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## Overestimated Balance Sheet — the Astray of Research Without Archival Sources In Response to Kazimierz Przeszowski

**Summary:** The polemic reviews the research of Kazimierz Przeszowski, which was intended as a balance sheet of previous estimates by Stanisław Płoski and Ewa Śliwińska, Adam Borkiewicz, Hanns von Krannhals, Maria Turlejska, Antoni Przygoński, Joanna Hanson, Maja Motyl and Stanisław Rutkowski, Piotr Gursztyn, Norbert Bączyk and Grzegorz Jasiński, as well as Hubert Kuberski. These estimates indicate that the number of victims of the Wola massacre ranged from 10,000 to 57,600 (even 65,000). This part can be considered a precise summary of previous studies. However, the subsequent section of the article is based on statistical research derived from post-war historians' studies (lacking statistical data from 1938–1944), which does not allow for detailed research. The comparative analysis of mass executions in Rumbula near Riga, Babi Yar near Kyiv, and executions carried out during Operation 'Erntefest' [sic! actually — Aktion 'Erntefest'] in Distrikt Lublin is even more problematic, as the author proves that German forces in Wola were sufficient to exterminate even 65,000 people. Przeszowski demonstrated that the Wola district was estimated to have been inhabited by around 100,000 people in the summer of 1944, potential victims of mass executions. These finding, indicate the need for a new methodological approach and further archival research into the number of human losses in Wola in 1944, particularly concerning the analysis of documents preserved in the Bundesarchiv. This place provides an orientation to the number of German, Austrian and Eastern European exterminators during the two-day *dance macabre* in Northern County — commonly known as the Wola district.

**Keywords:** Warsaw Uprising 1944, Wola massacre, German & Austrian, WW II, war crimes, mass executions of the civilian population, correction of Attempt at Balance



Finding one's name in footnotes among cited materials is a pleasant feeling for any historian. However, it is difficult to agree with the opinions and estimates presented in Kazimierz Przeszowski's article *Population Losses in the Wola Area During the Warsaw Uprising 1944. A Review of Research and an Attempt at Balance*.<sup>1</sup> The author did not align with the position of German historian Hanns von Krannhals, whose work he did not examine thoroughly enough.<sup>2</sup>

Yet, with virtually no analysis and comparison of the German scholar's argument, Przeszowski rejected Krannhals's theses.<sup>3</sup> Krannhals's findings only reached a wider Polish audience in 2017, although they were still presented in a poor translation and an unfinished edition.

The author of this polemic disagrees with Przeszowski on many points, particularly regarding his acknowledgement of 'possible ethical objections to placing the aforementioned figure in the role of a kind of arbiter in matters of mass murders committed against the Polish population by German pacification forces during the Warsaw Uprising in 1944'.<sup>4</sup>

However, even Przeszowski is bound by the triad proposed by von Krannhals, which highlights three key aspects in assessing the number of victims:

1. The methodology of calculations.
2. The technical feasibility of executing the assumed number of victims.
3. The correlation between the estimated number of victims and the population of Wola at that time.

To this triad, a fourth important point should be added — the actual number of exterminators serving in Kampfgruppe Reinefarth. Not all units were commanded by SS-Gruppenführer und Generalleutnant der Waffen-SS und Polizei Heinrich (Heinz) Friedrich Reinefarth carried out mass shootings and other crimes against civilians.

These issues and myths have been a visible part of academic discourse since 1946. This was also the case with Przeszowski's previous article, *Zaludnienie obszaru warszawskiej dzielnicy wola, objętego masowymi egzekucjami w Parku Sowińskiego wykonanymi 5 sierpnia 1944 roku* (Population of the area of Wola District in Warsaw, covered by mass executions in the Sowinski Park on August 5, 1944).<sup>5</sup> Similarly, it applied to the use of an averaging methodology derived from the real estate management

1 Przeszowski K. 2024, 109–128.

2 Krannhals H. von, 1962. See: Krannhals H. von, 2017 — a sloppy Polish edition by Bellona Publishing Hosue, with historical edited only 70% of its translation.

3 After a very fruitful search in the Polish People's Republic and initial support, the Poles detained Krannhals at the Warsaw airport and forced him to hand over virtually all the materials collected in the Polish archives. However, Krannhals was from then on persona non grata in Poland, a fact that was clearly felt by subsequent German delegations. See: Marti P. 2016, 230 (German edition: Marti P. 2014).

4 Przeszowski K. 2024, 111.

5 Przeszowski K. 2022, 29–76.

industry practices, in which statistical averaging was used to estimate the number of victims. For example, ‘in the case of the Hankiewicz house, records document approximately 150 residential units and about 600 residents. This translates to an average of about four people per apartment.’<sup>6</sup> To me, this represents research conducted without archival sources, which instead relies on developing novel methodologies for calculating civilian losses during mass executions of residents of Warsaw’s Northern County (such was the official nomenclature of that part of the city to which Wola belonged) — commonly known as the Wola district.

Here is the area of the aforementioned county:

The boundary line of the North Warsaw district follows the city boundary and the Vistula River, as well as the following route: from the city boundary along the left bank of the Vistula to Steinkeller Street, along Steinkeller Street to Bugaj Street, along Bugaj Street to Celną Street, along Celną Street through the Old Town to Piekarska Street, along Piekarska Street to Kapitulna Street, along Kapitulna Street to Miodowa Street, along Miodowa Street to Krasiński Square, across Krasiński Square to Nowiniarska Street, along Nowiniarska Street to Świętojerska Street, along Świętojerska Street to Nalewki Street, along Nalewki Street to Nowolipki Street, along Nowolipki Street to Przejazd Street, along Przejazd Street to Leszno Street, along Leszno Street to Solna Street, along Solna Street to Elektoralna Street, along Elektoralna Street to Zimna Street, along Zimna Street through Żelazna Brama Square to Rynkowa Street, along Rynkowa Street to Grzybowska Street, along Grzybowska Street to Karolkowa Street, along Karolkowa Street to Dworska Street, along Dworska Street to Bryłowska Street, along Bryłowska Street to Prądyński Street, along Prądyński Street to Kolejowa Street, along Kolejowa Street to the railway tracks and along the railway tracks to the city boundary.<sup>7</sup>

Instead of charts and hypothetical numbers of those murdered on August 5–6 in the area of Wola, thorough analytical work on the German documentation, consisting of several dozen volumes, would suffice. This documentation could, of course, be expanded to 30,000 pages of German-origin records.

However, before addressing Przeszowski’s continuation of research that notably avoids examining German ZStL<sup>8</sup> documents related to the Warsaw Uprising and fails

<sup>6</sup> Przeszowski K. 2022, 43.

<sup>7</sup> Dziennik Ustaw 1931, no. 26, pos. 155, 294.

<sup>8</sup> Zentrale Stelle der Landesjustizverwaltungen zur Aufklärung nationalsozialistischer Verbrechen (ZStL) — The Central Office of the State Justice Administrations for the Investigation of National Socialist Crimes in Germany’s — main agency responsible for investigating war crimes during National Socialist rule. The commission possesses the largest collection of files, documentation and materials concerning criminal activities during National Socialist dictatorship. The Central Office is located in Ludwigsburg.

to compare them with Polish records from postwar prosecutorial investigations into Wola,<sup>9</sup> let us first turn to the factual lapses and oversimplifications in reconstructing historical realities that appear in his article *Population Losses in the Wola Area During the Warsaw Uprising 1944*.<sup>10</sup> The author is, of course, aware of the importance of citing archival references, evidenced by his shifting of citation priority in footnotes, changing the hierarchy from a Swiss historian Philipp Marti, to archival.<sup>11</sup>

The first publication presenting data on the number of victims of mass executions of Wola residents was a compilation of execution sites and victim counts for mass executions in Warsaw between 1939 and 1944. This source-based study was authored by Edward Serwański and Irena Trawińska. In their study, we read:

It is impossible to determine the number of victims today. The testimonies of witnesses provide too general a basis for calculations. What is certain is that the victims [of the Wola Massacre — as the mass executions are referred to in the book] number in the tens of thousands. Many crimes will remain forever shrouded in mystery, as no one survived the numerous executions. Only a thorough registration of Wola's residents and the creation of a victim database would allow for a numerical assessment of the losses.<sup>12</sup>

This was achieved over more than 30 years of research by Marek Strok,<sup>13</sup> whose extensive inquiries as part of his scientific project *Wola IX 1939–I 1945*, which I will mention later. Already in my article from four years ago, I should have explicitly

9 In the internal review, together with the second reviewer, we recommended to the author to make broader use of German documents from the archives of the Federal Republic of Germany and the Republic of Poland in his research on this subject.

10 Przeszowski K. 2024.

11 Now 'Landesarchiv Schleswig-Holstein (LASH), quote from: Marti P. 2016, 165', and should be 'Marti P. 2016, 165, quote from: LASH', whereby the document was unequivocally discovered by a Swiss historian, and it is necessary to quote the meticulous monograph by Philipp Marti. See: Przeszowski K. 2024, 110.

12 Serwański E., Trawińska I. 1946, 23.

13 Marek Strok, although a self-taught history enthusiast, possesses a vast academic and historical legacy, and his historical skills are in no way inferior to those of professionals. For decades, working closely with insurgent veterans, he has documented the history of the Polish Underground State and the Warsaw Uprising. Conducting countless research studies in Polish and foreign archives, he has accumulated the most comprehensive source of knowledge about the participants of the Uprising and its various military aspects. However, this is not merely a duplication of scattered archival materials, but rather a creative compilation into databases. Over several decades of meticulous work, which, it should be emphasised, is of a social nature, he has collected over 50,000 names, nicknames and other personal data of Uprising participants. Based on this list, the Warsaw Uprising Museum has created an online database of insurgents. Thanks to his research, the names of approximately 12,000 participants are inscribed on the Wall of Remembrance at the Warsaw Uprising Museum. Underground soldiers were killed in Warsaw in 1944. Furthermore, Marek Strok compiled a database of the victims of the Wola massacre. He painstakingly, tenement by tenement, reconstructed the names of the Wola residents murdered in August 1944. He is the author of a monograph: Strok M. 2006. In addition, he published and edited AK documents in cooperation with M. Olczak and R. Bielecki: Olczak M., Strok M. 2008; Olczak M., Strok M. 2018; Bielecki R., Strok M. 1997.

referred to the estimates of 'Marek Strok and Hubert Kuberski',<sup>14</sup> which were based on an extensive database of residents of the so-called Wola's tenement buildings and properties, alongside *Powstańcze biogramy* compiled by Strok.<sup>15</sup> The upper estimate proposed by him was his own; I merely introduced it into academic discourse after several multi-hour discussions.

I did not succumb to the argument equating Marek Strok's estimate of 'at most 15,000' with the reduction of the Wola Massacre death toll to 'over 15,000' by a German historian who failed to reference specific sources for his calculations.<sup>16</sup> The war crimes committed by German-Austrian pacification forces in Wola accounted for 10% of the total number of civilians murdered in August and September 1944 — a figure generally accepted as 150,000, based on data provided by Polish researchers.<sup>17</sup>

The most thoroughly sourced estimates come from Maja Motyl and Stanisław Rutkowski, prepared for the 50<sup>th</sup> anniversary of the Warsaw Uprising. Their work presents an alphabetical list of addresses, sites of mass executions and individual killings of civilians during the 1944 Uprising. Although the authors did not summarise the total number of victims in Wola, Przeszowski compiled a balance of 176 war crime sites in Wola (identified by M. Motyl and S. Rutkowski) and, after 'recalculating the approximate data', arrived at an estimate of around 40,000 victims, as well as 9 other locations. It is difficult to agree with such estimates by M. Motyl and S. Rutkowski. However, the scale of these atrocities can be further verified through a comparative analysis of the Polish and German documentation.<sup>18</sup>

Also, it is difficult to agree with Piotr Gursztyn, who rejects the '15,000 victims' figure by arguing that its author, Hanns von Krannhals, is not particularly credible. This could be seen as part of a broader competition over which massacre of civilians was the bloodiest, compared, for example, to 'Aktion Erntefest', during which 42,000 Jews were murdered in Lublin District on November 3–4, 1943 by German, Austrian, Volksdeutsche, and Trawnikiänner units of the SS and Orpo. According to Piotr Gursztyn, the death toll of 59,000 Polish victims in the Wola Massacre, popularised by Antoni Przygoński, should be considered. However, this estimate lacks support when compared to the actual number of German and Austrian (and probably Azeri) extermination units involved, who, in this case, would have had to eliminate four times fewer innocent civilians in Wola.<sup>19</sup>

<sup>14</sup> Kuberski H. 2021, 173–174.

<sup>15</sup> *Spis powstańczych biogramów*.

<sup>16</sup> Krannhals H. von, 1962, 307–308 and Kuberski H. 2021, 173–174.

<sup>17</sup> Currently, 97–99% of the content consists of information cross-referenced and gathered by M. Strok, while the remaining portion consists of supplements from the Warsaw Uprising Museum archival unit. See: *Spis powstańczych biogramów*.

<sup>18</sup> Motyl M., Rutkowski S. 1994, 11–13.

<sup>19</sup> Gursztyn P. 2015, 305–306.

In 2020, Norbert Bączyk and Grzegorz Jasiński published a book in which they deemed previous estimates of the number of victims of the 'Wola Massacre' to be 'significantly overestimated.' Their reading of testimony from former SS- Gruf. Reinefarth led them to accept a figure of 'over 10,000 people.' They supported their estimate with the claim that 'Wola had a wartime population of 30,000,' and that a significant portion (20,000 people) fled either to Śródmieście or the countryside upon hearing about the massacres. The authors did specify the source basis, based on reports on the situation during the Warsaw Uprising prepared by the Einsatzkommando Spilker (they forgot that this unit was not engaged in extermination and started its actual activity since 13 August). They firmly advocated for the lowest estimate in their analysis.<sup>20</sup>

An excerpt from an article by Kazimierz Przeszowski deserves particular attention:

In 2021, Hubert Kuberski published an article presenting the participation of Dirlwanger's unit in the mass executions of Wola's population in August 1944, in which the number of victims of the Wola Massacre was estimated to be about 15 thousand people. Kuberski relied on calculations compiled by Marek Strok based on an extensive source search but did not explain the methodology adopted by the author he quoted.<sup>21</sup>

I have already referred previously to the scanty forces involved in the 5–6 August extermination of the civilian population. Strok's estimates are the result of many years of painstaking research, which I referred to in one of the footnotes. It should have been mentioned in the main text, as follows:

Marek Strok used the following sources to determine his calculations of the number of victims of the Wola Genocide: parish registers of births, marriages, deaths from the churches of: St. Joseph – Deotymy Street, St. Stanislaus – Bema Street, St. Lawrence – Wolska Street, St. Adalbert – Wolska Street; registration books for specific houses on Wola preserved in the State Archive of the City of Warsaw; Red Cross card files and exhumation protocols related to Wola; archives of The Main Welfare Council (Rada Główna Opiekuńcza – RGO) containing lists of Wola residents displaced after the Uprising from Warsaw; collections of Arolsen Archives; and the Main Commission for the Investigation of German/Hitlerite Crimes (Główniej Komisji Badania Zbrodni Niemieckich/Hitlerowskich), or photographing all graves at the Wola cemetery and symbolic graves of Wola mass extermination victims in other Warsaw's cemeteries.<sup>22</sup>

<sup>20</sup> Bączyk N., Jasiński G. 2020, 52 (footnote 37).

<sup>21</sup> Kuberski H. 2021, 173–174.

<sup>22</sup> AIPN, BU 0688/311, 228; Krannhals H. von, 1962, 308; Strok M. 2019, 7 (article not admitted to the conference 'Osądzić rzeź Woli' ['To judge the Wola massacre'], Warsaw, September 28, 2019, organised by Instytut Pamięci Narodowej — received thanks to correspondence with the Author).

The author attempted to confront the adequacy (in his view) of the German forces to carry out mass executions and murder 35,000 victims within 2 days, a claim which Hanns von Krannhals refuted, while this was also the conclusion of three decades of research into the two-day massacre of the Wola district.<sup>23</sup> Meanwhile, Przeszowski based his thesis on a comparative analysis with three mass executions of Jewish populations carried out by German policemen, Austrian policemen and Volksdeutscher and East European volunteers, in occupied Central and Eastern Europe during World War II — on 29–30 September 1941, in Babi Yar near Kyiv, with a victim count of 33,771; on 30 November and 8 December 1941, the extermination of Jews from the Riga ghetto: 25,000 victims in the forests near the village of Rumbula; and ‘within the framework of the Operation ‘Erntefest’ [actually Aktion ‘Erntefest’] on 3–4 November 1943: 42–43,000 victims. Technically, it was possible to murder between 25,000 and 42,000 people within 2 days. However, German documents do not confirm such large extermination forces, and there was no organisational preparation for carrying out mass shootings (there was no call to gather at designated assembly points) in Wola district.<sup>24</sup>

It should be noted that Przeszowski determined that the number of German pacification units operating in Wola in the first days of August 1944 was 1,000 on 4 August and 2,297 on 5 August. On 6 August, these forces were further reinforced by several hundred policemen and soldiers, and by 8 August, they totalled 2,640.<sup>25</sup> Hubert Kuberski, based on German documents, assesses that the Orpo units directly involved in the mass executions on 5 August numbered 497 policemen of Polizei-Bataillon Petersburgs. However, to definitively settle this issue, detailed research of the extensive archival resources will be necessary. Indications suggest the participation of other German units in the war crimes in Wola. In conclusion, it should be stated that from 5 to 8 August 1944, between 2,297 and 2,640 German soldiers operated in the Wola area,

23 Kąkolewski K. 1975, 98.

24 A minor typographical error in the extermination Aktion in the Lublin District — it should also not be confused with the counter-partisan Unternehmen ‘Erntefest’ from 18 January to 7 February 1943. The assumptions assumed the pacification of three former regions east of the Minsk–Slutsk highway, partly part of Kreis Minsk-Land. The aforementioned counter-partisan operation took place simultaneously with Unternehmen ‘Peter’, which was carried out by the 203. Sicherungs-Division, see: [Wolfgang Vopersal] SS- u. Polizei-Kampfgruppe Griep [undated]; BA-MA, N 756/206b, s.p.; SS-Sonderbat Dirlwanger, Batl. Befehl für den 19.1.43. BA-MA, RS 3–36/3, 231; 18.01.1943; Verstärktes SS-Sonderbataillon [Dirlwanger], Abschlussbericht für das Unternehmen ‘Erntefest’, 00.01.1943 (before January 19). BA-MA, RS 3–36/9, 5–6; SS-Sonderbatl. Dirlwanger, Batl. Befehl für den 18.1.43; 17.01.1943. BA-MA, RS 3–36/9, 96; SS-Sonderbatl. Dirlwanger, Batl. Befehl für den 17.1.43; 16.01.1943, BA-MA, RS 3–36/9, 97; Kampfgruppe Coretti, Unternehmen ‘Peter’ der 203. Sich.Div. 11.01.1943, BA-MA, RS 3–36/9, 102; Bender R.J., Taylor H.P. 1986, 51; Żukov D., Kovtun I. 2009, 99–100.

25 Przeszowski K. 2024, 110. It has been a while since then — I will propose changes to the quoted passage: ‘On 6 [7] August 1944, the German troops [Kampfgruppe Reinefarth] were joined by the second battalion of the Brigade [sic! actually the 2<sup>nd</sup> battalion of the regiment — II/SS-Sonderregiment Dirlwanger — without the SS-Standartenführer des Reserve Oskar Paul Dirlwanger, who was absent in Warsaw until 8 August]. Dirlwanger. This unit was commanded by SS-Sturmabführer und Major der Schutzpolizei Josef Steinhauer]’: Krannhals H. von, 1962, 362–363. Document no. 24.

of which at least 750–850 were policemen (Ordnungspolizei and Sicherheitspolizei), directly involved in the extermination of the civilian population.<sup>26</sup>

The author's comparative considerations focus solely on comparing the number of executioners and victims. By adopting this methodological approach (which is, of course, entirely dependent on acting in accordance with the available knowledge, regardless of whether it aligns with objective reality), Przeszowski significantly simplified the described events, albeit in line with the knowledge he possessed, but before becoming familiar with and confronting German documents with Polish sources. The author was, of course, aware of the differences in conditions under which mass executions were carried out in various locations. Nevertheless, he formulated a thesis rejecting the claim that it was 'technically unfeasible' to execute 35,000 or even 65,000 people.<sup>27</sup>

Apart from the known number of executioners from German documents (unfortunately, not available for every day of August and September 1944), the most crucial factor in estimating the number of victims is the amount of ash remaining after the burning of those murdered in mass executions. The most frequently cited version mentions 12 tons of human ashes collected from execution sites in Wola and piled into a mound, on top of which a field altar was to be placed, serving simultaneously as a chapel-mausoleum. It was not until 1973 that Gustaw Zemła's monument 'The Fallen, Unconquered' was erected there, unveiled on 20 September 1973.<sup>28</sup> The figure of 12 tons of victims' ashes became so widely accepted that it was used by director Michał Rogalski in the title of his 2008 documentary film *12 Tons. They Are All There*. In one of my discussions with Kazimierz Krajewski, I accepted his proposed estimate of 18 tons of human ashes.

I went even further — in addition to estimating the amount of ashes, I also considered atmospheric conditions (wind, rain, snow), the presence of children among the victims, whose burned remains weighed less than those of adults, and unrecorded

26 Polizei-Bataillon Peterburs consisting on 5 August of 497 officers (on August 6, there were already five companies, i.e. 750–850 policemen) and a battalion from the 608<sup>th</sup> Security Regiment [Sicherungsregiment 608, Col. Schmidt] with personnel of 618 soldiers (as of 20 August, see: Kranhals H. von, 1962. Document no. 40). See: Gursztyn P. 2015, 354–355; Mierecki P., Christoforow W. (eds), 2007, 685. H. Kuberski did not present a hypothesis but rather quoted two key documents indicating that 2.5 Schutzpolizei companies with 341 men and 1 Gendarmerie company with 155 men were numerically equivalent to the staff of an Ordnungspolizei battalion (Polizei-Bataillon) on 5 August 1944, such a unit, created on an emergency basis from subunits of Orpo was Polizei-Bataillon Peterburs. On the second and final day of command, Major Peterburs resigned from this position, and his unit was renamed from 7 August to Polizei-Bataillon Sarnow (from the name of the new commander). See: Kuberski H. 2021, 144, footnote 15.

27 Przeszowski K. 2024, 120.

28 At the back of the monument, there is a plaque with the following inscription: 'In this place rest the ashes of over 50,000 Poles, civilian residents of Warsaw and soldiers of the Home Army, who died for the freedom of the Fatherland, murdered by the Germans during the Warsaw Uprising in August and September 1944. On 6 August 1946, 117 coffins with the ashes of people murdered and burned, transported from among others: the Gestapo headquarters in Szuch Avenue, Wolska Street, Górczewska Street, Sowiński Park, St. Stanislaus Hospital (Fronaszek's factory), Moczydło Street and Młynarska Street.' This means that the ashes of victims of the massacre in Southern Śródmieście were also buried there.

massacre sites from which the ashes did not reach the Warsaw Insurgents Cemetery. Due to these factors, the estimated amount of ashes could be increased by 2.5 times and rounded up to 30 tons (30,000 kg). This figure could then be divided by the amount of ash corresponding to one statistically murdered person, allowing for an estimate of the number of victims of mass killings in the western part of the former Warsaw-North County, i.e., today's Wola district. The Polish side stipulated that '[this] was not intended to determine the number of victims,' but this method allowed for an estimate of 12,000–15,000 victims. Meanwhile, a German judge arrived at different calculations based on the opinion of his expert, ranging from 8,500 to 10,000 dead. However, considering the consistency of von Krannhals's estimates with the thirty years of research conducted by Strok, we assume the number of victims at approximately 15,000 murdered civilian residents of Wola.<sup>29</sup>

The literature providing data on the weight of cremated human remains is surprisingly scarce, and most of it consists only of approximate estimates. Let us first refer to the arguments of Wojciech Szukiewicz, the author of one of the studies on this subject:

The weight of ash obtained after the cremation of a human body depends on the size, development and robustness of the skeletal structure, as well as the abundance of water and fats. A man's corpse yields 3–5 kilograms of ash, which fits in an urn with a capacity of 2–4 litres. For women and children, an urn with a capacity of 1–2 litres is usually sufficient.<sup>30</sup>

For example, Iserson (1) reports a range of 3–9 pounds (1.36–4.08 kg), Quigley a range of 6–12 pounds (2.72–5.44 kg), Carlson a range of 3–7 pounds (1.36–3.17 kg), and Maples and Browning a range of 2.2–8.8 pounds (0.99–3.99 kg). In summary, one can assume that the weight of ashes remaining from human cremation falls within the range of 0.99 kg (for children) to 5.44 kg.<sup>31</sup>

29 The most shocking information found in the Polish document was the mention of treasure hunters searching for gold and valuables, which highlights that such practices were not only related to Poles scavenging through the 'corpse slime' at the sites of former German death camps, but also applied to other places of mass extermination. These were inevitable effects of the barbarisation and dehumanisation of some members of Polish society under the German occupation.

30 Szukiewicz W. 1909, 58.

31 Cremation mass can be used to estimate the age and sex of individuals, to determine the minimum number of people in a sample, or to assess the pre-mortem size of the deceased. However, the cremation mass is also influenced by various other factors, including the cremation process itself, the selection of remains for burial, the soil, and the burial conditions to which the bones are exposed. The information on body mass after cremation in this study is used for a preliminary assessment of the preservation state of the remains and is not the basis for drawing conclusions about the age and sex of individuals. Data from articles and books by the aforementioned scientists (Iserson K. 1994; Quigley C. 1996; Carlson L. 1998; Warren M.W., Maples W.R. 1997) are taken from the article Bass W.M., Jantz R.L. 2004, 5; Schultz J.J., Warren M.W., Krigbaum J.S. 2015; Szukiewicz W. 1909, 58.

The estimate provided by the German forensic expert in an expert opinion for the investigating judge at the Hamburg Regional Court in the preliminary proceedings against insurance salesman (ex SS-Standartenführer, Regierungs- und Kriminaldirektor, Oberst der Polizei) Ludwig Hermann Karl Hahn and reserve criminal counsellor (ex SS-Sturmabführer und Regierungs- und Kriminalrat) Walter Willy Otto Stamm:

From the expert opinion prepared based on these findings by construction senior counsellor [Oberbaurat, Claus] Ballenthin from the Hamburg Building Authority, Department of Gardens and Cemeteries [Bauamt Hamburg, Garten- und Friedhofsamt], which was based on a series of experiments, it follows that in the case of impure cremation remains, one should assume that 3.53 kg corresponds to one corpse, while in the case of pure cremation remains, the weight is 2.25 kg per corpse. The expert believes that in the case of the ashes found in the cadet barracks,<sup>32</sup> the calculation should be based on the average weight of impure cremation remains. However, he incorrectly assumes that the bodies were burned in clothing. On the other hand, it should be considered that wood was burned along with the bodies (the weight of 2.25 kg was determined for cremation without coal). If an average weight of 3 kg is assumed, the conclusion is that the ashes found originate from the cremation of approximately 1,860 corpses [in the cadet barracks — HK].<sup>33</sup>

It is also important to consider the previously mentioned weather conditions, the presence of children among the victims — whose cremated remains weighed less than those of adults — as well as the unregistered massacre sites, from which the ashes did not reach the Warsaw Insurgents Cemetery. Due to these factors, the estimated amount of ashes can be increased 2.5 times and rounded to 30,000 kg. This number can then be divided by the amount of ash corresponding to one murdered person to estimate the number of victims of mass executions in the western part of the former Warsaw-North County, i.e., today's Wola district. However, considering the consistency between Hanns von Krannhals' estimates and Marek Strok's thirty years of research, we accept the number of victims at approximately 15,000 murdered civilian residents of Wola (assuming an average of 2 kg of ashes per victim, remembering the murdered children who weighed less than adults).

Returning to the issue of the number of perpetrators of genocide, a document from 6 August slightly increased the recorded personnel of the exterminators. Instead of the 3.5 Orpo companies that were present in Wola on 5 August, the German 9. Armee

32 Currently, the building of the Chancellery of the Prime Minister of Poland, Aleje Ujazdowskie 1–3, Warsaw.

33 Staatsanwaltschaft bei dem Landgericht Hamburg, Abteilung 14 B, Geschäfts-Nr.: 147 Js 22/69, Voruntersuchung gegen Dr. Hahn u.a. wegen NSG-Verbrechen in Warschau 1944, 10.02.1971. BL, B 162/18307, Bd. 1, k. 52.

Order of Battle (OdB) mentions that in 'Einsatzgruppe Reinefarth' in section (Teil) B, five companies of Schupo and Gendarmerie were subordinated. The number of soldiers or policemen in one company is, on average, from 90 to 200 men. However, on that day, the mass killings of Polish civilians ceased to have a systematic, exterminatory character after the evening order issued on 5 August by SS-Obergruppenführer von dem Bach. A noteworthy fact is the absence, in the above summary of extermination forces, of the personnel from Sonderkommando 7a (mentioned later in this monograph). These SS men may have been involved in mass executions in Moczydło, behind the viaduct and the embankment of the regional railway.<sup>34</sup>

This raises the question of the intentions and emotions of the perpetrators of the mass extermination of the civilian population in the western part of the Warsaw-North County (Wola) during the two-day Wola massacre. Assistance in this matter comes from the late writer Jarosław Marek Rymkiewicz,<sup>35</sup> in his historiosophical reflections included in the volume *Kinderszenen*, expressed in a paradoxical yet balanced form:

The massacre that really took place — the one carried out in Warsaw by the soldiers [and policemen — *HK*] of von dem Bach — had (one could say and not only could but should say) a human character, a human face, a human dimension. It was a massacre that was deeply and fundamentally humanistic. It consisted of a thousand events, of many thousands of events, and each of these events had its own character (each slightly different), each had its own duration, its own course, its own tension, its own particularity — its own distinct flavour. [...] The massacre that truly took place had a human character also because those who carried it out were human — they could be seen, their faces (each face different), their smiles (each smile different), their rage (each rage different). One could see the sweat running down their foreheads, see them gulping water after completing their work. One could see the sleeves of their uniform shirts rolled up below the elbows, their hands sweaty, hairy. Later, they sat on the sidewalk, took off their heavy helmets, and leaned against a bullet-riddled wall — resting. Like weary workers, for it was all very human. [...] Thousands of soldiers took part in these massacres that took place in Wola, Ochota, and the Old Town — from the Wehrmacht [Heer], the SS, the Sicherheitspolizei, the Luftwaffe, the RONA, and the ROA [sic!]. These thousands were commanded by dozens or hundreds of officers who gave orders to execute and burn or who personally carried out the executions. These hundreds or dozens were commanded by a few generals or a dozen or so colonels, who did not personally take part in the massacre; perhaps they watched, or perhaps they did not.<sup>36</sup>

34 Krannhals H. von, 1962, 361. Dokument 23: Einsatzgruppe [SS-] Gruppenführer Reinefarth; 5.08.1944, 363 — doc. 24: AOK 9, Ia N 3788/44, Gliederung AOK 9, 6.08.1944.

35 J.M. Rymkiewicz, (1935–2022). Polish poet, playwright and literary critic, professor of the humanities.

36 Rymkiewicz J.M. 2008, 210.

## Conclusion

Based on the analysed research results, it should be stated that despite nearly 80 years having passed, there is still no consensus on the number of casualties in Wola during the Warsaw Uprising in 1944. Moreover, the existing discrepancies in this area have even widened, ranging from 10,000 to 59,000 victims. A comparative analysis with other mass executions, based on specific examples, demonstrated that the ‘technical feasibility’ of executing 35,000 or 38,000 people should be considered unfounded ‘due to the insufficiency of German forces.’ At the same time, considering only the issue of ‘technical feasibility,’ the number of victims of the Wola Massacre could have been even higher, even accounting for the possible statistical absence of Orpo officers. It is challenging to accept the findings of Przeszowski, which were made 80 years after the tragic events discussed in this paper, as they were found to be merely averaged statistical studies. The author still faces the task of confronting German documents — cross-referencing his statistics with available information on the forces of Ordnungspolizei (Schutzpolizei and Gendarmerie) and SS (Sonderkommando 7a) based on the Order of Battle of the pacifying forces, which will allow for obtaining reliable information regarding the number of exterminators and Germans and Austrians and Azeris who primarily fought, but were also capable of pulling the trigger of their 7,92 mm MG 34s or 7,92 mm MG 08/15 or machine pistols 9 mm MP35 or Erma EMP or 7,62 mm MP 717(r) or ordinary bolt-action rifle 7,92 mm Karabiner 98k.

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