. 420).”

And paragraph 3(c) directly addresses the anxieties of Volzhlag chief Kopaev (voiced in March 1950: see above): “To prohibit the simultaneous use in a single service correspondence of differently named forms, stamps and seals of the camp (e.g. application of a seal with the camp’s conventional name and use of its actual name on signature, etc.).”

It is not clear exactly what was resolved, but something was enacted. On July 29, 1950, MVD war supplies administration chief Gornostaev complained – again – to deputy interior Serov.<sup>31</sup> The interior minister, he said, had issued more decrees: in addition to no. 0035-1949, there was now decree no. 00108-1950. These decrees gave every camp a mailbox number. The problem, Gornostaev continued, was that nothing had been implemented. MVD camps and building sites had not revised their bank account details, so that the MVD war supplies administration remained unable to debit camps for shipments because the debits were not accepted by Gosbank; in fact, Gosbank was imposing a 100-ruble penalty for each incorrect debit. Meanwhile, the war supplies administration had to continue to use full details of camp names and addresses, since these were what Gosbank required. Until the matter was resolved, Gornostaev asked permission to maintain this practice, using the MVD secret courier service (spetssviaz’).

Whatever was enacted in decree no. 00108-1950 was not the final resolution. Gulag second administration chief Matevosov wrote to MVD legal section acting chief Kurbatov on September 23, 1950, asking him for comments on the draft decree “On the procedure for maintaining correspondence,” revised after the May 9, 1950, MVD leadership meeting and still, apparently, pending.<sup>32</sup>

---

<sup>31</sup> Hoover/GARF, R-9414/1dop/145, folio 24.

<sup>32</sup> Hoover/GARF, R-9414/1dop/145, folio 66.

*Triangular seals have been employed that have become unfit for use*

In the spring of 1950 a by-play emerges in the file. On March 4, 1950, Unzhlag chief Ivanov reported to the MVD second special department chief that the previous November, he had asked the MVD Gor'kii oblast office to allow him to order numbered circular seals for internal authorizations, and had been refused on the grounds that MVD had not approved seals for internal use.<sup>33</sup> Ivanov asked for a ruling that existing approvals could apply or, failing that, for a new approval. "Up to the present in Unzhlag," he wrote, "triangular seals have been employed that have become unfit for use."

The letter, accompanied by samples of what Ivanov wanted, was passed from MVD second special department deputy chief Katurkin to MVD secretariat deputy chief Diukanov and from there to Gulag chief Timofeev. Unzhlag was a timber camp; six weeks later, on April 26, MVD timber camps administration deputy chief Sorokin asked MVD secretariat deputy chief Diukanov to approve the Unzhlag request.<sup>34</sup> No decision yet, then.

#### 4. Effects on Transaction Costs

This story, observed in real time, would be one of maddening tedium. Cut down to a few paragraphs, it yields basic insights into the trade costs and control costs of doing Soviet business when secrecy was tightened.

##### *Trade costs*

The evidence of the Gulag in 1949/50 reveals the role of secrecy as an inhibitor of exchange. The law of June 9, 1947, suddenly intensified secrecy throughout the Soviet economic and political system. The change was not instantaneous, because it took many months to implement fully, but it was surely unanticipated. This shock altered the relations between the Gulag and its civilian environment by making them more complicated. As a result, trade became more costly; possibly, some exchanges did not take place at all, although both parties would have wished to make a contract.

Notably, it is the authorized trade of the Gulag that was visibly hindered, involving exchanges that were already approved in state plans for the benefit of regime goals – the same regime that had enacted the secrecy laws. There was no discernible effect on unauthorized trade, because none was being

---

<sup>33</sup> Hoover/GARF, R-9414/1dop/145, folio 71. "Unzhenskii ITL MVD," telegraphic address "Unzha"; address "Sukhobezvodnoe station, Gor'kii province (oblast')"; mailbox number 242. See the entry under the Memorial website at <http://www.memo.ru/HISTORY/nkvd/gulag/r3/r3-431.htm>.

<sup>34</sup> Hoover/GARF, R-9414/1dop/145, folios 67, 70, and 73.

reported in the first place. There was no parallel with the “KR” affair, for example. Gulag officials were not like scientists; they did not meet with foreigners or have any incentive to share information or resources with them.

The wider effectiveness of secrecy might be overstated in our documents. It is possible, for example, that the identity and location of many camps was not so much a secret as an “open secret.” By this, I mean that, although they did not have the legal right to such knowledge, many people may have been perfectly well aware of the identity and address of many particular camps. While this may be true, it does not really change the essence of the story about transaction costs. For some purposes, it is not enough to know something; the knowledge you have must be verifiable. For example, in writing a contract or making a bank transfer, you have to be able to assure your own legal identity and/or be assured of the legal identity of the counterparty. What secrecy legislation did was to put verifiable knowledge out of reach, and from a transaction-cost perspective it probably did not matter whether the knowledge was an open secret or a real secret.

There is irony in this. The contractual parties and counterparties were not independent buyers and sellers in a real market. They were owned by the state, were commissioned by the state to operate in an internal market that the state had created, and were trying to make or complete contracts that the state had pre-authorized, but the state’s own laws prevented them from identifying themselves to each other in a way that would let this happen. Or, if it happened, it was at a higher cost than would have been necessary in the absence of those laws. This cost was paid, ultimately, by the state that made the internal market and the laws that regulated it.

### *Control costs*

The problem of how to maintain the secrecy of the location and identification of camps, which arose early in 1949, was unresolved eighteen months after it arose. It took more than a year to move some way towards a resolution. All the signs are that, if a resolution was found (and we’re not completely sure about that), then more time passed while no one paid attention.

The by-play about the Unzhlag seals also shows this. Camps had to have official seals to function as legal economic entities, but no one could be found to authorize the ordering and purchase of new seals when old ones became worn out. Indecision on the major issue became an excuse for delay on minor matters, however distantly related.

Procrastination is a natural concomitant of risk-adverse bureaucracy. When officials do not wish to be held accountable for wrong decisions, the safest course is to take no decision. That is found everywhere. There is a direct link to transaction costs. The Soviet officials that left the issues for

which they were personally accountable hanging in the air were demonstrating a tolerance for heightened transaction costs, or an indifference to them. While they left matters unresolved, officials and managers below them continued to avoid responsibility where necessary, to work around the rules where possible, and to take out the insurance that seemed to be recommended – to give time and effort to lobbying Moscow for change. So, control costs were raised as well. The officials that repeatedly delayed effective resolutions tolerated this.

A tendency to procrastination is not specific to the Soviet system. Every complex organization has elements of hierarchy. Wherever these exist, there is the temptation to procrastinate. Delay can be privately optimal when it passes the responsibility for costly decisions to others; this applies, obviously, to leaders of democracies (e.g. Gomes, Kotlikoff, and Viceira 2007) and equally to officials in bureaucracies with rapid circulation among posts. Thus procrastination is a stratagem to duck accountability. Another incentive arises, according to Rose-Ackerman (1986), from overlapping jurisdictions. When a decision can be taken at more than one instance, the official with a reputation for timely decision making will be overwhelmed by petitioners. Here, delay is a stratagem for regulating work pressure.

In our case we see that procrastination did more than just spread a given cost of decisions over a longer period. It also increased the total cost of decisions. This is because each decision was considered and reconsidered repeatedly. Higher officials used their time to draft and redraft complicated decrees and instructions in alternative variants that were never approved. Lower officials used their time to press for information about the progress of a decision that was never made. The decision they wanted had no political significance; it was of a technical nature that might be thought well suited to a committee of experts. The problem was that the committee did not decide.

While indecision may be found in any large organization, it had fewer restraints in the government of a closed society under a dictator. Soviet officials answered only to superiors for their actions, and Stalin did not have to ask anyone's forgiveness for his. In contrast, voters and markets can be unforgiving. The government of an electoral democracy could not be so indifferent to its internal transactions because ultimately the ruling party would have to answer to voters, including taxpayers, who could switch their votes to political rivals. Private corporations in a competitive market economy would have to answer for higher costs to the buyer, who could switch business to a lower-cost competitor. Because of such pressures, political and economic organizations in open societies are more likely to develop mechanisms to limit their own indecision.

Stalin had a clear idea of control costs and the importance of efficient control. One of the few instruments that he could apply directly to this problem was terror. But terror intensified the fear of being identified as accountable for decisions, and this exacerbated the problem of indecision.

## 5. Conclusion

In this paper we have considered the opportunity costs of secrecy, exploiting evidence produced by an exogenous shock to a bureaucracy. The shock was Stalin's sudden tightening of Soviet state and party secrecy in 1947, which led to significant problems for the business of the Gulag in 1949 and 1950. The implementation of new secrecy rules made this business unexpectedly more costly. As a result, transactions that were already authorized and desired on both sides were hindered and some may not have been completed.

Business links were maintained, only to the extent that the parties were willing to work around or ignore the new rules. In that context, however, neglect of the rules was much more dangerous than before, because the law of 1947 was explicitly aimed at secrecy violations committed without the intention to harm the state. Those responsible for the business of the Gulag tried to insure themselves against legal consequences by repeatedly informing their superiors about the difficulties they were facing and by asking for decisive action to resolve these difficulties. Higher level responses were marked by indecision and procrastination. In short, this episode allows us to observe that, when the level of government secretiveness was markedly increased, so were both trade costs and control costs.

The documentation does not allow us to infer motivations. Economic analysis suggests that, when higher costs are incurred willingly, they are incurred for the sake of some equal or greater benefit. In this case the question that seems to follow is: if the Soviet rulers were willing to incur higher costs arising from secrecy, where was the expected benefit that was commensurate with the higher costs? In the materials exploited for this paper, there is a notable absence of any official motivation for classifying the location and identification of labour camps as one of the most important secrets of the Soviet Union or for strengthening measures to protect it. This was taken for granted by every person at every point.

As a result, while anyone is entitled to their own suspicions, we cannot be certain whether Stalin launched the intensification of secrecy because he thought the increase in trade and control costs would be compensated in some other dimension, or whether he failed to anticipate the consequences, making a miscalculation, or excess, or a step too far. This gives a sense of the distance we have to go before we fully understand the purposes of Soviet secretiveness in its full scope and complexity.

## Appendix. Secrets of the Gulag, June 1947

In a memorandum of June 17, 1947, Gulag acting chief Dobrynin listed those aspects of “the work of Gulag of the USSR MVD and its peripheral agencies that are state secrets (gosudarstvennaia taina),” bringing them within the remit of the decree of June 9, 1947, “On responsibility for the disclosure of state secrets and for the loss of documents containing state secrets.”<sup>35</sup> The list was as follows:

1. “The location of corrective-labour and verification-filtration camps, colonies, deportation prisons, and other Gulag subsections.
2. “Summary data concerning the stock, movement, and labour utilization of detainees.
3. “Demographic data concerning the detainees (information concerning sex, age, character, depiction of offenses committed, terms of sentences, nationality, and citizenship.
4. “Summary data concerning the physical condition, morbidity, and mortality of detainees, and outbreaks of disease in camps and colonies.
5. “Summary figures for escapes, arrests among detainees, and other crimes in camps and colonies.
6. “Summary data concerning transfers of camp contingents and railway movements involving them.
7. “Summary data concerning the dimensions of accommodation provision of camps, colonies, and deportation prisons.
8. “Information concerning the servicing of facilities of other ministries by detainees’ labour power.
9. “The establishment strength and demographic composition of the officer corps and hired employees of Gulag and its peripheral bodies, information about staffing and demographic data concerning personnel, and documentation of security checks.
10. “The organization, numbers, degree of staffing, demographic data, location, fighting power, armament, equipment, combat training, political and moral condition, and material provision of units and sub-units of militarized security.
11. “All [documentary] materials and data concerning undercover security operations in ITL, UITLK, OITK, and their subsections.”<sup>36</sup>

---

<sup>35</sup> Hoover/GARF, R9414/1/335, folios 11-12.

<sup>36</sup> This string of abbreviations translates roughly as “all labour camps and colonies at all levels of the forced labour system, Union, republican, and

12. "The organization, material and financial provision, and mobilization and operational plans of Gulag and its peripheral agencies, [documentary] materials underlying their development, and the production of defence items.
13. "Data concerning the numbers, movement, and labour utilization of special-purpose contingents in camps and on MVD construction sites, and the regime for their maintenance.
14. "The numbers and movement of those sentenced to corrective labour (without deprivation of freedom), data concerning the character of crimes committed by them, and summary information concerning means deducted from these contingents for the revenue of the state.
15. "Documents containing detainees' proposals for inventions and rationalizations of defensive or important national economic significance.
16. "Statistical data concerning the composition and movement of communists among the party organizations of camps and colonies, and documentation of party conferences and activist groups.
17. "Information concerning the production and economic activity of camps and colonies:
  - a. "Production and financial plans of industry, agriculture, subcontract work, capital construction, and sideline auxiliary enterprises, calculations and groundwork of these plans, and also data of accounting or operational reporting concerning their fulfillment;
  - b. "The quantity, capacity, and characteristics of the condition of production equipment in industry, agriculture, capital construction, and sideline auxiliary enterprises;
  - c. "The stock and qualitative condition of all kinds of transport, energy bases, and their fuel provision;
  - d. "The quantity and condition of areas sown, gross yields, livestock herds, and information concerning the prevalence of animal diseases.
18. "Supply plans of all kinds of subsistence allowances for camp contingents and data concerning stocks requested and received.

---

local." Specifically ITL, *ispravitel'no-trudovoi lager'* = corrective labour camp; UITLK, *upravlenie ispravitel'no-trudovykh lagerei i kolonii* = republican MVD administration of corrective labour camps and colonies; OITK, *otdel ispravitel'no-trudovykh kolonii* = UITLK department of corrective labour colonies; MVD, *ministerstvo vnutrennykh del* = ministry of the interior of the USSR and Union republics; UMVD, *upravlenie ministerstva vnutrennykh del* = local MVD administration.

19. "The character and quantity of shipments dispatched to camps, colonies, and deportation prisons.
20. "The finance, planning, and supply of medications and the medical stocks of the network of hospitals, clinics, and other establishments for the servicing of contingents located in camps and colonies.
21. "All correspondence concerning archived documents that touch on the issues listed above."

## References

### *Archives*

GARF: State Archive of the Russian Federation (Moscow).

Hoover: Archive of the Hoover Institution on War, Revolution, and Peace (Stanford, California).

TNA: The National Archives (London).

### *Publications*

Applebaum, Anne. 2003. *Gulag: A History of the Soviet Concentration Camps*. London: Allen Lane.

Bacon, Edwin. 1994. *The Gulag at War: Stalin's Forced Labour System in the Light of the Archives*. Basingstoke: Macmillan.

Berliner, Joseph S. 1957. *Factory and Manager in the USSR*. Cambridge, MA: Harvard University Press.

Davies, R.W. 1989. *The Industrialisation of Soviet Russia*, vol. 3. *The Soviet Economy in Turmoil, 1929-1930*. Basingstoke: Macmillan.

Davies, R.W. 1996. *The Industrialisation of Soviet Russia*, vol. 4. *Crisis and Progress in the Soviet Economy, 1931-1933*. Basingstoke: Macmillan.

Esakov, V. D., and E. S. Levina. 1994. Delo 'KR' (iz istorii gononii na sovetskuiu intelligentsiiu). *Kentavr*, no. 3, pp. 54-118.

Frankland, Mark. 1999. *Child of My Time: An Englishman's Journey in a Divided World*. London: Chatto & Windus.

Gomes, Francisco J., Laurence J. Kotlikoff, and Luis M. Viceira. 2007. *The Excess Burden of Government Indecision*. NBER Working Papers 12859. Cambridge, Mass.: National Bureau of Economic Research.

Gorlizki, Yoram, and Oleg Khlevnyuk. 2004. *Cold Peace: Stalin and the Soviet Ruling Circle, 1945-1953*. New York: Oxford University Press.

Gorlizki, Yoram. 2002. Ordinary Stalinism: The Council of Ministers and the Soviet Neopatrimonial State, 1946-1953. *Journal of Modern History* 74/ 4, pp. 699-736.

Gregory, Paul R., and Valery Lazarev, eds. 2003. *The Economics of Forced Labor: The Soviet Gulag*. Stanford: Hoover Institution Press.

Harrison, Mark. 2005. The Fundamental Problem of Command: Plan and Compliance in a Partially Centralised Economy. *Comparative Economic Studies* 47/2, pp. 296-314.

Harrison, Mark. 2008. Secrecy. In *Guns and Rubles: the Defense Industry in the Stalinist State*, pp. 230-254. Edited by Mark Harrison. New Haven: Yale University Press.

Jasny, Naum. 1951. Labor and Output in Soviet Concentration Camps. *Journal of Political Economy* 59/5, 405-419

- Khlevniuk, Oleg V. 2004. *The History of the Gulag: From Collectivization to the Great Terror*. New Haven: Yale University Press.
- Kozlov, V. P., ed. 2004/2005. *Istoriia Stalinskogo Gulaga*, 6 vols. Moscow: Rosspen.
- Losev, A. I., and V. I. Kazakov. 1992. *Korpus voennykh topografov*. *Voenno-istoricheskii zhurnal*, no. 10, pp. 79-82.
- Markevich, Andrei. 2007. *How Much Control is Enough? Monitoring and Enforcement under Stalin*. Working Paper no. w0110. Moscow: New Economic School, Center for Economic and Financial Research.
- Rose-Ackerman, Susan. 1986. *Reforming Public Bureaucracy through Economic Incentives?* *Journal of Law, Economics, and Organization* 2/1, pp. 131-161.
- Stiglitz, Joseph E. 2000. *The Contributions of the Economics of Information to Twentieth Century Economics*. *Quarterly Journal of Economics* 115/4, pp. 1441-1478.
- Tikhonov, Aleksei. 2003. *The End of the Gulag*. In *The Economics of Forced Labor: The Soviet Gulag*, pp. 67-74. Edited by Paul R. Gregory and Valery Lazarev. Stanford: Hoover Institution Press.
- Voronkov, N., and N. Zakuvaev. 1982. *Topogeodezicheskoe obsluzhivanie voisk*. *Voenno-istoricheskii zhurnal*, no. 12, pp. 28-33.