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Historiography and Death Toll of World War I and World War II Famines in Iran

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Historiography and Death Toll of World War I and World War II Famines in Iran

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Abstract: The remarks by the Supreme Leader of the Islamic Revolution on the toll of the famines that afflicted occupied Iran in World War I and World War II indicate a desire to incorporate these calamities in Iran's national narrative and collective memory. His criticism of famine historiography and stated toll numbers, and the unfolding famine in Gaza, justify a fresh look at Iran's historical wartime famines. This article re-estimates the toll of the three famines by using overlooked and neglected primary sources and in ways not previously done. It builds a trajectory of Iran's demographic developments from 1810 to 1944, and derives the toll of each famine. The least known famine, that of World War II, began in the fall of 1940 and combined with typhus epidemics took 5.5 million lives in five years. World War I famine was even more deadly than previously estimated, and the 1869-73 famine toll, though reduced, was not far behind. At least 15.5 million Iranians died in the two world wars, a fact not reflected in the history of the conflicts. Iran's 1944 population of 12 million was unchanged from that of 1850 and a century of population growth obliterated.

Keywords: Iran; famines; 1869-73; World War I; World War II

In remarks to a group of academics and poets in Mashad on April 16, 2023, as reported in the daily *Khorassan* and by Iranian Students' News Agency (ISNA), Ayatollah Seyyed Ali Khamenei, the Supreme Leader, reminded the gathering of the refusal of Western countries to provide Iran with the Covid-19 vaccine despite having received payment. He compared the vaccine denial to the Allied failure to provide Iran with food and medicine during their occupation in the two world wars, adding that he had no doubt that hunger would again be used as an instrument of war. Vindication came a few months later when reports and images of starving children and reports of unburied corpses in Gaza partially eaten by dogs, so reminiscent of the reports on the Iranian famines (Majd, 2013, 2017), appeared in newspapers and on the web.

Ayatollah Khamenei noted that while there had been public discourse and increased awareness of the severity and catastrophic toll of famine in World War I, in contrast, there was little awareness of and even less discourse concerning the famine of World War II which had inflicted a similar toll. He took exception to its stated duration (1942-43) and declared that it was much longer than two years and its toll had been correspondingly understated. The remarks indicate a desire to include the two famines in Iran's collective memory and national narrative (Edalati and Imani, 2024). They also justify a review of the historiography and a re-estimation of the death toll of the two famines. In addition, the unfolding famine in Gaza is likely to stimulate greater interest by students and scholars in Iran's wartime famines.

In order to determine the toll of each famine in the absence of a population census prior to 1956, this study investigates demographic developments before and after each calamity using an array of overlooked and neglected primary sources, and constructs a trajectory of demographic developments from 1810 to 1944, and derives each famine's toll. In addition, the demonstrated consistency of the data provides a check on the accuracy of the results. It is found that the death toll of the two famines exceeded the prior estimates, and World War I was doubtless the deadliest. The largely forgotten famine of World War II had claimed 5.5 million victims. Conservatively, 15.5 million Iranians

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perished in the two world wars. Eighty years later, they remain absent from the pages of the history of the two wars.

Demographic Background, 1810-1869

Sir John Chardin (1643-1713) gave Iran's population in the 1670s at 40 million, and that of Isfahan at 1 million which exceeded London's population (Curzon, 1892, vol. 1: 9). Population plummeted in the 18th century and Sir John Malcolm (1769-1833) estimated the population in 1810 near the end of the first Russian-Persian War (1803-1812) at a mere 6 million and Isfahan at 100,000 (Balfour, 1922: 22-23; Issawi, 1971: 25-26**).**

The population in the 1840s is given at 10 million by Justin Perkins (1805-1869), the first American missionary to Iran (Perkins,1843: 144). Sir Henry Rawlinson (1810-1895) estimated the 1850 population at 10 million (Curzon, 1892, vol. 2: 492), while the *Weimar Almanac* gave the 1850 population at 11 million (McCulloch, 1854: 493). Similarly, Perkins places the population in the early 1850s at 12 million (Perkins, 1861: 18). It turns out that the 12 million is a pivotal number to which the population returned in 1900, 1926, and 1944. Eugène Flandin (1809-1889) and Pascal Coste (1787-1879) attachés at the French Legation, had placed the 1854 population at 13 million "while noting that it is on the low rather than the high side" (Flandin and Coste,1854: 407-8). From the concurrence of these sources it can be concluded that population had grown at 1.7% annually: at 6 million in 1810, as predicted, it stood at 10 million in 1840, and at 13 million in 1854. Furthermore, growing at 1.7%, it should have reached 17 million in 1869, and this indeed is indicated in at least two sources.

Iranians placed the 1865 population at 16 million (Ussher, 1865: 643). In the 1850s and 1860s, the Iranian government spent much effort and money in unsuccessful attempts at setting up large scale modern factories (Gilbar, 1979: 199-200). In his 1867 book, published under the auspices of the French government, Julien de Rochechouart (1831-1879) wrote that "in a country that possesses a population of 16 to 20 million souls," there was sufficient demand for the output of a proposed steel mill in Mazandaran (de Rochechouart,1867: 233). To repeat, based on the data, the population had grown by 1.7% per year during 1810-1869, that is from 6 million in 1810 to 13 million in 1854 and stood at 17 million in 1869 at the onset of the Great Famine.

Tabriz, Tehran and Isfahan were the largest cities. A house census in Tabriz in the 1860s had enumerated 32,000 Moslem households, 3,000 Armenian inhabitants and 2,000 soldiers (Gilbar, 1979: 181). Given an average household of 7.67 persons (Houtum-Schindler, 1897: 120), Tabriz's population circa 1865 was 250,000, and was the hub of trade with Russia and Europe.

Tehran's population in the 1850s is given at 70-80,000 (Gilbar, 1979: 181). Its 1865-1866 population was given at 100-120,000 (Ussher, 1865: 614; Mounsey, 1872: 96). Tehran in 1865 was "a place of considerable trade, of which we had evidence in its bazaars" (Ussher, 1865: 614). Similarly, returning to Tehran in 1862 after an absence of four years, the French envoy, Arthur de Gobineau (1816-1882), had commented on the economic and construction boom: "To sum up, the country is not in the same state as before… very evident progress has been made and nothing leads one to predict that this ascending movement has to stop" (Issawi, 1971: 18). In contrast, Isfahan whose population was given at 100,000 in 1810, had declined. An official Persian report in 1868 gave its population at 75,000 (Gilbar, 1979: 182).

Historiography of the Great Famine of 1869-1873

The death and devastation in the Great Famine of 1869-73 is considered by Iranian historians to be comparable to the Mongol invasions of the 13th century. It was a precursor to the famines of 1876-79 in China, India, North Africa and Brazil, said to be "the worst ever to afflict the human species" (Davis, 2002: 1-8). The Iran famine was well documented by contemporaries (Brittlebank, 1873; Bellew, 1874; von Thielmann, 1875; St. John et al., 1876; Bassett, 1886). There were extensive reports in British, Indian, and American newspapers. The Iranian government, however, had denied the famine for two years and had subsequently downplayed its severity (Majd, 2017: 17-23). There is no mention of the calamity in the writings of Albert Houtum-Schindler (1846-1916, hereafter Schindler) who was in the employ of the Iranian government and a resident from 1868 to 1909. It was forgotten

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until publication of scholarly articles more than a century later (Gilbar, 1976; Okazaki, 1986; Melville, 1988; Seyf, 2010). But still Davis (2002) makes no reference to it and it is not included in his list of nineteenth century famines.

British members of the Persia-Afghan Boundary Commission of 1870-72 gave widely varying estimates of the toll. Sir Frederick J. Goldsmid (1818-1908), head of the Commission, placed the toll at 200-300,000 (Goldsmid, 1873: 65-82), while some other members placed the toll at 500,000 and gave the post-famine population at 10 million (St John et al., 1876, vol 1: 98). Henry Walter Bellew (1834-1892) provided a detailed account of the famine. In his travel log of April 14, 1872, he stated that the toll "cannot be less than a million and a half" (Bellew, 1874: 336-37), and the famine had continued at least until the end of 1873. In a letter dated December 31, 1873, American Missionary James Bassett had reported that despite the bitter cold the streets of Tehran "are filled with half naked and wretched crowd" (Majd, 2017: 87). Bassett and American missionaries initially put the death toll at 3 million but in 1873 raised it to 3.5 million. Several contemporary Iranian estimates varied from 2 to 5 million (Majd, 2017: 121-22). Other Iranian sources in the 1870s stated that half of the population starved, and a quarter immigrated and implied that Iran lost three quarters of its population (Gurney and Safatgol, 2013: 155-56). Majd (2017: 124) placed the toll at over 10 million or two-thirds of the population.

In resuscitating the famine, Gilbar declared that "only Sir Henry C. Rawlinson, for the 1850s and 1860s, and Albert Houtum-Schindler, for the remaining years of the nineteenth century, had the necessary knowledge and the opportunity to make fairly reliable estimates" (Gilbar, 1976: 128). Seemingly citing Bellew, he put the toll at 1.5 million out of 10 million, and the 1872 population at 8.5 million. But, as noted, 10 million was the reported population in the 1840s and it cannot be assumed that it had remained unchanged until 1869. Moreover, his post-famine population of 8.5 million differs from Rawlinson and Schindler whom he praises. Rawlinson placed the 1873 population at 6 million, and Schindler gave 7.65 million for 1884 (Curzon, 1892, vol 2: 492-94). As below described, Schindler had adopted a growth rate of 0.75%, so that his implied estimate for 1873 was 7 million. Finally, as noted, Bellew's statement that the toll cannot be less than a million and a half was from his travel log of April 14, 1872, and the famine had continued long after he wrote it.

Toll of The Great Famine of 1869-1873

Iran's 1869 population was 17 million. Its post-famine population is given at no more than 5-7 million. For instance, the *New York Herald* of July 29, 1871, refers to the "unparalleled mortality" of the famine and declares "Persia already half depopulated" and the famine lasted two more years. On Iran's population in 1872, Augustus H. Mounsey (1834-1882) wrote that: "a gentleman, who has been long a resident in the country and has traversed it in every direction, states that the total number of inhabitants falls short of 5,000,000 souls" (Mounsey, 1872: 96-97). Rawlinson gave the 1873 population at 6 million and Schindler implied a population of 7 million. Taking Rawlinson at the mid-point of 5-7 million, it can be stated that population had declined by 11 million, nearly 65%.

The population of Tabriz fell 60%. Its population in the 1860s was 250,000. An Austrian diplomat based in Russia who visited Tabriz in October 1873 reported that although the city was the size of St Petersburg and Moscow, "the population is only estimated at 100,000 souls… The misery inflicted during the last famine appears to have been fearful… newly built cemeteries gave evidence of the multitude of victims" (von Thielmann, 1875: 44-55). Tehran's population fell from 120,000 in 1866 to 70,000 in 1873 (Mounsey, 1872: 96; Gilbar, 1976: 149). Curzon stated that the population of Sabzevar in Khorassan fell from 30,000 in 1869 to 10,000 in 1873. Its 1891 population he put at 18,000 and added that Sabzevar "is only now beginning to raise its head again" (Curzon, 1892, vol 1: 268).

The heavy toll is confirmed by the proportion of uninhabited houses. The British agent in Mashad had informed the Goldsmid Mission in May 1872 that "not half" of the 9,000 houses in Mashad remained occupied (Majd, 2017: 57). Traveling in South Iran in 1875, Charles M. MacGregore (1840-1887) had reported that of the 2,700 houses in Kazerun, only 1,000 (37%) were inhabited, and adds that this occupancy rate "is about the usual proportion throughout Persia" (MacGregore, 1879, vol 1: 15-21).

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There was considerable immigration to Russia, India and Turkey during the famine. Quoting the *Bombay Gazette* of October 28 1871, the *New York Times* of December 4, 1871, reported that "more starving Zoroastrians have left for Bombay." Quoting the *Times of India*, the *Times* of December 19, 1871, wrote: "Large parties arrive in Bombay from Persia by every vessel from the Persian Gulf… Some 500 attenuated Zoroastrians had reached Bunder Abbas but, as they were nearly all sick, the Persian authorities placed them in quarantine".

In north Iran during the 1860-61 food shortages, British diplomat E.B. Eastwick had reported that the road between Kazvin and Rasht was "lined" with migrants heading north presumably to Russia (Seyf, 2010: 294). In August 1871, an American missionary in Tabriz reported that "the rush to Russia was by thousands" (Majd, 2017: 102). A three-day quarantine at the Russian and Turkish borders instituted in August 1871 had not deterred the exodus. The missionaries had been besieged by "Multitudes ask(ing) enough to get a passport and a crust of bread in order to get to Russia" (Majd, 2017: 106). The missionaries had responded: "A large number of famishing refugees from other provinces were assisted with food, and some were helped on their way to Russia" (Bassett, 1886: 54). Even in the harsh winter of 1872, "The roads were known to be thronged with refugees who were endeavoring to get to Russia and Turkey" (Bassett, 1886: 57). Sheikh Ibrahim Zanjani (1853-1934) had witnessed the famine near Zanjan: "Without exaggeration, half of the population of Iran died because of starvation during the famine … Those who could emigrated to Gilan and Russia" (Majd, 2017: 93). Similarly, Seyed Ibrahim Zeinol-ol-Abedin Isfahani, writing on May 13, 1873, stated that half the population had starved, and half of the survivors had emigrated to neighboring countries and beyond (Guerney and Safatgol, 2013: 155).

It may be concluded that of the 17 million in 1869, at least 8.5 million perished, at most 2.5 million emigrated, and 6 million remained in 1873. To the extent that immigration is overstated, the death toll is understated. The famine had restored the 1810 population and wiped out 60 years of population growth.

Demographic Developments, 1873-1914

Schindler gave the 1884 population at 7.65 million and declared that for the last decades of the 19th century "the population increases ¾ per cent per annum, which I have found elsewhere to be the usual ratio", and he raised his estimated growth rate to 1% for the beginning of the 20th century (Schindler, 1897: 120; Gilbar, 1976: 133). The unambiguous statement notwithstanding, the 0.75% growth rate was nevertheless attributed to Curzon by Sobotsinskii and by Issawi (1971: 20 and 33), despite Curzon's rejection of Schindler's population estimate and adopted growth rate. Curzon points out that the greatest challenge in deriving Iran's population in the absence of a census was estimating its rural population. He shows that Schindler had systematically undercounted the rural and hence the total population and that his suggested growth rate of 0.75% was far too low. He rejected Schindler's implied 1891 population of 8 million and places the 1891 population at *at least* 9 million (Curzon, 1892, vol 2: 492-494).

Despite Curzon's criticism, Schindler had placed the 1900 population at 9-9.25 million and that of 1910 at 10 million (Gilbar, 1976: 127). His numbers had been adopted by Russian geographers Medvedev and Sobotsinskii who extended Medvedev's 10 million total population and 2.5 million urban population (25%) to 1913 (Issawi, 1971: 33). But Sobotsinskii next declared that given the low level of development "in Persia the urban population does not exceed 12 percent of the total" (Issawi 1971, 34). He thus undermines his own argument because an urban population of 2.5 million and 12% ratio imply a population of 21 million, which, interestingly, is given below by other Russian sources.

The accuracy of Rawlinson's 6 million in 1873 is shown by its consistency with subsequent figures. Samuel Benjamin (1837-1914), the first American envoy to Tehran, gave the 1886 population at "not far from nine millions" (Benjamin, 1886: 128). Curzon gave the 1891 population at at least 9 million (Curzon, 1892, vol 2: 492-494). In January 1900, the Department of State had instructed its envoy in Tehran to report the population of the country. The reply reads in part: "I… beg to state that hitherto no census of the population of Persia has ever been taken, consequently no authentic statistics exist on the subject. It appears, however, from the observations of travelers, surveyors and

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others, whose estimates on the whole fairly agree, that the population at the present time is about twelve millions" (Bowen, March 15, 1900). Iran had just recovered its 1840s population. Moreover, contrary to Gilbar's claim, 12 million was not Bowen's "guess" (Gilbar, 1976: 128-29). It is a consensus figure by those deemed knowledgeable.

Population had grown from 6 million in 1873 to 12 million in 1900, an average annual growth rate of 2.6%. Growing at 2.6%, it stood at 9.5 million in 1891, justifying Curzon's figure of *at least* 9 million. At 12 million in 1900 and growing at 2.6% annually, the population would have been 16 million in 1910, justifying several contemporary estimates. Morgan Shuster, chief of finance: "The population of Persia has been singularly misrepresented… Europeans who are familiar with the situation estimate the population at from 13,000,000 to 15,000,000 inhabitants" (Shuster, 1912: lx). The American Minister on population in 1910: "The Persians think the population of the country has been much understated, one intelligent acquaintance of mine putting it at 17,000,000" (Russell, May 11, 1910).

American, Russian, French and Iranian contemporary sources placed the 1914 population at 20-21 million. From the American Minister's report on Russo-Persian relations: "Persia is as large as Austria, France and Germany combined with a population of 20,000,000" (Russell, March 11, 1914). He next refers to "the present revolutionary struggle of 20,000,000 Aryans in Persia" (Russell, June 14, 1914). On the population prior to World War I, economist Hossein Moschar-Ghadimy wrote: "The population of Persia has been given at 12 to 15 million inhabitants, but the figure given by Tchernazoubof, a member of the Russian geographic mission to Persia, is 21 million. This number has the concurrence of Monsieur Lampre, head of the French archaeological mission to Persia" (Moschar-Ghadimy, 1922: 8).

Growth of Tehran and Tabriz, 1873-1914

After falling to 70,000 in 1873, by 1887 Tehran had become "one of the most flourishing and active cities of the East, with a growing population of nearly two hundred thousand souls" (Benjamin, 1887: 56). One can place confidence in Curzon's estimate of Tehran's 1891 population: "I was informed, however, that the most reliable computation, determined upon a joint reckoning of the births and deaths in the city and of the amount of food brought for consumption into its bazaars, fixed the present (1891) total at from 200,000 to 220,000" (Curzon, 1892, vol 1: 303). The next reliable figure, also based on food consumption, is given by the American envoy in May 1910: "Our English clerk-interpreter… estimates the population at 300,000… From another foreigner I get the estimate of between 350,000 and 400,000, based on the amount of bread consumed, the bakeries being more or less under government supervision" (Russell, May 11, 1910). During 1873 to 1891, Tehran grew at an annual rate of 6.6%. Growth slowed to 3.2% during 1892 to 1910. Growing at 3.2% yearly, Tehran's 1917 population would have been 500,000. This is confirmed by the elections to the Fourth Majlis in October 1917 (Caldwell, October 10, 1917). It is also the figure given in Iranian diplomatic reports (Zoka-ed-Dowleh, December 6, 1920).

Tabriz was reported at 100,000 in 1873. Its 1884 population is reported at 200,000 by an American missionary who observes that "The city has been much larger and more populous than it now is" (Bassett, 1886: 65). Its 1913 population is reported at 300,000 by Sobotsinskii (Issawi, 1971: 34). In the 40-year period 1873-1913, the population of Tabriz had tripled, an annual growth rate of 2.8%.

Migration and Foreign Trade

During the 1880s and continuing up to World War I, a massive flow of labor from all parts of Iran to southern Russia and the Volga region, documented by Z.Z. Abdullaev (Issawi, 1971: 51-52), indicated a robust population growth. Iranians had flocked to southern Russia: "Baku is even more a Persian city to-day than formerly, for every other person one meets wears the sheepskin cap of Persia" (Benjamin, 1886: 18-20). Baku quadrupled in twenty years: "When I passed through Baku in 1884 its population was about 60,000 or 70,000. To-day it is getting on for a quarter of a million" (Chirol, 1903: 23).

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Foreign commerce also grew rapidly. In 1857, Iran's merchandize imports were $14.6 million and its exports $14.7 million. Imports were dominated by cloth (63.2%), tea and sugar (11%), and drugs (6.3%). Main exports were raw silk (31%); wheat, tobacco, and livestock (33.5%); and textiles (27.2%). Raw cotton was 1% of exports and opium had not yet entered the picture (Gilbar, 1979: 210; Shahbazi, 1991).

In 1913 imports were $50.0 million and exports $38.3 million and a trade gap had opened (Wadsworth, March 12, 1914). Raw silk had disappeared and recorded exports were dominated by raw cotton, rice, opium, animal products, and carpets. Of the imports in 1913, 70% consisted of 4 mass consumption goods: cotton textiles, sugar and tea, flour and kerosene. Russia supplied two-thirds of imports and took one-half of exports. The 1901 customs treaty with Russia had consolidated Russian trade dominance (Issawi, 1971: 148). The trade deficit with Russia was $17 million in 1913. Worker remittances helped meet the deficit and maintain a stable exchange rate. Issawi (1971: 131-32) estimated that Iran's foreign trade in real terms had quadrupled between 1860 and 1913.

The relative magnitude of the trade sums is indicated by the fact that the daily wage of a laborer in 1913 was 2 krans, equivalent to 17.5 cents (Wadsworth, February 16, 1914). Staple food products were inexpensive and 2 krans constituted a subsistence wage (Wadsworth, February 16, 1914).

Historiography of The World War I Famine

Soon after the outbreak of World War I in August 1914, Iran's neutrality was violated by Russia, Great Britain and Turkey (Majd, 2013: 13-32). Unlike World War II, Tehran was not occupied by the invaders in World War I and there was no press and mail censorship. Consequently, the famine received extensive press coverage and was widely reported by American missionaries, as in 1869-73 famine. Memoirs of British officers also contain much on the famine (Donohoe, 1919; Dunsterville, 1920; Sykes, 1921, vol 2; Dickson, 1924; Forbes-Leith, 1927). Usually referred to as the Great Famine of 1917-19, extreme food shortage was already rampant in 1916, and more accurately it should be called the Great Famine of 1916-19 (Cronin, 2021: 9-10).

An early indication of the toll is given by Frances Packard, wife of an American missionary in Urumia, Azerbaijan (emphasis added): "Her villages are for the most part deserted… Her fields and vineyards lie waste and uncultivated, and in the city streets are full of starving beggars, while the formerly well-to-do Moslems are reduced to poverty. The Christian population are all in exile, while the Moslems have been reduced *50 per cent* by war, sickness and famine" (Packard, 1920: 44).

Arthur C. Millspaugh (1878-1955) who arrived in Tehran in the fall of 1922 as Administrator General of Finance, makes just two very brief references to the famine (Millspaugh, 1925: 77 and 114). He does not cite Balfour's 1922 book and only quotes from a speech of little substance that Balfour had given in the House of Lords on May 19, 1925 (Millspaugh, 1925: 116). But he provides useful figures on rural devastation in Azerbaijan: "About six months after my arrival in Persia, the financial agent of Garrous in northwest Persia, reported that of the two hundred and forty villages in his district, one hundred and six were ruined and without inhabitants, while the remainder were partly ruined and partly tenantless" (Millspaugh, 1925: 251). Thus, 44% of the villages had been totally depopulated, and the remaining 56% had been partially depopulated and ruined. The rural population had fallen by at least 50 percent. Millspaugh (1926: 3) stated that the government planned to conduct a census of the country. Instead, he was dismissed in 1927 and not until 1956 was a census conducted and it took five additional years to "tabulate" the results (Bharier, 1968). Clearly, the two Pahlavis were in no haste to conduct and publish a census which would have provided clarity on famine losses in World War I and World War II. Similarly, it took ten years to "tabulate" the 1960 census of agriculture, and even then it was devoid of data on landownership (Majd, 2000: 128)

Mostafa Fateh (1896-1978) of the Anglo-Persian Oil Company also does not cite Balfour: "A Persian statistician, who took the estimated census of three large cities as the basis and compared them with the estimates of other writers, finds in his calculations that the population of Persia in 1914 was approximately 15,000,000… I am inclined to believe that the present (1926) population of Persia is about 10,000,000" (Fateh, 1926: 2-3). He implied that at least 5-6 million had perished during World War I. He downplayed the famine and instead emphasized "Early marriage and premature aging,

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the great length of the nursing period and the consequent impaired fertility of the female sex, can be mentioned in the first place. Secondly, the public sanitation and the consequent ravages of typhus, cholera, malaria and plague, can be mentioned. The most important reason, however, is war… and, above all, the violation of Persian neutrality during the Great War, followed by the invasion of the greater part of the country, coupled with famines, have contributed to the diminution of human resources of Persia" (Fateh, 1926: 2-3). A 1927 League of Nations report on opium production in Iran also gives the 1926 population at 10 million and notes its drastic decline without any mention that Iran had suffered a catastrophic famine during the occupation of the country in World War I (League of Nations, 1927: 2).

Julian Bharier (1941-2017) used retrogression, also known as backward progression, method and the 1956 census as base to estimate the population of Iran during 1900-1966 (Bharier, 1968: 273-79). Applying Schindler's 0.75% growth to 1900-25, and declaring his findings "the nearest one can get to the truth", he placed the 1900 population at 9.86 million, and that of 1914 at 10.89 million (Bharier, 1968: 275). But there is no mention of the World War I and World War II famines. Bharier cites works in which World War I famine is discussed (Balfour, 1922; Fateh, 1926), and he briefly acknowledges (in a footnote) that "some publications" had reported a large decline in population, but he dismisses them because they "give the usual Malthusian reasons for sudden declines in population" (Bharier, 1968: 279). Another study on "demographic developments in late Qajar Persia," is similarly devoid of a mention of World War I famine. Although Qajar era had lasted until 1925, Gilbar avoids any mention of the World War I famine, and for no declared reason stops at 1906, and declines to extend his analysis to the end of the Qajar period using Bharier's results. Given that Issawi (1971) is cited by Gilbar (1976: 130), he was aware of the World War I famine and displays it when he writes (emphasis added): "It seems that the ravages of the great famine were more severe than at any other period in the 19th and *early 20th century Persia*" (Gilbar, 1976: 144).

Charles P. Issawi (1916-2000) devoted a paragraph to the famine, including two brief quotes from Sir Percy Sykes (1867-1945) and a short one from Balfour (Issawi, 1971: 373). He refrains from mentioning the claim given in Balfour that 2 million out of 7 million had perished because, as above noted, his own population figure for 1914 was 10 million. He compared the 1956 population of Egypt (23.5 million) with Iran (18.9 million) and assumes a stable ratio of 0.8. The 1907 population of Egypt he gives at 11.3 million, from which he concludes that the 1907 population of Iran was about 9 million and that "the figure of 10,000,000 for 1914 does not seem unreasonable". However, a stable ratio over time implies similar growth rates, and given that Iran suffered two catastrophic wars and famines in the spate of 30 years (1914-45), Iran and Egypt did not have similar population growth and Issawi undermines his own argument by admitting that "it is highly unlikely that in 1907 to 1956 the Iranian rate of growth was as high as the Egyptian" (Issawi, 1971: 20).

Matters rested for another decade until Nikki Keddie and Yann Richard, citing Balfour (1922), wrote: "Adding to the discontent was a severe famine in 1918-19, which may have killed as much as one-quarter of the population in the north" (Keddie and Richard, 1981: 81; 2006: 75). The writers seemed to imply that the rest of the country had been spared.

Following the publication of a book that placed the toll at 8-10 million (Majd, 2003), two authors citing Balfour (1922) gave the toll at 2 out of 10 million (Pollack, 2004: 25; Ward, 2014: 123). Several had retained the 2 million but dispensed with the 10 million (Rubin, 2012: 508; Katouzian, 2013: 193; Abrahamian, 2008: 205). Some even substituted "epidemic" for "famine" in an apparent attempt to blame unsanitary conditions and inadequate healthcare (Matthee, 2019: 181-84; Abrahamian, 2013: 26-27). Recent studies of World War I famine in Lebanon and Syria do not even mention the contemporaneous famine in Iran (Fawaz, 2014; Tanielian, 2018).

Balfour's Statement on the Famine

James M. Balfour (1878-1960), presumably the son of Lord Arthur James Balfour (1847-1930), was the Chief Assistant to the British Financial Adviser in Persia during 1919-20. Upon publication in 1922, Balfour's book was seized by the British government and an expurgated version published (Majd, 2008: 63-65). Since the expurgated version has been cited as the source for the claim that 2

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million out of a population of 10 million perished in the famine, its relevant part is quoted. Commenting on the estimates of Iran's population, Balfour writes (added emphasis):

"In 1810 Sir John Malcolm placed the population at approximately six millions and since that date published estimates have ranged from six to ten millions. In 1884 General Schindler considered that something over seven millions was the correct figure, while five years later Lord Curzon put it at nine millions. To-day reference books usually give ten millions, but this cannot be regarded as more than a conjectural figure somewhere between the two extremes. These vary as widely to-day as in former times. For example, a high official put the population at something under fifteen millions, probably about thirteen, while at the *other extreme* a European of long residence, who in addition had had opportunities of gaining an insight into the question in the north during the famine of 1918, considered that prior to that disaster the total population was *seven millions*, and that two millions had died at that time. This estimate was admittedly based on experiences in the north-west, but the extent of the mortality at least was borne out by my own experiences when inquiring into the affairs of the Province of Teheran, when I found that approximately a quarter of the agricultural population had died during the famine" (Balfour, 1922: 22-23).

Balfour's claim that published estimates since 1810 "have ranged from six to ten millions" is untrue. His estimate of the rural death toll is significantly lower than that given by Packard (1920) and Millspaugh (1925). Moreover, the 7 million for 1914 was even below the 7.65 million given by Schindler in 1884. In addition, the implied 1920 population of 5 million is less than the population (6 million) given by Malcolm for 1810. Balfour makes clear that he does not subscribe to a 1914 population of 7 million and a 1920 population of 5 million. Nor had he "estimated" a famine death toll of 2 million. In short, Balfour has been inappropriately cited as the source for the claim that 2 million out of 10 million perished, or the claim that a quarter of the population of northern Iran perished. There is no valid source for these claims.

Toll of the World War I Famine

Unlike 1869-73, migration was not possible during World War I and World War II. Military operations by belligerents aside, wartime transportation scarcity was such that even Iranian government officials lacked travel to their provincial posts (Majd, 2013: 101-2). In the absence of immigration, the decline in population provides a good measure of the toll. At 20-21 million in 1914, Iran's population exceeded the 17 million in 1869.

In a report of February 1, 1919, on commerce and industry in the Tehran consular district, comprising all of Iran except Azerbaijan which constituted the Tabriz consular district, the American vice consul wrote: "The Teheran consular district embraces central and southern Persia, a vast but sparsely populated region, having not more than 6,000,000 or 7,000,000 inhabitants" (Bader, February 1, 1919). Adding the population of Azerbaijan, the vice consul's figures indicate that Iran's post-famine population was 8-9 million. The American minister and Sir Percy Sykes both placed the 1920 population at 10 million (Caldwell, April 10, 1920; Sykes 1921, vol 1: 13). An Iranian author wrote: "Without a census count, it is difficult to obtain an exact measure of the population of Persia. Geographers place it at 9 to 12 million souls" (Hechmet es Saltaneh, 1920: 10). Given that 12 million was assigned for 1926 by Millspaugh (1926: 3), and given the cited consular and diplomatic reports, the 1920 population was at most 9 to 10 million.

With a pre-famine population of 20 to 21 million and a post-famine population of at most 9 to 10 million, a death toll of *at least* 10 million, amounting to 50% of the population is determined. This contrasts with a prior estimate of 8-10 million (Majd, 2013; Edalati and Imani, 2024). Neutral Iran had suffered by far the highest absolute and relative death toll of World War I. The 1920 population was similar to that given by Curzon for 1891. Population growth of the preceding thirty years had been wiped out in three years. The population decline had "ended" the famine by making food more plentiful for the surviving population, a fact also observed in 1945.

World War I famine also killed at a higher rate than the preceding one. It killed at least 10 million in three years, whereas the 1869-73 famine had killed 8.5 million over five years, and 2.5 million had

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escaped death by immigrating. The World War I famine was the greatest calamity in the recorded history of modern Iran.

Toll in Tehran, Tabriz and Shiraz and Other Indicators

Tehran's population in 1917 was 500,000. Its 1920 population was given at 200,000 (Caldwell, April 10, 1920), and it was confirmed in 1922 when "the first census of the city of Tehran was attempted which showed that the population was 210,000" (Fateh, 1926: 4). The population of Tehran fell 60% to the 1891 level reported by Curzon.

In Tehran in March of 1918, the daily death toll from typhus was reported at 1,000 (Golshani et al., 2022: 764).

Tabriz also suffered catastrophic losses. An American missionary indicated that "about 90,000 have died in Tabriz of hunger and disease… Dr. Vanneman says he thinks typhus is killing more than any one of our cholera epidemics" (Jessup to Speer, August 9, 1918). The letter's date was prior to the outbreak of the influenza pandemic which had killed additional tens of thousands. Moreover, famine and disorders in Azerbaijan had lasted until 1920. Shiraz's population fell from 50,000 to 20,000-25,000, a 50-60% decline (Golshani et al., 2023).

Abdullaev wrote that before World War I, "the streets and bazaars of Iranian towns, especially the large commercial centers, were overcrowded with poor and unemployed persons, ready to sell their labor for a piece of bread" (Issawi, 1971: 50). An acute labor shortage developed after the famine: "Unskilled laborers are hard to find, for they constitute the class which was especially affected by famine. At present farm laborers and unskilled workers of various kinds receive 4 to 4 ½ krans per day, as compared with the pre-war wage of 2 krans. The increase in wages paid masons and other skilled workers has not been so marked. Formerly a skilled laborer received 5 krans per day, as compared with 7 krans to 8 krans, the amount now being paid" (Bader, February 1, 1919). At the pre-war exchange rate of $1=11.36 krans, the unskilled wage was 17.5 cents; at the post-war exchange rate of $1=5.25 krans, the unskilled wage was 86 cents, near five-fold increase.

Carpet weaving was the most important industry: "This industry has been greatly affected by the famine of 1917-1918 which caused the death of many of the best weavers. The Chief of Public Works at Kashan reports that the number of looms at that place was reduced from 968 to 255" (Bader, September 14, 1918). Sultanabad (present day Arak) was another important center: "Speaking of the Sultanabad market the rug trade is absolutely at a standstill… (and) most of the able weavers have died of hunger last year and consequently the production is very limited. The same could be said in a general way about all kinds of rugs" (Tirakiyan to Bader, July 12, 1919).

The 28 brick kilns in Tehran produced 30 million bricks a year before the war: "On account of the economic situation, building operations are practically at a standstill, and not a single brick was burned in Teheran during the past year. The… owners of brick-kilns state that many skilled workers died of starvation last winter" (Bader, September 9, 1918).

Historiography and Onset of World War II Famine

Despite its declared neutrality, Iran was occupied by Anglo-Russian forces in August 1941 (Majd, 2011; 2012). By the Anglo-Soviet-Iranian Tripartite Treaty of Alliance, January 29, 1942, the Allies imposed strict censorship in Iran (Majd, 2016: 27-41) which may explain the absence of memoirs by British officers after the war. Press censorship ensured that, unlike World War I, there were no Iranian newspaper reports on economic conditions or the famine. Offending foreign-bound private letters were seized by the British and Russian censors. Some of these letters, as paraphrased by the British censor, were found in the American archives, describing the dire conditions during the famine (Majd, 2016: 527-77).

In his 1946 book, Millspaugh declared 1942 as the onset of the famine and downplayed its severity, his earlier reports notwithstanding: "Finally in 1942 a partial crop failure brought Teheran and other cities for a short time to actual famine and for months to semi-famine… For several months the quantity of bread distributed to the people was insufficient and the quality bad. Isolated cases of starvation occurred; and a portion of the population, whose large numbers can only be guessed at,

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suffered from undernutrition as well as malnutrition" (Millspaugh, 1946: 45). Thereafter, the famine was forgotten until a brief mention by Pollack (2004: 43). An acclaimed book on food in World War II (Collingham, 2012) discusses the famines in India, Indo-China and China, but Iran is not mentioned. Jackson (2018) discusses food shortages but gives no indication of a famine or loss of life in Iran. Majd (2016) refers to the famine of 1942-43, and Iranian sources have referred to the Great Famine of 1941-45 (Dehghannejad and Lotfi, 2013: 45-68). A study of prenatally exposed persons in Tehran to famine in World War II showed a significant reduction in height compared with those born before or after, longterm adverse health consequences, and most likely shortened lifespans (Dadgar et al., 2020).

American diplomatic records indicate that the onset of the famine was the fall of 1940, a year before the Allied occupation, and that it had continued at least until the end of 1944. In the spring of 1940, the American consul in Tehran had traveled in Azerbaijan, northern and western Iran, the most productive agricultural regions: "To my mind, the outstanding feature observed on the trips was the condition of the peasants. There has been a shortage of bread, flour and sugar in Tehran for several months past, and the further I traveled from the capital, the more acute the shortage became… A plausible and commonly accepted explanation for the shortage is that the grain monopoly has contracted for exports based on the surplus available in 1938 above domestic needs. With fixed quantities of grain set aside for export, any deficiency must be made good by reducing domestic consumption. It now appears that the 1938 harvest was better than average, so that in a normal year there will be a deficiency and in bad crop years a serious shortage… Many trucks were seen on the roads of Azerbaijan hauling to Trebizond cotton and other goods intended for Germany" (Moose to Murray, July 20, 1940).

Scarcity in areas considered Iran's bread basket indicated dire conditions in the rest of the country. Famine conditions prevailed in the fall of 1940: "The severe shortage of wheat which has prevailed in Iran since the fall of 1940… has been partially alleviated and a serious crisis averted by the importation of wheat from India… The mere fact of importation shows that the situation is acute, for Iran is self sufficient in wheat and does not import except during famines…Tehran has suffered also, bread in recent months having been of very inferior quality." Disorders and bread riots had ensued in Tehran in January 1941, resulting in the dismissal of Tehran's mayor (Dreyfus, January 30, 1941).

In April 1941, the American consul had traveled in eastern, central and southern Iran: "I think the most striking feature of the trip was the scarcity of food throughout the country. With one unimportant exception, every place on the route was short of food, and in many, no bread whatever was available… The Iranian authorities did not restrict the exportation of foodstuffs after a severe shortage in 1940; and there is slight reason to believe that the shortage now will make them more prudent in the future. In fact, grain monopoly agents were collecting grain in the region about Bojnord when I passed through, for export to Germany via the Soviet Union" (Moose to Murray, May 23, 1941).

In August 1941, on the eve of the Allied invasion, the average wage was 8 rials per day: "Thus it will be seen that the wage is insufficient even for food for a family and most workers have a starvation diet… It is not possible to buy adequate clothing or even to dream of luxuries such as education of the children" (Minor, August 9, 1941).

Immediately after the Anglo-Russian occupation in August 1941, scarcity had reached crisis levels: "The food situation continues unimproved and near riots are developing in food and kerosene cues" (Dreyfus, August 27, 1941). Soon food was practically unobtainable: "Bread, the most important item in the diet of the underfed masses, was simply not to be had, rice was short, charcoal and kerosene for cooking were scarce. The poor people spent a great deal of their time in food queues where fighting and near rioting developed" (Minor, November 1, 1941).

Iranians were terrified that the famine of World War I was about to be repeated (Majd, 2016: 534). The government had unsuccessfully tried to reassure the people: "The Minister of Finance, to reassure the people on the important question of wheat shortage, announced by radio on September 28 that 100,000 tons of wheat have been purchased in India of which 3,000 tons have already arrived.

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He urged… consumers in Tehran to have patience". It was also announced that each person could buy up to six kilos of rice instead of the previous maximum of two (Dreyfus, October 1, 1941). On October 27, 1941, there were violent bread protests in Kermanshah and according to a British report, "Persian troops fired and used armoured cars believed 6 dead. Proclamation issued by General Sharbakte that price of bread would not be raised and no wheat transferred until need of own district assured" (Majd, 2012: 346).

The famine was subsequently greatly aggravated by the seizure and export of food and fuel by the occupying armies, commandeering the transport system, sequestering farm labor for military projects, restricting imports, and compelling the government to print money resulting in hyperinflation. In addition, the Allies brought 200-300 thousand (equivalent to the population of Tabriz) starving typhus-infested Polish and Jewish refugees from Russia (Majd, 2016: 206-221; Sternfeld, 2018), and then refused to provide the desperately needed typhus vaccine. Not providing the Covid vaccine in 2021 had a precedent in 1942 when the Allied occupiers declined to provide the typhus vaccine intended to prevent or at least mitigate a deadly epidemic in 1942-43 (Majd, 2016: 168-82). Despite treaty obligation and assurances that they would meet the "minimum needs" of the Iranian people, the Allies failed to deliver and for five years the "bridge to victory" became a land of famine and disease.

World War II Famine Toll

The current estimate of the toll based on US State Department figures for 1940 (15 million) and 1944 (10-12 million) is 4 million (Majd, 2016: 690). Other data, however, indicate that population in 1940 was about 17.5 million. Millspaugh (1926: 3) reported the 1926 population at 12 million. The 1937 population is given at 16.2 million in the United Nations Demographic Yearbook (Ramazani, 1975: 457), indicating a growth rate of 2.75% during 1926-37. Based on the latter, the 1940 population likely stood at 17.5 million, nearly the same as that of 1869 and 1910. A 1922 census of Tehran, as noted, reported 210,000 inhabitants (Fateh, 1926: 4). Another census of Tehran in 1933 reported 310,129 inhabitants (Engert, June 8, 1939). Tehran had grown at 3.6% annually during 1922-33, consistent with 3.2% noted previously, and its 1940 population likely stood at 400,000 similar to that of 1910.

In his reports to the State Department, Millspaugh who had returned in 1942 as financial administrator and in charge of food distribution, gave the 1944 population at 12 million, unchanged from 1926, while British officials placed it at no more than 10 million, about the same as in 1920 (Majd, 2016: 201). Millspaugh's 12 million is consistent with 18.9 million given in the 1956 census, indicating a growth rate of 3.3% during the first decade of the post-war baby boom, and similar to population growth of 3.1% during post-famine years 1920-26.

Iran's population fell from 17.5 million in 1940 to 12 million in 1944, a loss of 5.5 million that obliterated population growth of the preceding twenty years. Ayatollah Khamenei's statement that World War II famine was much longer and more deadly than it has been portrayed is undoubtedly accurate. The population decline, similar to World War I, had diminished the famine by making food more plentiful for the survivors. Pointing out the "improved" situation and the priority of supplying the newly liberated European countries, the Allied governments had quickly reneged on their obligation to supply Iran with wheat and in late 1944 notified the Iranian government that no grain imports could be expected in 1945 (Majd, 2016: 678-88). Given that hunger and typhus had persisted in 1945, the appropriate designation is the famine of 1940-45. Ayatollah Khamenei indicated that famine conditions were observed in Khorassan and south-east Iran as late as 1950. It is unclear if they were related to conditions in World War II or a reflection of the continued extreme poverty of these remote regions.

The Iran toll exceeded that of India's World War II famine (Mukerjee, 2010; Toye, 2010). India's population, however, was 300 million whereas Iran's just over 17 million, and while the Indian famine has received much scholarly attention, Iran's was long relegated to oblivion. It did not rival the calamity of World War I and was less deadly than the Great Famine of 1869-73, but was sufficiently lethal to once again restore the 1850 population. World population tripled during 1850-

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1950, while Iran's population had remained unchanged at 12 million and a century of population growth lost to famine.

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