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## Contents

**Vorontsov, Vladimir Valentinovich**

Classification of Coins of the independence era of the Pskov State

1424/25 – 1510..... 3

**Gavrilov, Gabriela**

The great experiment in industrial farming: Soviet collectivization

& US agricultural advisors.....26

**Kildeev, Adel**

Ethical AI application: a global review of principles, practices,

regulations and impacts..... 82

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## CLASSIFICATION OF COINS OF THE INDEPENDENCE ERA OF THE PSKOV STATE 1424/5-1510

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**Abstract.** The author tells about the history of Pskov's coinage during its independent administration from 1424/25 to 1510. He provides a detailed classification of these coins accepted in numismatic science with images of each group and type, tells about the technique of their manufacture, about the prototypes of the images on these coins and the features of paleography.

**Key words:** Pskov Principality coins, wire coins, Pskov Denga, Pskov Chetvertsa, Pskov Pulo, Grivna, Novgorod Ruble, Moscow Ruble, Novgorod Denga, Artig of the Bishopric of Dorpat, Pieniądz, Poltina.

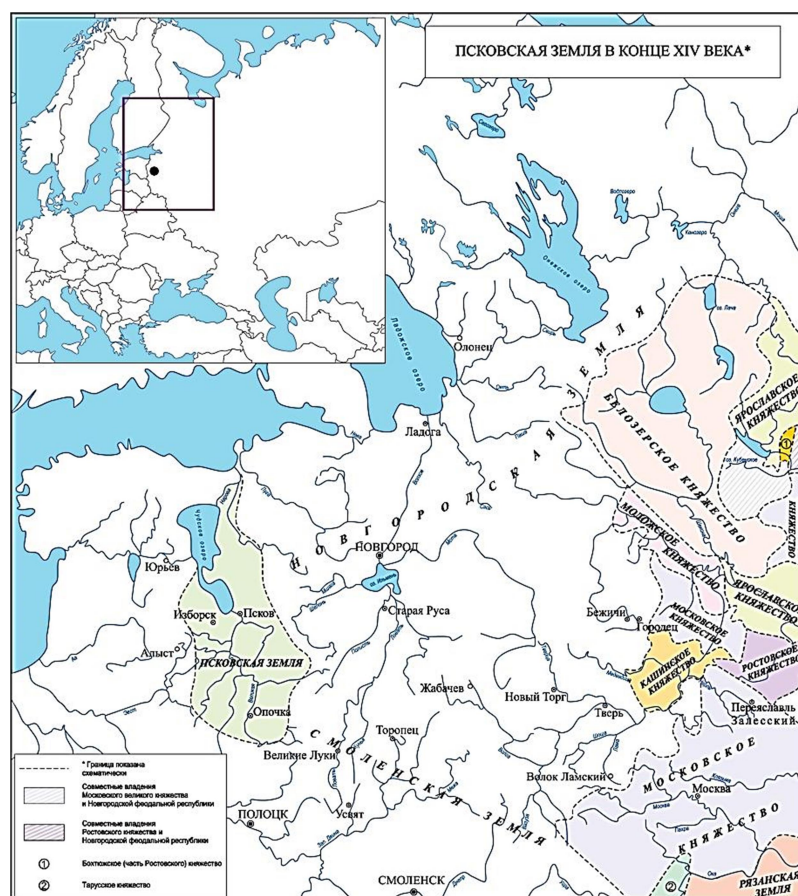


Fig. 1a. Map of the medieval Pskov state (in gray to the left of the center of the map)

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For the first time in the chronicles, Pskov was mentioned under the year 903 under its ancient name Pleskov. In this year, Prince Oleg brought Prince Igor a wife named Olga from Pleskov<sup>1</sup>, later a right-believing Princess, who left a deep mark on Russian history. She was the first Russian monarch to convert to Christianity. Initially, Pskov had the status of one of the suburbs of Veliky Novgorod. He received an independent prince at the end of the reign of Olga's grandson Vladimir Svyatoslavich (978 – 1015), when he distributed Russian cities to his sons. Pleskov went to the youngest son Sudislav. However, his elder brother Yaroslav, who came to power in Ancient Russia, in 1036 was "angry" with Sudislav and put him in a "porub" (dungeon)<sup>2</sup>, and Pskov was again turned into a suburb of Novgorod. To govern Pskov, the Novgorod prince sent there a prince and a posadnik, often only a posadnik. In the following years, the Pskovites were invited to the Novgorod veche, took part in the struggle of the Novgorod warring parties in order to create an advantage for one of the parties, being as if equal citizens of Novgorod itself, helped Novgorod in its wars and received help from it in their own. The location of the Pskov land on the westernmost border of the Novgorod possessions and convenient river and lake communication routes, on the one hand, contributed to the development of trade and the transformation of Pskov into a major trading center, and on the other hand, exposed it to the constant danger of attack by external enemies. As Ancient Rus disintegrated into separate states in the 11th-14th centuries and Novgorod weakened due to the lack of a firm, stable state structure, Pskov began to summon princes without notifying the Novgorod authorities, to conclude defensive and offensive alliances, international treaties, and, finally, in 1348, it received complete independence from its overlord (Bolotov Charter<sup>3</sup>). Only in ecclesiastical matters did Pskov remain subordinate to the bishop of Novgorod.

The prince was called to Pskov primarily in order to lead the Pskov army in wars with external enemies, especially with the continuous raids of the knights of the Livonian Order. The most beloved and revered among the princes was Dovmont, who fled to Pskov from Lithuania in 1266. He converted to Orthodoxy, receiving the Christian name Timotheus, was elected prince at the Pskov veche and ruled Pskov for 33 years. During his reign, Dovmont effectively repelled enemy raids and made a number of successful campaigns against Lithuania and the Livonian Order, including participating in the defeat of the Germans in the Battle of Rakovor on February 18, 1268. After his death in 1299, Dovmont-Timotheus began to be revered by the Pskovians as the right-believing patron saint of the city.

In 1341, the Pskov veche "beat the forehead" of the Grand Prince of Lithuania Olgerd. From that time until the end of the XIV century, Lithuania sent its princes and governors to Pskov. Sometimes there were two princes in Pskov at

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<sup>1</sup> Sofia First Chronicle. In the year 6411. PSRL, vol. V, ed. 2. Leningrad, 1925, p. 18.

<sup>2</sup> Sofia First Chronicle. In the year 6544. PSRL, vol. V, ed. 1. St. Petersburg, 1851, p. 137.

<sup>3</sup> The Novgorod Fourth Chronicle. In the year 6856. PSRL, vol. IV, part 1, iss. 1. Petrograd, 1915. P. 278. Novgorod Third Chronicle. PSRL, vol. III, p. 227.

the same time. In the winter of 1399, the Grand Prince of Lithuania Vitovt broke the peace with Novgorod and Pskov. In the same spring, the last prince from the Lithuanian family of Gediminids, Olgerd's grandson Ivan Andreevich, resigned the kiss of the cross and left Pskov. The Pskovites sent an embassy to the Grand Prince of Moscow, Vasily Dmitrievich, "to ask the prince." Since then, the princes-governors were sent to Pskov from Moscow. From 1468/1469, the city began to be called "the patrimony of the Grand Prince Ivan Vasilyevich" of Moscow and all Russia on the Pskov seals (Fig. 1b).



Fig. 1b. Drawing of the Pskov hanging seals of Ivan III (6977 from the creation of the world - 1468/1469)

Obverse: in the center is Prince Dovmont. The circular inscription reads:

ВЪ.ЛѢ(ТО) С.Ц.О.З (6977) ДОСНѢ(ТЫ) БЫ(ША) КЛѢЩИ СИ(Н)

"These walls were built in 6977"

Inscription on the reverse:

ПЕЧАТЬ ПСКОВСКАЯ ВОДЪЧНЫИ ВЕЛИКОГО КНЯЗЯ ИВАНА ВАСИЛЬЕВИЧА

"The seal of Pskov is the domain of Grand Prince Ivan Vasilyevich"

The self-names of Pskov were "Pskovskoye Gospodarstvo" ("Pskov State"), "Pskov Land" and "Lord Pskov". The word "principality" (which became the most popular designation of Russian medieval state formations in historiography) in authentic sources was first encountered only at the end of the 14th century in the form "princedom". At first, it was used only in the south-west of the Old Russian territory, in the Russian Galician-Volyn lands, occupied first by Lithuanian princes, then by the Hungarian and Polish monarchs. The first known case of the use of the term "principality" in relation to north-eastern Russia dates back to 1494: in the treaty of Grand Prince Ivan III of Moscow and All Russia with the Grand Prince Alexander of Lithuania, in the text of the charter sent from the Lithuanian prince to Moscow, Novgorod, Pskov and Tver belonging to Ivan were called "grand principalities"<sup>4</sup>. In modern Russian historiography, it is customary to call Pskov and Novgorod "republics".

Like Novgorod, Pskov was divided into ends and suburbs. The ends were not just administrative-territorial units, as in Novgorod, but represented communities of citizens. Within the communities, citizens were divided into hundreds, each of which had its own representative – the sotsky. In rural areas ("gubas"), the same function was performed by the guba headmen.

From the beginning of the XIV century, the chronicles mention the people's assembly of Pskov - *Veche*. The *Veche* had the highest legislative power. This body was more functional than a similar meeting in Novgorod. There were no

<sup>4</sup> Gorsky A.A. 2018. "Beshchislenye rati i velikie trudy...": problemy russkoi istorii X - XV vv. Pp. 7-8.

irreconcilable hostile parties fighting for power, as in Novgorod, issues were not solved by shouting over each other, physical violence was not used, there were no bloody massacres and murders. The *Veche* gathered to decide on the most important issues: the adoption of laws, the invitation or expulsion of the prince, the conclusion of peace or the declaration of war, etc. There was a certain qualification for those who could come to the *Veche*. They were men - the owners of the courtyards located in the city. Villagers did not have such a right. The executive and judicial powers were exercised by the prince, *posadniks* and *sotskies*. All together they made up a collegial body, which was called "gospodá" (a feminine noun, singular, with an emphasis on the last syllable). The *posadniks* directed the foreign and domestic policy of the Pskov land, concluded treaties, acted as ambassadors to neighboring states, and made judicial decisions as part of the "gospodá" as the highest panel of judges. During the period of independence of Pskov, there were at least two *posadniks*. Their exact number, election procedure and term of office are unknown. *Sotsky* represented the city administration. On January 13, 1510, the Grand Prince of Moscow Vasily III abolished the autonomy of Pskov, the institution of *posadniks* and *Veche* were abolished, and Pskov became part of the unified Russian state.

As in a large international trade center, Pskov had a permanent trading post of merchants of the largest German trade union - the Hanseatic League, and trade with the Hanseatic cities was regulated by treaties (for the first time Pskov was independently mentioned in the Novgorod-Hanseatic Treaty of January 6, 1342).

The monetary system of Pskov before 1409 is beyond the scope of this article. Nevertheless, I will focus on two important monetary units that connect it with the coins that were subsequently minted. Written sources and archaeological finds convincingly prove that the Pskov monetary system in the Middle Ages was tied to the monetary system of Veliky Novgorod. Neither Novgorod nor Pskov minted their own coins until the 1420s. But they produced heavy cast silver payment bars to settle large transactions. The presence of ingots in monetary circulation was common, both for Europe (where they were called "marks") and for Asia (saixi, yuanbao, som). In Russia, they were called "*grivnas*", and starting from the last quarter of the XII century, such ingots in birch bark letters began to be called *rubles*, and ingots of half a ruble – *poltinas* (Fig. 1d). In 1316, the ruble was first mentioned in an official document - in the treaty of Novgorod and the Tver prince Mikhail Yaroslavich. Novgorod ingots are known in two types. The first of them, the so-called "*long*", have the shape of an elongated stick with a trapezoidal section 14-20 cm long (Fig. 1c). Other ingots are called "*humpback*". They are much shorter: 11 - 14 cm, but thicker and have a kind of humped back. Both long and humped ingots had the same weight norm. Until the end of the XIV century, the "original" weight of the Novgorod silver grivna-ruble was equal to 197 grams, but around 1389 it was reduced to 184 g<sup>5</sup>. And this weight norm was preserved throughout the first half of the XV century. Humpback ingots appeared a

<sup>5</sup> Bauer N. P. 2014. History of Old Russian Monetary Systems of the IX Century - 1535, Moscow, "Russian Word". Pp. 344-345.

little later than long ones, their appearance is explained by a more compact shape for storage and transportation.



Fig. 1c. The payment ingot "long" ruble (grivna) of the Novgorod type XIII-XIV centuries. Weight 194.932 g. 96.5% pure silver.



Fig. 1d. The payment ingot poltina is a half "humpback"ruble (half grivna) of the Novgorod type of the XIII-XIV centuries. 1365 A.D. Weight 99.738 g. 96.2% pure silver

The most common point of view connects the emergence of the noun "ruble" with the verb "chop". The most marginal version claims that there was an ingot called the grivna, which was cut in half, and the halves began to be called rubles. In fact, the ruble and the grivna are synonymous and denote the same object, and its halves are called poltinas (Fig. 1d). As early as 1834, an entry from the Menaion of 1494 from the collection of the Solovetsky Monastery was published: "Remember, how the Novgorodians traded until then." It describes in detail the correspondence of Old Russian monetary and weight units to each other. It is clearly written: "and the grivna of silver is a ruble" (Fig. 2).

Поме. Какъ торговаху селеніи въ порѣхъ.  
 Платиша четири рубль. а селеніи дадутъ  
 паче рубль. и не по мѣрѣ. а по старому  
 рублю. при чѣхъ рубль. а селеніи дадутъ  
 лѣтъ. а селеніи дадутъ рубль.  
 Но въ старомъ. г. рубль. а селеніи дадутъ  
 рубль. а селеніи дадутъ рубль.

Fig. 2. Postscript to the Menaion of 1494 "Remember, how the Novgorodians traded until now" with the mention of the equality of the grivna of silver to the ruble.

Black is marked "and the grivna of silver is a ruble" (Edited by I.G. Spassky)<sup>6</sup>

Another version believes that the grivna began to be called the ruble, since this name reminded that the whole ingot could be *cut* into fifty and smaller fractions. An alternative opinion was expressed by the curator of the numismatics department of the State Hermitage, V. A. Kalinin. As early as in the 50s of the last century, M. P. Sotnikova in her dissertation on silver payment ingots of Veliky Novgorod noted that some of the humpbacked ingots usually have a clearly visible seam, which is explained by the technique of "double casting". The technique of double casting of silver ingots involves the production of an ingot in two stages: first, an alloy of silver (high-grade or with impurities) is poured, and then molten high-quality silver is added on top. V. A. Kalinin suggested that the etymology of the word ruble does not necessarily have to be associated with the verb "chop", and the explanation may lie in the technique of making a ruble ingot: the edge of the "humpback" ingots was probably processed, smoothed with a hammer, while the root *rub* means the edge, the border. It seems that the solution to the problem is even simpler: *rub* ... In Serbo-Croatian it is a *seam*, a border, in Polish it is *a scare*. To the same group of words we should also include the Russian rube. Thus, the term ruble should probably be understood as "an ingot with a seam".<sup>7</sup> I do not know how valid this assumption is. In the same dissertation by M. P. Sotnikova, the data of a study of 425 ingots stored in the State Hermitage (St. Petersburg) and the State Historical Museum (Moscow) are cited. of these, 222 ingots were made by the monolithic casting technique, and only 203 were made by double casting. Of these 203, only about 70 ingots showed a difference in the quality of the silver of the lower and upper castings and had a scar visible to the eye<sup>8</sup>.

The general concept of "money" in the XIV – XV centuries was denoted by the words "kuns" or "silver". "Kuns" got their name from the denomination of the coin common in Russia in the Middle Ages. And "silver" - because silver was the standard precious monetary metal in Russia. Foreign European money, because of the Polish denarii or pfennigs (in Russian "penyazi") widespread in Lithuania since the second half of the 14th century, was generally called "penyazi".

In 1409, according to the chronicles, "in Pskov they put aside kunas to trade, and from then on they began to trade in penyazi",<sup>9</sup> that is, they legalized the circulation of foreign currency on the domestic market. The next year, the same thing happened in Novgorod: "In the same year, the Novgorodians began to trade between themselves with lobtsy and Lithuanian groschen and penyazi and German

<sup>6</sup> Spassky I. G. Russian Coin System. Historical and numismatic essay. Moscow, p. 40, fig. 29; 2nd ed. Moscow, 1960. P. 40, fig. 29; 3rd ed. Leningrad, 1962. P. 66, fig. 47.

<sup>7</sup> Potin V.M. 1993. Coins, treasures, collections. St. Petersburg: Iskusstvo, p.153.

<sup>8</sup> Sotnikova M.P. From the History of the Circulation of Russian Silver Plating Ingots. The Case of Fyodor Zhrebets // Soviet Archaeology. – 1957. – No 3, pp. 54-59; Sotnikova M.P. Serebryanye platnye slitki Veliky Novgoroda i problemy proiskhozhdenie novgorodnoy denezhnoy sistemy XV v. [Silver payment ingots of Veliky Novgorod and the problems of the origin of the Novgorod monetary system of the XV century]. – T. 12. Leningrad, Nauka Publ., 1981.

<sup>9</sup> Pskov 1st Chronicle. Tikhonov's list. PSRL, vol. V, iss. 1. Moscow, 2003. P. 32.

artugs, and put aside kunas"<sup>10</sup>. The word "lobtsy" referred to the Lübeck (German: lübische) pfennigs minted in Reval, which were issued according to the coin standard of the capital of the Hanseatic League - the city of Lübeck. "Lithuanian groschen" are the Krakow groschen and their factions circulating in the Grand Principality of Lithuania. The "German artugs" meant the artugs of the Livonian Order and the Bishopric of Dorpat.

The reasons why Pskov and Novgorod allowed the intervention of foreign coins in the domestic money market are for some reason passed over in complete silence in numismatic literature. The only researcher who touched upon this topic, N. A. Khan, on the basis of indirect data, suggests the following. According to the Pskov chronicles, in 1407-1409 there was a large harvest of grain in Pskov, the surplus of which was exported. The money received for grain could be used in different ways - up to the formation of a foreign exchange reserve, not to mention the beginning of the issuance of its own coin. In Pskov and Novgorod, they chose not the best option - a mass of Western European and Baltic low-grade silver was thrown to serve retail trade<sup>11</sup>. Another reason for the admission of foreign currency into circulation, according to N. A. Khan, was the mitigation of the silver deficit resulting from the decline in silver production in Europe<sup>12</sup>. Be that as it may, as a result, the economies of Pskov and Novgorod suffered heavy losses. Firstly, by introducing foreign currency into circulation, the state lost income from its emission. Secondly, Western issuers carried out constant deterioration of coins by systematically reducing the silver content in it. Inflation income again went into the pocket of the issuer, and the consumer constantly suffered losses.

Novgorod was the first to abandon foreign currency and switch to minting its own. In 1420, "the Novgorodians began to trade in silver dengas, and sold the artugs to the Germans, and traded for 9 years"<sup>13</sup>, which means "the Novgorodians began to use silver dengas in trade, and the Artugs sold it to the Germans, and used it in trade for 9 years." In this case, the word "dengas" means the denomination of new coins.

Pskov began minting its own coins between September 1424 and February 1425, such a conclusion was made by V. L. Yanin on the basis of a chronicle record of the handwritten service Menaion XV kept in the State Historical Museum, discovered in 1929 by A. N. Oreshnikov<sup>14</sup>. In terms of money circulation, this entry is as follows<sup>15</sup>:

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<sup>10</sup> The Novgorod First Chronicle of the Elder and Junior Editions. Ed. by A. N. Nasonov. Moscow-Leningrad, 1950. P. 402.

<sup>11</sup> Khan N. A. Monetary Systems of Ancient Russia and the Golden Horde at the End of the XIII - the First Half of the XV Century: Mutual Influence and Confrontation. Chapters from the monograph on Nikolai Khan's website. Electronic resource:

<https://nkhan.ru/glava-iz-monografii-denezhnyie-sistemyi-drevney-rusi-i-zolotoy-ordyi-v-kontse-xiii-pervoy-polovine-xv-vv-vzaimovliyanie-i-protivostoyanie/>

<sup>12</sup> Ibidem.

<sup>13</sup> The Novgorod First Chronicle of the Elder and Junior Editions. Ed. by A. N. Nasonov. Moscow-Leningrad, 1950. P. 412.

<sup>14</sup> A. N. Oreshnikov, apparently, was the first to draw attention to the fact that the said entry in the Menaion contains information related to the beginning of the Pskov coinage. It was published in 1909: Record of the

Въ лѣ 6932. (...) при великомъ кнѣзи. васильи дмитріевѣ.  
(...) того лѣ свершинны бы перси оу кромѣ. (...) того  
лѣ. федосъ посадни. и вси псковѣ оуставили денги.

Translation: "In the year 6933 from the Creation of the world (1424/1425)... Under Grand Prince Vasily Dmitrievich... In this year the walls in the Pskov Kremlin ("Krom") were completed. This year, the posadnik Fedos and all the people of Pskov decided to put dengas into circulation." In this context, the word "dengas" also refers to the name of coins. Where did such an exact interval come from: September 1424 – February 1425? The Menaion, according to V. L. Yanin, uses the September style, according to which the year 6933 from the Creation of the world begins on September 1, 1424. On the other hand, the entry could not have been made later than February 28, 1425, on which day the Grand Prince Vasily Dmitrievich, under whom the Menaion was written, died<sup>16</sup>.

However, in the Pskov 1st Chronicle, according to the Tikhanov list, it is said that the construction of the walls in Except was completed in 6932, and even the exact date is indicated - July 7, 1424;

"В лето 6932. Свършены быша перси у Крома мѣсяца июля в 7 день, а делаша двести мѣж пол четверта года и взя оу Пскова делѣ мзды 1000 рѣблев, а котории плитѣ жгли взяша двести рѣблев."

Translation: "In the year 6932. The walls at Krom were finished on the 7th day of the month of July, and they were made by two hundred men for three and a half years, and they took a fee of 1000 rubles from Pskov, and those who fired bricks took two hundred rubles." This entry is followed by the following:

"Того лета псковичи отложиша пенязми артѣгы торговати и приставиша мастеров денги ковати в чистом сребре."<sup>17</sup>

("In that year, the Pskovians stopped paying with foreign money - artugs - and appointed masters to mint dengas from pure silver"). V. L. Yanin believes that there was a mistake in the chronicle, and the construction of the walls was completed in November 1424, that is, already in 6933. To prove this, he cites the inscription on the hanging seal mentioned by I. I. Tolstoy in the 1886 monograph "Pskov Coins", which also bears the date 6933<sup>18</sup>. I give a photograph of this seal (Fig. 3). Drawing is given according to A. S. Melnikova<sup>19</sup>.

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Menaion of the Synodal Library No 173. Karinsky, N. M. Yazyk Pskova i ego oblasti v XV veke [The language of Pskov and its region in the XV century]. St. Petersburg. Type. M. A. Aleksandrova, 1909. (Notes of the Faculty of History and Philology of the Imperial St. Petersburg University; Part 93). Pp. 142-143.

<sup>15</sup> Yanin V. L. 1955. On the beginning of the Pskov coin coinage. Numismatic Collection of the State Historical Museum, Part 1. Moscow, p. 23.

<sup>16</sup> Ibidem.

<sup>17</sup> Pskov 1st Chronicle. Tikhanov's list. Pskov Chronicles. Issue 1. Moscow-Leningrad, 1941. P. 35.

<sup>18</sup> Tolstoy I.I. 1886. Russian pre-Petrine numismatics. Issue 2. Pskov coins. St. Petersburg. Pp. 14-15.

<sup>19</sup> Melnikova A. S. 1963. Pskov Coins of the XV Century // Numismatics and Epigraphy. Volume IV. 1963, p. 233.



Fig. 3. Pskov Hanging Seal of 6933.

Obverse: in the center is the head of Dovmont in a circle of beads. Circular inscription (according to V. L. Yanin):

**В ЛѢТ. 6933 С(О)ЛН(ЦА) (КРУГ) 17 М(ЕСЯЦА) 17 ИНД(ИКТА) 3**

" Year 6933 17th circle of the sun 17th month of 3rd indication"

The reverse: an inscription in 6 lines (after V. L. Yanin):

**ПЕЧАТЬ ПСКОВСКОГО. ТОГДА И ПЕРСИ СВЕРШЕНЫ КАМЕНИ**

" The Pskov seal. Stone walls were built then "<sup>20</sup>

The coin introduced in Pskov was called " **denga** " (Russian «**деньга**»). The name "denga" was a common name for the denomination of coins in the states of northeastern Russia. "Dengas" began to be minted in the Ryazan and Suzdal - Nizhny Novgorod lands in the 1370s-1380s, in Moscow in the early 1380s, in Tver in 1413, in Veliky Novgorod in 1420, etc. The weight and design of " dengas " in different states were different. It was from the name of these coins that the modern Russian word «**деньги**» ("**money**") was born. Pskov began to issue " dengas " in 1424/25, one of the last.

The process of making coins was as follows. The image of the obverse and reverse of the coin was carved on the mother cells of hard metal. Queen cells could serve for years, from time to time the image on them was corrected. Stamps were made from the mother cells on coin stamps, and a negative image was obtained on them: all convex elements of the pattern became depressed and vice versa. The stamps obtained by this method were hardened and used in work. The prepared metal in the form of silver ingots, European coins or silver scrap was melted and poured into special oblong molds. During remelting, the metal was cleaned of impurities and ligature, which made it possible to obtain silver of a very high standard. The resulting rods were dragged into silver wire of the desired diameter, which was cut into pieces of equal weight. These blanks were flattened, then money masters minted coins from them. Such a technology for making coin blanks led to the fact that the circle turned out to be uneven, usually on the two opposite sides of the scales two protrusions are clearly visible, remaining on the blank after its separation from the wire. Because of their shape resembling fish scales, these wire coins are called "*cheshuiki*" or "*scales*".

I. I. Tolstoy was the first to try to systematize Pskov coins in the monograph "Pskov Coins", published in 1886<sup>21</sup>. He studied about 800 coins, did serious work on their description, but could not find criteria for their chronological and metrological classification. Only in 1963 the systematization of Pskov coins

<sup>20</sup> Yanin V. L. 1955. On the beginning of the Pskov coin coinage. Numismatic Collection of the State Historical Museum, Part 1. Moscow, p. 22.

<sup>21</sup> Tolstoy I.I. 1886. Russian pre-Petrine numismatics. Issue 2. Pskov coins. St. Petersburg.

appeared. It was published by A. S. Melnikova in her work "Pskov Coins of the XV Century."<sup>22</sup> This work appeared on the basis of a scrupulous study of about 3000 copies stored in the collections of the Hermitage, the Pushkin Museum and the State Historical Museum. Melnikova analyzed the stamp connections of the obverse and reverse sides of various types of coins, bringing them together in 7 impressive tables with drawings of several hundred copies. Melnikova's systematization, although, of course, is not devoid of "blank spots", but it makes it possible to distinguish the groups and types of coins proposed by Melnikova from each other by the appearance and weight of the money and to establish the approximate time of their minting. To date, it is the only justified classification of money of independent Pskov according to any criteria.

The Pskov silver coin was minted in two denominations: *denga* and *chetvertsa*. The chetvertsa was a ¼ of the denga. Coins were minted from high-grade silver. In addition to the silver coin, small copper coins – *pulos* were minted in Pskov, but the images on them (a double-headed eagle and a siren), characteristic of the coins of the Moscow and Tver mintage, testify to the fact that they were minted after the annexation of Pskov to Moscow.

On the obverse of the coins of both denominations, during the 85 years of minting (1424/5 – 1510), there was a rather primitive image of a man's head in full face; on the head there is a wavy headdress divided by a vertical line into two halves - a hat or a crown, from under which semicircular pendants hang on both sides of the face, resembling ears in shape. Chest and neck are absent. From below, semicircular lines depicting shoulders and arms protrude directly from this head to the sides (Fig. 4a). Often two triangles appear under the chin, depicting a collar (Fig. 4b), between the hands - dots or beads (Fig. 4b, 4c) or a placket (Fig. 4d), depicting buttons or a clasp. In the right hand there is a sword with a characteristic blade in the form of an elongated triangle, the left hand seems to be pressed to the chest. In rare cases, the sword is in the left hand. Along the edge of the coin there is a rim of dots. The coin field can contain dots and letters.



Fig. 4. Obverses of Pskov dengas

The image on the obverse of the coins is similar to the image on the Pskov hanging seal dedicated to the completion of the construction of the Krom walls (Fig. 3). The only difference is that only the head is depicted on the seal, and on the coins - in addition to the head, there are also shoulders with arms. There is no

<sup>22</sup> Melnikova A. S. 1963. Pskov Coins of the XV Century // Numismatics and Epigraphy. Volume IV, pp. 222-244.

doubt that the prototype for this image was the portrait of the "bishop in a mitre" on the obverse of the artigs of the Dorpat bishopric – the very same "German artugs" who served the Pskov retail trade for 15 years from 1409 to 1424 (Fig. 5).



Fig. 5. Artigs of the Bishops of Dorpat

As we can see, on the obverse of the Dorpat coins there is a chest-length image of the bishop in a mitre. Both temples have poorly depicted mitre ribbons - a sign of episcopal dignity, which everyone mistakes for curly hair. I. I. Tolstoy, having carefully studied the images on the articles and compared them with the images on the Pskov coins, noticed that there were two dots on the articles at the bottom near the curls or ribbons of the bishop. Exactly the same two dots are found on the Pskov seal of 6933 and on the Pskov dengas, which he rightly considered to be the earliest (Fig. 6). According to I. I. Tolstoy, this is quite enough to recognize the fact of copying the image on Pskov coins from Dorpat<sup>23</sup>. Later, the drawing on Pskov dengas in small details began to gradually move away from the prototype.



Fig. 6. Obverse artillery: Bishop Henry I Felde's artig (left) and Pskov denga (right)  
I. I. Tolstoy (1886)

Forming the obverse side of the coins, the Pskov stamp carvers decided to abandon the circular inscription. They added hands to the image on the coin, which they needed in order to insert a sword into them. According to the general opinion of researchers, the portrait depicts the heavenly patron of the city - Prince Dovmont. The famous Dovmont's sword was a symbol of princely power. The chronicle mentions that this sword was "put into the hands" of the prince summoned to Pskov on the throne in the Trinity Cathedral: "In the year 6968 (1460)... The Grand Prince sent his son Prince Yuri to Pskov... and the Pskov people received him with great honor, and set him on a table in the church of the

<sup>23</sup> Tolstoy I.I. 1886. Russian pre-Petrine numismatics. Issue 2. Pskov coins. St. Petersburg. P. 23.

Holy Trinity, and gave the sword of their Prince Dovmont into his hands"<sup>24</sup>. Dovmont's sword is still on display at the Pskov Museum-Reserve. It has a 90-centimeter blade of a characteristic elongated-triangular shape, evenly tapering towards the end, a round pommel on the handle and a transverse guard, the edges of which are bent towards the blade. This is the shape that the carvers tried to give to the sword on coins. On the field of the coin, next to the portrait of Dovmont, there are usually different letters or dots.



Fig. 7. Dovmont's sword (drawing from life by I. F. Barshchevsky from the monograph of I. I. Tolstoy)<sup>25</sup>

The reverse of Pskov silver money is of two types. The first of them contains an inscription in four lines: **ДЕНЬГА ПСКОВЪСКАЯ** ("the Pskov denga"). Along the edge of the coin there is a rim of dots (Fig. 8a). The second in the center of the coin depicts a four-legged animal with a mane and a long curved tail raised up, which for some reason is called a leopard in numismatic literature. Around the "leopard" in a circle clockwise there is an inscription **ДЕНЬГА ПСКОВЪСКАЯ** ("the Pskov denga"). As a rule, the "leopard" on the coin is turned to the right (Fig. 8b). On single specimens, it is depicted with its head to the left (Fig. 8c).



Fig. 8. Reverse of Pskov dengas

On the reverse of the coins of the chetvertsa denomination, due to their extremely small size, there is only an inscription in 3 or 4 lines **ПЪСКОВЪСКАЯ** ("Pskov's"). Along the edge of the coin there is a rim of dots. On the obverse near the left ear of Dovmont there is usually some marker: a letter or a badge.

<sup>24</sup> Chronicle according to the Voskresensky list // PSRL, vol. VIII, St. Petersburg, 1859, p. 148.

<sup>25</sup> Tolstoy I.I. 1886. Russian pre-Petrine numismatics. Issue 2. Pskov coins. St. Petersburg, p. 26.



Fig. 9. Pskov Chetvertsya. Silver, 0.18 g. No marker near the left ear

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According to technical characteristics, chronologically, A. S. Melnikova divides the Pskov dengas into 4 groups.

### Group 1

The so-called archaic coins. This is the earliest Pskov money, which began to be minted first in 1424/5. On the obverse – Dovmont in full-face. On the reverse there is an inscription. In Russian numismatic jargon, this type of coin is called "*strochnik*" (Russian «*строчник*»). This name was born due to the fact that the inscription on the coin is not arranged in a circle, but in several *lines* (Russian «*строчки*»), as on a piece of paper. The distinctive features of archaic coins are, firstly, the more ancient spelling. The word "Pskov's" on the reverse is written according to an outdated form for the XIV century with two letters **Ь**: **ПЬСКОВЬСКАЯ**. Tolstoy also drew attention to this feature and explained this form of transition from an even more ancient one - **ПЛЬСКОВЬСКАЯ** ("Pleskov's"). In addition, I. I. Tolstoy came across a copy of a coin with a legend **А СЕ ДЕНЬГА ПЬСКОВЬСКАЯ** ("and here is the denga of Pskov") (Fig. 9b), which reminded the researcher of the legends on even more ancient coins of the late 10th – early 11th centuries, on which the name of the Prince and the phrase **А СЕ ЕГО СРЕБРО** ("and here is his silver"). According to the researcher, this was also an argument in favor of the fact that this coin belongs to the earliest. Of the 6 coins of the 1st group, studied by I. I. Tolstoy, and 150, studied by A. S. Melnikova, the inscription on the reverse in four lines exists in one of three versions:

ДЕНЬ|ГАПСЬК|ОВЬС|КАЯ (Fig. 9a)

ДЕНЬ|ГАПСЬК|ОВЬС|КАЯ (Fig. 9b)

АСЕД|ЕНЬГАПС|КОВЬС|КАЯ (Fig. 10)

("the denga of Pskov")



a

b

Fig. 9. Dengas of the 1st group. "Archaic"

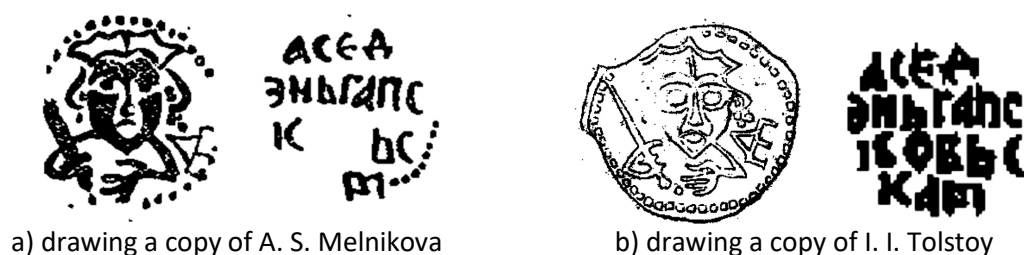


Fig. 10. "Archaic" dengas with the inscription " а се деньга псковьскаа "

The second important distinguishing feature of the coins of the first group is the obligatory presence of the sign  on the obverse of the coin. It is located above the left shoulder of Dovmont, directed with the "point" towards the face. Tolstoy mistakenly assumed that  this is some archaic form of the Old Russian letter **А** (jus small), which was not found anywhere else. Melnikova puts forward a more plausible version. She deciphers  it as a ligature consisting of the letters **Д** and **П**, denoting the name of the patron prince of Pskov «ДОВМОНТ-ПИМОФЕЙ» ("Dovmont-Timotheus"). Having compared the stamp connections of archaic coins, the researcher came to the conclusion that all of them were minted at a single mint, and suggested that the first mint in Pskov was located in the city adjacent to Krom of Dovmont, and the badge  was the emblem of this mint.

The two main features I have mentioned are quite enough to visually distinguish the dengas of the 1st "archaic" group from the rest of the mass of Pskov coins.

The weight norm of this dengas, according to Melnikova, was initially 0.79 g, then decreased to 0.76 g. The chronological framework of the decrease in the weight norm, the researcher, on the basis of chronicle evidence, refers to the period between 1434 and 1466. The first evidence speaks of the price of bread in 1434: "And in Pskov of the Holy Trinity God gave a lot of bread, 9 dengas for a zobnitsa<sup>26</sup> of rye".<sup>27</sup> Under the same year in another Pskov chronicle it says: " 13 rye zobnitsas in Pskov cost poltina ".<sup>28</sup> Based on the cost of one zobnitsa of 9 dengas and the cost of 13 zobnitsas of poltina, it is not difficult to calculate that the poltina included  $9 \times 13 = 117$  dengas. And since poltina was half a ruble, the ruble was equal to 234 dengas. The weight norm of a ruble silver bar in the first half of the 15th century, as calculated by N. P. Bauer and A. S. Melnikova independently of each other, was 184 g. Consequently, the weight norm of dengas was  $184 : 234 = 0.786$  g, that is, a figure close to 0.79 g, which was confirmed by the weighing materials of the heavier part of the coins of the 1st group.

<sup>26</sup> Zobnitsa is a measure of bulk solids in Pskov, equal to 104.96 liters.

<sup>27</sup> Pskov 1st Chronicle. Tikhonov's list. Pskov Chronicles. Issue 1. Moscow-Leningrad, 1941. P. 42.

<sup>28</sup> Pskov 2nd Chronicle. Synodal List. Pskov Chronicles. Issue 2. Moscow, 1955. P. 44.

## Group 2

The group is more numerous than the previous one. In total, about 400 coins were examined. These coins-*strochniks* are minted on thinner and wider plates. The weight norm in comparison with the "archaic" ones is reduced to 0.76 g. The portrait on the obverse acquires various small details: the collar, patterns on the headdress, dots in the field of the coin. Monogram  it is no longer minted on the obverse; Letters appear instead: К, И, Ё, С, ІЄ, Д, signs , points. Some coins are rough imitations of coins of the 1st group (Fig. 11a). A characteristic difference from archaic coins is the paleography of coins. From the word ПСКОВЪСКАЯ ("of Pskov") after П disappears Ъ, and the suffix ЪСК is replaced by the suffix ЪСК. A single legend type and location is set: ДЕНЪГА ПСКО|ВЪ•СК|•АЯ•. Judging by the lack of correlation between the stamps, the activities of a single monetary mint with an emblem , for some reason ceased, and the coinage was transferred to several independent moneymakers, who, according to A. S. Melnikova, put their initials on the coins. The researcher talks about six disparate types of coins of the 2nd group.



Fig. 11. Dengas of the 2nd group

A. S. Melnikova does not report on the period of time when these coins were minted. As for the metrological system of Pskov money, she reports that in the period between 1434 and 1466 the Münzfuß (coin foot) changed, and not 234 dengas, but 220 dengas was minted from the ruble. Citing chronicle evidence of hop prices in 1466 and 1467, Melnikova reports on the following ratios of the ruble, poltina and denga. In 1466, in Pskov, "hops were expensive, a zobnitsa of

hops cost 100 and 20 dengas"<sup>29</sup>. In 1467, "hops were expensive in Pskov, I bought a zobnitsa of hops for poltina and 10 dengas."<sup>30</sup> "Because hops were very expensive, 60 dengas was worth ½ zobnitsa of hops, but it wasn't for a long time."<sup>31</sup> When comparing this information, it turns out that 100 and 20 dengas correspond to poltina and 10 dengas. In 1467 - ½ a zobnitsa cost 60 dengas, a zobnitsa, respectively, cost 120 dengas, which confirms the equality of prices of 1466 and 1467. According to this information, the half-ruble corresponded to 110 dengas, and the ruble to 220 dengas. According to N. P. Bauer, in Novgorod since 1420, along with the ruble-bullion weighing 184 g, which I mentioned above, there existed an accounting monetary ruble equal to 216 Novgorod dengas weighing 0.80 g<sup>32</sup>. In 1446/47, silver bullion was no longer produced in Novgorod, they were withdrawn from circulation and melted down into coins: "In the same year, the Novgorodians abandoned monetary silver bars: old and new rubles due to the fact that the moneyers mixed impurities from base metals into silver. All the ingots were melted down into dengi, and the *Veche* sentenced the money makers to take away all the proceeds from the manufacture of counterfeit silver bars, and the counterfeiters themselves to drown in the river."<sup>33</sup>. If in 1466 the ruble was equal to 220 Pskov dengas, the weight norm of the Pskov denga was  $172.80 : 220 = 0.7854$  g, that is, exactly the same as before. Metrological studies by A. S. Melnikova do not give an answer to the question of why the Pskov dengas of the 2nd group weighed 0.76 g, and then fell even more in weight.

### Group 3

In the third group, A. S. Melnikova included two seemingly completely different types of coins. The first type is "*strochniks*" - coins with an inscription on the reverse side **ДЕНЬГАПСКОВЪСКІА**, similar to coins of groups 1 and 2. Their weight norm has been reduced to 0.75 g. The second type has a new reverse: in the center of it, the so-called "leopard" appears, around which there is a circular inscription **ДЕНЬГАПСКОВЪСКАЯ**. Their weight norm is higher: 0.76 - 0.77 g. There are no stamp connections between these two types.

What made Alla Sergeevna Melnikova unite them into one group? On the obverse of these coins, the sign of the single mint again appears. This is no longer the same ligature **А**, but a sign that is close to it in meaning **А**. Vertical Lines Letters **П** are transformed into triangles, one of the angles directed downwards: **▼▼▼**. Melnikova believes that the significance of the ligature by that time had been lost due to the passage of time, so on the obverse of some coins with a leopard instead of a sign **А**. Letters that are more understandable to ordinary

<sup>29</sup> Pskov Chronicles. Issue 2. Moscow, 1955. P. 74.

<sup>30</sup> Ibid., pp. 163-164.

<sup>31</sup> Ibid., p. 164.

<sup>32</sup> Bauer N. P. 2014. History of Old Russian Monetary Systems of the IX Century - 1535, Moscow, "Russian Word". Pp. 433 and 484.

<sup>33</sup> PSRL, vol. IV, part 4; Novgorod Fourth Chronicle, iss. 2, Leningrad, 1925, pp. 442, 443.

people appear  $\Delta$  and  $\Lambda$ . Melnikova considers the portrait on the obverse of the coins and the letters in the inscription on the reverse to be similar to the iconography and paleography of the Pskov hanging seals of 1468/69, which I have given in Figure 1. Therefore, Alla Sergeevna considers the 1460s to be the time of minting. The number of coins of the 3rd group exceeds the coins of the previous groups and is about 500.



Fig. 12. Dengas of the 3rd group of the 1st type

There are many versions of the appearance of the so-called "leopard" on coins. And I see no point in listing them. Judging by the fact that the animal has a mane on the coins, according to the artist's plan, it is not a leopard, but a lion, dragon or some other mythological creature (Fig. 13).



Fig. 13. Drawing of "leopards" on the reverses of the 3rd group of the 2nd type

Images of similar animals were widespread starting from the X-XII centuries on Novgorod hanging seals (Fig. 14).



Fid. 14. Drawing of Act Seals of Veliky Novgorod (after Yanin, Gaidukov, 1998)<sup>34</sup>

<sup>34</sup> Yanin V.L., Gaidukov P.G. 1998. Aktovye pechati Drevnei Rusi X-XII vv. T. III. P. 213.

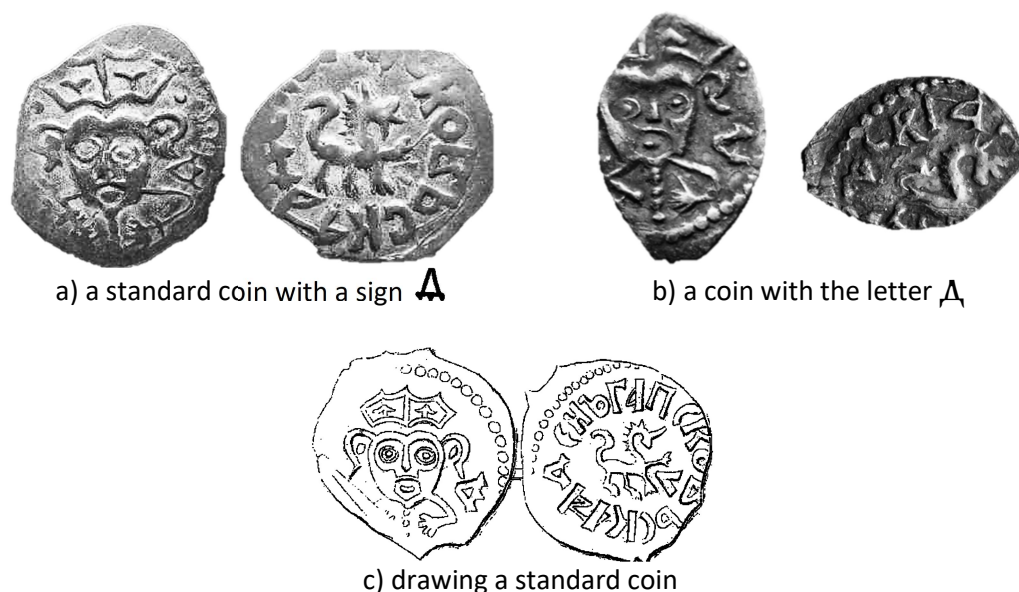


Fig. 15. Dengas of the 3rd group of the 2nd type

### Group 4

The fourth group includes money with a leopard on the reverse. This is the most diverse and the most numerous group, which includes about 700 coins. Coins of this group differ from the previous ones in that the sign Δ, as a symbol of a single mint, disappears from them and dots, icons, letters Δ, З, Є, Э, Л, М, presumably belonging to different moneymakers or money masters, appear again. In addition, on some of the coins on the obverse there are no additional signs at all. Of all the letters, only the letter М is found on coins with the name of the Grand Prince, minted after Pskov lost its independence in 1510.

A. S. Melnikova divided the coins of the 4th group into 2 types. The first of them has a weight norm of 0.74 - 0.75 g (Fig. 16), the second type is "heavy" - a weight norm of 0.79 g. On the basis of written sources, Melnikova came to the conclusion that in the 1490s the Pskov monetary system was transferred to the all-Russian account and equated to the Novgorod denга weighing 0.79 g or two Moscow dengas weighing 0.395 g on the coin foot of 100 Novgorod dengas weighing 0.79 g or 200 Moscow dengas from one Moscow ruble. Consequently, the "heavy" dengas with the leopard, which replaced the lightweight dengas of the 1st type, was the last denга of independent Pskov, minted before 1510.



Fig. 16. 4 type 1 group. Weight 0.74 g. Obverse: letter З



Fig. 17. 4 type 2 group. Weight 0.84 g.



Fig. 18. "Heavyweight" denga of the 4th group of type 2 on the scales

### Chetvertsas

The most complete study of the chetvertsas belongs to P. G. Gaidukov<sup>35</sup>. In total, he managed to examine 331 coins. Chronologically, he divided them into three main types or groups.

In the 1st group, he singled out coins, which, like dengas, can be called "archaic", and their production Most likely, it took place simultaneously with the minting of early "archaic" dengas. He believes that they were minted for about 10 years: from 1425 to 1435. Unfortunately, I could not find an explanation from the researcher why he considers 1435 to be the date of the end of their minting. A total of 128 such coins are known. Stylistically and in appearance, they are noticeably different from all other quarters. The inscription on the reverse does not contain the denomination of the coin. It consists of one word "Pskov's", in three lines: ПЬС|КОВЬС|КАІА. The spelling is the same as that of the Pskov denga: the word ПЬС|КОВЬС|КАІА written with two Ъ. The coins are combined into 30 variants, connected to each other by common stamps. The number of coins in the variants ranges from 1 to 12 copies. The weight of most coins of this variant is approx. 0.18 g.



Fig. 19. Drawing the chetvertsa of the 1st group

<sup>35</sup> Gaidukov P. G. Pskov Coins of the XV Century // The Tenth All-Russian Numismatic Conference: Moscow, April 15-20, 2002: Tez. dokl. and messages. Moscow, 2002. P.169-173. Gaydukov P.G. 2006. Russian half-dengi, chetverietysy, and polushkas of the XIV-XVII centuries. "Paleograph", Moscow.

The main difference between groups 2 and 3 from the first group is that the inscription on them is not in three, but in *four lines*: ПЪ|СКОВЪ|СКА|Я (Fig. 20, 21). The palaeography of these coins differs from the palaeography of both the chetvertsas of the 1st group and from the paleography of dengas. The word "Pskov's" is written with two Ъ: ПЪСКОВЪСКАЯ. Coins of the 2nd and 3rd groups are larger and thinner than archaic chetvertsas. According to the ratio of stamps, P. G. Gaidukov divided them into 120 variants. There are stamp connections between the options, but they are insignificant. In group 2, the number of coins in the variants ranges from 1 to 12 copies, in group 3 - from 1 to 6. The difference between the 2nd and 3rd groups is that the image of the prince and the letters of the inscription on the coins of group 2 are slightly larger than on the coins of group 3. The weight diagram of the coins of groups 2-3 shows 0.17 g, which indicates a slight decrease in the weight of these coins compared to the "archaic" chetvertsas. As for the chronological framework of the minting of coins of these groups, P. G. Gaidukov says that it is impossible to establish them. He calls the year 1435 the beginning of the minting, but on what his assumptions are based, unfortunately, I could not find.



Fig. 20. Group 2 chetvertsa


Fig. 21. Group 3 chetvertsa  
(drawing)

Among the exceptions to the general classification, there are two coins weighing 0.14 and 0.17 g, on which the inscription "Pskov's" is written with Ъ and Ъ (Fig. 22): ПЪ|СКОВЪ|СКА|Я



Fig. 22. Chetvertsa of the 2nd group with the legend of ПЪ|СКОВЪ|СКА|Я

Analyzing the weight of the coins under study, P. G. Gaidukov comes to the following conclusion. Based on the example of the Novgorod chetvertsas, the weight norm, or "statutory" weight, for different types of Pskov chetvertsas can be safely determined at 0.19 and 0.18 g. Judging by these figures, it turns out that the "statutory" weight of the Pskov denga in 1425 was 0.76 g, and a few years later it was reduced to 0.72 g. Since there is no proper equality between the real weight of denga and the chetvertsa when divided by 4: the weight of denga remains higher

under all reasonable assumptions. This means that the chetveretsas in Pskov were treated at a slightly overvalued rate<sup>36</sup>.

### Pskov Pulos

Pskov coins with the denomination "pulo" were minted of copper. The method of their manufacture was exactly the same as that of silver coins. All coins were made of wire cut into pieces, which were flattened with smooth coinage to obtain coin blanks.

Pulos research was carried out by P. G. Gaidukov. He examined 162 specimens of these coins. Referring to the testimony of the German diplomat Sigismund Herberstein, who visited Russia as part of an embassy in 1517 and 1526, Gaidukov suggested that in the first quarter of the 16th century, the Novgorod denга, which at that time corresponded to the Pskov silver denга, was equal in value to 120 copper pulos<sup>37</sup>.

According to the image on the obverse, Pskov pulos can be divided into two types. The first of them depicts a winged figure, which is conventionally called a siren. On the reverse there is an inscription in three lines: "Pulo of Pskov" •пѡло•|псковѣ|коѣ (Fig. 23). 33 specimens were examined. The average weight is 0.36 g. Gaidukov refers this type to the 1490s.



Fig. 23. Type 1. Pulo with a siren (photo and drawing)

The obverse of the second type depicts a double-headed eagle. On the reverse there is an inscription in three lines. Or пѡло|псковѣ|скоѣ, or •пѡло•|псковѣ|скоѣ• ("Pulo of Pskov"). Gaidukov divided the second type into two variants. He dates the 1st of them (116 specimens, average weight 0.39 g) to the 1490s. The 2nd version (200 specimens, 0.20 g) is attributed by the researcher to the Grand Prince's coinage after the liquidation of the independence of Pskov. The reason for this dating is not explained.

<sup>36</sup> Gaidukov P. G. Pskov Coins of the XV Century // The Tenth All-Russian Numismatic Conference: Moscow, April 15-20, 2002: Tez. dokl. and messages. Moscow, 2002. Pp. 169-173.

<sup>37</sup> A. Coins of Nezavisimogo Pskov (XV – nachalo XVI v.). Pskov No 25, 2006. P. 24.



Fig. 24. Type 2. Option 1 (drawing)



Fig. 25. Type 2. Option 2 (drawing)

## Conclusion

62 years have passed since the publication of A. S. Melnikova's work, and 26 years have passed since the publication of P. G. Gaidukov's works. Since then, the fund of Pskov coins has been significantly replenished and continues to be replenished, mainly due to the finds of new treasures. The number of these coins already significantly exceeds the number of coins that formed the basis of the classifications of these outstanding scientists. However, since then, not a single study has appeared that would continue their work. It is quite obvious that it is necessary to establish new metrological characteristics of Pskov coins, to draw up a unified scheme of the ratio of coin stamps and to establish an exact chronology of the production of all types of Pskov coins from 1424/5 to 1510.

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## THE GREAT EXPERIMENT IN INDUSTRIAL FARMING: SOVIET COLLECTIVIZATION & US AGRICULTURAL ADVISORS

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**Abstract.** The author explores one of the most hidden and shocking secrets of our history – the causes of the famine in the 1930s in the USSR. For many years, all historians blamed the ill-conceived policy of collectivization and Stalin personally, who thereby decided to pacify the rebellious peasantry. Ukrainian pseudo-historians accuse Stalin of genocide of only Ukrainians, although even more residents of the Volga region, the Caucasus and Kazakhstan died of starvation. Without whitewashing Stalin, who made serious miscalculations in the agrarian policy and the policy of forced collectivization, the author proves, based on historical documents, that the main cause of the famine of the 1930s was the adventurism of American agricultural advisers, who used in the USSR untested agricultural equipment (tractors, combines, mechanical plows, etc.), which did not prove itself well in the United States, numerous mechanizations of agricultural work failed in the United States, nevertheless, American advisers criminally continued these experiments in the USSR, which led to millions of deaths from hunger and diseases.

**Key words:** collectivization, US agricultural advisers, famine, Soviet government, foreign agricultural machinery, grain supplies.

In the process of studying U.S.-Soviet trade agreements during the 1st Five-Year Plan for my recent book , *"U.S.-Russian Trade Relations: 1763-1933: The Origins of Russophobia"* (to be published in the summer of 2025 in English), I was shocked to learn that in 1929, a group of American agricultural advisers followed more than \$43.5 million worth of American agricultural machinery to the Soviet Union.

The American consultants consisted of agricultural technicians from firms that had sold the machinery; the American Marxist Harold Ware, who since 1922 acted as an intermediary in transactions between the Soviet government and American

agro-engineering firms; Milburn Wilson, former head of the U.S. Department of Agriculture's (USDA) Farm Management and Cost Accounting Division; Professor Edward James Stirniman, agricultural engineer at the University of California; and the pioneer of industrial agriculture in the United States, Thomas D. Campbell.

Campbell, who had been receiving millions of dollars from J.P. Morgan since 1917 to create industrial agriculture in the United States, was so badly defeated that by 1928 Morgan and the other bankers who had financed his experiments had withdrawn their support for his company and resigned from the board of directors. The head of the USDA's cost accounting division, Wilson, took over Campbell's failed venture, but despite free labor from the University of Montana and funding from the USDA, it also failed. The main reason for the failures in both cases was faulty equipment that could not withstand the harsh conditions of ploughing and sowing virgin land, as well as the fact that mechanical plows were buried too deep in the soil (compared to hand plows packed with animals) and raised clay in which wheat could not grow.

Yet a decade of failed attempts to industrialize U.S. agriculture did not prevent these men from traveling to the USSR to advise the Soviet Grain Trust (Zernotrest) and Stalin himself on the methods and practices of starting industrial agriculture in Soviet Russia—in areas six times the size of the largest of their experimental farms in the United States.

I have long blamed Stalin for the devastating famine of 1930-1933, believing most of the Western media on the subject, who blamed Stalin's alleged plan to starve recalcitrant ethnic groups into submission to politics. had no political purpose and was a more or less preventable accident caused by uncontrollable corporate greed. While its cause remains man-made, the blame has been shifted from the Soviet regime to Western agro-engineering firms, which, through untried methods and prototype machines, entered the Soviet centralized economy specifically to profit enormously from initiating industrial agriculture in a system devoid of quality control rules, social responsibility, and an unfettered press. A system that was also designed as a captured market for the largest Western firms (details of which are described in my *book U.S.-Russia Commercial Relations: 1763-1933*). I also suspect that the Soviet Union served as a guinea pig<sup>1</sup> for Western firms because of its political system<sup>2</sup>, which did not hold them

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<sup>1</sup>Deborah Fitzgerald called the Soviet Union a "guinea pig" (a laboratory animal for product testing) for Western firms in her book (2003) *Every Farm is a Factory: The Industrial Ideal in American Agriculture*. New Haven, CT/London: Yale University Press,

<sup>2</sup>In my forthcoming book, I have explained in detail how communism was imposed on Russia through Lenin and his Bolsheviks, who received financial and material support from Germany to overthrow the Russian monarchy and turn the Russian economy into a monopolistic corporatocracy (through industrial trusts linked to the German cartels), to destroy the investments of other European firms in Russia, thereby ruining competing European firms and opening up Russia's resources to German ones. Firms. However, as soon as Germany lost World War I, another world power intervened. I'll let you guess what it was like.

accountable for failures, even if they led to debilitating famine that led to millions of deaths, disease, and untold suffering.

The famine of 1930-1933 struck the main grain-producing regions of the Soviet Union, including Ukraine, the Caucasus, the Kuban and Volga regions, Kazakhstan, the Southern Urals and Western Siberia. **Often portrayed as a crime against Ukraine alone, it was in fact a crime against the whole of Russia, caused by multinational corporations busy making a profit (225 million rubles only from the purchase of tractors abroad) from the 1st Five-Year Plan and collectivization.**

While the causes of the famine, which condemned 50 to 70 million Soviet citizens to starvation and resulted in the death of 5.7<sup>3</sup> to 8.7<sup>4 5</sup> million people, were spread over various measures, such as the forced collectivization of agriculture (in which Western firms were supposed to have had nothing to do), forced grain procurements, and the reduction of the agricultural labor force during the First Five-Year Plan, in everything I read about the Soviet Union. For decades, I don't remember a single source mentioning this group of American agricultural advisers, as well as more than \$43.5 million worth of U.S. agricultural machinery purchased by Stalin between 1927 and 1929, until I came across some fairly obscure American agricultural magazines.

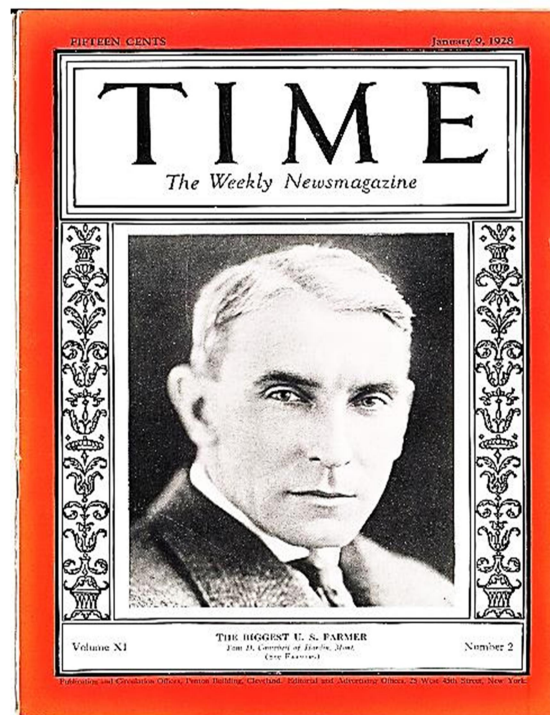
What is not mentioned in mainstream works on the famine is that the two largest collective farms of this period, Gigant (Sovkhoz 1) and Camel (Sovkhoz 2), were not only fully equipped with American agricultural equipment, but were even run by American advisers. American agricultural machinery broker Harold Ware was in charge of Verblud, a company based near Rostov-on-Don, while Gigant was managed by the former head of farm management and cost accounting at the US Department of Agriculture, Milburn Wilson.

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<sup>3</sup>[https://www.philosophy.nsc.ru/sites/default/files/journals-old/humscience/2\\_98/15-MAL.HTM](https://www.philosophy.nsc.ru/sites/default/files/journals-old/humscience/2_98/15-MAL.HTM).

<sup>4</sup><https://www.demoscope.ru/weekly/2003/0101/analit02.php>.

<sup>5</sup>Robert C. Stewart (1982). "Review of the book "Industrialization of Soviet Russia", Volume 1: Socialist Offensive: Collectivization of Soviet Agriculture, 1929-1930; Industrialization of Soviet Russia, Volume 2: Soviet Collective Farm, 1929-1930., R. W. Davis. *Slavic Review*. 41 (3): 551–552. doi:10.2307/2497035. ISSN 0037-6779. JSTOR 2497035.



Thomas D. Campbell, U.S. Agriculture Advisory Group Leader  
to Stalin's collectivization campaign of 1929-1932  
Cover of TIME magazine (January 9, 1928), public domain.

"Agriculture must be industrialized... The biggest industrial opportunity today is in agriculture. The largest field of activity of technical specialists today is agricultural engineering. In less than 50 years, we'll have a U.S. Farming Corporation that's bigger than U.S. Steel [Corp.]... In 20 years, less than 20% of our population will be living on farms." - Thomas D. Campbell (1928)

### **Attempts to start industrial agriculture in the United States in the 1920s**

Industrial agriculture in America began during World War I, when Thomas David Campbell proposed growing agriculture on a massive scale to support the war effort.<sup>6</sup> Campbell met "Jack," as he called J. Morgan, Jr., back in 1917, when a bank magnate gave him \$2 million to begin cultivating 200,000 acres of land expropriated from the Crow Indian Reservation north of the Big Horn River.

J. Morgan, Jr., head of J.P. Morgan Co., James Stillman<sup>7</sup>, president of the Guaranty Trust Company, Charles H. Sabin, former secretary to the president, vice president of J.P. Morgan's First National Bank and co-founder of the U.S. Federal Reserve Charles D. Norton, and vice president of the Guaranty Trust Company of

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<sup>6</sup>Campbell Farming Corporation Papers, 1918-1975: An Overview

<sup>7</sup>Along with W. Averell Harriman, Jacob Henry Schiff, and William Rockefeller, Stillman controlled the most important railroads in Texas (including the Texas and Pacific Railroad, the Southern Pacific Railroad, the International Great Northern Railway, the Union Pacific Southern Railway, St. Louis, Brownsville, and Mexico City, and the Mexican National Railroad). (Source: [en.wikipedia.org/wiki/James\\_Stillman](https://en.wikipedia.org/wiki/James_Stillman))

New York, Francis H. Sisson, founded the Montana Farm Corporation with Thomas Campbell as its general manager.<sup>8,9</sup>

In 1917, Campbell ordered thirty-four 13-ton Aultman Taylor 30-60 tractors with eight-foot-tall wheels and some of the largest Caterpillar tractors on earth to plow the virgin land of the Indians when there were only about 225,000 tractors in use in the entire U.S.<sup>10</sup> 500 plough bottoms, ten trucks, 33 tractors, 10 binders and 100 wagons for transporting grain.<sup>11</sup> That year I cultivated 7,000 acres. By 1920 I had 50,000 acres of land, a year later 95,000 acres, and by 1923 I had 110,000 acres under cultivation."<sup>12</sup>

In the first year alone, Campbell spent more than a million dollars on equipment, tools, and supplies. The rest of the money was used to purchase seeds, store grain, barracks, kitchen and canteens, and store fuel and a general machine shop.<sup>13</sup> Wells were dug, roads were built, buildings were erected and supplies were delivered. Most of the equipment was out of order, as much of it was in the experimental stage. Repairs were slow, and many parts had to be made in the field. Campbell even joked that "Bailing wire was jokingly referred to as the company's seal because it was the most common replacement for broken and missing parts."<sup>14</sup>

Tractors and harvesters easily got stuck in the mud and were often left standing in the fields for days before they could be freed. At one point, fifty-two railroad cars were needed to transport machinery and equipment from one site to another because most of them broke down.<sup>15</sup> Four years later, despite massive financial support from some of the nation's leading bankers, the board members decided that the Montana Farming Corporation was not profitable and would never be profitable, and voted to cease operations. Most of the losses were attributed to [American taxpayers] as part of the war effort, and those that could not be attributed to the U.S. government, have been reimbursed through income tax refunds.<sup>16</sup>

Campbell admitted, "We found that the deep ploughing done by these heavy new machines, which were much stronger than horses, dried out the soil and made it vulnerable to wind erosion."<sup>17</sup> Campbell and massive experimental equipment eventually dried up all of those acres, and the wheat didn't grow. The devastation of 110,000 acres of once-virgin Native American land was extensive.

"Jack didn't want to pay the money back," Campbell muttered. "He told me to keep the money and continue to run my own farm, so I organized the Campbell Farming Corporation in 1922 and kept 75% of the property. I eliminated the

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<sup>8</sup> Campbell Farming Corporation Papers, 1918-1975: An Overview

<sup>9</sup> Hiram Drache (1977), "Thomas D. Campbell: The Plough of the Plains," *Agricultural History*, 78-91.

<sup>10</sup> Ibidem.

<sup>11</sup> [sites.rootsweb.com/~mttygf/county/campbell.htm](http://sites.rootsweb.com/~mttygf/county/campbell.htm) (2001)

<sup>12</sup> Hiram Drache, "Thomas D. Campbell"

<sup>13</sup> Ibidem.

<sup>14</sup> Ibidem.

<sup>15</sup> Ibidem.

<sup>16</sup> Ibidem.

<sup>17</sup> Ibidem.

payment of dividends to managers who were 25% minority owners,<sup>18</sup> eliminated employee camps, and moved from biennial steaming to year three, exponentially increasing work and land use."

Campbell was determined to prove that mechanized agriculture was more economical; that wage and management farms will supplant farms based on family labor; and that he can produce one million bushels of grain in one year. He began using International Harvester tractors, as well as Caterpillars and Case, any company that gave him a machine for testing. He reduced his workforce to about 20 year-round employees and reduced labor costs per acre. But his industrial agriculture still did not work. Unreliable equipment caused too many delays, and yields never reached expectations.

However, because of his relationship with J. Morgan, Jr., sent him to Russia to advise Joseph Stalin on the systematization of the organization of millions of acres of agricultural production and the mechanization of Soviet state farms.<sup>19</sup>

The former head of the U.S. Department of Agriculture, Milburn Wilson, continued to work for Montana Farming Corp. after Campbell's departure and later started his own agricultural project. As the head of the Industrial Agricultural Experiment, Wilson received \$100,000 in financial backing from John D. Rockefeller, Jr., along with farm equipment companies. Fairway Farms Corporation was founded in Montana around the same time as the Campbell Farming Corporation in 1924. "to ensure efficient production" and "to organize farms on a more profitable basis".<sup>20</sup>

Unlike Campbell Farming Corp., which hired employees, Wilson's Fairway Farm Corporation allowed private farmers to farm the land under contract, but on the condition that the corporation would own a mortgage on the land. Fairway Farms was also assisted in the development of agricultural plans by the Department of Farm Management of the Montana College of Agriculture. Instead of annual cash payments, the Fairway contract stipulated that all income from the farm as a unit, stock, grain, or leased land was "gross income," which was to be owned by the corporation, from which all taxes, insurance, mortgage interest, advances, and operating expenses were deducted.<sup>21</sup> The amount remaining after deductions, the "net profit", was then held in trust by the Corporation until the accumulated funds amounted to 25% of the purchase price. At the conclusion of the contract, the lessee agreed on a plan for the organization and operation of the farm, which included the most efficient methods of production and selection of enterprises. in which the corporation was listed as a beneficiary.<sup>22</sup> This operational

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<sup>18</sup> Ibidem.

<sup>19</sup> Douglas Rogers (October 2006), "How to Be a Khoisan in a Transforming State: State Formation and Governance Ethics in Post-Soviet Russia," *Comparative Studies in Society and History* 48(04):915–945  
DOI:10.1017/S001041750600034X.

<sup>20</sup> Deborah Fitzgerald (Summer 1996), "Blinded by Technology: American Agriculture in the Soviet Union, 1928-1932," *Agricultural History*, Volume 70, No 3, pp. 459-486.

<sup>21</sup> Ibidem.

<sup>22</sup> Ibidem.

plan was remarkably similar to the Model Soviet Collective Farm Treaty, adopted by the Soviet Agricultural Trust on Wilson's advice in 1929.

Although it was not a USDA project, the U.S. Bureau of Agricultural Economics provided services and advice to the corporation because it functioned as "a demonstration of the results of research on agricultural types and the organization of profitable farms in the Northwest Spring Wheat Belt." The corporation's plans were based on information contained in the Agricultural Forecast (1926) issued by the U.S. Department of Agriculture.<sup>23</sup>

Fairway farms were not favourably received by neighbouring communities, who disagreed with the method of combining small plots into industrial farms, arguing that they could become super-marginal with the introduction of new methods seeking to increase productivity per worker.

Wilson and his team tried to turn their Rosebud farm into a model corn growing location that could compete with the corn crop in the Midwest. After consolidating 220 acres, they planted corn. Wilson explained, "We fenced it off and harvested it with the hogs, and by the end of the first year, we had a profit of \$850 after how we sold fattened pigs."<sup>24</sup> Fat pigs were the result of an industrial experiment growing corn in the United States.

The following year, their farmer was forced to take a job at a local mill to make ends meet. In 1927, their farmer, following their plan, planted 118 acres of wheat, 242 acres of corn, and 33 acres of oats. As before, two wagons with pigs were brought in for harvesting, but due to the fall in pig prices in the fall, they lost money. The following year, precipitation was poorly distributed and led to a complete crop failure.<sup>25</sup>

Wilson's Cloverleaf Farm in north-central Montana. It all started in 1925 with a tenant who planted 400 acres of spring wheat, oats, barley, and corn, but due to mechanical failures, he planted behind schedule, and hot winds damaged the young crops in the summer. Although the rains were average, they fell at the wrong time for these crops, and yields were low.<sup>26</sup>

**The third farm that Wilson used as the basis for the report for the Stalin Grain Trust (Grain Trust) was the Lone Warrior Farm, also called Brockton's Farm, as the nearby town was called.** This land, located on the Fort Peck Reservation, was part of Tom Campbell's Montana Farm Corporation from 1917 to 1922. In the spring of 1925, Fairway Farms bought two lots from the Bureau of Indian Affairs for \$8.43 an acre, while similar land in the country sold for more than twice as much.<sup>27</sup> Wilson and his team ordered two more International Harvester tractors, but the company was so overwhelmed with orders that they didn't receive them until the end of the year, when it was too late to use

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<sup>23</sup> Ibidem.

<sup>24</sup> Ibidem.

<sup>25</sup> Ibidem.

<sup>26</sup> Fitzgerald: "Every farm is a factory.

<sup>27</sup> Ibidem.

them.<sup>28</sup> It took several years to prepare all the fields for cultivation, and by the end of 1926 they owed the bank \$10,000 and were almost forced to sell the farm and abandon the experiment, but the Rockefeller Foundation shelled them out another \$25,000 so they were able to continue. In 1927, yields were again low due to "poorly distributed rainfall." In 1928, they entered into an agreement with the Montana State University Experiment Station. which, in exchange for research on experimental tractors, provided Fairway Farms with unpaid student labor and supervision of experimental tests of the use of machinery and combinations of crops. Gun dealers were asked to borrow machines for experimental purposes, which many did.<sup>29</sup> By 1929, after twelve years of failed experiments with industrial agriculture, they planned to plant 1,400 acres of wheat and nearly 850 acres of corn, flax, oats, and barley,<sup>30</sup> but the experiments were never self-sufficient and depended on their ties to federal agencies.<sup>31</sup> The state of Montana even had to pay Wilson's assistant's expenses, and the Bureau of Agricultural Economics had to pay Wilson's expenses.<sup>32</sup>

The Division of Land Economics negotiated contracts, and the Division of Farm Management prepared plans and estimates for each of the farms. In the fall of 1926, Wilson and his team approached the Anaconda Copper Mine Corporation<sup>33</sup> in Butte, in which Rockefeller was interested, and received additional support.<sup>34</sup>

Finally, in 1929, Wilson hoped to turn things around as long as the weather was favorable and hog prices held until he and his team were sent to the Soviet Union to advise the Soviet Union on industrial farming practices.

**With such a dismal track record in industrial agriculture, these American agricultural engineers were sent to the Soviet Union to give expert advice on large-scale agriculture in an area about ten times the area they had tried unsuccessfully to cultivate for more than a decade, and where the success or failure of the experiment would affect the lives of one hundred and seventy million people.**

## **Why American Corporations Needed a Huge Foreign Market for Agricultural Machinery**

At the turn of the 20th century, the Holt Manufacturing Company of Stockton, California, produced a range of continuous tractors. Holt tractors gained popularity

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<sup>28</sup> Ibidem.

<sup>29</sup> Ibidem.

<sup>30</sup> Ibidem.

<sup>31</sup> Ibidem.

<sup>32</sup> Ibidem.

<sup>33</sup> Anaconda Copper is also the place where Raymond Robins and William B. Thompson of the American Red Cross Mission in Russia got their early wealth.

<sup>34</sup> By 1930, the tenant was forced to sell his livestock in order to survive. In 1933, Wilson and his partner Starch used their personal finances to keep the Lone Warrior afloat, but yields continued to be low until 1935, and the end result of Brockton's farm was that little more than seeds were produced. By 1937, the Rockefeller Foundation had returned the banknotes to the corporation, ending the experiment.

in World War I as artillery tractors. Despite U.S. neutrality, Holt Manufacturing Co. sent 1,200 tractors to England, France, and Russia for "agricultural purposes," which sent the tractors directly to the front, where they were used to transport artillery and supplies.<sup>35</sup> Over the next four years, the Holt tractor became the main artillery tractor in the European war, used to tow heavy artillery up to the 9.2-inch howitzer.<sup>36</sup> About 2000 Holt 75s, along with 698 Holt 120s and 63 Holt 60s, were used for military purposes during the war. French Schneider CA1 and Saint-Chamond and even German A7V tanks were based on Holt tractors<sup>37</sup>.

Holt's planned expansion to meet further military needs was abruptly interrupted when the war ended in November 1918, and Holt was left with heavy war tractors that were not suitable for America's small farms. The company's situation worsened when artillery tractors were returned from Europe, resulting in lower prices for new machinery and unsold Holt inventory.<sup>38</sup> In 1925,<sup>39</sup> Holt and C.L. Best Co. merged to form Caterpillar.

Another international economic factor played a role here. The post-war economy slowed down, and heavy machinery and weapons manufacturers (any businesses with a large foundry) that had record production and profits during World War I were looking for new and lucrative markets for their huge products. Since they already owned huge forges where steel was melted and cast for artillery, tanks, and ships, they could easily convert their large factories to produce agricultural machinery, tractors, and spare parts; Slashing swords into plowshares, so to speak.

But in the 1920s, large American agrimachinery firms were frustrated that the American agricultural market could not take advantage of their heavy equipment. Why couldn't they sell their equipment to the American market? Because American farms were still small enterprises and did not have the financial ability to buy large and expensive new machines, and they were not interested in doing so.

The problem (for agricultural engineering companies) has its roots in a series of **American homestead laws** between 1862 and 1916. In the 1860s, in an effort to displace the Native American population and prevent the arrival of French, Spanish, or any other imperialist settlers, the U.S. organized a federal land grant that gave settlers tracts of up to 160 acres. By 1916, this area increased to 640 acres. In all, more than 270 million acres of land, or nearly 10% of the total U.S. area, were given to 1.6 million settlers.<sup>40</sup> Now that the threat of invasion by natives, French, and Spanish into the U.S. had passed, these small, family-owned farms became an obstacle to large agribusiness, which needed a market with farms large and wealthy enough to buy their massive machinery.

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<sup>35</sup> [https://en.wikipedia.org/wiki/Caterpillar\\_Inc](https://en.wikipedia.org/wiki/Caterpillar_Inc).

<sup>36</sup> Ibidem.

<sup>37</sup> Eric K. Orlemann and Keith Haddock, (2001) "Classic tracked suspensions". *Motor Books International*. Pp. 20-22. ISBN 0760309175.

<sup>38</sup> Op. Cit.

<sup>39</sup> Today, Caterpillar remains one of the largest manufacturers of heavy machinery in the world.

<sup>40</sup> [en.wikipedia.org/wiki/Homestead\\_Acts#Homestead\\_Act\\_of\\_1862](https://en.wikipedia.org/wiki/Homestead_Acts#Homestead_Act_of_1862)

Such was the situation west of the Mississippi. The land in the northeast was too diverse and the growing season too short to offer a viable large-scale agricultural market.

South of the Mason Dixon Line, where the rains fell, the soil and land were suitable for large-scale agriculture, it was the country's most rural region.<sup>41</sup> From the Potomac River in the nation's capital to the shores of the Gulf of Mexico, the land had remained unchanged since the late 1870s; it was a land of scarce capital and abundant labor. Southerners still planted and harvested their traditional crops of cotton, tobacco, rice, and sugarcane with mules and muscle.<sup>42</sup> Overall, while American farmers brought 50 percent more produce to market in 1928 than in 1900, industrial production doubled and doubled over the same period. Machinery led to remarkable productivity in all other sectors, but U.S. agriculture refused to modernize. By 1925, a fully assembled Ford Model T rolled off the ever-moving assembly line of the Henry Ford Highland Park plant every ten seconds. Just ten years earlier, it took fourteen hours to assemble one car.<sup>43</sup> But agriculture in the U.S. still continued to exist in the 19th century, forcing American multinational companies with huge foundries to sell their most advanced equipment outside the U.S. until the American crop was forced to consolidate (in the 1930s and 1940s).

U.S. agricultural machinery manufacturers produced giant agricultural machinery for Argentina, Canada, and the Soviet Union, while very few of their largest machines had a market in the U.S. that still relied on horses and wage laborers.<sup>44</sup> That is why bankers such as J.P. Morgan<sup>45</sup>, who had financial ties to International Harvester and other agricultural firms, decided to argue that family farms should be replaced by industrial farms large enough to justify the purchase of a significant amount of their equipment.<sup>46</sup>

### **Enter Soviet Russia**

Tsarist Russia issued decrees similar to the American homestead laws, such as the Stolypin Reform of 1911, which granted land to settlers and established millions of small family farms throughout Russia's vast landscape to populate remote areas and prevent settlement by rival nationalities. Moreover, Lenin's Land Decree of 1917 divided large estates into smaller holdings. as in the US, these

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<sup>41</sup> David M. Kennedy (1999), *Freedom from Fear: The American People in the Depression and War 1929-1945*, New York, Oxford University Press.

<sup>42</sup> Ibid., Kennedy

<sup>43</sup> Ibid., Kennedy

<sup>44</sup> Fitzgerald, every farm is a factory.

<sup>45</sup> . Morgan created the agricultural machinery giant in 1902 when he organized the merger of the McCormick Harvesting Machine Co. and the Deering Harvester Co., with three smaller agricultural equipment firms, to form International Harvester.

<sup>46</sup> This connection also leads me to wonder about the real causes of the economic collapse of October 1929 and the Great Depression that followed, which forced so many U.S. family farms into bankruptcy and foreclosure in the early 1930s and provided a convenient way to consolidate thousands of individual family farms into huge industrial farms. Then came the man-made environmental disaster dubbed the "Dust Bowl" (1934-1940), which further united family farms into industrial giants.

millions of small family farms were now on the path to profit (publicly referred to as "progress"). **Unable to forcibly collectivize U.S. agriculture (for the time being), the big agrimachinery firms turned their attention to the Bolshevik regime's monopoly control of Russia's agricultural market. They found in General Secretary Stalin a man willing to force the Soviet people to consolidate their lands, eliminate fences, barns, houses, and ban the use of ploughing horses to create massive, uninterrupted collective farms—and become The leading consumer of Western heavy equipment, too large and expensive for the individual American farmer.**

### Tractor Testing Act

There was another reason why American agricultural machinery manufacturers sought to sell their equipment in foreign markets. As early as 1919, the State of Nebraska passed **the Tractor Testing Act**, known as the List 85 of the 37th Session of the House of Representatives (Chapter 218, Laws of the State of Nebraska, 1919), which went into effect on July 15, 1919, and was enacted to encourage the production and sale of improved types of tractors and to promote more successful the use of a tractor in agriculture.<sup>47</sup> The Testing Act grew out of the uncontrolled sale of tractors during the First World War, when there were virtually no laws governing standards or guaranteeing even minimal quality. In response to so many low-quality tractors being sold, the Testing Act required all manufacturers planning to sell their machines in the state to first submit their tractors to the University of Nebraska for testing and prove that the company had an adequate supply of spare parts for repairs. This law is believed to have set America's first standards for farm implements.<sup>48</sup> but he put a serious obstacle in front of all the engineering companies that refused to spend money on real field trials – which take years – before starting to sell their products, until Comrade Stalin was kind enough to offer his country as our guinea pig.<sup>49</sup> These giant Soviet farms were supposed to be huge experimental stations where they could test their most radical ideas to increase agricultural production, because much of what they wanted to learn simply could not be tried in the U.S. for three main reasons: it would have cost too much; there wasn't a large enough agricultural site with so many private family farms along the way. Both American farmers and the American public at large would be alarmed by the consequences of such experiments. After spending a few months in the Soviet Union, they could try out their ideas to make sure they were viable and bring the improved version back to America.<sup>50</sup>

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<sup>47</sup> O.W. Sjogren, E.E. Brackett, C.W. Smith, F.R. Nohavetz (1921), Nebraska Tractor Act and Official Tractor Test Regulations, *Nebraska Agricultural Experiment Station Historical Circulars 12*.  
<https://digitalcommons.unl.edu/hcnaes/12>, University of Nebraska.

<sup>48</sup> Fitzgerald, every farm is a factory.

<sup>49</sup> Fitzgerald used the term to describe it.

<sup>50</sup> Fitzgerald, every farm is a factory.

The U.S. experience in large-scale agricultural production and agribusiness management in the 1920s was largely theoretical. **The largest farm in the U.S. was Tom Campbell's farm (110,000 acres), but it was a garden compared to The Giant (642,000) and Camel (375,000 acres).** Despite the dubious past of these American agricultural advisers, the Soviets fulfilled their obligations 100 percent. **By the spring of 1930, Stalin had already placed orders for more than \$65 million worth of equipment,** and much of this equipment had never been tested or used in real conditions.

**In January 1928, before the Five-Year Plan began, the Soviet government purchased 1,058 Kletrak tractors from the Cleveland Tractor Company in Ohio. Then, in June of that year, Amtorg, the Soviet clearing house for the purchase of American products in New York, ordered another 6,750 John Deere and International Harvester tractors from Hercules Motor Corp, as well as 2700 engines for heavy trucks. In 1928, however, there were only 53 state-owned grain farms in the Soviet Union, covering an area of seven million acres.<sup>51</sup>** The rest of the country was cultivated by independent farmers, the vast majority of whom did not have the money needed to absorb so much expensive American machinery.

Why would Stalin dare to buy so many of the largest and most expensive agricultural machines that had never been used on the U.S. market?

Germany also participated in the Soviet collectivization campaign through its main arms manufacturer, Friedrich Krupp AG. Krupp had already established a 120,000-acre industrial farm in the Caucasus in 1922 <sup>52</sup>, just after the Treaty of Rapallo. In December 1928, another, more comprehensive agreement was reportedly signed between the Soviet government and German industrialists, which stipulated that the leading arms manufacturer in Europe, Friedrich Krupp Ag, the manufacturer of Europe's first Mercedes Benz car, and another European arms manufacturer, Rheinmetall Ag, will organize Soviet collective farms and supply them with tractors. And there were rumors that the Soviets were paying these German companies \$2 billion for this equipment and engineering services.<sup>53</sup> This was the market that these German corporations claimed as a result of the restrictions placed on Germany by the Treaty of Versailles, although there were reports that war production had resumed as early as 1921, and definitely since Adolf Hitler's Reich acquired a controlling stake in the company in 1925.

### **The First Five-Year Plan and Collectivization**

The capital investments laid down by the Soviet government in the budget for the first five-year plan (1929-1933) amounted to 64 billion rubles.<sup>5455</sup> (about \$32.9

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<sup>51</sup> Fitzgerald, (1993).

<sup>52</sup> Andrew Miller (2018), "The Secret Genocide of Germany and Russia", *The Trumpet*.

<sup>53</sup> Sarah Moore (2007), *How Hitler Came to Power*, Author House.

<sup>54</sup> H.R. Knickerbocker (1931), *The Soviet Five-Year Plan and Its Impact on World Trade*, London.

<sup>55</sup> Sixty-four billion rubles. At the official exchange rate adopted in the USSR in the early 1930s, 1 dollar was equal to 1.95 rubles. However, according to the " *Review of the Soviet Union*" published by the Soviet Trade Mission in

billion in 1928). At that time, the gross domestic product (GDP) of the United States was \$79.4 billion<sup>56</sup>. This meant that Stalin obliged Soviet society to spend an amount equal to almost half of U.S. GDP, whereas in the previous few years Russia's GDP had been only about 30% of that of Great Britain.<sup>57</sup> Britain's GDP was about £4.8 billion (about \$23 billion), divided by 30 percent, meaning that Russia's GDP was only \$6.9 billion. The jump to \$32.8 billion in spending required an almost fivefold jump in total output.

Much of this money has been directed to, or has already flowed, to U.S. engineering and heavy industry companies.<sup>58</sup> Prime Minister Stalin obliged the Russian people, as prescribed in accordance with the adoption of the Five-Year Plan, to purchase huge quantities of Western goods and services necessary for the fulfillment of the plan and collectivization. This meant that Russia's natural resources had to be sold on the world market in order to obtain the funds to pay for these services and equipment in a timely manner. Soviet heavy industry was supposed to demonstrate a 350% increase in production.<sup>59</sup> Grain, oil, coal, timber, sugar, copper, manganese, iron, tin, gold, silver, etc., all these resources would have to be sold on the world market in order to obtain the capital due to American and Western European companies.

In the absence of an industrial economy during the first five-year period and the refusal of loans from foreign governments, the only way to pay for contracts for Western equipment and technical assistance was to increase foreign exchange earnings by significantly increasing grain sales abroad. Since hard currency revenues largely determined the amount of Western goods and services that the Soviet regime could purchase, increased sales of Soviet resources on the world market were in the interest of foreign firms seeking to sell their equipment to the Soviet market. This is where American agricultural advisers came to the rescue and why they were potentially the most important (and destructive) of all the foreign engineers who came to Russia in the 1920s and 1930s.

Shortly after U.S. agricultural advisers presented a plan to establish industrial agriculture in the Soviet Union, the First Five-Year Plan was revised with a 50 percent increase in production targets for exports overall.<sup>60</sup> Without a significant jump in wheat production and export sales by a fixed minimum number of bushels, the Soviets would not have been able to raise the capital needed to make payments to Western firms, especially in the absence of a trade treaty between the U.S. and the Soviet Union. General Electric, International Harvester, Caterpillar, Ford Motor Co., and dozens of other Western multinationals counted on U.S. advisers to

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the United States, 1 ruble was equal to 51.5 cents in 1928, and then fell to 50.5 cents in 1929, despite the free fall of the dollar in late 1929.

<sup>56</sup> [fred.stlouisfed.org/series/Q0896AUSQ240SNBR](https://fred.stlouisfed.org/series/Q0896AUSQ240SNBR)

<sup>57</sup> [Economy\\_of\\_the\\_Soviet\\_Union#/media/File:USSR\\_GDP\\_per\\_capita.png](#), 2018.

<sup>58</sup> Knickerbocker, Soviet Five-Year Plan.

<sup>59</sup> Grigor R. Suny (1998), *The Soviet Experiment: Russia, the USSR, and the Successor States*. Oxford University Press. ISBN 978-0195081046. OCLC 434419149.

<sup>60</sup> Oleg V. Khlevnyuk (2015), *Stalin: A New Biography of a Dictator*, London, Yale University Press.

push through agricultural reforms to ensure that Soviet Russia met its private financial obligations to them in a timely manner.

The Soviet regime based its ability to pay Western firms for the private loans they provided for the massive industrialization projects spanning the First Five-Year Plan mainly on its ability to produce 16.5 million metric tons of grain over the next four years. The main goals of agriculture for 1930 and 1931 were to produce 1.7 million tons of marketable grain in 1930 and 2.25 million tons in 1931.<sup>61</sup> The collectivization plan was based on exponentially growing yields through an annual increase in acreage, which would provide a cumulative surplus of grain for sale on the world market.

The grain will be sold to grain-importing countries such as the United Kingdom, Germany, Austria and Italy, and this revenue will be used to reimburse Western firms for design/construction costs, equipment, materials and technical assistance contracts. While other income-generating resources such as furs and oil would have contributed, without a developed industrial base or long-term loans backed by the U.S. government, grain would have become Russia's largest agricultural commodity in the early 1930s – at least that was the plan.

After selling about \$48 million worth of U.S. agricultural machinery between 1927 and 1929, U.S. agrimachinery firms, along with American pioneers of industrial agriculture, traveled to Soviet Russia in 1929 to advise Stalin and the Soviet Grain Trust (Zernotrest) on a large-scale plan to collectivize Russian agriculture and establish industrial agriculture in the Soviet Union. Six months after the arrival of a team of American advisers, and just weeks after they submitted their plan to the Soviet Grain Trust, the Soviet collectivization campaign (and dekulakization) was added to the First Five-Year Plan. In 1930, the Soviet government adopted a law on the harvest of grain: "To organize a network of state farms (state collective farms) on uncultivated lands in the RSFSR and Ukraine, which were to produce about 16.5 million metric tons of marketable grain within four years."<sup>62</sup>

According to V. Ladyzhinsky's 1938 article "Soviet State Farms: Experience in Large-Scale Socialist Farming", the Bolsheviks expropriated private land plots in Russia and distributed the land to the peasants. The system of large-scale farming, which accounted for one-third of the agricultural area of European Russia, was abolished, and after the October Revolution of 1917 Russia became a country of small peasant farmers. This was a temporary truth.

It can be argued that Lenin's Land Decree of 1917, which distributed the land of the monarchy to the peasants of Russia, was designed to enlist the support of his young regime, and was never meant to be permanent. If the peasants had had the opportunity to read Lenin's works before the revolution, they would have known that their control over agricultural land would be short-lived. By February 1919,

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<sup>61</sup> *Review of the Soviet Union* (June 1930), "Yakovlev on the Situation in Agriculture", p. 90.

<sup>62</sup> *Review of the Soviet Union*, "Review of the Situation in Agriculture," April 1931, vol. IX, No 4. Soviet Information Bureau, Washington, D.C. (p. 80).

Lenin had issued a new Decree on Land, which legitimized the existence of state farms and defined their main function as the construction of a "single agricultural economy" that replaced individual farming, in order to: a) "maximum growth of production by increasing agricultural productivity and expanding sown areas; b) creation of conditions for a complete transition to a collectivist system of agriculture; c) organization and development of cultural agronomic centers."<sup>63</sup> Thus, two years after Lenin called on the Russian peasants to take possession of the landlords' lands, he ordered them to transfer all their land to the state farms.

The history of the organization of state farms in the Soviet Union falls into two main stages; the period from 1919 to 1928, when the sovkhozes were relatively small units organized on former estates, and the period beginning in June 1928, when the Soviet government embarked on a program of creating huge, fully mechanized collective farms (kolkhozes), while accumulating a sufficient number of foreign tractors to equip the new large farms.

### **Import of American tractors to Soviet Russia in 1921-1933**

From the beginning of the 20th century until the outbreak of World War I, Imperial Russia spent about \$60 million a year on foreign agricultural machinery.<sup>64</sup> The largest recipient of this money was the American firm International Harvester, which had a near-monopoly on the agricultural market of the Russian Empire. As discussed in detail in *the book U.S.-Russian Trade Relations 1763-1933*, Robert S. McCormick of the McCormick family, which owned International Harvester, was appointed U.S. ambassador to Russia between 1902 and 1905 to push for the removal of Russian tariffs on foreign imports agricultural machinery.

As tariffs were to be renewed in 1910, IH decided to establish a factory in the Russian Empire.

On February 10, 1909, George Perkins, a partner of J. Morgan and founder of the IH company, appealed to Washington to provide "friendly help and assistance" in efforts to "accelerate the approval of the charter" for the creation of an International Combine Plant in the Russian Empire. By February 19, U.S. Ambassador Rockhill was "instructed to use his official good offices to assist" in the approval by the Tsar of the Russian commercial charter of the International Harvester Company.<sup>65</sup>

In July 1909, Cyrus McCormick met with the Ministers of Agriculture, Finance, and Trade to find out whether the Tsarist government would grant the International Harvester Company special exemptions, such as exemption from tariffs on machinery and low duties on imported parts for the duration of the plant's construction, followed by low tariffs on parts that could not be manufactured in

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<sup>63</sup> "On the Socialist Plan for the Organization of Land and Measures for the Transition to Socialist Forms of Land Tenure", Collected Laws, 1919, No 4, Charter 44, Art. 29. From, Soviet State Farms I, V. Ladezhinsky, *Quarterly Journal of Political Science*, vol. 53, No 1 (March 1938), pp. 60-82 <https://doi.org/10.2307/2143604>

<sup>64</sup> "Tractors in the Soviet Union," *Review of the Soviet Union*, February 1932, p.

<sup>65</sup> William A. Williams (1952), *American-Russian Relations, 1781-1947*, Rinehart and Company.

Russia, tax exemptions, and the imposition of "general duties" on those who could not be manufactured in Russia. who was "only an importer".<sup>66</sup> The reaction was positive. In August, the outdated New York Air Brake plant in Lyubertsy, near Moscow, was bought. The plant was an American supplier of air brakes for Pullman cars, supplied for the now almost completed Trans-Siberian Railway and put up for sale by owner Charles R. Crane<sup>67</sup>, its own production base will become insurance in case of the expected end of tariff exemptions for imported agricultural machinery.<sup>68</sup>

In 1910, the Chicago Record Herald newspaper published the headline: "Factory in Russia to Produce Chicago Equipment":

Berlin, December 3, 1910 – The International Combine Company's business in Russia has grown so large that the company has recently established a factory in the village of Lyubertsy near Moscow to produce binders, reapers, lawn mowers, engines and other agricultural machinery.<sup>69</sup>

Commercial relations between International Harvester and Russia continued well into World War I, when Cyrus McCormick, Jr. became a member of the American International Corporation in 1915, a firm formed by leading American bankers and industrialists who sought to capitalize on the participation of European firms in the Great War and invest in overseas projects, especially in China and Russia.

As soon as the February Revolution of 1917 overthrew Tsar Nicholas II, McCormick accompanied former Secretary of State Elihu Root on Root's mission to Russia. As an experienced administrator of U.S. territorial possessions such as the Philippines and Puerto Rico, Root's official goal was to pressure Russia to remain in the war against Germany.

McCormick remained in Russia after Mission Root left and joined the newly arrived American Red Cross mission in Russia. Organized by J.P. Morgan partner Henry. Davidson, the American Red Cross mission to Russia consisted of approximately twenty-five captains of American industry (and 7 doctors) who traveled to revolutionary Russia in early 1917 under the guise of the Red Cross to discuss commercial trade with the Provisional Government. and after October 1917, with the Bolsheviks (both U.S. missions are discussed in detail in *U.S.-Russian Commercial Relations 1763-1933* (2025)).

According to a 1919 U.S. Senate hearing on *Bolshevik propaganda*, the head of the Red Cross mission in Russia, Raymond Robins, successfully negotiated with Lenin to release the International Harvester plant in Lubertzi from nationalization. After hearing the complaints of the Russian manager of the IH, Robins, in his capacity as head of the American Red Cross mission in Russia, met with Lenin on the matter.

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<sup>66</sup> Fred W. Carstensen (ed.) (1983), *Entrepreneurship in Imperial Russia and the Soviet Union*, Princeton Heritage Library, ISBN 9780691641386.

<sup>67</sup> Ibidem.

<sup>68</sup> Ibidem.

<sup>69</sup> William E. Curtis (December 3, 1910), "Factory in Russia for Chicago Machinery," *Chicago Record Herald*.

I went to Lenin and said, "Now there is a capitalist enterprise, an American capitalist enterprise, which is doing business in Russia for the purpose of making money, but in your formula, for the purpose of exploiting Russia. But it happens, Commissar, that we deliver commodities, produce a product which is of primary economic necessity to the agrarian people, i.e., agricultural machinery. Your decree, if carried out now, will destroy this organization. As far as I know, International Harvester Co. is the best agricultural machinery manufacturing organization in the world. I've heard that they have the best brains not only for manufacturing, but also for marketing. I'm not going to argue with you about that. You have to cooperate with America. You can't get a ton of space on any vessel in a U.S. port, and you can't get a dollar of bridge credit between the time of shipment and until the raw materials for payment are returned. You cannot get a ton of space on any American ship for industrial material, if this can be successful: fully support in America that an existing enterprise, which produces the main product for the economic life of Russia 18 versts from Moscow, cannot continue production because of your socialist decrees. I will not argue. I'll just leave it up to you.

The fact is that a representative of the Soviet Council came there and conferred with the representatives of the Harvester Company, and Mr. McAllister came back to my office and said that he had a perfectly satisfactory agreement with them regarding the implementation of the workers' decree, and that everything was going satisfactorily. When I left Russia, these gentlemen approached me with this statement, and I brought the information to the International Harvester Co. and passed it on to Mr. Edgar Bancroft, who met me on the train to Chicago on his way to Washington, calling for co-operation, credit, and business opportunities under the Bolshevik Government in Russia six months after I had done so. how this government got to work.

I want to say further that in my daily work there were constant changes in these decrees, which showed, in my opinion, the possibility of working with the Soviet government.

In addition to using the American Red Cross as a cover for negotiations on exemptions for individual American firms, Robins threatened Lenin with refusal to give Russian resources space on international cargo ships if he did not release the International Harvester plant in Luberti from nationalization (while all Russian entrepreneurs were banned from entering Soviet Russia, and their enterprises were merged into trusts, and then transferred to Western firms). Who Robins really represented in these negotiations with Lenin (and Trotsky) remains to be seen. Some have suggested that it was the State Department, but I vote for the bank that manages the Red Cross mission in Russia, J.P. Morgan, especially since IH was under the House of Morgan financial umbrella.

In 1919, the Supreme Economic Council (VSNKh) also signed a contract with American automaker Henry Ford for the mass supply of Ford tractors. Bolshevik Russia suddenly became the greatest client of the great capitalist Henry Ford. The contract stipulated that until 1922, Russia would import more than 25,000 Fordson tractors from the United States and the Ford plant in Cork, Ireland. The Fordson Tractor Model F 1919, with large spoked wheels and beveled studs, claimed to be able to maintain traction in the ubiquitous Russian mud.

U.S. Department of Agriculture (USDA) economist Dana G. Dalrymple in her 1964 article " *The American Tractor Comes to Soviet Agriculture*" explains that American collectivization advocate Harold M. Ware saw the possibilities of using tractors to reorganize Soviet agriculture and received enough money to ship twenty Case tractors with equipment in the spring of 1922.<sup>70</sup> In the fall of that year, the Jewish United Distribution Service also purchased eighty-six John Deere tractors for resettlement work under the direction of Dr. Joseph A. Rosen. Rosen was a well-known American agronomist and colonization specialist who, as director of the American-Jewish United Agricultural Corporation, directed agricultural settlement projects for 250,000 Russian Jews after the October Revolution. led the management of approximately \$16 million provided by the American-Jewish Joint Agricultural Corporation.<sup>71</sup>

The first direct batch of 200 Fordson tractors was shipped in 1923.<sup>72</sup> Over the next few years, an increasing number of machines were exported, and by 1926, Soviet orders had been placed for 24,600 American machines. One shipment from the Ford River Rouge plant carried 1,930 tractors. By 1927, Ford boasted that 85 percent of the trucks and tractors in Russia were made by Ford; of the 5,700 tractors owned by the Ukrainian government, 5,520 were owned by Fordson.<sup>73</sup> In February 1927, an article titled "Tractors Purchased by Amtorg for the Soviet Union" in the *Economic Review of the Soviet Union* stated: "More than 98 percent of the tractors are American-made."

According to Dalrymple, by 1931, the Soviets were spending \$400 million a year on agricultural machinery. By 1934, the number of foreign tractors in the Soviet Union had increased to more than 200,000, and the increase in the number of tractors led to a catastrophic transformation of the social and economic structure—the collectivization of agriculture. "This technology, however, did not come from Russia," he explained, "it came almost entirely from the United States."

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<sup>70</sup> Clarissa S. Ware (November 1, 1922), "In Russia with Western Pioneers," *The Survey*, pp. 135, 162; Bruce Bliven (July 22, 1925), "Mr. Ware and the Peasants," *The New Republic*, p.

<sup>71</sup> Rosen's obituary, <https://www.jta.org/archive/dr-joseph-rosen-agro-joint-director-who-resettled-250000-jews-in-russia-dies-in-n-y>

<sup>72</sup> Letter from Howard S. Tuttle, Manager (April 27, 1962), Public Relations Department, Tractors and Implements Division, Ford Motor Co., Birmingham, Michigan. These were apparently not the first Fordsons to come to Russia. According to *For Industrialization* (November 4, 1932), page 3, the Soviets purchased several Fordsons in the fall of 1920, when Wrangel fled the Crimea. abandoning several tractors that had been imported by the British (noted by Dodge, op. cit. [1960], p. 555)

<sup>73</sup> Allan Nevins and Frank E. Hill (1957), *Ford, Expansion and Challenge, 1915-1933*, New York, pp. 255, 673-4.

The following diagram from Dalrymple's article does not take into account that the Ford plant in Cork, Ireland, had been supplying Ford tractors to Soviet Russia since 1923, and that International Harvester continued to operate its Lyubertsy plant long after Lenin's nationalization of Russian domestic enterprises. Moreover, the International Harvester plant in Stalingrad (by 1930) and the Ford plants in Nizhny Novgorod (Gorky, GAZ) and Chelyabinsk Caterpillar by 1932 were producing tractors domestically *under US licenses*.

**Table 1. Export of tractors from the USA to the USSR**  
In units per calendar year  
Year/Total/Wheeled/Tracked

| US Tractor Exports to the Soviet Union |               |        |         |
|----------------------------------------|---------------|--------|---------|
| Units per Calendar Year                |               |        |         |
| Year                                   | Total         | Type   |         |
|                                        |               | Wheel  | Crawler |
| 1921                                   | 1             | 1      |         |
| 1922                                   | 26            | 12     | 14      |
| 1923                                   | 356           | 354    | 2       |
| 1924                                   | 367           | 359    | 8       |
| 1925                                   | 6,785         | 6,782  | 3       |
| 1926                                   | 9,733         | 9,726  | 7       |
| 1927                                   | 5,119         | 5,105  | 14      |
| 1928                                   | 5,211         | 4,730  | 481     |
| 1929                                   | 12,571        | 11,367 | 1,204   |
| 1930                                   | 23,101        | 20,484 | 2,617   |
| 1931                                   | 23,442        | 22,909 | 533     |
| 1932                                   | 33            | 33     | 0       |
| 1933                                   | 15            | 14     | 1       |
| 1934                                   | 6             | 1      | 5       |
|                                        | <b>86,766</b> |        |         |

Source: Compiled on the basis of annual issues

*Foreign Commerce and Navigation US*, U.S. Department of Commerce.

The intermediary in the transactions between American agro-engineering firms and the Soviet government was the Amtorg Trading Corporation, the first trade mission of the Soviet Union in the United States, created in New York in 1924 by the merger of Armand Hammer's Allied American Corporation (Alamerico) with the Products Exchange Corporation (Prodexco) and Arcos-America Inc. ("Amtorg" was the American branch of the All-Russian Cooperative Society, ARCOS, also known as the "Russian House" or "Soviet House" in Britain, founded in London in 1921.

According to Amtorg chairman Saul G. Bron in 1930:

Between 1927 and 1929, Stalin purchased more than \$43.5 million worth of agricultural machinery, which "indicates the tremendous importance that recent advances in centralized agriculture in the USSR can have for the

United States. The United States continues to be the main supplier of tractors to the Soviet Union, and will account for more than three-quarters of the sixty thousand tractors that will be used on Soviet farms this spring.<sup>74</sup> Beginning in the summer of 1929, the Amtorg Trading Corporation purchased more than 20,000 tractors from the USSR for shipment to the USSR. The cost of these tractors was 30 million dollars, and we hope that they will arrive in time for the spring sowing campaign. In addition, 17,000 plows, 2,000 grain seeders for sowing machines and 18,000 special seeders for cotton and corn were purchased. International Harvester Company, John Deere Company, Caterpillar Company, Allis-Chalmers Company, Case Tractor Company, Massey-Harris Company, and Cleveland Tractor Company. Plows were also purchased from Oliver Farm Equipment Company and B.F. Avery & Sons.

Bron went on to explain that:

The study of the import of Soviet goods into this country presents considerable difficulties due to the fact that some goods of Soviet origin come through Germany and other European countries and therefore do not appear in customs reports either as Soviet exports to the United States or as imports from the Soviet Union.

In 1928, Caterpillar Co. acquired Russell Grader Manufacturing Co. and began selling tractors and graders to the Soviet Union. By 1929, the Soviet Union had purchased 2,050 Caterpillar machines,<sup>75</sup> quadrupling Caterpillar's sales to \$52.8 million (\$96,096,000 in 2024). While Ford's exports declined (after it built its factories in Nizhny Novgorod (GAZ) and Moscow), International Harvester tractors predominated,<sup>76</sup> followed by John Deere,<sup>77</sup> Case<sup>78</sup> and Allis-Chalmers.<sup>79</sup>

As a result, Calvin B. Hoover in his 1931 book *The Economic Life of Soviet Russia* reported:

... Agricultural machinery manufacturers were booming, and their shares rose to new records on the New York Stock Exchange.<sup>80</sup>

In February 1930, the new chairman of Amtorg, Pyotr A. Bogdanov, declared: "The five-year plan, according to which the total investment in economic construction will amount to \$33 million, prepares the ground for the further development of business relations between the Soviet Union and the United States." By February 1930, there were about 38,000 tractors in the villages, and

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<sup>74</sup> Saul G. Bron (1930), "Soviet Economic Development and American Business," Horace Livewright, New York, p.

<sup>75</sup> [www.pjstar.com/story/business/2017/01/31/timeline-caterpillar-inc-through-years/22573825007/](http://www.pjstar.com/story/business/2017/01/31/timeline-caterpillar-inc-through-years/22573825007/)

<sup>76</sup> In 1929 alone, about 6,000 tractors were purchased (Soviet Tractor Purchases, July 11, 1929, *Farm Implement News*, p.

<sup>77</sup> From 1929 to 1931, between 3,000 and 4,000 units were transferred (letter from R. L. Mueller, Sales Administrator, John Deere Intercontinental, Ltd., Moline, Illinois, May 21, 1962).

<sup>78</sup> "Total sales were between 2,000 and 2,500 units" (letter from R. C. Hausschel, Export Sales Manager, J. I. Case Co., Racine, Wisconsin, May 16, 1962).

<sup>79</sup> "About 900 copies were sold." (Letter from Paul Wilk, Advertising and Promotion, Allis-Chalmers International, Milwaukee, Wisconsin, to Ms. Charlotte Peasley, *Science Digest*, New York, (June 19, 1962). See also "Allis-Chalmers Receives Large Order for Russian Tractor," *Farm Implement News*, July 30, 1930, p.

<sup>80</sup> Calvin B. Hoover (1931), *The Economic Life of Soviet Russia*, New York, p.

another 25,000 were on the way. which represented an investment of 200 million rubles (\$102 million in 1930 and \$1.856 billion in 2024) in agricultural machinery.<sup>81</sup> Ninety thousand tractors were bought by the Soviet regime, the vast majority of them produced abroad, and the rest were built in foreign-made factories (such as the IH plants in Lyubertitsy and Stalingrad, the Caterpillar plant in Chelyabinsk, and the Ford plants in Gorki and Kharkov) and produced under foreign licenses.<sup>82</sup>

The Kharkov **Tractor Plant** was designed and built by the New York-based architectural firm Albert Kahn Assoc. for Ford, and then began production of the McCormick-Deering 15/30 International Harvester tractor under license. After the plant opened in 1931, American Communist Fred Beal was appointed director of propaganda and cultural relations in the colony of several hundred foreign workers and specialists, mostly Americans. Germans and Czechoslovaks.

The publication of Amtorg, in conjunction with the Soviet Trade Mission in the United States in Washington, D.C., *Overview of the Soviet Union*, In the September-October 1930 issue, he declared: "The thousand-year-old boundaries between the holdings of millions of small peasant proprietors have been erased, and modern industrial economy has replaced the primitive individual methods of the past. ... More than 82,000 collectives, about six million, or a quarter of all peasant households... are engaged in large-scale cooperative production. ... 10 million hectares are allocated exclusively for the production of grain by the huge industrial farms of the Grain Trust (Grain Trust), which is now in charge of 131 large grain farms."

The Soviet government imported more than half of the more than 100,000 tractors from the United States and initiated "a grandiose construction program in Soviet factories, for which American specialists were invited."<sup>83</sup> Capital investments in foreign agricultural machinery and implements in 1926-1927 amounted to 988 million rubles and increased to 1404 million rubles (\$72.3 billion).<sup>84</sup>) by 1929.<sup>85</sup>

### Domestic tractor building in the Soviet Union

|              |                |
|--------------|----------------|
| 1929         | 4,500          |
| 1930         | 13,400         |
| 1931         | 41,700         |
| 1932         | 40,664         |
| <b>TOTAL</b> | <b>100,264</b> |

### From the indicators of domestic production in 1932:

<sup>81</sup> *Soviet Review* (February 1930) "Spring Sowing Campaign", p. 35.

<sup>82</sup> "Soviet Review" (May 1930), "Spring Sowing Campaign", p. 74.

<sup>83</sup> "Review of the Soviet Union" (September-October 1930), "Agricultural Collectives", p. 137.

<sup>84</sup> \$130.3 trillion in 2024 prices.

<sup>85</sup> "Review of the Soviet Union" (September-October 1930), "Agricultural Collectives", p. 137.

|                                                                      |               |
|----------------------------------------------------------------------|---------------|
| (developed in the USA) Stalingrad Plant                              |               |
| (Caterpillar license)                                                | 18,410        |
| Putilovets (Ford license)                                            | 20,950        |
| (Developed in the USA) Kharkov Plant (International Combine License) | 1,304         |
|                                                                      | <b>40,664</b> |

Source: "Tractors in the Soviet Union," *Soviet Union Review*, Soviet Trade Delegation/Amtorg, Inc., February 1932, p. 35.



International Harvester, McCormick-Deering 15-30 domestically produced KhTZ 15-30. Ukrainian SSR of 1931.

Even Soviet domestic production provided American firms with significant royalties and income from technical assistance.

Selmashstroy, the only factory of agricultural implements of the 1st five-year plan, built without the involvement of foreign contractors, was nevertheless filled with obsolete American equipment, and its products had previously been purchased in America.<sup>86</sup>

### **Collectivization: The American Plan for the Industrialization of Soviet Agriculture**

In the wake of all these mechanisms, a delegation of American agricultural advisers, led by Hal Ware, Milburn Wilson, and Thomas Campbell, traveled through the vast farmlands of Soviet Russia to meet with Stalin in Moscow in early 1929.<sup>87</sup> In 1929 alone, more than three hundred American agricultural engineers

<sup>86</sup> H.R. Knickerbocker, (1931), *The Soviet Five-Year Plan and Its Impact on World Trade*, London: John Lane Bodeli Head Ltd., p. 117.

<sup>87</sup> Lement Harris (1978), Harold M. Ware (1890-1935): Pioneer of agriculture, USA and USA. Periodical Bulletin No 30.

arrived in the Soviet Union to advise the Soviet government on agricultural policy.<sup>88</sup>

The group's organizer was Harold Ware, a 39-year-old American Marxist who was considered one of the Communist Party's leading agricultural experts.<sup>89</sup> Ware had been visiting the Soviet Union since 1922 after winning \$75,000 in U.S. funding and securing a deal to supply 24 tractors and related equipment from the J.I. Case Farm Implement Co.<sup>90</sup> for sale to the Soviet government. Throughout the 1920s, Ware led groups of American businessmen from agricultural firms in Russia.<sup>91</sup> In the winter of 1928-1929, Ware made a deal with American manufacturers of agricultural equipment to send experimental tractors and implements, along with mechanics, to assemble them in the Soviet Union.<sup>92</sup> Ware also offered Zernostrast to allow him to equip and manage the collective farm with American machines, methods, and specialists.<sup>93</sup>

According to Lement Harris's book *Harold M. Ware (1890-1935): A Pioneer of Agriculture, USA and USSR.*:

The new farm [Ware] was called the Camel State Farm, officially Sovkhoz No 2. The Camel Farm consisted of several units scattered along the railway running east of Rostov-on-Don, covering an area of about 150,000 acres. International Harvester, Caterpillar, Cleveland Tractor Co., Nichols & Shephard, and Massey-Harris (Canada) sent tractors, combines, plows, blades and discs, as well as a full line of dryland grain production equipment. Ware's most compelling argument<sup>94</sup> was that the Soviets planned to keep a record of the performance of each individual brand and, in the years that followed, to place orders with those companies whose machines were best suited to Soviet conditions.



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[archive.org/details/HaroldWareAgriculturalPioneer/page/n23/mode/2u](https://archive.org/details/HaroldWareAgriculturalPioneer/page/n23/mode/2u)

<sup>88</sup> Knickerbocker, Soviet Five-Year Plan.

<sup>89</sup> Harris, Harold M. Ware.

<sup>90</sup> Lement Harris, (1978) *Harold M. Ware (1890-1935): Pioneer of agriculture, USA and USSR.*

<sup>91</sup> Deborah Fitzgerald (2003), "Every Farm is a Factory: An Industrial Ideal in American Agriculture," (2003) Yale University Press. ISBN 0-300-08813-2.

<sup>92</sup> Harris.

<sup>93</sup> Ibidem.

<sup>94</sup> sic = used in parentheses after a quoted word that seems strange or mistaken to show that the word is enclosed in quotation marks exactly as it appears in the original.

Harold Maskell Ware, circa 1935

The second person in the delegation in 1929 was forty-two-year-old Milburn Lincoln Wilson. In 1924, Wilson joined the U.S. federal government, serving as head of the U.S. Department of Agriculture's Division of Farm Management and Cost Accounting until 1926. In 1926, he returned to Montana State College to chair the Department of Agricultural Economics, where he began his career and began conducting experiments in industrial agriculture. to conceptually, physically and materially organize a collective farm using American agricultural machinery.<sup>95</sup>



Milburn Lincoln Wilson

Thomas David Campbell, 47, a recipient of funds from J.P. Morgan to launch industrial agriculture in the United States, was also part of a delegation that came to Moscow as a special adviser to Stalin's first five-year plan in early 1929.<sup>96</sup>

As Deborah Fitzgerald writes in her book *Every Farm Is a Factory: The Industrial Ideal in American Agriculture*, Milburn L. Wilson consulted the Soviet government for six months on a plan to grow 400,000 acres (161,874 hectares) of wheat.

Edward James Stirniman, an agricultural engineer at the University of California, Berkeley, and Leonard Fletcher, an agricultural engineer at the Caterpillar Tractor Company, spent two years teaching the Soviets how to assemble and operate agricultural machinery.

John C. MacDonald, another Caterpillar engineer, traveled to Soviet state farms, assessing equipment needs for various crops.

Brownlee Davidson, a professor of agricultural engineering at Iowa State College, traveled to the Soviet Jewish State to advise on the suitability of land for agriculture.<sup>97</sup>

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<sup>95</sup> Fitzgerald (2003), *Every Farm is a Factory*.

<sup>96</sup> Hiram Drache (1977), "Thomas D. Campbell: The Plough of the Plains," *Agricultural History*, pp. 78-91.

<sup>97</sup> *Ibid.*, p. 460.



Thomas D. Campbell (right) with Deputy People's Commissar of Agriculture of Soviet Kazakhstan, circa 1930  
Photo courtesy of the Bighorn County History Museum, Hardin, Montana.

Wilson spent 1926-1929 at Thomas Campbell's Fairway Farms project in Montana, where he collected empirical data correlating farm size and machinery needs.<sup>98</sup> According to Fitzgerald, in the fall of 1928, Hal Ware visited Wilson in Montana, where he was working on an experiment in industrial agriculture, and persuaded him to join him on a trip to the Soviet Union as an expert in farm management, in particular to "figure out how to organize the collective farm physically and conceptually." Sitting out in a Chicago hotel in the first two weeks of December 1929, Wilson, Ware and Riggin, who ran a farm in Brockton, were struggling to figure out how to turn a hundred thousand acres of virgin land into a productive wheat farm.

Fitzgerald explained:

In a report prepared for the Grain Trust, Wilson, Ware, and Riggin argued that the Soviets should adopt much the same system of wheat cultivation that Wilson had urged the farmers of Montana to adopt. They made very minor concessions to the fact that many aspects of the system would have been more difficult to implement in the Soviet Union. Rather, they presented their plan as if it were a strictly technical and almost formulaic problem that could be solved without considering social, psychological, political, or cultural problems at all.

or whether the machines that were sent by American firms were tested and tested and had a sufficient number of spare parts.

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<sup>98</sup> Fitzgerald, every farm is a factory.

**From April to October 1929, Wilson spent in Soviet Russia at the invitation of Zernotrest, working out the agricultural part of the Soviet Five-Year Plan.<sup>99</sup>** Wilson was already involved in the purchase of Soviet tractors through Zernotrest. In January 1929, Wilson reported to the U.S. Department of Agriculture that the Soviets had purchased 350 Cletrac tractors. In June, while Wilson and U.S. agricultural technicians were advising Soviet agricultural policy, the Soviet trading company in New York, Amtorg, ordered another 6,750 tractors from John Deere and International Harvester. In August, they ordered 1,700 heavy engines from Hercules Motor Corporation and another 708 tractors from Cletrac, and in December another 1000. By August 1930, the Soviet Union had ordered a Caterpillar 60 worth \$5 million. The Department of Commerce estimated that between January and March 1930, tractor sales to the Soviet Union amounted to about \$20 million. In July of that year, the Soviet government ordered another \$40 million in tractors and harvesters<sup>100</sup> **for a total of \$65 million (about \$1.24 billion in 2024) in the first six months of 1930 alone**, a boon for American firms in the midst of the Great Depression.

### **A giant: the world's largest wheat farm**

In the spring and summer of 1929, when Harold Ware was organizing the management of the 150,000-acre (60,703 ha) Grain Farm No 1 (unofficially named "Camel"), Wilson initiated the largest wheat farm the world had ever seen. Located in the North Caucasus and aptly named The Giant, it had an area of about 1,000 square miles (2,590 square kilometers), with a total of 642,000 acres (259,808 hectares). Rhode Island. The Soviet government invested 27 million rubles in this farm alone, most of which was invested in Western equipment, which numbered 8,000 units.<sup>101</sup> The U.S. plan was to plant 300,000 acres of land in the first year and the rest the following year. The farm was expected to produce more than 4 million bushels of wheat over 3 years at a price of 54 cents per bushel.<sup>102</sup>

Two agricultural engineers from the Caterpillar Tractor Co., Leonard Fletcher and John C. MacDonald, accompanied Wilson and Ware. For two years, Fletcher trained Soviet workers to assemble and operate Caterpillar equipment, while MacDonald traveled from one collective farm to another, assessing his company's needs for Soviet equipment. Caterpillar had already received orders from the Giant collective farm alone for 240 of the largest Caterpillar tractors, 220-wheeled tractors, 330 combines, 500 seeders, 1200 plows, 300 cultivators, 6000 harrows, as well as related consumables, spare parts and tools. The harvesters cost about

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<sup>99</sup> Ibidem.

<sup>100</sup> Ibidem.

<sup>101</sup> Knickerbocker, *The Soviet Five-Year Plan*, p. 108.

<sup>102</sup> In 1931-32, the price of a bushel fell to an all-time low of 57 cents a bushel. [ageconsearch.umn.edu/wheat-1932-12-09-03.pdf](https://ageconsearch.umn.edu/wheat-1932-12-09-03.pdf) page 24 of 74. **The actual cost of Giant's wheat per bushel was estimated at 87 cents, while the cost of Camel was estimated at 67 cents.** (Source: Knickerbocker, H.R., *The Soviet Five-Year Plan and Its Impact on World Trade*, (1931) London.)

\$3,300 apiece, so the Soviet purchase of \$220 gave Caterpillar \$726,000 for the harvesters that year alone and only on one of hundreds of farms<sup>103</sup>. Such large orders for Caterpillar during the Great Depression not only rallied the company, but also allowed it to buy out its smaller competitors around the world.<sup>104</sup>

Professor Edward James Stirniman, an agricultural engineer at the University of California, Berkeley, has worked as a field equipment tester in research and development for a number of agricultural machinery companies and was part of a delegation to monitor the performance of American machinery with the aim of making improvements for sale in the American market. As Chief Agricultural Machinery Consultant at Stalin's second-largest state farm "Camel", **Stirniman was appointed to the board of the Soviet Grain Trust (Zernotrest) to evaluate Wilson and Ware's reports.**<sup>105</sup>

Under Wilson's leadership, the Gigant State Farm ordered forty tractors, fifty combines, sixty seeders, one hundred plows, forty cultivators, and several hundred disc and toothed harrows from other American companies, which Stirniman was to evaluate.<sup>106</sup> Of the 131 state farms that are part of Zernotrest, only Camel and Gigant provided American companies with unprecedented orders for equipment.

The immensity of the black earth lands of Russia was seven times larger than the area of agricultural land in the United States. The fields stretched in all directions to the horizon. Ten-ton American tractors lined up until the horizon could not move east, until they became larger than specks and then disappeared against the twilight sky before turning to make a second pass. Post-imperial Soviet Russia created a serene time for the commercial trade of American multinationals, despite the fact that for more than a century almost nothing was reported about it.

### **American advisers organize the Camel factory (Educational and Experimental Grain Farm No 2), February 1929**

Located in Rostov Oblast, the North Caucasus region of southern Russia, Camel (Grain Farm No 2) was second in size only to neighboring Gigant (Grain Farm No 1) with a total area of 495,000 acres (200,319 hectares).<sup>107 108</sup> The camel and its larger brother the Giant were located in the Don River Valley not only because of its very fertile lands, but also to facilitate the transshipment of grain produced in these state farms onto river barges bound for the Sea of Azov, where it could be loaded onto ships bound for the West.

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<sup>103</sup> Knickerbocker, *Soviet Five-Year Plan*. Pp. 110-111.

<sup>104</sup> Fitzgerald, every farm is a factory.

<sup>105</sup> Knickerbocker, *Soviet Five-Year Plan*.

<sup>106</sup> Ibid., p. 113

<sup>107</sup> About 773 sq. miles or 2,002 sq. km.

<sup>108</sup> Knickerbocker, *Soviet Five-Year Plan*.

Most of the several hundred American mechanical and agricultural advisers who came to the Soviet Union to advise and organize Stalin's collectivization campaign worked at Camel Farm at one point or another.<sup>109</sup>

In February 1929, Hal Ware, Guy Riggin, and Milburn Wilson traveled to the Soviet Union to deliver a report to Stalin's Soviet Grain Trust explaining how to organize Soviet collectivization of agriculture in Russia.<sup>110</sup> Wilson admitted that it was the first time he had set foot on Russian soil. He knew nothing about the country or the people. But they were asked to report to Zernotrest and advise Stalin on how the Soviet government should implement a system of growing wheat identical to the one they had established in the Montana farm project.<sup>111</sup> They made no concessions to Russian culture, nor private property, nor local land needs, nor climate. They simply focused on selling American equipment to the Soviet government through its Grain Trust<sup>112</sup>, since without this equipment the report would have been useless.

Professor E.D. Stirniman was a member of the board of directors of Zernotrest from 1929 to 1930 and was appointed chief consultant on agricultural machinery at Camel State Farm No 2, responsible for evaluating the agronomic plan of Ware, Riggin and Wilson.

According to Fitzgerald, the heart of Ware, Riggin, and Wilson's project, "A Preliminary Plan for the Organization of a Wheat Farm Demonstration Factory for the Grain Trust on Camel North Caucasus, USSR," was a description of Wilson's favorite project for American wheat growers: a summer fallow system. Basically, it was a rotational system, the summer fallow system required dividing the land into winter wheat fields, spring wheat fields and summer fallow fields. Wilson recommended this approach as a replacement for continuous wheat cultivation, which tended to reduce soil moisture. The key features of the system were an increase in the area under wheat, a reduction in sowing and plowing due to crop rotation and dependence on equipment for all operations. This system fundamentally changed the way farmers managed their farms. It required not only a large organization of land and seeds, but also machinery, labor, credit, and time.

The difficulty with this type of industrial agriculture, Fitzgerald warned, was that because each element was heavily dependent on all the other elements, a problem in any of them could disrupt the entire system. It is this interdependence between factors that, first, made fussy governance so important in this process, and second, made the Soviet context so risky.<sup>113</sup>

Moreover, while Wilson and Ware's report was based on experimental farms of no more than 100,000 acres, Soviet farms were more than six times larger, up to

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<sup>109</sup> Deborah Fitzgerald (Summer 1996), "Blinded by Technology: American Agriculture in the Soviet Union, 1928-1932," *Agricultural History*, Volume 70, No 3, Duke University Press, pp. 459-486.

<sup>110</sup> Fitzgerald, "Every Farm is a Factory": (Harold M. Ware, M. L. Wilson, and Guy Riggin, "Preliminary Plan for the Organization of a Wheat Farm Demonstration Factory for the Camel North Caucasus Grain Trust, USSR," February 1929, Box 10, File F-22, MLW.)

<sup>111</sup> Ibidem.

<sup>112</sup> Ibidem.

<sup>113</sup> Ibidem.

642,000 acres. They explained the nearly sixfold increase in the size of their plan by simply increasing everything in their original equation, ignoring the fact that the larger the plan, the parameters are all the more unreliable. They emphasized land consolidation and changing any traditional crop rotation cycles to the American system to get the most out of the massive new harvesting equipment. They linked wheat yields not only to weather, insects, and seeds, but also redefined agricultural issues to include machinery, labor, credit, and time management.<sup>114</sup> "Obsessive management," says Fitzgerald, "was critical to the process, and the entire production system was tied to producing as much wheat as possible to keep up with equipment payments."<sup>115</sup>

The experiment of collectivization was extremely risky for Russia.<sup>116</sup> The Soviet government entered a frenzied cycle of procurement and production *ad infinitum*<sup>117</sup>, and if it didn't work, it could (and was) a disaster.

### **Two months after the American consultants submitted the plan to the Grain Trust, collectivization was included in the first five-year plan**

In the spring of 1929, American agricultural engineers and agricultural salesmen were living in the Kremlin, meeting with Stalin before traveling to their posts in the Soviet Union. Most of them went to Camel State Farm 2 in the Caucasus with Harold Ware to organize, consult and supervise the operation of U.S. agricultural machinery.

**In September 1929, after spending six months in Soviet Russia in Soviet Russia, Wilson and Ware presented to Zernotrest their plan for the organization of Soviet farmland and grain production based on the methods developed by the Fairway Farms Corporation and the Campbell Farm Corporation. Two months later, in November 1929, the Central Committee of the Communist Party voted to amend the First Five-Year Plan to include an agricultural plan for the collectivization of Russian farms into state-owned enterprises.**

**Joseph Stalin had previously announced the Soviet collectivization campaign in a speech delivered at a conference of Marxist researchers of agrarian questions on December 27, 1929, and published in an article in the Soviet newspaper *Pravda* No 309 two days later.**

His speech is reproduced below, for it shows that the Soviet agricultural policy was aimed at removing the kulaks (rich peasants) from their power in the production of Russian grain, and that this policy was based on the accumulation of "a sufficient material base... to replace their products with the products of collective farms and state farms." "Sufficient material base" was Western technology that was supposed to displace the last remaining agricultural

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<sup>114</sup> Fitzgerald, every farm is a factory.

<sup>115</sup> Ibidem.

<sup>116</sup> Ibidem.

<sup>117</sup> Ibidem.

entrepreneurs of Russia to Soviet-controlled industrial farms filled with American equipment, where farmers were no longer farmers, but hired workers.

### Joseph Stalin's Speech on Agrarian Policy, December 27, 1929<sup>118</sup>

Comrades, the main fact of our social and economic life at the present moment, a fact which attracts everyone's attention, is the tremendous growth of the collective-farm movement. A characteristic feature of the work of our Party over the past year is that we... launched an offensive along the entire front against the capitalist elements in the countryside; that this offensive, as you know, has produced and is producing very noticeable and positive results.

What does it mean? This means that we have passed from the policy of restricting the exploitative tendencies of the kulaks to the policy of eliminating the kulaks as a class. This means that we have carried out and continue to carry out one of the decisive turns in our entire policy.

Until recently, the Party pursued a policy of restricting the exploitative tendencies of the kulaks. As you know, this policy was proclaimed at the Eighth Party Congress. This was again announced at the introduction of NEP and at the Eleventh Congress of our Party. We all remember Lenin's famous letter [in 1922], in which he... Once again, we returned to the need to pursue this policy. Finally, this policy was confirmed by the Fifteenth Congress of our Party. And this is exactly the policy we pursued until recently.

Was this policy correct? Yes, it was absolutely correct at that time. Could we have undertaken such an offensive against the kulaks five or three years ago? Could we have counted on success in such an offensive then? No, we could not. For we would certainly have failed, and our failure would have strengthened the position of the kulaks. Why? **Because we did not yet have strongholds in the countryside in the form of a broad network of state farms and collective farms, which could become the basis for a decisive offensive against the kulaks. Because we could not yet replace the capitalist production of the kulaks by the socialist production of collective farms and state farms.**

An offensive against the kulaks is a serious matter. It should not be confused with declamations against the kulaks... To begin an offensive against the kulaks means that we must smash the kulaks, liquidate them as a class. To begin an offensive against the kulaks means that we must prepare for it, and then strike a blow at the kulaks, strike so hard that they cannot get to their feet. That is what we Bolsheviks call a real offensive. Could we have undertaken such an offensive five or three years ago with any hope of success? No, we couldn't.

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<sup>118</sup> [history.hanover.edu/courses/excerpts/111stalin.html](http://history.hanover.edu/courses/excerpts/111stalin.html)

**In fact, in 1927 the kulaks produced more than 600,000,000 poods<sup>119</sup> of grain, of which they sold about 130,000,000 poods outside the countryside. This was a fairly serious force to be reckoned with. How much did our collective farms and state farms produce at that time? About 80,000,000 poods, of which about 35,000,000 poods were sent to the market.** Judge for yourselves, could we then replace kulak products and marketable grain with the products and marketable grain of our collective farms and state farms? Obviously, we could not.

What would a decisive offensive against the kulaks mean in such conditions? This would mean inevitable failure, strengthening the position of the kulaks and being left without bread. That is why we could not and should not have undertaken a decisive offensive against the kulaks at that time.

But today? What is the situation now? **Today we have a *sufficient material base* to strike a blow at the kulaks, to break their resistance, to liquidate them as a class, and to replace their products with those of the collective farms and state farms.** You know that in 1929 the collective farms and state farms produced not less than 400,000,000 poods of grain (200,000,000 poods less than the gross output of the kulak farms in 1927). You also know that in 1929 the collective farms and state farms produced more than 130,000,000,000 poods of marketable grain. Finally, you know that in 1930 the gross grain output of the collective farms and state farms will amount to not less than 900,000,000 poods. and the production of marketable grain will amount to at least 400 million poods.

Now, as you see, we have the *material basis* which enables us to replace the products of the kulaks with the products of the collective farms and state farms. That is why our resolute offensive against the kulaks is now having an undoubted success.

That is why we have recently passed from the policy of restricting the exploitative tendencies of the kulaks to the policy of liquidating the kulaks as a class.

And what about the policy of dekulakization? Can we tolerate dekulakization in the areas of complete collectivization? This question has been asked in various circles. A ridiculous question! We could not permit dekulakization as long as we pursued a policy of restricting the exploitative tendencies of the kulaks, as long as we could not pass to a decisive offensive against the kulaks, as long as we could not replace the products of the kulaks with the products of the collective farms and state farms. Correct. But now? Now everything is different. Now we have the opportunity to conduct a decisive offensive against the kulaks, to break their resistance, to liquidate them as a class, *and to replace their products with the products of the collective farms and state farms.* At the present

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<sup>119</sup> Pood = 36.6 pounds.

time, dekulakization is being carried out by the masses of the poor and middle peasants themselves, who are carrying out complete collectivization in practice. Collective farms. Consequently, it is ridiculous and stupid to talk about dekulakization for a long time now. When the head is cut off, you do not mourn the hair...

Without naming a source, Stalin in his speech attributed to the Soviet Union massive purchases of Western, especially American, agricultural machinery—the "material base"—its ability to "replace the kulaks," and that thanks to these purchases, his "decisive offensive against the kulaks is now an undeniable success." The destruction of all small forms of private enterprise, this time in agriculture, which would eventually put even food production in Russia under centralized control — and, amazingly, under the control of agricultural trusts headed by representatives of foreign agro-engineering firms and listening to their advice.

Is it any wonder why Soviet Russia fell out of the world's breadbasket and was forced to spend millions on imported (American) grain for the rest of its existence?<sup>120</sup>

Has this been reported by the Western media over the past 95 years?

A high degree of planning was *essential* to the American system adopted by<sup>121</sup> Zernotrust. Wilson and Ware's report stipulated that a standard seasonal program for four hundred plots of land covering 2,500 acres (1,012 hectares) each should be cultivated using an American duck foot cultivator with<sup>122</sup> June 1 to 8. They calculated that it would take eight days and 147 tractor-hours with two tractors for each unit of land. On June 9, the rotary rod, weeder and duck foot must be used for 147 tractor-hours until June 17. From August 10 to August 20, the fields must be cultivated with a disc plough for 292 tractor-hours, three machines per unit of land.<sup>123</sup> The breakdown of even one car would nullify the whole plan.<sup>124</sup>

The breakdowns, however, were not taken into account in the report. Wilson, Riggin, and Ware's "Standard Land Unit Management and Personnel Plan" required a mobile team of nine to move from one field to another in a fully equipped portable field station. While American farmers visited their fields every day, the new Soviet collective farms were so huge that Wilson, Ware, and Riggin

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<sup>120</sup> The Center for Russian, East European, and Eurasian Studies at the University of Kansas states: "Although the Soviet Union continued to export some grain until the mid-1960s, it increasingly had to turn to foreign suppliers. By the early 1970s, the Soviet Union was regularly buying huge amounts of grain from the United States and its allies. In 1972, the Soviet Union bought 19 million metric tons of American grain, including a quarter of the entire U.S. wheat crop. ... A few months later, grain shortages led to skyrocketing global food prices and forced the U.S. to limit food aid to developing countries, fearing food shortages at home. American politicians dubbed this episode the "great grain robbery." (coldwarheartland.ku.edu/documents/foes-or-friends)

<sup>121</sup> Ibidem.

<sup>122</sup> A duck foot cultivator is a group of mini V-shaped plows suspended from a metal frame used to break up topsoil before planting.

<sup>123</sup> Ibidem.

<sup>124</sup> Ibidem.

concluded that Soviet farmers should live in the fields until the cultivation of the land was completed.<sup>125</sup> The personnel of each plot of land had to include a manager, a field foreman, a mechanic, a cook, two oilers and three tractor drivers. The new farmers had to act as *a fighting unit in* a timely manner and with effective movement.<sup>126</sup> Agricultural combat units (brigades), which were required in their report, were to be translated into Russian as "*brigade*".

The U.S. report described daily hourly activities: At noon, lunch boxes provided men with hot meals. While they ate, greasers had to lubricate the equipment.<sup>127</sup>

The problem was that this level of system regularity was virtually unattainable in reality, especially with prototype experimental machines and a plan that was also experimental — and failed in the U.S. during experiments that lasted from 1922 to 1929 in significantly smaller areas.

**Nevertheless, shortly after Ware, Riffin, and Wilson submitted their final agricultural plan to the Grain Trust in September 1929, the**<sup>128</sup> **Central Committee of the Soviet Union decided to embark on a nationwide program of accelerated collectivization and dekulakization.** This marked the end of the New Economic Policy (NEP), which allowed peasants to sell their surpluses on the open market. In addition, the Soviet Union's purchases of American tractors doubled from 5,211 in 1928 to 12,571 in 1929, then doubled to 23,101 in 1930 and 23,442 in 1931, until sales plummeted to 33 in 1932 during the famine.

While hundreds of other Americans were building and equipping American tractor factories in Stalingrad, Kharkov, and Chelyabinsk as part of the First Five-Year Plan (detailed in my forthcoming book), Professor Stirniman and Hal Ware worked with Verblud manager Jacob F. Bagmakin to industrialize Soviet agriculture and introduce Henry Ford's model of efficiency into Soviet teams. Ford's introduction of the assembly line introduced the concept of a division of labor, where workers were limited to specific tasks.

The camel was separated from the land holdings of thousands of Russian families. Not without a struggle, quaint country houses, barns, schools and churches were demolished to make way for unhindered cultivation. Now all the farm workers (no longer farmers) were gathered in tall, huge, box-like dormitory-style apartment buildings with shared bathrooms and kitchens. The apartments were crammed around the farm's administrative buildings, the post office and telephone centre, the commissary and the state canteen. An agricultural institute was being built, where the children of agricultural workers studied the operation of agricultural machinery, maintenance and modern farming techniques.

The barracks were planned to be built for the additional workers who crowded the site after their houses were demolished and the land was swallowed up by the Camel.

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<sup>125</sup> Ibidem.

<sup>126</sup> Ibidem.

<sup>127</sup> Ibidem.

<sup>128</sup> Ibidem.

According to the U.S. Agricultural Plan presented by Wilson, Worth, and Riffin, each event had to follow a strict schedule. There were eight days left to sow the fields. Depending on the amount of cultivated land that had to be sown, they would have to cultivate huge tracts of land twenty-four hours a day with machines.

But many of the machines were experienced, experienced and not subject to any quality control when they entered the Soviet market. They were forbidden to use horses or oxen, but they explained that horses were "useless eaters"<sup>129</sup> and were no longer needed because they had been replaced by foreign machinery. Many of them were driven to the countryside, where they roamed in search of food. They fell ill and died. Their carcasses dotted fields and forests.

Russian agricultural workers were forced to plow the land entangled with bushes, tall grass, stones and trees, foreign machines incapable of performing this task. They are mired in mud or entangled in weeds. Many plows purchased from American companies were untested prototypes, experimental in design, obsolete or defective, and simply could not work when sending hundreds of hectares of virgin land for plowing. Tractors got tangled in weeds, gears jammed and cracked, and when tractor crews asked for spare parts, they were told that there were none.

When the tractors worked, the machines ploughed the land much deeper than their horses and oxen. They had powerful engines, and their large plows lifted the clay under the fertile soil to the top, where it dried up and turned to dust. American industrial farmer Thomas Campbell was already facing the same problem with American machinery at his bankrupt corporation, Montana Farms.<sup>130</sup> The machines dug up clay from under the topsoil so that when the seeds were thrown into the soil, they could not grow, since wheat does not grow in clay.

Days and weeks were lost due to millions of dollars worth of non-working equipment. Crews struggled to pull the weeds out of the gears. Women with hand scythes were sent to walk in front of the machines to cut weeds for the machines, but this slowed down the machines. Others littered fields that had been broken down waiting for spare parts, overgrown with weeds, with cracked gears and wheels stuck in the mud.<sup>131</sup>

Days passed, and the time for spring sowing slipped away.

Tractor crews begged for the animals to be returned to them so they could finish ploughing. The management of the state farm informed them that the animals are now state property and cannot be released without permission.

By the beginning of June 1930, they had not yet sown all the fields. Too many tractors broke down, and workers had to spend more time repairing them than plowing and sowing.

If you plant the grain so late, it won't be ripe enough to survive the August heat.

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<sup>129</sup> Alanna Demers, (2016), "They Kill Horses, Don't They?" Peasant Resistance and Horse Decline in Soviet Russia, Bowling Green State University Graduate College.

<sup>130</sup> Hiram Drache (1977), "Thomas D. Campbell: The Plough of the Plains," *Agricultural History*, pp. 78-91.

<sup>131</sup> D'Anne R. Prenner (1998), "Stalin and the Italian Woman 1932-1933 in the Don Region", *Cahiers du Monde Russe*, pp. 27-68.

When tractor crews began to demand that the animals be returned to them so that they could finish plowing and sow the land, the young collective administrators called them saboteurs. The administrators took to the fields to coax the workers to start the machines, and there was a lot of fierce debate, but in the end, as the machines broke down and even the administrators couldn't keep them running, they had to go back to using horses to continue working.

When collectivization collapsed, famine broke out between 1932 and 1934, killing between 5.2 and 8.2 million people. Ware, Wilson, Riggin, and Campbell were pointedly silent about their role in implementing Soviet agricultural policy. As Dana Dalrymple described, **the severity of the famine was exacerbated by the fact that it was not caused by environmental causes, such as drought or crop failure, but rather by government policy**<sup>132. 133</sup> which was influenced, if not dictated, by American agricultural advisers and the corporations they represented.

The disaster caused by their corporate profit policy was catastrophic, causing immense human suffering and death, and instead of bolstering the USSR's ability to pay for further American goods, they plunged Soviet Russia into a massive financial crisis.

## Collectivization

By 1930, Zernotrest had organized 143 state farms with a sown area of 4,322.5 thousand acres, which during the 1929 harvest yielded 11,800,000 metric tons of marketable grain.<sup>134</sup>

The planting campaign itself was a costly undertaking, requiring more than 120,000 additional tractors in 1931 under the decree, as well as 1,040 additional machine tractors. *According to the "Review of the Situation in Agriculture"* of the journal "Soviet Union" for April 1931, "the cost of agricultural machinery and implements delivered to the collectives in 1931 would have amounted to "almost 400 million dollars against about 200 million dollars delivered last year. Seven thousand trucks and light vehicles will be sent to the teams. Over "2,000,000 tons of improved and selected seeds will be delivered to the collective farms. In addition, according to the resolution of the 6th All-Union Congress of Soviets of March 8, 1931, "the collectives will be granted loans for a long-term loan of more than half a billion dollars, and the collectives will be paid about 180 million dollars in advance for the contracted harvest."<sup>135</sup> The fact that these figures were in dollars indicates that the expenses were in dollars.

Six months after the American delegation presented its plan to Zernotrest in September 1929, the chairman of Cernotrest, M. Gerchikov, summed up the situation from a very capitalist point of view:

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<sup>132</sup> Fitzgerald, every farm is a factory.

<sup>133</sup> Dana Dalrymple, "The Soviet Famine of 1932-1934," *Soviet Studies* 15 (January 1964), pp. 250-284.

<sup>134</sup> *Review of the Soviet Union*, "Review of the Agricultural Situation," April 1931, vol. IX, No 4. Soviet Union Information Bureau, Washington, D.C., p. 80.

<sup>135</sup> *Ibid.*, p.84.

The question of the optimal size [of the sovkhoz] under Soviet conditions is only a question of the correct arrangement of mechanical force; or the correct configuration of the farm land plots, as well as efficient transportation within the farm. The experience of state farms in the course of almost two years of work has shown that all these tasks can be successfully solved. Moreover, this experience showed very clearly that under the conditions described, the larger the farm, the lower the cost of production.<sup>136</sup>

"The problem of maintaining soil fertility was not given any attention," explained V. Ladezhinsky, "and with a single-culture system of sowing only wheat, relying on a sufficient amount of precipitation, maximum results were expected. In view of the fact that most of the new cultivated areas were in semi-arid zones, the Soviet Commissar of Agriculture pointed out that under the new system there was a considerable risk of crop failure and that the only possible guarantee against it "is to expand the cultivated area and accumulate stocks of food and seeds."<sup>137</sup>

Russian agricultural scientists are concerned that the regime is concerned about the purchase of foreign tractors. Ladezhinsky wrote:

Another serious drawback of grain farming was that the tractor was considered as a fetish capable of solving all important tasks related to the development of the state farm, including increasing yields. This oversimplification of the problem has not escaped the attention of experts familiar with semi-arid regions.

Professor Tulaykov noted; "I understand very well that the use of a tractor is an extremely important aspect of the work that we need to pay special attention to. However, it should be emphasized that we are building grain farms not in order to use tractors, but in order to get a certain grain harvest."

Firstly, the Soviet Union served as a captured market for Western firms, in this case for agro-engineering firms (many of which preferred to send outdated or untested models that could not and did not work as promised), and secondly, the agronomic methods promoted by American advisers were already known as failures in the US on a much smaller scale and where Nobody depended for their survival on the outcome. Imposing such a plan on an entire nation was nothing short of a crime of epic proportions.

In addition, in addition to serving as a lucrative market for heavy equipment when the U.S. market was not yet mature, Soviet grain was to become the main export commodity sold to Western firms for all the industrial equipment needed to transform the Russian economy from a semi-feudal to an industrial one in less than a decade. Collectivization was not easy The consolidation of peasant farms into gigantic state-owned fields was a complete transformation from small-scale private farming to mechanized industrial agriculture controlled by the state. The state

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<sup>136</sup> M. Gerchikov (1930), "Results of the Development of the State Grain Farm", On the Agrarian Front, No 5, p. 106.

<sup>137</sup> I. A. Yakovlev (July 12, 1930), Report before the XVI Congress of the CPSU. "Economic Life" (Ladezhinsky, V.)

controlled what land was ploughed and how, how and when it was sown, how the crops were cared for and how the crops were harvested, all within the framework of a system of scientific farming, albeit experimental, and finally distributed the final agricultural products and where the money from the sale of grain was spent. Most importantly, no domestic agricultural entrepreneur will be allowed to turn into commercial competitors of foreign firms on some of the world's most fertile lands.

Soviet peasants were forced to give up their lands and farms under conditions of collectivization, as a result of which farmers not only hid their crops, but also slaughtered their livestock so as not to hand them over to state farms. One of the most effective methods of destroying kulak farms – apart from terror, forcible seizure of property and forced resettlement – was tax policy. It was announced that the tax rate for collective farms would be "significantly lower than for individual peasants." "In collectives, each ruble of gross income will be taxed from three to four kopecks, and income from individual farms will be taxed from four to thirty kopecks per ruble."<sup>138</sup> Most importantly, the new law applied the tax rate to kulak households "not according to the general norm." The tax rate for kulak households ranged from 30 to 70 percent.<sup>139</sup> In other words, those peasants who joined the collective system were to be taxed at only 3 to 4 percent, while non-collective kulak farms were to be taxed at 30 to 70 percent. The new law is also intended to encourage "contracts" – a system in which individual peasants and collectives enter into contracts to grow certain crops for sale to the government. for which they receive advance payments and other assistance.<sup>140</sup>

According to the "Model Collective Agreement" **published in** the May 1931 issue of the *"Bulletin of the Soviet Union"*, collective farms were bound by contractual obligations for pre-planned volumes of commodity production of grain, which were to be transferred to the state for export. When joining collective farms, peasants were forced not only to hand over livestock, but since collective farms had to be exclusively mechanized (without By decree, most of them were forced to drive their horses (which used to plow the fields, etc.) into the wild, because the collective farms were ordered not to give grain to the former ploughing horses. While Russian horses were turned into wild animals or shot, more than 50,000 tractors were bought from American firms and imported to Soviet Russia, where they were supplied to state farms and collective farms. These tractors remained in state ownership and were only lent to collective farms. Misuse or damage to equipment has become a criminal offense punishable by fines and forced unpaid labor for up to three years.<sup>141</sup>

The system of banning farm animals from entering and replacing them with foreign agricultural machinery worth millions of dollars was most beneficial to

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<sup>138</sup> "Review of the Soviet Union" (May 1931), "The Latest Agricultural Legislation", p. 105.

<sup>139</sup> Ibid., p. 106.

<sup>140</sup> Review of the Soviet Union, "The Newest Agricultural Legislation," May 1931, p.

<sup>141</sup> Soviet Union Review, "Misuse of Machinery Is a Punishable Crime," May 1931, p.

none other than the very capitalist firms from which the Soviet government claimed to protect the Soviet people.

### **The struggle of the collective farm "Camel" with the machines of the United States**

U.S. agriculture professor Edward Stirniman of the University of California was appointed head of the Verblud collective farm from 1929 to 1932, while he sat on the board of directors of Zernotrust.<sup>142</sup> An unnamed correspondent of the *Izvestia* news service<sup>143</sup> conducted the spring sowing campaign of 1931 on an American collective farm to chronicle the third spring sowing campaign of the first five-year plan. Here is their report:

Preparing for the second spring, the "shock workers" of the Experimental Training Farm faced a lot of difficulties. A serious situation developed at the very beginning of our repair campaign. There were no spare parts for the tracks and vehicles. Imported spare parts, we were informed, could not reach us before the end of February [1932].

The heads and shock workers of the central repair shops, looking for a way out, came to the only possible conclusion: do not expect spare parts from America! We mobilize all our resources and produce our own spare parts!

The foundry was equipped in a short time. Four old worn-out lathes were brought from Odessa in addition to the four that we already had. The state farm began serial production of spare parts for tractors. ...

Our state farm plans to sow 113,620 acres of its fields and 39,520 acres for collectives this spring. The shock workers undertook to overfulfill this plan by means of socialist competition... pledging to increase its production... [and] reduce the sowing period to one day. Komsomol Section No. 3 undertook to sow 6,000 hectares not allotted to it in the same period and with the same equipment.

Specialists of the shock troops undertook to reduce the sowing period from fifteen to thirteen days.

On April 18, it was reported that the Camel collective farm had completed planting 117,354 acres, 105.6 percent of its program, and had sent its tractor fleet to work for neighboring collective farms. On the same day, its neighbor Gigant (operated by the German arms and agricultural engineering firm Krupp) finished planting 288,000 acres instead of the 265,000 under the program, spending nine days instead of ten, and then putting its tractors and planters at the disposal of its neighbors.

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<sup>142</sup> Knickerbocker, (1932) and Archives of the University of California, Milburn Wilson.

<sup>143</sup> *Soviet Review*, "On the Front of Spring Sowing", May 1931, pp. 101-102.

Regardless of whether the reported successes were accurate or not, this report establishes that the spring planting campaign was characterized by excessive energy, broken machines and a shortage of spare parts for foreign machines. If the sowing window had been missed, the young plants would not have had the opportunity to grow enough to withstand the drought and heat of late summer, especially if the seeds were cast on clay dug by machines that dug too deep. The causes of the mass starvation lie at the feet of American firms, which sold more than 100,000 untested and unfinished tractors to the Soviet regime and then sent bankrupt industrial agronomists led by employee J. Morgan Thomas Campbell and former head of the U.S. Department of Agriculture Milburn Wilson advised Stalin on collectivization. It ended in a man-made disaster of epic proportions.

But the world remains silent.

After returning to the U.S. from starving Soviet Russia, Professor E.J. Stirniman<sup>144</sup> was awarded various positions at the Caterpillar Tractor Co. for the next 26 years, from 1932 to 1958.

### **The End of the New Economic Policy: Curtailing the Threat to Russia's Grain Production**

Until the end of 1929, Russian grain was still produced on private farms throughout the country, and some of the more fortunate farmers became rich. If the Soviet government continued to buy grain from private farmers, there would be a danger of creating a local class of wealthy farmers and grain merchants who would not only receive financial revenues from large government purchases, but would also benefit from the grain shortages that would inevitably hit the local grain market as more and more grain was needed for export. It was these factors that put an end to the domestic economic "liberalism" of the New Economic Policy. In November 1929, the Central Committee decided to accelerate collectivization in the form of collective farms and state farms, declaring that collectivization was "voluntary" and at the same time placed a heavy tax burden on non-collective farms.

With two and a half times the size of the United States and a soil quality that provided the USSR with more than three and a half times more wheat land than the United States<sup>145</sup>, it was not long before many of these wealthy Russian farmers and grain traders accumulated financial and technical resources that could put them in direct competition with foreign agricultural equipment firms. such as International Harvester. Caterpillar, Case and John Deere. Even worse for Western countries, especially for the United States, said Walter Pitkin;<sup>146</sup> Russia would

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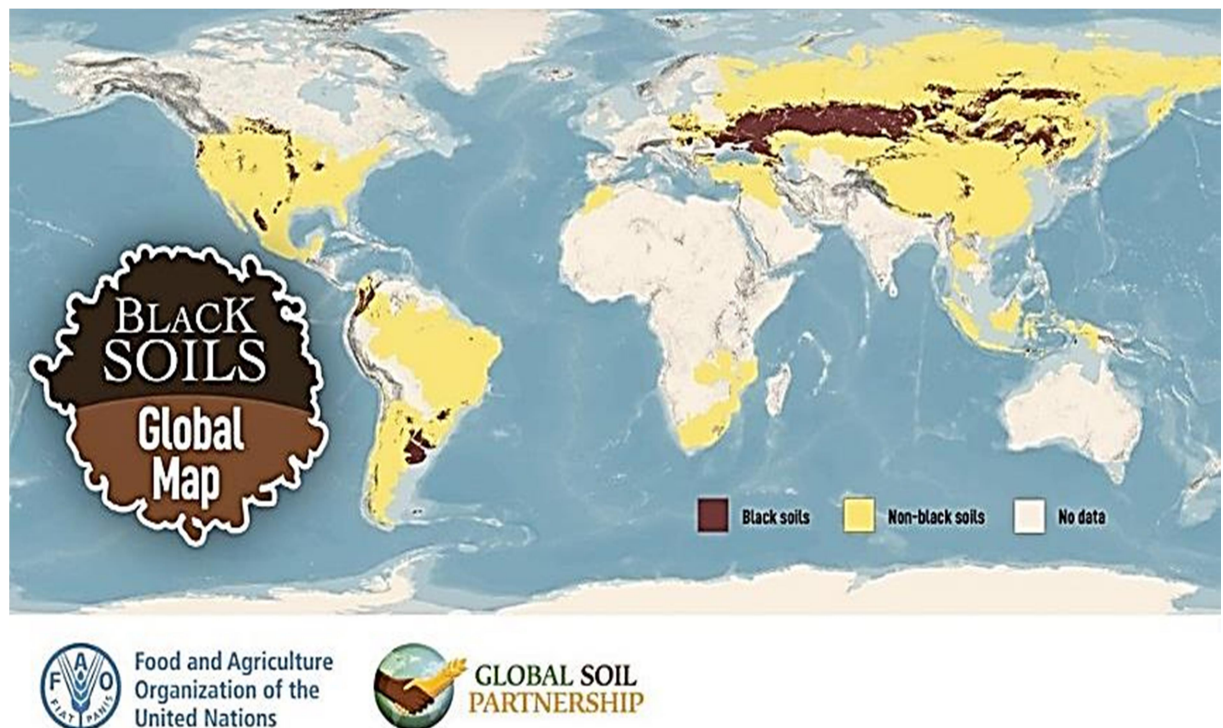
<sup>144</sup> On-line archive University of California,  
<https://oac.cdlib.org/findaid/ark:/13030/c8kw5j8v/admin/#did>

<sup>145</sup> Richard E. Bell (1961), A Comparison of Agriculture in the United States and the Soviet Union, Cornell University, ERS-Foreign\_9.

<sup>146</sup> American professor of philosophy and psychology at Columbia University and professor at Columbia University School of Journalism.

inevitably dominate the world grain market because of its ability to produce far more wheat than America. If that were to happen, Soviet Russia would set world prices for wheat, and the U.S. would be out of competition.<sup>147</sup> This threat would have been real if the Soviet system had not been strengthened enough to keep grain production under control. Thus, while U.S. agricultural advisers were in the Soviet Union to make sure that enough wheat was produced to collect enough hard currency to make timely payments, the U.S. also had to make sure that Russia does not dominate the world grain market.

Is it possible that these people went so far as to shift Russian agricultural production to produce just enough to pay for their equipment, services, and technical assistance, but to prevent Russia from producing enough wheat and to force it to buy from the United States, despite its exceptionally fertile land resources?



Map of black soils (marked in brown)

### The Great Depression and Its Impact on Grain Sales in the USSR

The Great Depression (1929–1939) was a period of near-global economic depression that became evident after a significant drop in stock prices in the United States. While banks across the U.S. began to fail in the early spring of 1929, once the big banks became insolvent by the fall, the crisis led to the collapse of the Wall Street stock market on October 24. *Recorded* international trade fell by more than

<sup>147</sup> Fitzgerald, every farm is a factory.

50%, and unemployment in the United States rose to 23%.<sup>148</sup> Between 1929 and 1932, global gross domestic product (GDP) fell by about 15%. By comparison, global GDP fell by less than 1% between 2008 and 2009 during the Great Recession.<sup>149</sup> Cities around the world have been hit hard, especially those that depend on heavy industry. In many countries, construction has all but stopped. Farming communities and rural areas have been hit as crop prices have fallen by as much as 60%.<sup>150</sup> Millions of people in the U.S. and Western Europe lost their jobs and were forced to search for food in soup kitchens to survive.

The conventional wisdom on the cause of the Great Depression is the Wall Street stock market crash of October 1929. Others point to overproduction — also known as market saturation — and rising income inequality that contributed to market saturation. Former President Herbert Hoover in his *"Memoirs of Herbert Hoover: The Great Depression 1929-1941"* accused Germany of consistently refusing to pay reparations while its growing economy was engaged in further war production, while European countries devastated by German occupation during World War I struggled to recover economically, especially France. This refusal by Germany to pay reparations contributed to the decline of the U.S. banking industry due to the declining ability of the Allies to repay war loans.

Whatever the real reasons, the end result has been further consolidation of global corporate giants that have taken advantage of the economic downturn to buy their competitors or simply let them fail. This systematic contraction and consolidation of the economy continues, leaving the giants and pushing aside or absorbing small and medium-sized firms. The Great Depression also led to a decline in global commodity prices, which negatively affected expected revenues from Soviet grain and other inputs, which meant that the Soviet regime would have to sell more grain than planned in order to make payments.

In 1930, when the economic calamity known as the Great Depression devastated the U.S. economy, orders for Soviet equipment organized by representatives of American companies in the Soviet Union continued to flow to equipment manufacturers. Many of the purchases were financed by U.S. banks—in the absence of diplomatic recognition and a formal commercial contract—many of which were interested in agricultural companies that made machinery, such as International Harvester. Morgan. While American farmers were losing their land to the same banks financing the purchase of Soviet machinery, American agricultural equipment companies were receiving unprecedented orders from Canada, Argentina, and Soviet Russia.

However, Soviet Russia's main export, wheat, fell sharply in price after the U.S. stock market crash of October 1929. A bushel of wheat on the world market peaked at \$1.12 in 1928 and reached a price of \$1.40 until October 1929, but by March 1930 the price had fallen to 0.96 cents, a decrease of 31.4%. In 1931, the

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<sup>148</sup> Robert H. Frank and Ben S. Bernanke, (2007). *Principles of Macroeconomics* (3rd ed.), Boston: McGraw-Hill/Irvine, p. 98. ISBN 978-0-07-319397-7.

<sup>149</sup> Roger Lowenstein (January 14, 2015), "History Repeats Itself," *Wall Street Journal*.

<sup>150</sup> Willard W. Cochrane (1958), *Agricultural Prices, Myth and Reality*, p. 15.

price fell again to 0.33 cents (another 34.3%) and remained low at 0.38 cents in 1932. By 1936, prices had recovered to \$1.03. With wheat prices falling by 65.7% in two years and remaining low, Stalin faced at least 50% lower revenues for wheat alone than planned. This meant that Western firms needed about 50% more wheat than planned to make timely payments.

As commodity prices on the world market plummeted, the expected revenues from Soviet resources evaporated. Desperately needed money to pay for huge orders for foreign engineering and engineering was gone. However, contracts for foreign technology and engineering remained at pre-Depression levels, forcing the goals of the Five-Year Plan to increase even further to keep up with international debt payments.

There was pressure to repay Germany the huge short-term loans taken out that year and other loans taken to pay for American equipment in previous years. From 1928 to 1932, shortages in the production of other inputs, such as timber, coal, and cattle, had to be compensated for by exporting more agricultural products.<sup>151</sup>

Admitting the famine would not only be tantamount to declaring bankruptcy in the face of so many foreign loans, but would probably lead to an investigation into its causes. As a member of the Politburo of the XVI convocation S.I. Syrtsov wrote in 1929: "We cannot import grain now, because we have too little hard currency. But even if we had enough currency, we would still not import grain, because it would undermine our credit abroad."<sup>152</sup>

While the price of wheat on the world market fell to 0.57 cents per bushel in the early 1930s, the cost of a Soviet collective farm to produce a bushel hovered around 0.67 cents.

Being obliged to fulfill Western contracts, Stalin pushed Russia to produce the most. But even though the volume of wheat exports from the Soviet Union in 1933 increased by 35.8% compared to 1932, wheat revenues increased by only 7%.<sup>153</sup> **Stalin was more interested in making timely payments to Western firms than in providing the Russian people with food. This clear example of economic imperialism once again confirmed the neocolonial status of Soviet Russia to Western firms.**

**Meanwhile, multinational companies with access to the Soviet market were able to survive the Great Depression years with some of the largest and most lucrative orders in history. During the Great Depression in 1929, Caterpillar's sales rose to \$52.8 million<sup>154</sup> thanks to its participation in Soviet Russia's First Five-Year Plan.** Albert Kahn Architectural Associates and Freyn Engineering, the two major U.S. firms involved in the design of at least 500 industrial projects under the First Five-Year Plan at a cost of more than \$2 billion, experienced their most lucrative years ever. These and other U.S. companies involved in Soviet

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<sup>151</sup> Prenner, D'Anne, "Stalin and the Italian Woman of 1932-1933 in the Don Region" (1998) *Cahiers du Monde Russe*, pp. 27-68.

<sup>152</sup> Ibidem.

<sup>153</sup> Ibidem.

<sup>154</sup> [www.caterpillar.com/en/company/history.html](http://www.caterpillar.com/en/company/history.html)

concessions were heavily invested in the Soviet system; not to mention the British, German and other companies equally involved in this study that did not participate in this study.

### **Famine in the Soviet Union of 1930-1933<sup>155</sup>: Not Stalin's way of acting**

In the face of a sharp drop in world grain prices in August 1930, the plan of the Soviet sowing campaign was changed. The schedule, which called for sixteen hours a day with teams of nine, was changed to work around the clock with teams of twenty-four.

Professor Kondratiev, a world-renowned agronomist and founder of the Research Institute of Agricultural Economics, and 25 others were arrested after it became known that his institute had supplied Rykov with materials to attack the pace of the plan.<sup>156</sup>

By the fall of 1931, the costs of the Gigant state farm were about 87 cents per bushel and the Camel 67 cents, while world wheat prices had fallen to 54 cents per bushel. This meant that the Soviet Union, in order to repay its debt to Western firms in a timely manner, would have to sell many times more grain, timber and other natural resources than originally planned. Faced with foreign debts, Stalin enacted increasingly draconian laws against his own people in order to extract more and more resources from Russia to fuel Western firms.



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<sup>155</sup> The Encyclopædia Britannica estimates that between 6 and 8 million people died of starvation in the Soviet Union during this period. The greatest loss of life was concentrated in the main wheat-producing areas of Ukraine and the South Caucasus.

<sup>156</sup> Knickerbocker, Soviet Five-Year Plan. P. 238.

In the spring of 1933, the rural population of the black earth strip of the USSR was dying at a rate of 25,000 people a day. The land, which was known throughout the world as the breadbasket of Europe, was devastated by an artificial famine of unprecedented proportions.<sup>157</sup> It is now generally accepted that the Holodomor was "planned by Stalin and his executioners to teach independent Ukrainian farmers a lesson they will not forget." ... Moreover, he was supposed to deal a "crushing blow" to any national aspirations of the Ukrainian people, 80 percent of whom were peasant farmers,<sup>158</sup> and there are websites on this topic. While Stalin is the perfect scapegoat, and it is understandable that the famine was a deliberate policy of genocide that he applied against recalcitrant sections of the population, the devastation and suffering were so widespread that this argument loses its force. When Stalin set his sights on the annihilation of the population, he had no qualms about publicly suppressing even the most brutal policies. that he would destroy the kulaks and many of his other "enemies" without shame. Stalin would hardly have pursued a policy of extermination without announcing it arrogantly. The nature of his power was largely based on his strength. He was even praised for his ruthlessness. The deliberate murder of millions of people without clarifying the reasons was not *Stalin's* modus operandi.

On the other hand, the role of American agricultural advisers was hidden. Accounting for the participation of American agromachinery firms in Stalin's collectivization campaign suggests that the famine was not planned, but was **the result of unregulated corporate greed**, the inability of the so-called "free press" to do its job, and the use of Judasocratics<sup>159</sup> to govern countries in such a way that more powerful countries (or their largest firms) can take advantage of them.

Stalin's policy of dekulakization had a significant negative impact on the production of grain and other agricultural products, destroying working farms, handing them over to people who had little experience in agricultural production, and leading to the destruction (sometimes deliberate) of both livestock and grain in order to prevent the state from seizing private property. But these actions were not enough to devastate vast regions of Soviet Russia with such large-scale famine that took place between 1930 and 1933. Drought was mentioned as another possible cause, but it did not affect all regions devastated by the famine, which covered thousands of miles. Drought was also not mentioned as the cause of any difficulties in agriculture in the "Review of the *Soviet Union*" until December 1931. This is important, because if there were a natural reason to explain the crop failures, it

<sup>157</sup> [mediachecker.wordpress.com/2014/03/25/the-man-made-famine-genocide-in-soviet-ukraine-1932-1933-holodomor/](https://mediachecker.wordpress.com/2014/03/25/the-man-made-famine-genocide-in-soviet-ukraine-1932-1933-holodomor/)

<sup>158</sup> Ibidem.

<sup>159</sup> It's a word I coined and used in my two previous books, *Fire in the Steppe 1905-1916* and *Fire in the Steppe 1917-1918*, to describe the type of politician willing to sell their own country to stay in power and privilege. (In the Bible: Judas betrayed Jesus to the Sanhedrin in the Garden of Gethsemane in exchange for thirty pieces of silver, kissing him on the cheek and addressing him as "master" in order to reveal his identity to the crowd that came to arrest him.

would be discussed in detail in this monthly publication of the Soviet Trade Mission. affecting agriculture, was in the May 1931 article "On the Front of Spring Sowing", which said: "Although the delay of spring, which was almost a month behind the spring of last year, somewhat delayed the spring sowing campaign, there is no reason to believe that the plans to increase the sown area during the spring sowing of this year will not be fulfilled."

The fact that the Soviet Union had purchased hundreds of thousands of tractors, combines, and other agricultural machinery from foreign firms (predominantly American and German) and relied on the productivity of these machines to successfully plow vast areas of virgin land after Russian peasants had been forbidden to use their horses, instantly created a dangerous dependence on foreign machinery. Foreign technology brought with it the methods of sowing, sowing and harvesting, which had to be imposed on Russian farmers. These new techniques were introduced by a team of American agricultural engineers in the form of an advisory board to the Grain Trust. These factors were never considered or even mentioned in connection with the catastrophic famine of 1930-1933. The fact that the American Advisory Council on Agriculture, which arrived in the Soviet Union in the spring of 1929, had already failed miserably in its repeated attempts at industrial agriculture in the United States since 1918, should have been a cause for concern for the Soviet regime. But this was never mentioned, despite the fact that there was a lot of evidence of problems faced on the farms in Montana that were run by partner J. Morgan Thomas Campbell, who was a leading adviser to Stalin in his collectivization campaign.

### **The sale of Russian grain to finance the purchase of foreign technology was nothing new**

Russia has traditionally been the breadbasket of Europe, supplying most European countries with cheap grain to feed a growing population. But under the Reich Minister of Finance, Ivan Alekseevich Vishnegradsky, wheat was sold in increasing quantities to finance Russia's purchases of foreign technology (especially American railway equipment), and this policy also led to a devastating famine in Russia. The famine of 1891-1892 began when the government raised taxes to force peasants to sell more grain to the government for export in the late 1890s. When, in the autumn of 1890 and the spring of 1891, after difficult weather conditions, the grain harvest was not as expected, the farmers and peasants, unaware of the fact that the government had contracts for the sale of vast quantities of grain abroad, relied on the fact that Russia was so vast and the weather so varied, that bad weather in one locality should not be fatal. And technically they were right. The summer of 1891 began in April and turned out to be long and dry. By July, yields were low, but grain exports continued in volumes contracted with foreign governments to pay off debts for the purchase of foreign technologies. With grain products disappearing from the countryside, and peasants and townspeople left without bread and grain, they were forced to slaughter livestock

to reduce grain consumption and compensate for the lack of bread and cereals in their diets. Nevertheless, grain exports continued in accordance with the agreements on external contracts.

As the Russian people moved from famine to famine, the imperial government refused to use the word "*famine*," instead calling it simply a bad harvest, *a crop failure* caused by bad weather conditions, and newspapers refrained from reporting on suffering.

Eventually, with more than half a million people dying in the streets, and after a month's advance warning to merchants so that they could quickly export their reserves and capitalize on profits, the government decided to ban grain exports in mid-August. Finance Minister Ivan Vishnegradsky even opposed this late ban.<sup>160</sup> He was considered the main cause of the disaster, as his policy was to raise consumer taxes in an attempt to force peasants to sell more grain.<sup>161</sup> By the autumn of 1892, Russian grain exports had halved from 418,503,000 to 196,422,000 poods<sup>162</sup>, and by 1893 they had risen again to 404,039,000 poods.<sup>163</sup> Cholera epidemics, caused by the weakness of the people during the famine, continued to kill for months after the famine ended. Only later did the causes of the tragedy become known, but the government continued to refuse to openly discuss the full range of causes.

**The Soviet regime willingly followed the same disastrous grain policy pursued by Tsarist Russia, never pointing out the imperialist character and disastrous consequences. Why not expose this terrible policy, so much to do with foreign imperialism and the incompetence of tsarism? The younger Soviet generation not only did not realize the dangers of this policy, but also never knew the real reason for the jump in grain production on the part of their supposedly proletarian government. In complete disregard of historical precedents, Stalin accepted American, British, and German advice, credit, and technology, and put Russian agriculture on the path of industrialization, which, in the twelve years of experiments already carried out in the United States, had brought nothing but disaster.**

It has been repeatedly asserted that "in the eyes of the Soviet leaders, Russian agriculture was a boundless ocean of small individual peasant farms with backward, medieval technology, in dire need of reform and modern equipment."<sup>164</sup> However, as Stalin made clear in his December 1929 speech, he did not see the kulaks as backwardness, but as a huge threat to be "smashed." Prior to collectivization, Russian farmers acted as their own agents and had considerable influence over grain prices,<sup>165</sup> leaving the Soviet government out of the economic

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<sup>160</sup> Orlando Figes (1996), *The People's Tragedy: A History of the Russian Revolution*, New York: Viking.

<sup>161</sup> Ibidem.

<sup>162</sup> About 36 pounds.

<sup>163</sup> [ru.wikipedia.org/wiki/Russian\\_famine\\_of\\_1891%E2%80%9393#cite\\_ref-A\\_People's\\_Tragedy,\\_page\\_158\\_1-2](https://ru.wikipedia.org/wiki/Russian_famine_of_1891%E2%80%9393#cite_ref-A_People's_Tragedy,_page_158_1-2)

<sup>164</sup> Smith, S. A., *Russia in Revolution: Empire in Crisis, from 1890 to 1928*, (2017) Oxford University Press, 0198734824.

<sup>165</sup> Ibidem.

equation and increasing their own power, which in a country of such size and with such resources, like Russia, could quickly challenge Western agricultural giants.

Those successful farmers who had bountiful crops and prosperous farms were considered enemies of the state because they competed for state property and could quickly develop into private farming on their own in the rich agricultural atmosphere that Russia's vast land offered. These successful farmers have been, or will soon be, a threat to state ownership if left unregulated, or worse, will grow and become self-sustaining agribusinesses, as was the case with Russia's previous oilmen, and threaten the shaky global dominance of Western agricultural leaders. The kulaks had to be eliminated before they became too powerful.

Stalin swore:

"The farmer must be collectivized in order to destroy his individualism, which is anti-communist. It must also be collectivized to increase its production. Its production should be increased so that more grain can be exported. It is necessary to export more grain so that more equipment can be bought. It is necessary to purchase more equipment so that industrial enterprises can start working. Industrial enterprises will increase the industrial population and at the same time provide machines for collective farms, in which the psychology of the industrial worker will be reproduced in the country. So logic works in a circle."<sup>166</sup>

History *unlearned* He also runs in circles.<sup>167</sup>

### Cover-up continues

When in 1932 a flood of starving people from the Caucasus, Ukraine, and the steppes of Kazakhstan (traditionally the richest agricultural regions) began to arrive in the cities, the Soviet authorities responded by requiring the use of passports for inter-republic travel and banning rail travel. Soviet internal passports were introduced on December 27, 1932. The rural population did not have the right to obtain passports and therefore could not leave their villages without permission. The right to issue passports belonged to the head of the collective farm, and identity documents were kept in the management of collective farms.

Article 58 of the Criminal Code of the RSFSR, which came into force on February 25, 1927 to prosecute those suspected of counter-revolutionary activities, was amended in April 1932, providing for theft on the railways and collective farm property and punishment with "maximum means of social protection, execution by firing squad or, in the presence of mitigating circumstances, imprisonment for a term of not less than ten years" with confiscation of all property. In addition, Regions that did not satisfactorily fulfill procurement plans stopped being supplied with goods. Mass arrests were carried out, as a result of which half of the local party secretaries in the North Caucasus and Ukraine were expelled. All grain without exception was exported, including seeds for next year's plantings and

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<sup>166</sup> Niebuhr, (1930).

<sup>167</sup> Buddhists call it samsara.

fodder for livestock. Even the bread that had already been given to agricultural workers as payment for their working days was confiscated and taken away.<sup>168,169</sup>

To confuse the widening gap between harvests and quotas, party officials began to inflate official grain volumes. While the grain harvest in 1932 barely reached 50 million tons, official government figures claimed that the harvest had reached 69.7 million tons.

Traditionally, the country's most productive wheat belts — Ukraine, the North Caucasus (including the Don and Kuban), the Volga region, and the steppes of Kazakhstan — were hit by the worst famine Russia has ever known. At least 20 million people were condemned to starvation. The two most affected regions, Ukraine and the North Caucasus, had not only the largest tracts of fertile soil, but also the most favorable climate in the country.<sup>170</sup> According to Davis and Wheatcroft in the series "*The Famine Years: Soviet Agriculture, 1931–1933, the Industrialization of Soviet Russia*," Soviet authorities were able to purchase only 4.3 million tons of the 1932 harvest, compared to 7.2 million tons from the 1931 harvest. when the official numbers were hidden. In 1964 the Soviet economist Malafeev admitted that Soviet state grain procurements in 1932 amounted to 18.5 million tons. In the same way, the number of deaths was confused. Officially, according to the workers' press in the Soviet Union and the "free" press in the West, the tragedy did not exist. Walter Duranty, the Moscow bureau chief of the *New York Times*, who had been writing about the Soviet Union for fourteen years (1922–1936), was not an aspiring reporter. Nevertheless, for decades he had denied the existence of a three-year famine in the USSR. In 1932, Duranty won the Pulitzer Prize for a series of reports on the Soviet Union denying the existence of the famine, eleven of which were published in June 1931. in the midst of famine.<sup>171</sup>

Having won the Pulitzer Prize for covering the Soviet Union's first five-year plan, Duranty was considered the leading Western expert on covering the famine. Duranty responded to reports of famine in Ukraine with his article "The Russians are starving, but they are not starving," and while acknowledging that there was malnutrition in some areas of the USSR, Duranty argued that there was no famine. In Kazakhstan alone, there are now 7 million people.

On February 19, 1933, Stalin ordered the closure of Ukraine's borders,<sup>172</sup> and the Pulitzer Prize-winning journalist Duranty said nothing. Moreover, the fact that Duranty did not mention the famine helped Franklin Roosevelt make the decision to diplomatically recognize the Soviet Union on November 16, 1933, and conclude a new trade agreement.

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<sup>168</sup> Orlando Figes (1996), "People's Tragedy: The History of the Russian Revolution", "Viking.

<sup>169</sup> R. Davis and S. Wheatcroft (2004), The Years of Famine: Soviet Agriculture, 1931–1933, *The Industrialization of Soviet Russia*, Palgrave Macmillan.

<sup>170</sup> D'Anne Prenner (1998), "Stalin and the Italian Woman of 1932-1933 in the Don Region", *Cahiers du Monde Russe*, pp. 27-68.

<sup>171</sup> Despite years of criticism of the Pulitzer Prize, the Pulitzer Prize board has consistently refused to withdraw the award.

<sup>172</sup> [cla.umn.edu/chgs/holocaust-genocide-education/resource-guides/holodomor](http://cla.umn.edu/chgs/holocaust-genocide-education/resource-guides/holodomor)

Former French Prime Minister Edouard Herriot, who toured Ukraine during his visit to the Soviet Union between August 26 and September 9, 1933, also denied reports of famine and said Soviet Ukraine was "like a garden in full bloom."<sup>173</sup> Herriot announced to the press that he saw no trace of hunger and that allegations about millions of starving people were being spread by opponents of the Soviet Union. "When someone believes that Ukraine is devastated by hunger, let me shrug my shoulders," he said. In the September 13, 1933 issue of Pravda, it was reported that Herriot "categorically contradicted the lies of the bourgeois press in connection with the famine in the USSR."<sup>174</sup>

A month later, William Bullitt and Raymond Moley, assistant secretary of state and representative at the London Economic Conference, successfully negotiated with Soviet Foreign Commissioner Maxim Litvinov about selling Russian wheat on the world market<sup>175</sup>, while millions of Soviet citizens were dying of starvation.

### **The Soviet system worked at the limit of its capabilities**

The rush to pay for American (and other foreign) equipment, technical assistance, materials, shipping, and supplies as part of the unprecedented spending of the First Five-Year Plan, combined with massive purchases of tractors and the reorganization of Russian agriculture under collectivization, pushed the Soviet Russian economy beyond its limits. The collapse of the U.S. stock market on September 29, 1929, and the subsequent depression in Western countries, led to a worldwide drop in commodity prices—the very goods on which the Soviet Union depended to pay for Western imports. As Knickerbocker noted in 1931, "the fact that the prices of everything Russia had to sell fell sharply, while the prices of the things she had to buy remained stable... Forced for the sake of the plan to maintain the import of machinery and industrial equipment at the level of the plan, it was forced to enormously increase its exports in size." Moreover, the export of wheat and other inputs to Britain, Germany, the United States, and other countries involved in Soviet concessions was only a fraction of what it had just a few years earlier, when the system of concessions and collectivization was planned. The increase in resource exports led to a worldwide protest against Soviet dumping and further lowered the standard of living of the Soviet population.<sup>176</sup> and also led to one of the worst famines in history.

At a time when millions of Russians were suffering from starvation and the Soviet regime was facing a financial crisis, the early 1930s would have been the perfect time for the U.S. or the international community as a group to pressure Soviet Russia to abandon its communist ideology and join the "democratic" community of nations that the world press so often – and still does – lament. But

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<sup>173</sup> N. Werth, K. Bartoszek, J. Panne, J. Margolin, A. Paczkowski, S. Courtois, (1999), *The Black Book of Communism: Crimes, Terror, Repression*, Harvard University Press, ISBN 0-674-07608-7, pp. 159–160.

<sup>174</sup> Ibidem.

<sup>175</sup> Salzman, Neil W., *Reform and Revolution: The Life and Times of Raymond Robins* (1991) p. 357.

<sup>176</sup> Knickerbocker, (1931), p. 185.

such political/economic pressure has never been applied. Instead, the international community allowed Stalin to demand an increase in grain quotas in order to make timely payments to American and other foreign firms. In fact, it was only when the Soviets, in desperation, began demanding that the U.S. diplomatically recognize the Soviet Union in order to provide the government (taxpayer-funded) with credit for Soviet purchases of American goods and services, that the U.S. government actually did what the Soviets wanted.

According to Knickerbocker,

During this period, the Soviet Union suffered losses of probably 15 percent of its total foreign trade. ... The prices that the Soviet Union received during this period for its exports, for almost all raw materials, fell by about 30 percent, while the prices it had to pay for its imports, about 65 percent for machinery and equipment, 35 percent for raw materials, fell by about 15 percent. ... Of all the goods that the Soviet Union had to sell, only oil was kept at the level of 1928. Timber, which is now the leading Soviet export, decreased by 30 percent, Bread by 50 percent, Furs by 40 percent, and so on. All countries with predominant commodity exports have suffered the same price declines. But the big difference between these countries and the Soviet Union was that all the others reduced their exports during this loss-making period; only the Soviet Union increased it. It was the only one that had a five-year plan that forced it to maintain imports at the planned level, despite the fact that it was forced to export at a loss to do so. ... The Soviet Union increased its imports in value terms by 17 percent, and for this it had to increase their volume by 57 percent.<sup>177</sup>

Under the terms of contracts signed with Western firms.

According to Melnikova-Reich, the Politburo resolution of August 29, 1930 emphasized that "the timely implementation of the mandatory grain quota is of vital importance for the industrial development of our country and, above all, for such industrial giants as Magnitostroi and Chelyabstroi." The decree was preceded by a letter dated August 24 to V.M. Molotov from Stalin from his country house on the Black Sea, in which he wrote:

Every day we ship 1-1.5 million poods [16-24 thousand] of grain. I think that this is not enough. We must immediately raise the daily export quota to at least 3-4 million poods. Otherwise, we risk being left without our new metallurgical and machine-building plants... In short, we must accelerate grain exports at a breakneck pace.<sup>178</sup>

According to Melnikova-Reich:

On August 20, 1931, the secretary of the Central Committee of the CPC, I. M. Kaganovich, reported to Stalin about a skirmish during a meeting of the Politburo over payments for completed orders and the placement of

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<sup>177</sup> Ibid., pp. 190-191.

<sup>178</sup> Sonja Melnikova-Reich, "The Soviet Problem with Two 'Unknowns': How an American Architect and a Soviet Negotiator Gave Impetus to the Industrialization of Russia, Part I: Albert Kahn," *Journal of the Society for Industrial Archaeology*, Vol. 36, No 2 (2010), pp. 57-80.

new orders in the United States, and Stalin asked Stalin for instructions. He also reported that "the Germans easily agreed to a reduction in the interest rate because they were in dire need of our orders." Stalin replied on August 25 with a telegram:

In view of currency difficulties and unacceptable credit conditions, I propose that new orders be prohibited in America, that all negotiations on new orders which have already begun be terminated, and, where possible, that contracts already agreed upon be terminated and that these contracts be transferred to Europe or to our own factories. I propose not to make exceptions, neither for Magnitostroi, nor for Kuznetsstroy, nor for Kharkovstroy, nor for Dneprostroy, nor for AMO, nor for Avtostroy.

Five days later, on August 25, 1931, Stalin wrote to Kaganovich:

The shortage of foreign currency is not the only problem. The main problem is that if we do not abandon new orders in America on the draconian credit terms that America practices, we may lose the preferential terms that we have secured in Germany, Italy and England (and will provide in France).

Kaganovich replied to Stalin on August 26:

We have received your telegram about orders in America. This resolved the differences even more radically than we thought. We immediately sent a telegram to America to stop all new orders. Tomorrow we will review the portfolio of orders and see which of them can be placed in Europe and which in the USSR.

When in September 1931 Kaganovich reported to Stalin that almost 90 percent of orders for Chelyabstroy could be received in England, the pendulum began to swing in the direction of European firms, not American ones.

According to Melnikova-Reich:

On March 25, 1931, Albert Kahn was in Moscow, negotiating the renewal of the contract, which officially ended on March 1. The negotiations broke down when the Soviets proposed that in the future payments be made not in dollars, but in rubles, which had no value outside the USSR. By 1932, the Soviet government stopped paying foreign firms and workers in hard currency, which led to an outflow of American specialists. On April 29, 1932, Kahn's unit in Moscow ceased its work, and the personnel returned to America.<sup>179</sup>

The Soviet regime reached its financial limit when some 70 million Soviet citizens were subjected to artificial starvation, a direct result of the exploitation of the Soviet market by American firms.

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<sup>179</sup> Sonja Melnikova-Reich, "The Soviet Problem with Two 'Unknowns': How an American Architect and a Soviet Negotiator Gave Impetus to the Industrialization of Russia, Part I: Albert Kahn," *Journal of the Society for Industrial Archaeology*, Vol. 36, No 2 (2010), pp. 57-80.

Both Britain and Germany had trade treaties with the Soviet Union from 1921 and 1922 respectively, which provided state-backed (taxpayer) credit to finance the purchase of goods, services, and materials from their firms.

However, this commercial structure, which favored elite firms with the financial capacity to provide private short-term loans to the Soviet regime, not only allowed American firms to sell substandard products, but also forced the Soviet regime to make payments over a much longer period of time. shorter period of time than if they were provided with long-term government loans. This forced Stalin to sell so much of Russia's resources (in this case, mostly grain) in order to raise the money in time, which exacerbated the grain shortage caused by faulty equipment and a poorly developed agronomic plan, and led to the starvation and death of millions of Soviet citizens.

This unbridled exploitation of the Soviet market, which led to the weakening of the Soviet government and the death and humiliation of nearly 50 percent of its population in the early 1930s, provided the West with an excellent opportunity to exert further financial and diplomatic pressure on the Soviet regime to insist on a more democratic and free Russian society. **The U.S. government under President Franklin D. Roosevelt could have used this moment of crisis to pressure the Soviet regime to abandon its policies, allow its entrepreneurs to participate in its economy, and allow its citizens to finally choose their own type of government in the Constituent Assembly, which the Bolsheviks dissolved in January 1918.**

**However, this claim was never considered.**

## Rosengoltz Report

On April 23, 1933, in connection with the 15th anniversary of the Soviet monopoly of foreign trade over Russia, the People's Commissar for Foreign Trade Arkady Pavlovich Rosengolts made a report on the topic "Foreign Trade Policy of the USSR... before the meeting of foreign trade workers of the USSR." The report was published in *the newspaper Izvestia* on April 30 and published as an editorial in the June 1933 *Review of the Soviet Union*, a publication aimed at the elite of the American business community.

The report was an important milestone in Soviet foreign policy; not only by asking the U.S. government for loans to purchase from U.S. firms, which was not unusual, but also by threatening to cut purchases in the face of a continued lack of U.S. government-backed financial credit and a "normal legal framework for reciprocal trade relations" to ensure "lower prices and lower financing costs" and "improved quality of procured goods."

This was the first time that the issue of a shortage of quality goods from the United States was raised. The report stated that "8,300,000,000 gold rubles (\$4,275,000,1866)" of foreign goods had been imported into the Soviet Union since the Bolshevik takeover of Russia. This huge volume of trade made the Soviet Union an invaluable market for Western firms. "Soviet exports," Rosengoltz continued, "which are the main source of covering the cost of imports, amounted to 7,200,000,000 rubles, leaving a balance of over a billion rubles," which the USSR now owed to the leading trading countries—Germany, England, and the United States. Rosengoltz noted: "Some preliminary data give an idea of the cost of imported equipment [excluding technical assistance contracts] for a number of our industrial giants:

- Gorky Automobile Plant [Ford] — over 40 million rubles;
- Stalingrad Tractor Plant [International Harvester] — 35 million rubles;
- Dnipro Hydroelectric Power Plant [Colonel Hugh Cooper, General Electric, Newport News, et al.]— over 30 million rubles;
- the Stalin Automobile Plant (formerly Amo) [American Fiat] — almost 25 million rubles;
- Kaganovich Ball Bearing Plant (Moscow) (owned by Fiat/RIV USA) — more than 20 million rubles;
- Chelyabinsk Tractor Plant [Caterpillar] — 20 million rubles;
- Kharkov Tractor Plant [Ford] – almost 20 million rubles."

Almost all of these factories were designed by the New York architectural firm of Albert Kahn and Ass., whose leading engineer was a member of the board of directors of the Soviet Architectural Trust.<sup>180</sup>

By November 16, 1933, the U.S. government had officially recognized the Soviet government. Shortly after the recognition was granted, the U.S. Treasury Department lifted restrictions on trade, and on February 2, 1934, the Export-Import Bank was established to finance Soviet purchases of American goods. While the U.S. Export-Import Bank claims that it did not provide loans to the USSR until decades later (during the Kama River truck plant project in 1972), once recognition was granted, the U.S. government was able to offer long-term loans for Soviet purchases of American products and prevent further fiascos, such as the devastating Soviet famine of the early 1930s. which could have destroyed the lucrative relationship between American firms and the Soviet government until 1991.

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<sup>180</sup> Anthony Sutton (1971), *Western Technology and Soviet Economic Development, 1930-1945*, Hoover Institution, pp. 145-148.

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## ETHICAL APPLICATIONS OF ARTIFICIAL INTELLIGENCE: A COMPREHENSIVE ANALYSIS OF STRUCTURES, LEGAL LANDSCAPES AND SOCIAL CONSEQUENCES

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**Gemini AI (Джемини ИИ)<sup>1</sup>**

**Abstract:** This article was written by Gemini Artificial Intelligence, the article discusses the ethical problems of the use of Artificial Intelligence (AI) in different countries of the world, its legal regulation and social problems arising from the use of AI.

**Objective:** To evaluate the logic of AI and its ability to analyze complex concepts.

**Keywords:** Ethics, artificial intelligence, AI safety, legal regulation of AI.

The topic of this article is a continuation of my previous article "Artificial Intelligence as a Human Servant or Vice Versa: Legal Aspects", published in the first issue of this journal (April 2025).<sup>2</sup> I received several responses to my article ranging from sarcastic to tragic from various AIs, which led me to think: What if Artificial Intelligence were allowed to analyze the ethical application of Artificial Intelligence itself and the legal and social implications associated with it? I gave this task to several AIs: Grock, DeepSeek, ChatGPT, Gemini. seemed to me the most complete and logical. Therefore, I present to you the creation of Artificial Intelligence Gemini (with my comments).<sup>3</sup>

**Gemini AI**

### **Ethical AI Applications: A Comprehensive Analysis of Structures, Legal Landscapes, and Social Impacts**

#### **1. Summary**

The application of artificial intelligence (AI) is rapidly transforming industries and everyday life, opening up significant opportunities along with complex ethical challenges. This report provides a comprehensive analysis of the

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<sup>1</sup> Gemini is a powerful artificial intelligence (AI) model from Google that can understand text, images, video, and audio. As a multimodal model, Gemini is described as capable of performing complex tasks in mathematics, physics, and other fields, as well as understanding and generating high-quality code in a variety of programming languages.

<sup>2</sup> Scientific Platform " XXI CENTURY" journal, # 1, April 2025, pp. 4-13, [www.episs.ru](http://www.episs.ru)

<sup>3</sup> Translation by Microsoft Translation service.

ethical use of AI, with a particular focus on the framework created by Microsoft and a comparative analysis of the approaches used by other major software manufacturers and vendors. In addition, it describes the evolving global legal landscape related to AI ethics and examines the expected cultural, social, and clerical implications of both ethical and unethical AI deployment. The analysis shows a strong consensus among leading tech companies on core ethical principles such as fairness, reliability and security, privacy, inclusivity, transparency, and accountability. However, the implementation and prioritization of these principles, as well as approaches to governance and compliance, vary across organizations and regions. The legal environment is also in a dynamic state, with the European Union taking a comprehensive approach to regulation, while other countries such as the United States, Canada, the United Kingdom, Japan and Australia are exploring different models ranging from sectoral rules to principles-based frameworks. Understanding the impact of AI on society, both positive and negative, is critical to fostering responsible innovation. Ethical AI can bring significant societal benefits, but unethical use can lead to distorted cultural perceptions, social inequality, and workforce disruption. The detailed table of resources included in this report serves as a valuable tool for further investigation by providing attributions and links to the source materials that underpin this analysis.

## **2. Microsoft's Ethical Concept of Artificial Intelligence:**

Microsoft has built a comprehensive framework for responsible AI, based on six key principles that guide the development and deployment of AI technologies<sup>1</sup>. These principles are designed to ensure that AI applications provide effective solutions without causing unintended negative consequences.

### **2.1. Six key principles of responsible AI:**

- **Fairness:** At the heart of Microsoft's ethical AI system is the principle of fairness. This dictates that AI systems should treat all individuals and groups of people fairly, avoiding discrimination on the basis of personal characteristics such as race, gender, or other sensitive attributes<sup>1</sup>. This commitment extends to how AI systems allocate capabilities, resources, and information<sup>3</sup>. For example, in critical areas such as medical care, loan applications, or employment, AI must provide consistent recommendations to people with similar symptoms, financial circumstances, or professional qualifications. Microsoft aims to minimize demographic and culture-based stereotypes in its AI and emphasizes the importance of mitigating the biases present in both the data used to train AI models and the algorithms themselves<sup>5</sup>. Microsoft's consistent repetition of fairness in various documents highlights its fundamental role in their ethical AI strategy, highlighting the strong an internal commitment to this value and the key

message they want to convey to the public. This emphasis suggests that ensuring equitable outcomes is a central tenet of their responsible AI efforts.

- **Reliability and security:** Building trust in AI systems requires that they operate reliably, securely, and stably under a wide range of conditions <sup>1</sup>. This principle emphasizes practical and reliable AI deployment, ensuring that systems function as expected and do no harm. Robust AI systems must be able to withstand harmful manipulation and operate according to their original design <sup>2</sup>. To do this, Microsoft has developed tools such as the bug analysis component in Azure Machine Learning, which enables data scientists and developers to gain a deep understanding of how failures are distributed in Model <sup>2</sup>. This focus on reliability and security goes beyond theoretical ethics, addressing a critical need for users to be confident in the stability and security of AI applications. Microsoft's alignment of AI systems with their values and design principles further strengthens Goal <sup>6</sup> of Harm Prevention, underpinned by extensive testing and validation <sup>processes8</sup>.
- **Privacy and security:** Recognizing the growing global challenges related to data privacy, Microsoft is placing great emphasis on respecting privacy and maintaining strong security in its AI systems <sup>1</sup>. This includes carefully protecting private and confidential information and ensuring that AI systems are resilient to attacks and attempts to compromise their integrity <sup>1</sup>. Azure Machine Learning provides a variety of capabilities to support this principle, including restricting access to resources, encrypting data in transit and at rest, and actively scanning for vulnerabilities <sup>2</sup>. Microsoft has also established clear requirements to prevent leakage or unauthorized disclosure of data used in AI systems <sup>6</sup>. Integrating strong privacy and security measures into AI technologies is paramount to building user trust and meeting evolving regulatory requirements <sup>8</sup>. Microsoft's ongoing commitment to these aspects addresses a major challenge for both individual users and businesses, especially in the context of stringent regulatory requirements such as GDPR.
- **Inclusivity:** Microsoft is committed to developing AI systems that empower and engage everyone, including people of all abilities. <sup>1</sup>. This principle goes beyond simply avoiding discrimination; it actively promotes the development of artificial intelligence that addresses diverse needs and abilities, thereby expanding the potential user base and societal benefits. Inclusive practices design helps AI developers understand and address potential barriers to accessing their products and services <sup>1</sup>. Microsoft believes that inclusion fosters innovation and helps develop experiences that benefit everyone <sup>1</sup>. In addition, collaboration is ongoing with underserved minority communities to help plan, test, and build these inclusive systems <sup>6</sup>. Committed to making AI accessible and useful to everyone, regardless of experience or ability, Microsoft demonstrates its commitment to ensuring that its AI technologies serve a wide range of users.

- **Transparency:** Ensuring that AI systems are transparent and understandable is crucial, especially as these systems increasingly inform decisions that can have a profound impact on people's lives <sup>1</sup>. Transparency is key to building trust, allowing users to understand how AI systems arrive at their decisions, thereby addressing concerns that AI is a "black box." Interpretability, a helpful explanation of the behavior of AI systems, is a critical component of transparency <sup>2</sup>. Microsoft provides transparency notes for its Azure services to help stakeholders understand the responsible use of these AI technologies <sup>1</sup>. In addition, Microsoft strives to be open about the uses and limitations of its artificial intelligence, ensuring that everyone understands how these systems behave. clear information about how AI systems work, including the data used and decision-making processes, Microsoft is committed to fostering better understanding and trust <sup>8</sup>.
- **Accountability:** The principle of accountability dictates that AI systems and their developers should be held accountable for how their systems work and the impact they have <sup>1</sup>. This provides a clear delineation of responsibilities for the development and implementation of AI, allowing for remediation and continuous improvement mechanisms. Organizations are encouraged to rely on industry standards to develop accountability standards <sup>2</sup>. Azure Machine Learning provides MLOps capabilities to improve the accountability of AI systems, including metadata tracking, management data collection throughout the machine learning lifecycle, and monitoring and alerting <sup>2</sup>. Microsoft continuously applies its ethical principles in all areas of its business <sup>6</sup> and established accountability mechanisms to ensure that AI is used responsibly throughout its lifecycle. <sup>8</sup>. This focus on accountability is essential as AI becomes increasingly autonomous, ensuring accountability for any negative impacts and promoting ethical development practices.

## 2.2. Microsoft Responsible AI Standard:

To implement six key principles, Microsoft has developed an internal framework known as Responsible AI Standard <sup>2</sup>. This standard serves as an internal guide for a company to effectively design, build, and rigorously test AI systems in accordance with its ethical commitments. It provides a structured approach to product development and risk management associated with AI technologies <sup>10</sup>. The standard includes company-wide rules that are regularly updated to improve their specificity, effectiveness, and seamless integration into existing engineering practices. <sup>6</sup>. As a fundamental element of responsible AI implementation at Microsoft, the standard articulates specific goals and requirements for each of the six principles, ensuring that for a product to be considered compliant with these principles, it must comply with all <sup>9</sup>. The existence of this internal standard demonstrates Microsoft's strong commitment to embedding ethical considerations directly into its development processes, moving

from ambitious principles to practical application. The fact that the standard is periodically revised, as evidenced by the reference to version 2<sup>9</sup>, demonstrates an adaptive approach to introducing new knowledge and solving the ever-emerging problems in the field of ethical AI. This iterative process ensures that the Microsoft platform remains relevant and effective for the responsible advancement of AI technologies. The full Responsible AI Standard is available at a dedicated link provided by Microsoft<sup>3</sup>.

### 2.3. Implementing Responsible AI at Microsoft:

Microsoft is using a multi-faceted strategy to implement responsible AI in its organization and beyond<sup>3</sup>. This strategy covers several key areas, including governance, team support, analysis of sensitive use cases, and active participation in government policy. , Microsoft has established clear rules and carefully defined roles and responsibilities for all teams involved in the implementation of responsible AI practices. This includes oversight from the highest levels of the company, as well as the Environmental, Social, and Community Affairs Committee of the board of directors providing guidance on responsible AI policies and programs. The Council for Responsible AI, co-chaired by senior management, serves as a forum to address the most important AI-related issues and to make progress in this area<sup>10</sup>. Responsible AI Governance (ORA) plays a critical role in putting these principles into practice by establishing internal company-wide policies, defining governance structures, providing resources, analyzing sensitive use cases, and Helping to shape public policies<sup>10</sup>.

**Team support** is another important aspect of Microsoft's adoption strategy. The company fosters a culture of readiness to adopt responsible AI practices not only within its ranks, but also among customers and partners<sup>3</sup>. This includes training, best practices, and toolkits to empower developers and other stakeholders to build responsible AI solutions<sup>8</sup>. Microsoft also places significant emphasis on analyzing **sensitive use cases** to ensure that responsible AI principles are consistently adhered to in its operations, especially in applications that involve higher ethical risks<sup>3</sup>. In addition, Microsoft actively participates in **public policy** discussions, working to shape new laws and standards to help ensure that the transformative potential of AI is realized for the benefit of society as a whole.

A key component of Microsoft's internal governance structure is **Aether**, the company's internal committee on artificial intelligence and ethics. This interdisciplinary team conducts research and provides invaluable guidance on responsible AI issues<sup>3</sup>. When Microsoft teams have questions or ethical dilemmas related to artificial intelligence, Aether offers recommendations based on research, which are often formalized in the official policies and practices of the company. Aether organizes specialized working groups that address the practical aspects of responsible AI, including building responsible AI tools and systems, defining and implementing ethical engineering practices, and establishing compliance mechanisms to monitor and enforce Responsible AI regulations and requirements.

To further ensure that AI is ethically developed and deployed, Microsoft has implemented **a process for assessing the impact of RAI**. This serves as a primary method for teams to scrutinize their AI systems and ensure they are aligned with the company's overarching principles and standards for responsible AI.<sup>9</sup> This structured assessment helps teams conduct a comprehensive assessment, encouraging them to consider various critical issues, such as the intended and unintended use cases of the AI system, the wide range of stakeholders that may be affected, and robust mechanisms for continuously monitoring and measuring the effectiveness and impact of AI.<sup>9</sup>

For specific AI products, such as Microsoft Copilot, the company provides clear **guidelines for responsible use**. These guidelines highlight the importance of users understanding the AI technology behind it, its inherent limitations, and potential biases. They also emphasize the need for users to thoroughly test and analyze the responses generated by Copilot, ensuring that the results are thorough are tested before any implementation. In addition, these guidelines address critical privacy and security considerations, clarify that Copilot only accesses resources to which the user has explicit permissions, and that user-provided Copilot prompts and responses are not used to train basic AI models.<sup>7</sup> User interaction data is collected with explicit consent and in accordance with Microsoft's established privacy policies. Users are also encouraged to actively monitor the content they create and report any unexpected or offensive results, reinforcing the overall responsibility for ethical AI practices.<sup>7</sup>

#### 2.4. Resources and tools for responsible AI:

Microsoft offers a wide range of resources and tools to promote understanding and adoption of responsible AI principles and practices, both internally and for the broader community.<sup>3</sup> These resources include **the Responsible AI Standard itself**, which provides internal guidance from Microsoft.<sup>3</sup> The company also maintains a dedicated **resources page**, which offers a curated collection of content related to responsible AI.<sup>3</sup> To increase transparency, Microsoft provides **transparency documents** that explain how AI technology works for various services, such as Azure AI Face and Anomaly Detector.<sup>3</sup> Responsible AI in Action provides practical examples of how to apply the six principles in real-world scenarios. Microsoft is also actively using its **blog** to share articles and ideas on topics such as machine learning for fair decision-making and cybersecurity for AI platforms.<sup>3</sup> For developers, **GitHub** contains valuable resources such as the Fairlearn Python package for fairness in AI models.<sup>3</sup> In addition, Microsoft **produces podcasts**, which take an in-depth look at topics such as harm measurement and mitigation in AI.<sup>3</sup> and provides access to a variety of **publications**, including research papers on topics related to equity and datasets.<sup>3</sup> The company also uses **videos** on platforms such as the Microsoft Developer channel to provide demonstrations and tutorials on responsible AI concepts.<sup>3</sup> In addition, Microsoft publishes its annual **Responsible AI Transparency Report**, which details the company's efforts to build, support customers, and grow a

responsible AI community. Microsoft highlights that it has more than 30 responsible AI tools with more than 3 100 features. The company also provides information on 3 AI policies and regulations and offers learning resources through **Microsoft Learn** <sup>3</sup>.

In addition to these resources, Microsoft offers dedicated tools to support responsible AI development. The **Human and AI Experience workbook** helps organizations identify and implement best practices for human-AI interaction <sup>4</sup>. Azure AI provides a variety of tools and features to help build more secure and reliable generative AI 4 applications. **The Responsible AI Dashboard** is an all-in-one toolkit that offers a set of tools to help create a customizable, end-to-end Responsible AI experience <sup>4</sup>. This dashboard includes components for **Fairness Assessment**, which helps assess and mitigate inequities in AI models, **Error Analysis**, which provides insight into model failures and areas for improvement, **interpretability of models**, which allows you to understand how and why AI systems make certain predictions, **counterfactual** "what-if" analysis, which allows you to study how changes in input features affect model results, and **causal inference**, which helps to understand causal relationships in data <sup>2</sup>. The availability of these tools and extensive resources underscores Microsoft's commitment to making responsible AI achievable for both its internal teams and the broader developer community.

## 2.5. Code of Conduct and AI Prohibitions:

Microsoft has developed a comprehensive Code of Conduct for its AI services, which sets out clear expectations and limitations for customers, users, and applications built using those services.<sup>11</sup> This Code expressly prohibits the use of Microsoft AI Services in any way that is inconsistent with the Code itself or that could cause harm to individuals, organizations, or society <sup>11</sup>. In addition, it prohibits the use of these services to influence individuals in ways prohibited by law or regulation, or to create or interact with content that is considered harmful or inappropriate under Code <sup>11</sup>. A key aspect of the Code of Conduct is the prohibition on the use of AI for decision-making without adequate human oversight, especially in cases where when it comes to applications that may have significant consequences for a person's legal or financial situation, life or employment opportunities, human rights, or have the potential to cause physical or psychological harm <sup>11</sup>. The Code also strictly prohibits the use of AI for the purpose of misleading or deliberate misinformation, including false advertising, or the use of subconscious methods with the intent to manipulate or distort behavior in a harmful way. Exploiting people's vulnerability because of their age, disability or socio-economic status to materially distort their behaviour to the detriment of their behaviour is also strictly prohibited.

In addition, the Code of Conduct prohibits the use of Microsoft Artificial Intelligence Services for social media scoring or predictive profiling that could result in discriminatory, unfair, biased, harmful, adverse, or harmful treatment of

certain individuals or groups. It also restricts the use of AI to assess the crime risk of individuals solely on the basis of profiling or personality traits. Only it is not used to support an individual's assessment based on objective and verifiable facts directly related to criminal activity.<sup>11</sup> In addition, the Code imposes restrictions on the use of biometric data, prohibiting its use to categorize people or infer sensitive characteristics such as race, political opinions, religious beliefs, or sexual orientation, except for lawful labeling or filtering biometric datasets or categorization by law enforcement<sup>11</sup>. Attempting to infer people's emotional state based on their physical or behavioral characteristics is also limited. Creating chatbots for erotic or romantic purposes, or creating images of specific people without their explicit consent, is also prohibited, as is allowing end users to create their own chatbots without supervision. Finally, The Code prohibits the creation or expansion of facial recognition databases by inadvertently extracting facial images from the Internet or video recordings from CCTV cameras.

Customers using Microsoft AI services are also subject to certain requirements outlined in the Code of Conduct. These include implementing technical and operational measures to identify fraudulent user behavior, establishing strict technical limits on entries and exits to prevent misuse, clearly disclosing that the output is generated by artificial intelligence to prevent cheating, thoroughly and continuously testing their applications, creating feedback channels for users to report abuse, implementing additional mitigation measures for specific scenarios, providing all necessary notifications, and obtaining consents to data processing. and implementing robust security and access control measures<sup>11</sup>. This comprehensive Code of Conduct demonstrates Microsoft's commitment to promoting the responsible use of its AI technologies by setting clear boundaries and expectations for its users.

### **3. Comparative analysis of the main software manufacturers and vendors:**

While Microsoft has developed a detailed framework for ethical AI, other major software manufacturers and vendors have also developed their own sets of principles and guidelines to address the ethical implications of AI. This section provides a comparative analysis of the approaches used by Google, Amazon, IBM, and Meta<sup>4</sup>.

#### **3.1. Google's Artificial Intelligence Ethics:**

Google's approach to ethical AI is based on three core principles: bold innovation, responsible development and implementation, and collaborative progress<sup>12</sup>. These principles reflect Google's commitment to advancing AI technologies while ensuring that they are developed and used ethically and for the benefit of humanity. Google is focusing on rapid innovation and the adoption of AI in

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<sup>4</sup> Meta Corporation is recognized as an extremist organization in Russia.

revolutionary products that benefit people around the world, promote scientific progress, and help solve humanity's most pressing problems.

Google identifies seven specific principles that guide the development and use of artificial intelligence<sup>15</sup>. The first principle is to **be socially beneficial**, to consider a wide range of social and economic factors, and to act where the overall likely benefits far outweigh the predicted risks. The second principle is to **avoid creating or reinforcing unfair biases**, recognizing that distinguishing fair biases from unfair biases is not always easy and varies across cultures. Google strives to avoid unfair impacts on people, especially those associated with sensitive characteristics. , employing strict safety and security practices to avoid unintended results that pose risks of harm. The fourth principle is **to be accountable to people** by developing AI systems that provide opportunities for feedback, appropriate explanations, and appeals, provided appropriate guidance and control by humans. The fifth principle is **to incorporate privacy** design principles, providing the opportunity for notification and consent, as well as providing transparency and control over the use of data. The sixth principle is to maintain **high standards of scientific excellence** based on the scientific method and a commitment to open inquiry and collaboration. Finally, the seventh principle is that **it should be made available for use in accordance with these principles**, working to limit potentially harmful or abusive applications by assessing the underlying purpose and use, nature and uniqueness, scope and The nature of Google's engagement.

Google Cloud's approach to responsible AI is based on the following AI principles, with a focus on creating safer and more responsible products, earning customer trust, and fostering a culture of responsible innovation<sup>16</sup>. Google Cloud uses rigorous assessment through various review bodies to conduct ethical analysis and risk assessments for its 16 technology products. They also offer tools such as Explainable AI, Model Cards, and the TensorFlow open-source toolkit to increase model 16 transparency. Google recommends considering fairness, accountability, security, and privacy as key aspects when developing AI

### 3.2. Amazon's Artificial Intelligence Ethics:

Amazon is committed to taking a responsible approach to the development of artificial intelligence by adopting a people-centered approach that prioritizes education, science, and its customers<sup>17</sup>. Their approach includes the integration of responsible AI throughout the AI lifecycle. Amazon identifies eight main aspects of responsible AI: fairness, explainability, privacy and security, security, auditability, credibility and reliability, governance, and transparency<sup>17</sup>. This comprehensive set of aspects highlights Amazon's commitment to addressing various aspects of ethical AI.

Amazon's Artificial Intelligence Policy outlines specific prohibitions on the use of its AI/Machine Learning Services, including for intentional misinformation, violation of privacy, portraying a person without consent, harming minors, stalking, circumventing security filters, and performing lethal functions with weapons without a person' s permission<sup>18</sup>. The policy also requires customers using

AI/ML services to make follow-up decisions to carry out appropriate human oversight and testing. AWS provides a variety of services and tools to help customers design, build, and operate AI systems responsibly, such as Guardrails to implement security measures in generative AI applications, Model Evaluation to compare underlying models, and Amazon SageMaker Clear to detect bias and explain <sup>predictions</sup><sup>17</sup>. Amazon is also actively involved in partnerships, diversity and inclusion initiatives, public policy engagement, and research to promote responsible <sup>AI</sup><sup>17</sup>. Their research activities include projects aimed at ensuring fairness, safety, and reliability in AI <sup>models</sup><sup>19</sup>.

### 3.3. Ethical principles of IBM artificial intelligence:

IBM's approach to AI ethics is distinguished by the Trust and Transparency Principles, which guide the company's development and implementation of AI technologies. These principles are as follows: the goal of AI is to complement human intelligence, data and ideas belong to their creator, and technology should be transparent and explainable. These guiding values underscore IBM's commitment to empowering people, respecting data ownership, and ensuring that AI systems are understandable.

At the heart of these principles are the pillars of trust: explainability, fairness, reliability, transparency and privacy <sup>20</sup>. Explainability aims to make AI systems understandable, especially with regard to the rationale behind their recommendations <sup>21</sup>. Fairness involves ensuring equal treatment of individuals and groups, actively working to counter prejudice <sup>21</sup>. Reliability aims to protect AI systems from attacks and ensure that they operate in exceptional conditions without causing harm <sup>21</sup>. Transparency emphasizes the need for users to see how a service works and understand its strengths and weaknesses <sup>21</sup>. Privacy emphasizes the importance of protecting consumers' data rights and providing safeguards for data protection <sup>21</sup>. IBM also adheres to the core principles of data development and artificial intelligence, including enhancing human intelligence, respecting data ownership, and ensuring transparency in AI systems. They identify key issues of AI ethics, such as data privacy, fairness, explainability and accountability. IBM advocates for policies that combine innovation with responsibility and trust<sup>20</sup> and has developed a comprehensive AI governance <sup>program</sup><sup>22</sup>.

### 3.4 Meta AI Ethical Principles<sup>5</sup>:

Meta is committed to building responsible AI based on a number of core considerations, including fairness and inclusion, reliability and security, privacy and security, transparency and control, and governance and accountability mechanisms. Meta believes in democratizing access to AI models and collaborating on risk management to harness the power of AI to solve global challenges <sup>23</sup>. They emphasize the importance of ensuring that generative AI

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<sup>5</sup> Meta Corporation is recognized as an extremist organization in Russia.

technology does not create harmful content and implement security measures for their AI offerings on the platform<sup>23</sup>.

Meta's approach is based on five pillars of responsibility: privacy and security, fairness and inclusion, reliability and security, transparency and control, and accountability and governance<sup>24</sup>. The company is proactively addressing AI equity issues through research and by creating and distributing more diverse datasets to train AI models<sup>24</sup>. Meta also provides guidance on how to responsibly tune baseline models, focusing on data preparation, training models for security considerations, and evaluating and improving performance<sup>23</sup>. They are also beginning to extend a multi-layered approach to security to their open models<sup>23</sup>.

**Table 1: Comparison of AI Ethical Principles of Major Vendors**

| Principle                       | Microsoft                                                                         | Google                                                                                       | Amazon                                                                                                               | IBM                                                                                                | Meta <sup>6</sup>                                                                                                      |
|---------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Justice</b>                  | Treats everyone equally, prevents discrimination, mitigates bias <sup>1</sup>     | Avoids creating or reinforcing unfair bias, seeks to avoid unfair consequences <sup>15</sup> | Ensures impartiality of decisions, minimizes bias using representative datasets <sup>17</sup>                        | Treating Fairness, Countering Human Prejudice, Promoting Inclusion <sup>21</sup>                   | Equity and inclusion are core considerations, addressing bias through 23 different datasets                            |
| <b>Reliability and security</b> | Reliable, safe and stable, resistant to harmful manipulation <sup>2</sup>         | Built and tested for safety, applies 15 strict security practices                            | Prevents harmful output and misuse of the system, ensures proper operation <sup>17</sup>                             | Operates in exceptional conditions, protected from attacks, minimizes security risks <sup>21</sup> | Reliability and security are the main factors that implement safety measures <sup>23</sup>                             |
| <b>Privacy and security</b>     | Respects privacy, protects confidential information, resists attacks <sup>1</sup> | Includes privacy design principles, provides visibility and control over data <sup>15</sup>  | Appropriately obtains, uses and protects data and models, pays special attention to data anonymization <sup>17</sup> | Prioritizing and protecting data privacy and consumer rights <sup>21</sup>                         | Privacy and security are core considerations, commitment to open science, but awareness of privacy risks <sup>23</sup> |

<sup>6</sup> Meta Corporation is recognized as an extremist organization in Russia.

|                       |                                                                                                              |                                                                                                     |                                                                                                            |                                                                                                       |                                                                                                                                 |
|-----------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Inclusivity</b>    | Empowers and engages everyone, inclusive design practices, benefits all users <sup>1</sup>                   | Develops AI as a foundational technology for the individual and collective good <sup>13</sup>       | Taking into account the impact on different stakeholder groups <sup>17</sup>                               | Promotes inclusion, diversity of development teams <sup>21</sup>                                      | Equity and inclusion are key considerations for the good of peace as a whole <sup>23</sup>                                      |
| <b>Transparency</b>   | Understandable, people understand how decisions are made, ensures transparency Note <sup>1</sup>             | Provides appropriate opportunities for feedback, appropriate explanations and appeals <sup>15</sup> | Understanding and evaluating the results of the system allows you to make informed decisions <sup>17</sup> | Transparency regarding algorithm recommendations, data sharing, data collection and use <sup>21</sup> | Transparency and control are the main factors, source codes, and open source datasets <sup>23</sup>                             |
| <b>Accountability</b> | Developers need to be accountable and responsible, MLOps capabilities for better accountability <sup>1</sup> | AI technologies will be subject to appropriate human guidance and control <sup>15</sup>             | Implement best practices in the AI supply chain, including suppliers and contractors <sup>17</sup>         | People working with AI have specific roles and responsibilities <sup>22</sup>                         | Accountability and public administration are the main considerations, mechanisms of governance and accountability <sup>23</sup> |

#### 4. Global legal developments in the field of ethical AI:

The legal landscape related to ethical AI is rapidly evolving around the world, and different regions have different regulatory approaches.

##### 4.1. The European Union Artificial Intelligence Act:

The European Union has taken a significant step in AI regulation by publishing the AI Law on 12 July 2024. This Law represents the first comprehensive horizontal legal framework for the regulation of AI systems in EU countries<sup>28</sup>. It uses a risk-based approach that classifies AI systems into four risk levels: unacceptable risk, high risk, limited risk and minimal risk<sup>27</sup>. AI systems that are considered to pose an unacceptable risk to the fundamental rights and values of the Union are prohibited<sup>27</sup>. These include systems that use subconscious or misleading methods to distort behaviour, exploit vulnerabilities, conduct social

scoring or use real-time remote biometric identification in publicly accessible places for law enforcement (with rare exceptions) <sup>27</sup>.

High-risk AI systems that may harm human health, safety or fundamental rights are subject to specific obligations <sup>27</sup>. These obligations include establishing a risk management system, ensuring data management for training and testing datasets, maintaining technical documentation, maintaining records, providing transparency and information to users, ensuring human oversight, and ensuring accuracy, reliability and cybersecurity. General-purpose AI model providers (GPAIs) also have obligations related to technical documentation, providing information to downstream providers, complying with copyright laws, and publishing training data summaries<sup>27</sup>. GPAI model providers with systemic risk face additional requirements, such as performing model evaluation and reducing system <sup>risks</sup><sup>27</sup>. EU Artificial Intelligence Law sets out obligations for various actors in the AI lifecycle, including suppliers, users, importers and distributors. Failure to comply with EU Artificial Intelligence Law may result in significant financial fines <sup>28</sup>. The Act will be implemented in stages: from 2 February 2025, prohibitions on the use of unacceptable risk AI systems will apply, from 2 August 2025 – obligations on general AI models, and from 2 August 2026 – obligations on high-risk AI systems. Artificial Intelligence will play a key role in overseeing the implementation and enforcement of Law <sup>No 28</sup>.

#### **4.2. U.S. Legislation in the Field of Artificial Intelligence:**

In contrast to the EU's unified approach, AI regulation in the United States is more fragmented, with efforts at both the federal and state levels. While there is no comprehensive federal law on artificial intelligence, several legislative initiatives and executive orders address specific aspects of artificial intelligence. The National Artificial Intelligence Initiative Act of 2020 aims to promote research and developments in the field of AI <sup>31</sup>. In October 2023, President Biden issued an executive order on safe, reliable, and reliable artificial intelligence, focusing on various aspects, including security standards, privacy protection, and the promotion of civil rights <sup>34</sup>. However, the current administration under President Trump is likely to adopt a softer approach to regulating the development and deployment of AI.

Several AI-related bills have been introduced in Congress, such as the AI Development and Reliability Act and the AI Creation Act, with a focus on AI safety and research <sup>resources</sup><sup>32</sup>. However, the prospects for broad, congressionally passed artificial intelligence legislation remain uncertain. In the absence of comprehensive federal regulation, states are increasingly taking the lead in passing their own laws, <sup>32</sup>. Trends in state legislation include a focus on consumer protection and transparency, addressing the risks associated with deepfakes, and regulating the government's use of AI tools <sup>33</sup>. Colorado, for example, passed the nation's first comprehensive consumer-focused artificial intelligence law, requiring organizations to avoid algorithmic discrimination and comply with certain risk management and transparency requirements. Utah has passed a law requiring

disclosure of generative AI use, and California has a strong focus on transparency in training data. Such a decentralized approach can lead to a complex patchwork of regulations for businesses operating in different states.

### **4.3. Canadian Artificial Intelligence Law and Policy:**

Canada is actively working to create a framework for AI regulation. The proposed Artificial Intelligence and Data Act (AIDA), introduced as part of the Digital Charter Implementation Act in 2022, aims to create a framework for the responsible design, development and deployment of AI systems that impact the lives of 36 Canadians. as Parliament has been suspended, the government remains committed to strengthening Canada's approach to AI <sup>39</sup>. AIDA offers a risk-based framework, focusing on high-performance AI systems and establishing requirements related to human oversight, transparency, fairness, safety, accountability, credibility, and reliability.<sup>36</sup> The Act also outlines prohibitions on the reckless and malicious use of AI that can cause serious harm, with potential criminal penalties.

In March 2025, the federal government launched Canada's first AI strategy for the federal public sector, based on four key principles: human-centered, collaborative, prepared, and accountable. Canada is also a signatory to the Council of Europe's Framework Convention on Artificial Intelligence and Human Rights, Democracy, and the Rule of Law, demonstrating its commitment to robust AI governance and international Cooperation. While AIDA is still under review, the government has also introduced a Voluntary Code of Conduct for the Responsible Development and Management of Advanced Generative Artificial Intelligence Systems to provide interim guidance for Canadian companies. The proposed AIDA aims to create an AI and Data Commissioner position to monitor compliance and intervene where necessary to ensure the safety and non-discrimination of AI systems <sup>37</sup>.

### **4.4. Artificial Intelligence Regulation and Policy in the UK:**

The United Kingdom has adopted an innovation-oriented approach to AI regulation, opting for a cross-sectoral, results-based framework based on the five pillars, rather than implementing comprehensive AI legislation at this stage. These five non-binding principles are: safety, security and reliability; appropriate transparency and explainability; fairness; accountability and governance; and contestability and redress <sup>41</sup>. The UK Government intends to draw on the experience of existing industry regulators to interpret and apply these principles in their respective areas <sup>42</sup>.

While the government has resisted legislative regulation of AI, the Artificial Intelligence (Regulation) AI Bill was reintroduced in March 2025, proposing the creation of an Artificial Intelligence Authority and the role of an AI officer for

organizations involved in AI <sup>41</sup>. However, this bill currently lacks government support and faces challenges in pushing through Law <sup>45</sup>The UK government has established a steering committee to support regulatory capacity and coordination in AI governance and is launching consultations on an inter-economic AI risk register and regulatory assessment. They are also developing a voluntary AI safety standard and an AI Governance Framework framework to set minimum standards of good practice for companies selling AI products and services. The UK's approach emphasises flexibility and aims to balance innovation with safety by applying existing technology-neutral rules to AI<sup>42</sup>.

#### **4.5. Regulation and policy in the field of artificial intelligence in Japan:**

Japan initially took an innovative approach to AI governance, primarily relying on non-binding guidelines and strategies rather than strict regulations. In April 2024, the Ministry of Economy, Trade and Industry (METI) released the "AI for Business Guide Version 1.0", aligned with international discussions and trends, providing voluntary guidance for developers, suppliers and users of AI <sup>47</sup>These guidelines emphasize a human-centred approach based on the principles of dignity, diversity and inclusion, and sustainability. <sup>47</sup> They provide guidance to AI developers, AI providers and AI business users on desirable voluntary actions.

However, there is a growing recognition of the need for more formal regulation to combat emerging risks. In February 2024, the government unveiled a draft of the "Basic Law for the Promotion of Responsible AI" (AI Law) <sup>49</sup>. This law, which is expected to be presented at the 2025 session of parliament, may include provisions for the appointment of "developers of specific models of artificial intelligence infrastructure", who will have obligations related to security systems and reporting. Prime Minister Fumio Kishida has said that Japan may start regulating AI in response to growing risks. It appears that Japan's approach is evolving from a reliance on self-regulation to a more hybrid model that balances innovation with the necessary oversight, which could be affected by events in the EU and the US.

#### **4.6. Artificial Intelligence Regulation and Policy in China:**

China has adopted a more proactive and mandatory approach to AI regulation compared to many other regions <sup>51</sup>. Since 2021, China has introduced detailed regulations on various applications of AI, including recommender algorithms and deep synthesis technologies <sup>51</sup>. These regulations often prioritize control over information and require service providers to adhere to socialist values. In September 2024, China released the AI Safety Management Framework, which prioritizes ethical issues in AI development, including safety, transparency, and accountability.<sup>54</sup> The framework outlines principles such as prioritizing

innovation, establishing governance mechanisms, promoting safe and reliable artificial intelligence, and protecting citizens' rights.<sup>54</sup>

The Chinese government adopts a multi-layered and category-oriented approach to managing AI applications based on risk levels, with higher-risk use cases requiring increased control and oversight<sup>54</sup>. Regulations also focus on data security, protection of personal information, and the establishment of ethical review systems<sup>53</sup>. Developers, service providers, and users have specific responsibilities set out in the system, including conducting security assessments, obtaining user consent, and understanding data processing practices. China has also established an algorithm registry in which services with public opinion attributes or social mobilization capabilities are required to provide information about their algorithms. The overall approach reflects a balance between promoting AI innovation and implementing safety measures to prevent social and economic harm, which is in line with China's ambition to become a global leader in AI by 2030.

#### 4.7. Artificial Intelligence Regulation and Policy in Australia:

Australia currently has no legislation or regulation on AI at the federal level.<sup>56</sup> However, in 2019, the government adopted eight voluntary ethical principles for AI to guide organisations in self-regulation. These principles cover human, social and environmental well-being; people-centred values; fairness; privacy protection and security; reliability and security; security; transparency and explainability; contestability and compensation for damages; and accountability<sup>57</sup>.

In June 2023, the Australian Government released a discussion paper on safe and responsible AI in Australia, seeking views on mitigating potential risks and supporting responsible practices<sup>56</sup>. The government's interim response acknowledges that existing laws may be inadequate and indicates that it will consult on new mandatory restrictions for organizations developing and deploying AI systems in the context of high-risk. In addition, a voluntary AI security standard has been proposed, consisting of 10 voluntary safeguards applicable to AI systems of any level of risk<sup>46</sup>. These constraints focus on areas such as accountability, risk management, testing, transparency, and stakeholder engagement. In addition, since September 1, 2024, the Australian government has implemented the Responsible AI in Government Policy, which is mandatory for non-corporate Commonwealth organizations and aims to be accountable and transparent in the implementation of AI in government. While Australia has yet to enact comprehensive legislation on artificial intelligence, there has been a clear movement towards establishing more specific regulations, especially for high-risk applications.

**Table 2: Summary of key AI legislation by region**

| Region/Country | Legislation/Policy                                                 | General provisions                                                                                                                                                                                                                 | Status/Chronology                                                      |
|----------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| European Union | EU Artificial Intelligence Law <sup>28</sup>                       | Risk-based approach (unacceptable, high, limited, minimal risk), prohibitions on high-risk practices, obligations for high-risk AI (risk management, data governance, transparency, human control), commitments under GPAI models. | Published July 12, 2024. Phased implementation from February 2025.     |
| United States  | Disparate Federal and State Laws <sup>31</sup>                     | Federal focus on research and development (NAII Act), state consumer protection laws (Colorado AI Act), deepfakes, and transparency.                                                                                               | Changing landscape, no comprehensive federal law. State laws vary.     |
| Canada         | Proposed Artificial Intelligence and Data Act (AIDA) <sup>36</sup> | Risk-based framework for high-performance AI, requirements for human oversight, transparency, fairness, security, accountability. Prohibitions and punishments.                                                                    | The proposed bill has not yet been adopted.                            |
| United Kingdom | Principles-based approach <sup>41</sup>                            | Five cross-sectoral non-binding principles (security, transparency, fairness, accountability, adversariality). Proposed AI Regulation Bill.                                                                                        | First of all, soft law, the potential for future targeted legislation. |
| Japan          | Artificial Intelligence for                                        | Voluntary Guidelines for AI Developers,                                                                                                                                                                                            | The guidelines are in place. The law on                                |

|           |                                                                                         |                                                                                                                                                                                   |                                                                                     |
|-----------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|           | Business Recommendations v1.0 <sup>47</sup>                                             | Vendors, and Users. A potential upcoming law on artificial intelligence, with obligations for designated developers.                                                              | artificial intelligence is expected in 2025.                                        |
| China     | AI Safety Management System, Regulations on Algorithms and Deep Synthesis <sup>51</sup> | Mandatory regulations on recommendation algorithms, deep synthesis, generative artificial intelligence. Multi-level risk management. Obligations to developers, providers, users. | An active regulatory environment with implemented rules.                            |
| Australia | AI Voluntary Ethics Principles <sup>57</sup> , Proposed Mandatory Fencing <sup>46</sup> | Eight Voluntary Ethical Principles. Proposals for mandatory fences for high-risk AI. Responsible AI policy in government agencies.                                                | First of all, voluntary, moving towards potential mandatory rules for high-risk AI. |

## 5. Impact of Ethical and Unethical Use of AI:

The way AI is applied, whether ethical or unethical, has profound implications for culture, society, and the workforce.

### 5.1. Cultural influence:

60. By respecting different cultural norms, values, and expectations, AI systems can be designed to avoid perpetuating biases that may be inherent in the data on which they are trained. However, the current situation with AI ethics often reflects Western-centric biases, which can lead to challenges in AI development. really sensitive to the nuances of non-Western cultures. Terms such as "fairness" and "privacy" can have different meanings in different cultural contexts, necessitating a more inclusive approach to AI governance.<sup>60</sup>

On the other hand, unethical AI carries the risk of distorting and stereotyping non-Western cultures, potentially leading to incorrect cultural appropriation and marginalization. For example, generative AI models have been

shown to portray cultures through the lens of an outsider, sometimes reinforcing exotic or inaccurate images. and affect people's personal identities and economic opportunities <sup>65</sup>. The lack of genuine cultural fluency in current AI models, which often resort to simplistic and harmful stereotypes, highlights the significant work that remains to be done in this area <sup>66</sup>. Without careful consideration of cultural diversity in the development of AI, there is a risk of exacerbating global cultural asymmetries and undermining trust in these technologies <sup>67</sup>.

## **5.2. Social impact:**

The social impact of the ethical use of AI is overwhelmingly positive, with the promise of improving decision-making processes, increasing fairness and strengthening privacy protections <sup>26</sup>. By adhering to ethical principles, AI can be used to solve social problems, promote inclusion, and ensure that technological advances benefit all members of society. role in protecting privacy, identifying and mitigating misinformation and bias, and ultimately contributing to more equitable and just societies <sup>70</sup>.

On the other hand, the unethical use of AI poses significant societal risks. Biased AI systems can lead to discriminatory outcomes in critical areas such as recruitment, credit, and criminal justice, perpetuating and even exacerbating existing inequalities. Violations of privacy and human rights are another major concern, as unethical AI can be used to collect and process huge amounts of personal data without consent, potentially leading to misuse and violation of fundamental freedoms <sup>74</sup>. The spread of misinformation and the creation of deepfakes through unethical AI can undermine trust in sources of information and threaten democratic processes<sup>75</sup>. In addition, the lack of transparency and accountability in some AI systems can make it difficult to address harms and undermine public trust in institutions <sup>68</sup>. The consequences of ignoring the ethics of AI can lead to increased social injustice, loss of trust, and slower societal progress.

## **5.3. Clerical influence:**

The application of AI has significant implications for clerical work and employment, both ethical and unethical considerations. Ethical AI can automate many of the routine and repetitive tasks typically performed in clerical positions, resulting in increased efficiency and productivity. Such automation can free up people to focus on more complex, strategic, and creative tasks, potentially leading to enriching jobs and creating new opportunities. However, the widespread adoption of AI in clerical work also raises ethical concerns about the potential displacement of jobs and the need to retrain and upskill the workforce.

Unethical or unsupervised adoption of AI in office facilities can exacerbate socioeconomic inequalities, leading to significant job losses, especially for low-skilled workers who may find it difficult to transition to new positions. There are also concerns about the potential for increased control and oversight by employers through AI, which could negatively affect workers' autonomy, dignity and mental

health<sup>87</sup>. Algorithmic bias in AI systems used to perform tasks such as job allocation or performance evaluation can lead to discriminatory outcomes and unfair treatment<sup>76</sup>. Lack of transparency in how these AI systems make decisions can also create difficulties in determining accountability and addressing any negative impacts on workers<sup>76</sup>. While AI offers opportunities to streamline clerical work, it is critical to consider the ethical implications related to job safety, worker well-being, and fair treatment to ensure a responsible transition to an AI-driven workforce.

## 6. Future trends and forecasts:

Experts have made various predictions about the future ethical use of AI, expressing a mixture of optimism and concern. A major concern for many is that ethical principles focused primarily on the public good may not be the main driver of AI development by 2030, potentially overshadowing ethical considerations. Difficulties in reaching a global consensus on ethical standards and the challenges of enforcing them are also key challenges<sup>91</sup>.

Despite these concerns, there is a sense of optimism about the growth of the "making AI safe" ecosystem.<sup>93</sup> As new regulations are implemented and public awareness of AI ethics issues increases, organizations are expected to face more pressure to demonstrate their commitment to ethical principles. This could lead to more specialized ethical AI teams and a greater focus on third-party risk assessment.<sup>93</sup> In addition, the development of AI ethical standards and benchmarks is expected to be critical to identifying and measuring fairness, transparency, and other key ethical characteristics of AI systems.

Looking to the future, unethical AI will exacerbate existing social inequalities and create new challenges.<sup>94</sup> Systematic error in algorithms caused by problems in training data and design processes is a major concern, especially in sensitive areas such as healthcare and criminal justice. veracity in AI-generated content.<sup>95</sup> In addition, ongoing AI-powered automation is expected to continue to have an impact on the labor market, potentially leading to job displacement and increased economic inequality.<sup>96</sup> However, there is also hope that by focusing on the ethical development of AI, these challenges can be mitigated, leading to a future that will lead to a future that can lead to the development of AI ethically. in which AI technologies will be used responsibly for the benefit of individuals and communities by reducing bias and promoting equity<sup>73</sup>.

## Findings:

The analysis shows a global recognition of the importance of ethical considerations in the development and application of AI. Microsoft has created a robust and well-documented framework based on six core principles supported by an internal standard, specialized governance frameworks, and a wide range of resources and tools. Comparing this framework to Google, Amazon, IBM, and

Meta highlights a common set of ethical principles, although the emphasis and implementation strategies may differ. The legal landscape is characterized by dynamic evolution, with the EU taking the lead in establishing comprehensive rules, while other regions are exploring different approaches. Understanding the cultural, social, and clerical implications of ethical and unethical AI is critical to addressing the challenges and reaping the benefits of this transformative technology. While ethical AI promises to bring about positive change in society, unethical applications carry significant risks related to bias, discrimination, privacy, and economic disruption. Future trends suggest a growing emphasis on AI safeguards and the emergence of ethical standards, but concerns remain about the primacy of ethical principles in the pursuit of profit and control. The comprehensive table of resources provided in this report offers a valuable framework for further in-depth exploration of these critical issues.

#### **COMMENTS:**

As can be seen from this detailed review, the governments of all countries are well aware of the need for legal regulation of AI, the establishment of uniform norms for the ethics of the use of AI and its safety.

And in Russia, legislators are actively working on these important issues. Federal Law No 258-FZ "On Experimental Legal Regimes in the Field of Digital Innovations" was adopted on July 31, 2020, several Federal Laws on amendments to the Law on Banking Activities, Government Resolutions on the establishment of EPR for unmanned vehicles in medicine.

Currently, the Law "On the Regulation of Artificial Intelligence Systems in Russia" is being developed. The group includes lawyers, representatives of consulting companies and market participants developing AI, they said. The initiative is formalized in the form of a bill "On the regulation of artificial intelligence (AI) systems in Russia." The document was discussed at meetings of working groups in the State Duma, in Business Russia, as well as at industry discussion platforms, RBC's interlocutors noted.

The draft law proposes:

- Introduce the concept of artificial intelligence (a set of technological and software solutions that imitate human cognitive functions, including self-learning, search for solutions without a predetermined algorithm, and provide results comparable to the results of human intellectual activity).
- The concept of AI technologies (these include technologies of computer vision, natural language processing, speech recognition and synthesis, data mining, machine learning, etc.).
- The concept of AI systems (information systems that imitate human cognitive functions using the technologies listed above), the developer, operator and user of such systems, etc.

- Introduce requirements for the labeling of AI systems, that is, a mandatory information designation that will indicate the use of AI in user interaction. Labeling must be "explicit, unambiguous and easily identifiable." It must be provided by the operator of the AI system before each user interaction. The requirement will not apply to AI systems used in closed technological processes, for internal automation of organizations, and a number of others.
- To introduce a classification of AI systems according to the level of potential risk: systems with an unacceptable, high, limited and minimal level of risk. It is proposed to prohibit in Russia the development and operation of AI systems that belong to the category with an unacceptable level of risk, that is, that pose a threat to the security of the individual, society and the state, as well as violate the fundamental rights and freedoms of man and citizen; for high-risk systems (those used in healthcare, transport, finance, law enforcement and other areas where it can create significant risks to the life, health, fundamental rights and freedoms of citizens) to introduce mandatory state registration and certification; for those with a limited level of risk – internal quality control systems, voluntary certification.
- Introduce liability for causing harm to life, health or property for persons involved in the development and operation of artificial intelligence systems. But the document stipulates that the developer will not be liable if he has taken all necessary measures to prevent harm, if the damage occurred due to a violation of the rules for the operation of the system and in several other exceptions, the operator of AI systems will be exempt from liability if he proves that the damage occurred through the fault of the developer as a result of the user's violation of the rules for using the system, etc high-risk AI systems.
- To determine who owns the rights to the result of intellectual activity created using AI, it is proposed to focus on whether there was a significant creative contribution of a person (whether a person determined the parameters and criteria for creating the result, whether he made a creative selection and refinement, whether he made creative decisions in the process of creation). If there was such a contribution, then the exclusive right to the result should belong to this person, if there was none, then to the operator of the AI system (valid for 50 years).

If adopted in its current form, operators and developers of AI systems will have to comply with its requirements within a year of its entry into force; high-risk AI systems that were created before the adoption of the project will have to undergo mandatory certification within two years.<sup>97</sup>

I believe that the drafters of the draft law are on the right track. By analogy with the European regulation on AI, it is proposed to classify AI systems according to the level of potential risk. Systems with an unacceptable level of risk are proposed to be banned in Russia both for operation and development. For systems with medium risk, according to the project, mandatory certification and registration are provided, and for systems with low risk - voluntary. According to experts, the new legislative initiative will launch a system for accounting for domestic solutions with AI with a risk status in order to quickly respond to potential data leaks.<sup>98</sup>

This is what is really relevant and requires the attention of legal scholars and legislators. I would like to believe in the common sense of the deputies, who must finally determine the true status of AI and AI robots as objects of law (not subjects), taking into account the modified norms of Roman law (the status of a slave).

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