# wespennest

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## Natur

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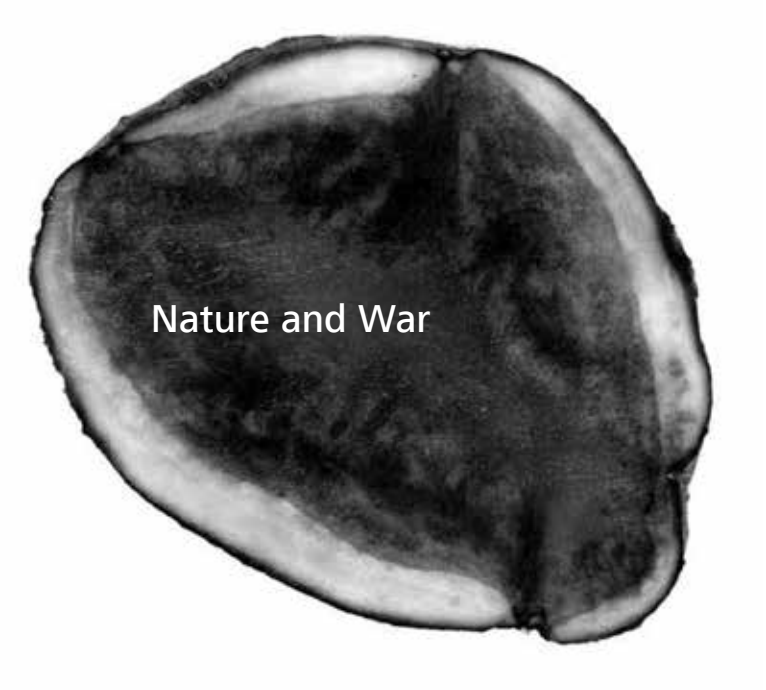


Photos: private archive

> *Nearly all of the wounded dragged themselves to the Danube, as did the wounded horses, and covered the long banks of the river to quench the burning thirst that wounds always produce*.[1]

Before the Danube underwent its major regulation, after breaking through the *Wiener Pforte* (Vienna Gate), it divided into numerous small arms and several large ones and formed *Werder* (river isles) and floodplains, among them, the island of Lobau. *Subject to daily changes,* at the start of the nineteenth century, at Groß-Enzersdorf and Kaiserebersdorf its many-armed bed reached a width of roughly one kilometer, even at normal water levels. However, despite its remarkable wealth of plants and animals,[2] the Viennese floodplains' labyrinth of islands, within which it was difficult to detect a main stream, was not "famous throughout Europe" at that time; according to the *Rheinische Bund* in 1809, the forested Lobau was above all, a "natural armory."[3] The poet Heinrich von Kleist wrote to his friend Joseph Baron von Buol-Mühlingen in Stockerau on May 25, 1809: "Today, Dahlmann and I are going to the battlefield in Kakeran [Kagran] and Aspern to take a look at everything and to inform ourselves about the course of events. – It is said that Archduke Carl crossed the Danube on the night of the 23rd to the 24th."[4]

Kleist and his companion Friedrich Christoph Dahlmann walked across the fresh battlefield near Aspern, which documented Napoleon's first defeat after 12 years of war. When they asked a farmer, who was collecting bullets, whether it was possible to wade through the small arm of the Danube over to the Lobau, he reported the two suspicious walkers[5] to the police.[6] At the time the two "traveler Siamese" were declared spies, they were most likely on the shores of the "Stad(t)ler" arm, then about 130 meters wide,[7] which formed the left bank of the Danube as the northernmost Danube arm, traversable only at low water. The arm, which surrounded the Lobau, separated the Danube from the Mühlau and the wide plain of the Marchfeld. In May of 1809, the Danube flooded, swelling to water levels of up to eight meters.[8]

Several written accounts tell of the Danube flooding caused by the Alpine snowmelt, which played a decisive role in this European war. During the occupation of Vienna, Napoleon had indeed taken the legendary *Danubius Pannonico-Mysicus* of 1726—the very precise, six-volume Danube monograph by the Bolognese cartographer Luigi Ferdinando Conte de Marsigli (1658–1730)—from Vienna's k.k. Hofbibliothek (the Imperial and Royal Court Library, today's National Library),[9] but at the decisive moment, the spatial strategist nonetheless misjudged the dynamics of "Général Danube." [10] Napoleon's army had marched via Albern into the Lobau, leaving behind a devastated landscape after the siege. In the 40 days or so "leading up to the Battle of Wagram, the river island was transformed into an artillery fortress. The

Lobau, earthwork and excavation for a trench for groundwater drainage; material was transported on the open carts of a light railroad (February 1941)


Lobau, derailment of the port railway locomotive in operation since 1940 at the Panozzalacke crossing (March 1941)

Lobau, flood during grading work on the construction of the harbor canal (March 1941)

soldiers camped mainly out in the open; the entrenchment work and the building of bridges were carried out amid a great lack of food. In the first days, countless horses were slaughtered; available to quench their thirst and for cooking was 'mere muddy Danube water, in which many corpses were floating.'"[11] According to the Berlin Salon lady and Vormärz author Luise Mühlbach, "The River Styx had flooded into the Lobau, to save the ferryman Charon the difficult work of bringing so many corpses down to the underworld, and it was as though it had transformed itself into a single, large corpse barque!"[12] After the occupation, the Lobau was hardly recognizable. The floodplain forest had disappeared, all trees had either been felled or uprooted, the highly vaunted floodplain game had escaped by swimming to the Marchfeld. Nothing remained but a sandy plain.[13] The theater of war on the Danube, over which wafted the "befouled air" from the great loss of human beings and animals on both sides,[14] claims its place in the books of Austrian mythology until today. The flag-waving Habsburg Archduke Carl, whom Kleist poetically romanticized to the "conqueror of the unconquerable,"[15] became an iconic historical figure deeply anchored in cultural memory.

The destruction of the floodplain landscapes over the last two centuries can be understood as a side effect of war, yet beyond that, it is possible to point out instrumental connections between war and a nation's nature. For both the Lobau on the left bank, as well as the Danube floodplains on the right bank near Albern, the respective military purposes and the type of warfare, but mainly the connection between the form of war and material resource situation of the states involved in the war played an essential role and actively transformed the space.

According to Edmund Russell's main thesis in his case study of more than a half-century of chemical warfare, war and the domination of nature are linked and have evolved mutually through a multitude of interactions.[16] In forms of war of the twentieth-century, practices for interactive and instrumental handling of non-human nature were generalized, and for their part, contain fundamental conceptualizations regarding nature. The unremitting, also violent handling of nature is labor, and not only in a metaphorical sense. Prototypically, in Turgenjev's 1862 novel *Fathers and Sons*: "She [Nature] is not a church, but a workshop wherein man is the laborer."[17] *The utilitarian pathos corresponded with the extent of secular desecration through exploitation. In the apocalyptic historical models of the brothers* Friedrich Georg and Ernst Jünger and also those of Walter Benjamin (albeit under a contrary ideological portent), the term work was expanded to war.[18] In his essay on Karl Kraus, Benjamin compared the war to a "gigantic battleground of bloody labor."[19] *For Ernst Jünger and—less poetically—for Friedrich Georg Jünger, the soldier and industrial worker in technical expansion and perfection, meld into one thus making both utterly dependent on technical equipment and organization.*[20] *According to Ernst Jünger, technology is the way in which the worker mobilizes the world.*[21] *War becomes total by both encompassing and standardizing all labor relations through militarization, which makes the economic exploitation and mobilization of natural resources decisive factors. The forced mass transformation of capital, labor, and nature into consumables for the wartime economy was associated with consequences and side effects that extended far into the future.*

**Arcadian resources**

> *Forge ahead with the whetted axe of reason, looking neither right nor left so as not to succumb to the horror that beckons from deep in the primeval forest.*[22]

The spatially and technically restricted impact of previous Kabinettskriege (cabinet wars), which formalized a limitation of violence against humans and nature, made it possible to speak of war in the early modern era as a theater or arena of the world. A paradigm that had first surfaced in the American Civil War ended with World War I. In his first essay, Kurt Tsadek Lewin, a student of Cassirer, field artillery officer, and gestalt psychologist who had been injured in the Galician front, described the coherent preparation of landscape through the logic and possibilities of modern industrialized war as a war landscape.[23] Galicia—on whose agricultural soil Joseph Roth let yellow corn fertilized by "Western European bodies" thrive [24]—along with Verdun and the Somme became symbols of the crushing violence of a new type of war. Lewin's concept of the "landscaping" carried out by the war required no actual natural reference. As *Pierre Robiquet describes his experience of nature in World War I, "A battle is a landscape that shoots at you," which seems mythically rolled into one with technology.*[25] At the same time, a more comprehensive re-naturalization of war corresponded not only with the spirit of World War I, which was fought with sweeping territorial and economic ambitions, but also found its counterpart in the way war now penetrated physical realms of the landscape and the extent to which it did. While Napoleon III could still claim that he waged war against rulers and not against peoples, in this world war, which was tightly meshed with technology, very little was able to escape the clutches of the unprecedented, omnipresent battle of materials waged by technological-mechanical means.

Although no direct combat took place in the Lobau during World War I, there, too, the war nonetheless left its mark. Nature as a landscape is not a space without history—as "dead work," the share of past work processes manifested in it is not only present in our perception, but is also included in terms of their consequences and effects as "future work." In the long century between its use as Napoleonic theater of war and World War I, the periodically flooded, and nutrient-rich alluvial landscape of the Lobau, which like before, as was generally common in the Danube floodplains, was once again farmed as coppice, and in a regular turnover roughly every ten to thirty years, used mainly as a forest for firewood.[26] The "greyish green" of the floodplains,[27] the fast-growing alders, willows, poplars, but also hardwoods, such as elms and ash trees, were felled during the sap season and formed a scrub of tuft-shaped shoots. Seed trees, so-called holdovers or upper stands were only occassionally left standing. The

Lobau, in the background on the left the construction site of the large tank farm of the Wirtschaftliche Forschungsgesellschaft m.b.H Berlin (WIFO plant), on the right embankment removal by an electric excavator, in the foreground a harbor pumping station (March 1941)

Lobau, view to the lower end of the harbor entrance and to the WIFO facility (March 1941).

Lobau, view in opposite direction to the harbor pumping station, in the background the harbor railroad (March 1941)

growing metropolis Vienna, whose demand for wood had long surpassed the supply available from the *Danube floodplains* and the Vienna Woods, had become the monarchy's most important firewood market over the course of the eighteenth century. The Danube, which transported wood, played a decisive role in the continuous supply of energy to the city.

However, until the end of the Habsburg monarchy, the dominant use of Vienna's Danube floodplains was hunting, which agriculture and forestry were subordinate to, should any conflicts of use arise. The stock of game around Vienna was considered unparalleled in Europe and the connection of hunting and stately representation has always played an important role in Austrian history. The Habsburgs had possessed hunting rights in the Danube floodplains from the bishopric landlords of the Prince-Bishopric of Freising since the era of Maximilian I; the imperial territory constituted roughly the area of today's Lobau. Red deer and wild boar were the main types of game. The court hunts began in July with the shooting of the huntable stags, and until the end of the 1830s "closed" stag hunts were held in the Lobau.[28] The end of this tradition is represented by Crown Prince Rudolf who, torn between an obsession with hunting and a sensitive observation of nature, each January of the waning nineteenth century hunted otters with his pack of otter dogs in the fields and floods of the already regulated Lobau.[29] Rudolf, an ornithologist who worked on *Brehm's Thierleben (he met the Berlin zoologist Alfred Brehm at the 1873 Vienna World's Fair)*, published several reports for his encyclopaedic *Kronzprinzenwerk* (Crown Prince's Work) on various species of birds of prey present on the Danube and wrote what are today considered protoecological essays on the Danube floodplains. Nevertheless, the character of the Lobau was shaped by the centuries-long dedication of the floodplains as court hunting grounds. The share of openings and aisles is relatively large, mainly because the imperial hunting grounds before the city's gates were "made comfortable with avenues" for the hunters on horseback.[30] Undergrowth was cleared away, and under the trees was tidied up. Hawthorn bushes and thatching grass spread on the striking surfaces in the 1920s; the so-called thorny ground of the game sites and bite-resistant hawthorn fields are considered visible results of this game management.[31]

In the 1870s, the river bed of the Viennese lowlands, which branched into numerous arms, was cut into a uniform profile between solid, sandstone-weighted banks by two large cut-offs. The river, previously "slipping through the plains, which the eye swept over finding almost no points of reference,"[32] now flowed in an organized course. The Marchfeld, an important breadbasket of the monarchy, was henceforth largely protected; a dam stretched from Vienna straight through the floodplains through to the state border. The flipside of this gain in agricultural area was that with the regulatory interventions, the floodplains disappeared from Vienna's urban area. Despite the great efforts to re-naturalize them in recent years through eco-engineering, since regulation, the Viennese Danube has only near-natural, that is, artificially maintained floodplain rudiments that are largely separated from the river and its flooding and re-forming influences. A rich supply of nutrients through the deposit of suspended sediment, commonly referred to as clay, which one knows from school geography from the Nile's summer flooding, failed to materialize. The groundwater level and the soil's dampness and fertility sank. The natural rejuvenation of the softwood floodplains with their light-loving alders, poplars, and pastures was no longer possible, making the transformation to a hardwood floodplain unavoidable. Created in this way, the Lobau—located exclusively on the Danube's north banks after regulation—mediated a quasi-Arcadian impression through its frequently changing landscape of wide marshes, bushes, and powerful groves of silver poplars and box elms, an impression further intensified by its "fairytale-like" wealth of wood and game until World War I.[33]

At the latest from the "Wruckenwinter" 1916/17, in light of the city's increasingly difficult supply situation, this Arcadia, which was recorded in Karl Lueger's *Wiener Wald- und Wiesengürtel* in 1905, and its lianas landscape, continually described as lush and additionally furnished with ghostly figures and a bleak character through Habsburg remembrance policies and literature, could not be excluded from wartime economy delibarations. *Already at the end of August 1914, when the "Russian steamroller" crossed the defense lines of the imperial and royal army in the plains of East Galicia, a crown of fortifications arose around the bridgehead Vienna, which placed as many as 28,000 entrenchment workers under the War Powers Act. In the Danube floodplains, the left bank was cleared of obstacles and shelters were set up, which remained occupied until the dismissal of the bridgehead command in May 1916. Vienna was subsequently declared an open city.*

As a result of the allied *blockade,* Austria-Hungary had become an almost hermetically sealed economic space whose agricultural production was too low to compensate for the loss of imports. This already precarious situation became even more explosive through the steady decline in domestic cultivation areas and yields, such as in Upper and Lower Austria.[34] Until 1914, the capital had lived primarily from its hinterland, the Sudeten lands, Galicia, and Hungary; Vienna was supplied with Hungarian livestock and grain, Bohemian and Galician potatoes, as well as Bohemian-Moravian sugar. From the second half of the war, there was hardly any food that was not managed by the "office for people's nutrition" created in 1916. *The army devoured immense amounts of grain and flour, hay and straw, and pigs and cattle as part of their room and board.*

Signs of deficiencies surfaced already by the first winter of the war and became increasingly dramatic and ultimately catastrophic over the course of the war era until November 1918. Already in autumn 1915, the Viennese municipality called on the population to use every available piece of land for urban "war vegetable gardens"; an area of roughly 2,810,000 square meters was leased for this purpose until 1919. (*The reaction of the Viennese population was remarkable and unique: for example, one woman recommended that bean trellises be applied to Vienna's buildings up to the fourth floor, and that pavement be torn up for planting on the sidewalks.*[35]*)* In addition to this war vegetable campaign, the municipality demanded more allotment gardens on private properties.

Lobau, Hilfswilliger (non-German auxiliary recruited in the occupied territories) (so-called HiWi) and Ostarbeiter (Eastern worker) (dating uncertain, 1941)

Lobau, rear view of a dredger in the upper end of the harbor, looking across the Danube to Albern (spring 1941).

Lobau, barracks camp (May 1941)

Also in the Lobau, in 1915, at the instigation of the Viennese mayor Richard Weiskirchner, an area of 43 hectares was cleared and cultivated by the municipal forestry inspectorate according to the directives of the magistrate.[36] The interests of the hunting sector were pushed into the background. The army administration declared itself willing to supply 500 Russian prisoners of war as laborers; the office of the colonel Jägermeister (hunt master) had to prepare the barracks (still present in today's Lobau topography as the "Russenlager" or Russian camps).[37]

Even before the outbreak of the war, the Prague plant physiologist Oswald Richter, together with Friedrich Pick, had discovered a highly regarded procedure to utilize the fibers of the large nettle as a replacement for staple fibers.[38] These nettle fibers were meant to be used for the production of clothing and tents. The imperial and royal war ministry requested the granting of appropriate properties in the Lobau where the sparse forest stands had proliferating thickets of meter-long nettles in order to cultivate them there for war purposes. By the end of the war, in addition to 500 Russian prisoners of war and 200 men to guard them, and the military present at the fortification, 300 nettle workers were employed in the mobilized Lobau.[39]

In 1917, the Viennese city council passed an important resolution with regard to the general conditions of use in Vienna's Danube floodplains. The starting point of the negotiations was an endowment from 1745, in which Empress Maria Theresia had ceded the palace and lordship of Ebersdorf to the Wiener Allgemeinen Versorgungsfonds (at the time, the Wiener Armenkasse), to subsequently turn the palace into a governmental forced labor house; hunting was, however, excluded from this grant. Through an agreement entered into between Hofärar (state property) and the City of Vienna in December 1917, the Lobau was divided. The upstream part (upper Lobau) was exempted from hunting rights; the Allgemeinen Versorgungsfonds (the municipality), received unrestricted right of ownership of this section. In the downstream part of the (lower) Lobau, on the other hand, in addition to hunting rights, the state property was entitled to service rights as well as right of ownership. The so-called *Königsgraben* formed the border. The municipal council instructed the magistrate to begin preliminary work for further agricultural use of suitable land in the Lobau and to submit applications for the transformation of the Lobau into a nature reserve as a recreational area for the Viennese population; no contradiction or conflict of use was seen at that time.[40] In February 1918, the municipality of Vienna created a "städtisches Landwirtschaftamt" or Municipal Agricultural Office that was to be responsible, among other things, for the agricultural use of the Lobau. The project turned out to be difficult at first, since at the time of the takeover by the agricultural office, almost no farming equipment, draft horses, or oxen were available—initially, there was also no labor force. Once again, prisoners of war were used, who planted the fields of the Lobau mainly with potatoes and cabbage;[41] in the Danube floodplains there were also so-called school war vegetable gardens cultivated by children.

As part of the war economy, coal and petroleum also became scarce commodities, no least due to increasingly difficult transport conditions and a disorganized distribution. The monarchy, which in 1909 was still the world's third-largest oil producer thanks to the Galician oil fields near Boryslaw, slid into a fuel crisis. In July 1917, a permanent committee was set up in the Ministry of Agriculture to supply Vienna with firewood. The committee wanted to draw primarily on the Danube floodplains and the high forests in the Waldviertel for the supply of firewood to Vienna—the former in view of the transport possibilities on the Danube. Initially, the wood was cut by "working soldiers" provided by the government, and from 1918 by Italian prisoners of war.[42] In the first half of 1919, about 6,000 cubic meters were felled in the Lobau for fuel purposes. During the last two years of the war, illegal clearing activities to obtain firewood also began in the forests around Vienna; the cleared areas were also used for the cultivation of vegetables and small livestock. In the floodplain forests, wild settlements developed, some of them very simple earth dwellings in the Danube silt, huts made of boards and boxes. Largely detached from the domestic colonization ideas of *all political stripes that* were flourishing at the time, Vienna's settler movement emerged at a time of hardship and a growing power vacuum. During this time, a mere 6,732 of Vienna's 186,000 schoolchildren were not malnourished.[43] Recourse to agrarian subsistence farming often remained the only means of sustenance even after the Allied blockade was lifted in March 1919. Vienna had become a poor city, where, for example, the discussion about the sale of valuable tapestries from Schönbrunn Palace to finance grain imports led to a fierce sociopolitical controversy.[44] Volk und Zeit, the illustrated weekly of the German newspaper Vorwärts published in Berlin, remarked: "The Viennese misery of the present is unparalleled in Central Europe since the times of the Thirty Years' War, and in our time, one has heard similar conditions only from descriptions of famine areas in Russia or India. Bleak is the future of the city of two million [...] nearly karstified with hunger for warmth."[45]

Before the wild, so-called "primitive settlements" of the Lobau were administered into a social democratic rationality and legality by the municipality of Vienna or Gesiba (Gemeinwirtschaftliche Siedlungs- und Baustoffanstalt) with Hermann Neubacher as its successful general director, the later National Socialist Karl Hans Strobl in his fantastical novel Gespenster im Sumpf (1920) denigrated the settlers living in earth caves as brutish "earth eaters" in whose mythology, "celestial worker councils" were to play an important role. "Red" Vienna, Strobl's swamp, found it much more difficult to recognize the utopia of the postwar settler movement, which had grown out of social misery, as part of a great socialist whole.

When Heinrich Strecker's highly popular Wienerlied (Viennese folk song) "Drunt' in der Lobau" was published in 1928, a total of about 1,320 hectares of forest land, 226 hectares of water areas or paths, and 730 hectares of meadows and fields already existed in the Lobau.[46] In the same year, the municipality gave an area of 104 hectares—mostly floodplain forest below the Stadlau railroad bridge—to sixty-one unemployed industrial worker fami-

Albern, view of the construction site of the unfinished harbor extension in the floodplain on the right bank of the Danube (summer 1941)

Albern, view of granary and quay wall (sheet pile wall) on the south shore of the harbor basin (summer 1941)

lies in exchange for rent.[47] Schierlinggrund, Großer Biberhaufen, and Steinspornhaufen were colonized and no longer counted as part of the Lobau proper. The formerly imperial Lower Lobau was transferred to the War Victims Fund based on the Habsburg Law of 1919, the few fields existing there were partly given as deputations to the company's own employees, or served for the cultivation of wild fodder. The Upper Lobau was now dominated by agricultural use—410 hectares had been intensively cultivated by the Forestry and Agricultural Operating Company since its foundation in 1919 and provided, among other things, the highly prized Canadian Manitoba wheat.[48]

At the end of the 1920s, there were more and more voices in favor of a return to the former Arcadian state. Karl Kirschner, a Floridsdorf district councilor active in the settlers' and allotment garden movement, advocated for a conversion of the fields back into pastureland—as had the nature and heritage conservationist Günther Schlesinger before him in his expert report on the Lobau and its use as a nature park in 1919—"to restore the scenic effect."[49] In the small state struggling for identity and existence, the dominant image of nature was also sentimental. The Danube song written in 1934 by the (now illegal) NSDAP member Heinrich Strecker,[50] referred not only to another section of the river steeped in myth—"Wach auf, deutsche Wachau!"—the long and controversially discussed willingness to join Germany, the *Anschlusswille*, was close to being fulfilled.[51] As Bruno Brehm wrote in 1939, "It is the undoing of this city that it *can* withdraw from a *landscape of duty to* a landscape of joy," [52] referring with the former to the battle-tested Marchfeld. The appropriation of the Viennese Danube floodplains during the years of National Socialism takes the already existing universal tendencies to the extreme, to a final state, so to speak, as was symptomatic for the enormous overexploitation of man and nature for the purposes of the Nazi war and its demand for living space.

**Port Vienna**

> *A whole sweet countryside amuck with murder*
> *Each moment puffed into a year with death* [53]

Fueled by the territorial losses following the loss of the war in 1918, debates in the German-speaking world about the relationship between the number of inhabitants and the size and resources of the natural environment as well as the international significance of a state gained an explosive topicality, not only for national, but above all for reasons related to economic policy. Geopolitical publications popularized the belief that all political processes were ultimately tied to spatial issues. The experience of a state-controlled fortress economy with the obligation of total mobilization of all natural resources solidified the conviction that wars can be won militarily only "if the homeland does its duty.[54] In such a thoroughly functionalized war landscape, all symbolic and physical boundaries of the front and rear are abolished.

During World War I, war economy measures had to be constantly improvised. The Nazi ruling apparatus had, in essence, carefully geared its war economy towards a planned war, in the form of two four-year plans. The lesson of 1918 had taught that economic self-sufficiency in terms of raw materials and through agriculturally utilized land and also infrastructure (roads, rivers, access to the world's oceans) was the prerequisite for a future prolonged war. Securing "food independence" was the contribution made by agriculture and science. This time, no national comrades were to starve or freeze; starvation in the occupied territories, whose raw materials, fertility, and human labor were to be "used completely and diligently for the benefit of Germany and its allies," was factored in.[55] In the "production battle" (Herbert Backe) proclaimed in 1934, the German Reichsnährstand (government body to regulate food production) forced an increase in the self-sufficiency rate from 68 percent (1928) to 83 percent (1938). At this time, already about one third of the bulk goods imported from southeastern Europe (grain, oil) and more than one quarter of the goods exported there were transported on the Danube, which functioned like a suction pump for the natural resources of the areas that had been transformed into Greater Germany's hinterland.[56] This was entirely in the spirit of the Nazi geopolitician and Salzburg book-burner Karl Springenschmid, who in 1938 described rivers "as guidelines for state growth and the development of political power."[57] The principle of internal colonization was applied to southeastern Europe, the extended area of Greater Germany.

In order to prevent potential inner-German urban-rural supply conflicts this time, the Völkischer Beobachter declared apodictically: "There is no need today for a link between town and country [...], because one faith unites them, the belief in National Socialism; one will dominates them, the will to help each other!"[58] Despite the propagandistic emphasis on will and community, technology played the key role in transforming the bourgeois era's landscape of workshops into a technocratic work state. However, because the technology of the Blitzkrieg no longer focused on barrage artillery, but rather "inverted air and earth into a vertical battlefield"[59] and the front could penetrate deep into the rear with tanks, bombers, and paratroopers from day one, the demands on fuel supplies were also much greater. Oil became one of the most essential means of warfare and simultaneously a target in the war. The annexation of Austria's oil resources in 1938 was an important gain for the German petroleum supply and formed one of the necessities for the large-scale war against the Soviet Union. A few years earlier, rich oil deposits had been discovered near Zistersdorf in eastern Lower Austria—German oil companies now secured concessions and production sites as well as control of the country's existing refineries. The Reich drilling program was extended to Austria, and the Bitumen Act of 1938 made the state the long-term owner of all existing mineral resources.

The refineries of the interwar period—Korneuburg, Kagran, and Schwechat—had been geared to Romanian oil, processing a mixture of products already pre-refined in Romania. The Romanian oil fields of Ploeşti also represented the material Achilles' heel


Albern, in the foreground the large storage facility of Rhenus Transportgesellschaft m.b.H Mannheim on the south bank of the harbor basin (summer 1941)

Lobau, construction of a Salzgitter-type air-raid shelter in Lobgrundstrasse (summer 1941)

of the National Socialist *war econ*omy. As a transport route, the Danube played a crucial role; from September 1939 to December 1941, the number of Danube tankers increased from 138 ships to more than 500.[60]

During the "phoney war" (une drôle de guerre) phase of 1939, the months of "*c*atching one's breath" until the beginning of the German invasion of western Europe in May 1940, construction began in Vienna on several infrastructural Danube projects for the transformation of the provincial city into a "Hamburg of the Southeast." For such a territorial task, deemed necessary were the Danube as a continuous and controlled waterway, as well as additional extensive port and warehouse facilities.[61] The actual harbor installations in the Vienna Danube floodplains designated for this purpose were mainly entrusted to companies from the so-called Altreich. Two Munich construction companies, Hoch- und Tiefbau München-Wien and Philipp Holzmann A.G., as well as Wirtschaftliche Forschungsgesellschaft mbH (WIFO), which was founded in 1934 with the participation of I.G. Farben, were responsible for the extensive dredging work with heavy equipment.[62] Starting in 1940, up to 500 prisoners from a forced labor camp built in the Lobau worked for these companies.[63]

Here, of all places, in this traditional Viennese recreation and conspiracy area of both left-wing and right-wing groups (controls by mounted police units were not uncommon even before the Austrofascist period), a large refinery was to be built for Austrian crude oil, which was now being extracted more than ever before. Production increased from about 60,000 tons (1938) to 1.2 million tons (1944).[64] The Lobauer Hafen, the port in the Lobau, planned primarily as an oil transshipment point, was connected via pipelines to the oil field in Zistersdorf, which was to be further processed by the Ostmärkische Mineralölwerke. Since the 45-meter-wide entrance was also intended as the mouth of the unfinished Danube-Oder Canal, the harbor basin branches off from it only after 1.3 kilometers, even today. A 1.2- kilometer-long and 90-meter-wide harbor basin with eleven hectares of water surface was given embankments and banks paved by hand by forced laborers. Vienna's largest *tank farm,* with a total capacity of 120,000 tons, was built on the area surrounding the harbor basin.[65] In 1943, British intelligence still estimated an annual capacity of 200,000 tons and 18 tanks owned by Elwerath-Wintershall-I.G. Farben Industrie. [66]

Running along the Hubertusdamm, the Danube's left-bank flood embankment, are a dedicated port railroad to Stadlau station and a port road opened in 1941. Loading pontoons and pumping stations ensured the transfer of petroleum products from the tankers to the tank farms built into artificial mounds on the banks, which belonged to the Berliner Wirtschaftliche Forschungsgesellschaft mbH ("WIFO plant"). Their main tasks included the procurement, stockpiling, and transport of strategic raw material reserves as well as the construction of large, reinforced concrete tanks for the Wehrmacht, of which more than 20 had been set up in the Reich territory—including the Lobau facility—by the end of the war. Construction began in 1939, repeatedly interrupted by floods, five times in 1941 alone. In August of that year, the Hubertus Dam was breached and the Danube flowed into the new port basin. In the summer of 1941, while the first crude oil was already being distilled, above-ground air raid shelters were built ("Lobgrundbauwerk"), and from 1942 to 1943 also so-called splinter trenches, i.e., uncovered trenches for air raid protection. The first chain of boats with Romanian mineral oil entered the port of Lobau on November 10, 1942, and was unloaded by the WIFO plant.[67] Romania had signed the so-called "oil-arms pact" after the defeat of France in 1940. The former Gesiba General Director and Vienna's mayor (1938–1940) Hermann Neubacher had been responsible for this treaty as "Special Representative for Economic Affairs at the German Legation in Bucharest" and had since been regarded as the regime's petroleum expert.

The Danube-Oder Canal, a project from previous centuries, was redesigned with a total length of 325 kilometers and was to branch off from the Adolf Hitler Canal inaugurated by Rudolf Heß in 1939 (today's Klotnicki Canal) and divide into two branches at Angern an der March, one of which was planned across the Marchfeld to the Danube below Vienna, while the other branch was to be formed by the March, which flowed into the Danube at Theben and was subsequently to be canalized. This would thus link Vienna, and the Lobau, which was well developed with regard to transport, to the Greater German waterway network. After the groundbreaking ceremony in 1939, construction was expected to take six years. Of the approximately 40-kilometer-long section of canal planned in what was then Ostmark, only a few kilometers were realized by 1943 in four separate construction lots in the Lobau and near Groß-Enzersdorf southeast of Vienna. There were also changes in the Lower Lobau. After the Austrofascist Ständestaat dissolved the War Damages Fund in 1937, the Lobau estate came into the possession of the municipality of Vienna by virtue of a contract on January 19, 1938. With the appointment of the "Reichsjagdgebiet Lobau" (Reich Hunting Area Lobau) by Reichsmarschall Göring, a contract between the City of Vienna and the German Reich in 1938 made the Lower Lobau the property of the German Reich, administered by the Reichsforsten. As Edmund Glaise von Horstenau, former Vice-Chancellor in the Seyß-Inquart cabinet and representative of the Wehrmacht to the Croatian Ustaša regime recalled, Göring and Gaujägermeister Neubacher hunted there in splendid hunting costumes.[68]

"Food is a weapon!" was the slogan of German agricultural policy in 1943.[69] The promotion of stockpiling had already been proclaimed as a special task of the Four-Year Plan during the Reich Farmers' Day in Goslar in 1936.[70] Since there was not enough Reich-owned storage space available for the planned Reich grain reserve, stockpiling was declared a task that should be addressed to all German people, especially in the private sector. As early as 1935, the construction of grain storage facilities was promoted with subsidies (about 35 percent of construction costs) and tax incentives. Hermann Göring, the "Commissioner for the Four-Year Plan," regarded the buildings "as belonging to military armament."[71] After a bumper crop in the summer of 1938, the Reich grain agency seized 1.8 million tons of "emergency storage space," and Herbert Backe, appointed by Göring as "special


Lobau, bucket brigade floating dredger Krivan during the breakthrough of the Marchfeld protective dam (= Hubertus dam) for the flooding of the harbor canal (September 1941)

Lobau, forced laborers fortify the embankment with rubble stones; view from the lower end of the harbor in the direction of the Danube (summer 1942)

Lobau, construction of an observation tower at the backwater dam for aerial protection of the harbor (December 1942)

commissioner for the construction of grain storage facilities," developed a "program for the accelerated construction of grain storage facilities." The new Reich-owned storerooms were originally to be built by private contractors so that the construction program could be carried out according to uniform Reich guidelines and without lengthy approval procedures; nonetheless, certain types of Reich silo buildings were prescribed. The location and dimensions of the storage spaces were also determined by central departments. In the vast majority of cases, the building shell, which was cast in concrete, was ideally to have a "local" design, i.e., a gable roof or brick facade, in accordance with aesthetic demands for the protection of cultural heritage.[72] The Reichsstelle für Wirtschaftsausbau (Reich Office for Economic Development) in Berlin was the chief construction supervisor, while the execution and control of the large Reich-owned storage buildings was in the hands of the General Building Inspector Fritz Todt. Reich storage facilities were also built in Vienna, to hold wheat and corn from the grain regions of the Danube lowlands—Dobruja, Slavonia, Banat—and the Ukraine. Albern, previously a small fishing village, was incorporated in October 1938 in the course of the establishment of Greater Vienna; during the following years it belonged to the 23rd district of Schwechat. "Europe's largest inland port" was to be built in the Albern Danube meadows below the confluence of the Danube Canal at river kilometer 1918.3.[73] The town council had to provide the land and was responsible only for the development work; the actual construction of the port was the responsibility of the Reich Ministry of Transport. In a first construction phase in 1939, the first of three originally planned harbor basins was dredged in a depression at the old mouth of the Schwechat. It was hoped that this would reduce the amount of soil movement and the time required for construction.

The Albern harbor area extended over 60 hectares. The harbor basin, about one kilometer long and 90 meters wide, was given a west-easterly direction; steel sheet pile walls still form the bank protection today. On both quaysides of the harbor, which was built as a grain handling site, five Reich warehouses with associated elevators and a total capacity of 85,000 tons were gradually built. The tenders for the construction of storage facilities along the Danube were also largely awarded to Reich German companies, including the Munich-based Suka-Silo-Bau Heinrich Kling, which built a 20,000-ton storage facility in Albern for the Berlin grain wholesaler Emil Kampffmeyer.

Before transshipment could begin in October 1941 and the first tow of Romanian grain could be unloaded in the 5,000-ton storage facility of the Friesacher company,[74] Reich Economics Minister Walther Funk and Post Minister Wilhelm Ohnesorge visited the new port of Albern in the summer of 1941; among their entourage were Vienna's mayor Philipp Wilhelm Jung and the powerful Gau Economic Advisor and Nazi multifunctionalist Walter Rafelsberger. In 1943, at Rafelsberger's suggestion, the head of the port administration, Otto Broschek, was appointed as "head of the overall port operation in the area of the Reichsgau Vienna."[75] The port administration and the so-called Lager- und Kühlhaus-AG of the City of Vienna were abandoned, and all municipal port facilities were leased to the new "Wiener Hafen und Lagerhaus-AG." Its board of directors was shared by Otto Broschek and Gerhard Eder, the former head of the Lager- und Kühlhaus-AG.[76]

"We are feeding on meager crusts," Karl Renner wrote from Gloggnitz in December 1941 to Hans Loewenfeld-Ruß, state secretary for Volksernährung (people's nutrition) from 1918 to 1920. The potato and vegetable fields of the so-called Grabe- und Brachlandlandaktion (digging and fallow land campaign) in former floodplain forest areas also testify to the city's growing supply problems.

As erratic blocks, the Albern warehouses survived the war more or less undamaged. Shortly after the concert hall premiere of the oratorio "Der Strom," composed in 1942 by Cesar Bresgen to a text by the Nazi lyricist Hans Baumann, in June 1944, the Lobau harbor became the target of several large-scale attacks by Allied bombers and was severely damaged. Two active anti-aircraft positions still existed in the Lobau area until the end of the war, including a triple-battery Aspern-Jägerhaus.[77] Approximately 12,000 bomb craters were counted in the wooded areas of the Lobau. The petroleum spilled at that time still presents environmental damage today, and the clean up of the so-called W 12 contaminated site has not yet been completed. On the former site of the Ostmärkische Mineralölwerke, two Salzgitter-type air-raid shelters have survived to this day. [78]

The economic successes of the Nazi system were based on expropriation, Aryanization, and the physical exploitation of labor and nature. Gaining control over nature can succeed only within certain limits (and always only temporarily). Whether the war, as Edmund Blunden says at the end of the poem quoted above, has corrupted *nature*, as it were, remains an open question in the example of Vienna's Danube floodplains. At least the *Arbeiter-Zeitung* was sure in 1957 that the Lobau harbor looked "as if placed by chance in the magnificent green floodplain landscape." Despite the oil floating on the water and the gray, smoking barges, large marsh birds would skim over the trees of the floodplain and frogs would sing in the evening. It was as if nature had not yet taken note of the industrialization caused by the war.[79].

1 Wolfgang Menzel, *Geschichte Europa's vom Beginne der französischen Revolution bis zum Wiener Congreß (1789–1815), in 2 volumes, vol. 2, Stuttgart 1853, p. 186.*

2 *Oesterreichische National-Encyclopädie, oder alphabetische Darlegung der wissenswürdigsten Eigenthümlichkeiten des österreichischen Kaiserthumes […], in 6 volumes, vol. 1, A to D, Vienna, 1835, p. 739.*

3 *Der Rheinische Bund. Eine Zeitschrift historisch-politisch-statistisch-geographischen Inhalts, hrsg. in Gesellschaft sachkundiger Männer von P.A.Winkopp Hofkammerrath,* vol. 13, nos. 37–39, Frankfurt/M. 1809, p. 311.

4 Heinrich von Kleist, *Sämtliche Werke und Briefe in 4 Bänden, eds. Ilse-Marie Barth et al., vol. 4: Briefe von und an Heinrich von Kleist 1793–1811, eds. Klaus Müller-Salget and Stefan Ormanns, Frankfurt/M. 1997 (=Bibliothek deutscher Klassiker 122), p. 434.*

5 Ludwig Tieck, *Heinrich von Kleist's gesammelte Schriften, Erster Teil, Berlin 1859, p. XCVIII.*

6 Ludwig Tieck, *Heinrich von Kleist's gesammelte Schriften, Erster Teil, Berlin 1859, p. XCVIII.*

7 "Flussbreite von 70 Klafter nach," *Besondere Beylage zur* (special insert in the) *Wiener-Zeitung* no. 42, Vienna, May 29, 1809, tenth bulletin of the Imperial French Army.
8 *Besondere Beylage zur* (special insert in the) *Wiener-Zeitung* no. 46, Vienna, June 2, 1809: "Die Donau hat an mehreren Stellen 24 und 26 Fuß Tiefe […]"
9 Marcus Landau, *Geschichte der italienischen Litteratur im achtzehnten Jahrhundert, Berlin 1899, p. 56.*
10 According to Caroline Pichler a designation in contemporary French newspapers, in *Denkwürdigkeiten aus meinem Leben, 2 Bände, Vienna 1844, in 2 volumes, vol. 2, p. 156.*
11 Friedrich von Hellwald, *Der Feldzug des Jahres 1809 in Süddeutschland, vol. 2, Vienna 1864, p. 57.*
12 Luise Mühlbach, *Geschichtsbilder, vol. 1, Jena 1868, p. 15.*
13 Armand Alexandre Hippolyte marquis de Bonneval, Mémoires anecdotiques du général marquis de Bonneval (1786–1873), Paris 1900, p. 30: "Cette île, si ravissante au moment de notre premier passage, n'était plus qu'une plaine de sable! Tous les arbres étaient coupés ou arrachés, et les troupeaux de cerfs et de chevreuils, affolés, s'étaient jetés dans la plaine en passant le Danube à la nage."
14 Eduard Duller, *Erzherzog Carl von Oesterreich, Vienna 1847, p. 673.*
15 *An den Erzherzog Carl. Nach der Schlacht bei Aspern. Den 21. und 22. Mai 1809.*
16 Edmund Russell, *War and Nature. Fighting Humans and Insects with Chemicals from World War I to Silent Spring, Cambridge et al. 2001.*
17 Ivan S. Turgenjev, *Fathers and Sons, n.p.:* https://www.gutenberg.org/files/47935/47935-h/47935-h.htm
18 Oskar Negt and Alexander Kluge are among the few after World War II who describe the war as work and who strive to understand it first and foremost as "work in the motif of the enemy." (*Geschichte und Eigensinn*, Frankfurt/M. 1981, chapter 10).
19 Walter Benjamin, "Monument to a Warrior" (1931), in *Selected Writings Volume 1 1913-1926, eds. Marcus Bullock and Michael W Jennings, Belknap Press of Harvard University, London, England and Cambridge, MA, 1996, p. 469.*
20 Friedrich Georg Jünger, *Die Perfektion der Technik, Frankfurt/M. 1993 (written 1939).*
21 Ernst Jünger, *Der Arbeiter. Herrschaft und Gestalt, Hamburg 1932, p. 150.*
22 Walter Benjamin, *The Arcades Project, ed. Rolf Tiedemann, trans. Howard Eiland and Kevin McLaughlin, Belknap Press of Harvard University, London, England and Cambridge, MA, 1999, pp. 456–457.*
23 Kurt Lewin, "Kriegslandschaft," in *Zeitschrift für Angewandte Psychologie 12, 1917, pp. 440–447.*
24 Joseph Roth, "Reise durch Galizien," in *Joseph Roth, Werke 2. Das journalistische Werk 1924–1928, ed. Klaus Westermann, Cologne, 1990, p. 280.*
25 Quoted by François Robinchon, "Ästhetik der Sublimierung. Die französische Kriegsmalerei," in *Die letzten Tage der Menschheit. Bilder des Ersten Weltkrieges. Ausstellungskatalog,* Berlin 1994, p. 290.
26 Josef Wessely, *Die Alpenlaender und ihre Forste, Erster Teil: Die Natur, das Volk, seine Wirtschaft und die Forste der Oesterreichischen Alpenlaender, Vienna 1853, p. 558.*
27 Friedrich Emanuel von Hurter, *Ausflug nach Wien und Presburg [sic!] im Sommer 1839, Schaffhausen 1840, Zwei Theile, Erster Theil, p. 254.*
28 *Österreichische Vierteljahresschrift für Forstwesen vol. 20, 1902, p. 386. Allgemeine Forst- und Jagdzeitung no. 71, June 13, 1838, p. 286.*
29 "Die Jagden seiner k. und k. Hoheit des Kronprinzen Rudolf," in *Centralblatt für das gesamte Forstwesen, vol. 11, March 1885, pp. 146–147.*
30 Heinrich Willhelm Döbel, *Neueröffnete Jäger-Practica, vier Theile, Leipzig 1754, 2. Theil, Von den noethigen Jagd-requisitis, p. 7.*
31 Hans Wodera, "Die Donauauen bei Wien. Studie anläßlich der Forstbetriebseinrichtung 1924," in *Centralblatt für das gesamte Forstwesen, vol. 55, Vienna 1929, no. 3, pp. 86–96, no. 4, pp. 121–131, here, p. 88, p. 131.* Note: The former thatching grass areas have been largely replaced today by brome grass meadows.
32 von Hurter, Ausflug, p. 254.
33 Hermann Margl, "Die Pflanzenwelt des Auwaldbereichs," in *Naturgeschichte Wiens in vier Bänden, Vienna/Munich 1972, vol. II, pp. 675–702, p. 706.*
34 Paul A. Söhner, *Die Anbauflächen und Erntestatistik in Österreich in den Jahren 1916 und 1917, Vienna/Leipzig 1917, p. 60.*
35 Municipal Administration of the City of Vienna, January 1, 1914 to June 30, 1919, Vienna 1923, p. 430.
36 Ibid.
37 Hermann Prossinagg, *Kaiserliche Jagdreviere in den Donau-Auen, Vienna 2007, p. 82.*
38 Process for the isolation of the fiber contained in the rind of the nettle and making it spinnable, Dr. Oswald Richter und Friedrich Pick, patented in Vienna on February 7, 1914 as R. 39855.
39 Prossinagg, Jagdreviere, p. 83. Oswald Richter had the rank of chief officer in World War I and was occupied with nettle planting for the Imperial and Royal top commando in Poland and Serbia.
40 Municipal Administration of the City of Vienna, January 1, 1914 to June 30, 1919, p. 434.
41 Ibid., p. 435.
42 Ibid., p. 419.
43 Otto Bauer, *Die österreichische Revolution*, Vienna 1923, p. 121.
44 In a detailed essay on this controversy, *Bread and Lies (1919), Karl Kraus firmly committed himself to the plan of the First Government of "German Austria" to accept an offer of an American company in this regard.*
45 Quoted in Paul Umbreit, *Wiener Elendsbilder, Berlin 1920, p. 24.*
46 "Unsere Vereinsexkursion in die Donauauen," in *Österreichische Vierteljahresschrift für Forstwesen, Vienna 1923, new installment, vol. XLI, p. 34.*
47 "Der Aufbau des österreichischen Siedlungswerkes," Report of the ÖKW Working Committee on Interior Colonization, Vienna 1933, p. 176.
48 Ferdinand Strauß, *Die Lobau, Vienna, 1935, p. 11.* In comparison: today there are about 120 hectares.
49 Prossinagg, Jagdreviere, p. 86.
50 Elisabeth Th. Fritz, Helmut Kretschmer (eds.), *Wien. Musikgeschichte. Volksmusik und Wienerlied, Vienna 2006 (=History of the City of Vienna 6).*
51 "Wake up, German Wachau! Why is the Danube flowing so fearfully through the wide German land? From castle to castle the question goes: When will the Ostmark rise? Whether also the brother finally found his way home, home to the great fatherland! [...]"
52 Bruno Brehm, *Tag der Erfüllung, Vienna 1939, p. 13.*
53 Edmund Blunden, *Third Ypres, Undertones of War, London 1928, p. 291.*
54 George Soldan, *Der Mensch und die Schlacht der Zukunft, Oldenburg 1925, p. 101*
55 Letter from *Fritz* Sauckel, General Plenipotentiary for *Labor Deployment*, to Alfred Rosenberg, Head of the RM for the Occupied Eastern Territories, April 20, 1942, Doc.PS-16 (US-168), The Nuremberg Trial, vol. 3, p. 454; cited in: Cornelia Schmitz-Berning, *Vokabular des Nationalsozialismus*, Berlin 2000, p. 46.
56 *Statistical Yearbook for the German Reich 1938, p. 221.*
57 Karl Springenschmid, *Deutschland, geopolitisch gesehen, Leipzig 1938, p. 6.*
58 Richard *W. Darré,* "Unsere 'Grüne Woche,'" *Völkischer Beobachter*, special supplement "Blut und Boden" January 28, 1934.
59 Franz Theodor Csokor, *Als Zivilist im polnischen Krieg, Amsterdam 1940, p. 107.*
60 Rainer Karlsch/Raymond G. Stokes, *Faktor Öl. Die Mineralwirtschaft in Deutschland 1859-1974, Munich 2003, p. 207.*
61 Until then, the Port of Vienna had consisted only of the approximately 13 kilometer long transhipment site on the right bank of the Danube and the protective harbors at Kuchelau and Freudenau. In May 1945, these facilities were largely destroyed.
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63 Manfred Pohl, Philipp Holzmann, *Geschichte eines Bauunternehmens 1849-1999, Munich 1999, p. 265.*
64 Dietrich Eichholtz, *Krieg um Öl. Ein Erdölimperium als deutsches Kriegsziel (1938-1943), Leipzig 2006, p. 16.*
65 Rudolf Tillmann, "Der Wiener Hafen - Rückblick und Ausblick," in *ZS des Österreichischen Ingenieur- und Architekten-Vereines, vol. 93, 1948, nos. 1/2, pp. 1– 20, p. 4.*
66 *Austria Basic Handbook. Economic Survey of Austria Section C Fuel, Power and Public Servives, Foreign Office and Ministry of Economic Warfare, Economic Advisory Branch, London 1944. Appendix II and III, Section C, Statistical Summary of Austrian Refineries (For the year 1943).*
67 The Municipal Administration of the Reichsgau Vienna from April 1, 1940 to March 31, 1945, Administrative Report, p. 449.
68 Peter Broucek (ed.), *Ein General im Zwielicht. Die Erinnerungen Edmund Glaises von Horstenau, vol. 2: Minister im Ständestaat und General im OKW, Vienna et al. 1983, p. 308.*
69 *Deutsche Agrarpolitik, no. 10, vol. 1, July 1943.*
70 *Reichsbauerntage in Goslar, Tagungsberichte 1934/1938, Reichsnährstand Verlag Berlin no year.*
71 Quoted from: Götz Aly, *Hitlers Volksstaat - Raub, Rassenkrieg und nationaler Sozialismus, Frankfurt/M. 2005, p. 195f.*
72 On the aesthetics of silos: during World War I, Karl Scheffler's book on the spirit of the Gothic (1917) juxtaposed images of old cathedrals with already modern granaries.
73 Kurt Sommer, *Referent der Hauptabteilung kulturelle Angelegenheiten der Gemeinde Wien, Das schöne Groß-Wien, Vienna 1941, p. 39.*
74 The Municipal Administration of the Reichsgau Vienna from April 1, 1940 to March 31, 1945, Administrative Report, p. 448.
75 Letter from Rafelsberger to the President of the Gau Labor Service and Reich Trustee of Labor Leo Haubenberger, October 28, 1943, Broschek Archive.
76 *Völkischer Beobachter, November 27, 1943, p. 5.*
77 Gustav Holzmann, *Der Einsatz der Flak-Batterien im Wiener Raum 1940-45, HGM* Vienna 1970 (=Militärhistorische Schriftenreihe no. 14), pp. 75ff.
78 In Lobgrundstraße, in the immediate vicinity of today's ÖMV, as well as in the vicinity of Panozzalacke, there are still two above-ground concrete bunkers with a vaulted semi-circular roof and rectangular porch.
79 "Die Binnenstadt Wien ist eine Hafenstadt," *Arbeiter-Zeitung, May 10, 1957, p. 3.*