



# The History of Surgery in World War I: **Assessments of Wounded Soldiers** in Germany

### Abstract

World War I not only resulted in a total of far more than 16,000,000 dead soldiers and civilians but also left countless soldiers with severe wounds and impairments. The present article focuses on the medical assessments of wounded soldiers during and after World War I. As many official files, including medical records of German World War I soldiers, were destroyed during World War II in April 1945, finding original materials on this topic is challenging. The following article examines an original correspondence between the surgeon, Georg Benno Schmidt (1860 – 1935), and the ophthalmologist, August Wagenmann (1863 1955), who were both full professors at Heidelberg University, which took place approximately 15 months after the end of World War I in 1919. This correspondence demonstrates the immense workload faced by physicians responsible for assessing World War I veterans, even more than a year after the war had ended.

Key words: Independent Medical Evaluation, 20th Century History of Medicine, General Surgery

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The enormous death toll of over 9,000,000 soldiers during World War I can be partially attributed to the economic and industrial shifts around the early 20th century, which led to fundamental changes in modern warfare (Winter, 2003). These transformations were partly responsible for the lasting impairments endured by countless wounded soldiers ("Kriegsbeschädigte") (Eiselsberg, 1937, p. 342; Enzensberger, 2021, pp. 11 – 12, 17; Suwa, 2023, p. 220). Furthermore, it is noteworthy to acknowledge the role of conflicting economic interests in triggering World War I, such as the project of "Berlin – Baghdad

railway" and the "Suez" Canal (Bode, 1982; Suwa, 2023, p. 220).

In Middle Europe, World War I veterans suffering from different impairments became a part of everyday life, shaping a new reality, in the years following 1914 (Winter, 2003, p. 276). Economic turbulence necessitated accurate evaluations to estimate whether the individual impaired soldiers were eligible for financial help or other forms of support. Therefore, medical assessments of wounded soldiers during and after World War I should be regarded as a relevant historical topic (Winter, 2003, p. 276).

Different forms of impairments have to be considered in connection with assessments of wounded soldiers during and after World War I (Winter, 2003, p. 276). It was absolutely and fundamentally necessary for the medical assessors to distinguish between simulation, psychiatric disorders, and non – psychiatric impairments (Simons, 1917, pp. 36 – 63; Suwa, 2022, p. 136). This distinction became particularly essential in the final months of the war when psychiatric disorders, often classified as "war neurosis," became prevalent among German soldiers (Simons, 1917, pp. 36 – 63; Suwa, 2022, p. 136).

In Germany, medical examination procedures differentiating between psychiatric disorders, simulation, and non-psychiatric conditions partly developed out of examination procedures which were used for assessing workers who suffered from injuries and impairments caused by accidents and occupational hazards (e.g., miners or industrial workers) (Oppenheim, 1889; Seeligmüller, 1890b, pp. 960 – 963; Strümpell, 1888, pp. 1-29). Therefore, these examination procedures, in part, already existed during the late 19th century, although they often required modification to effectively assess World War I soldiers and veterans (Oppenheim, 1889; Seeligmüller, 1890a; Seeligmüller, 1890b; Seeligmüller, 1890c; Simons, 1917, pp. 36 – 63; Strümpell, 1888, pp. 1-29; Suwa, 2022, p. 136).

Many of the official files concerning German World War I soldiers (1914 – 1918) were destroyed in a World War II bombardment in April 1945, particularly those of soldiers from the former Prussian part of the German army (Von der Kriegsschule zum Parlament, 2000, pp. 14 - 15). These official files were kept in a military archive in Potsdam, near Berlin. Therefore, official materials concerning World War I veterans are partly not very common in the former Prussian regions of Germany, making it difficult to find historical materials on specific topics (Von der Kriegsschule zum Parlament, 2000, pp. 14 – 15). It has to be emphasized that many medical files and medical assessment records were destroyed in April 1945.

# **August Wagenmann (1863 – 1955)**

August Wagenmann was born on April 5, 1863, in Göttingen (Pagel, 1901c). His father, Julius Wagenmann (1823 – 1890), became a professor of theology at Göttingen University in 1861 (Tschackert, 1896, pp. 477 – 479). The influential ophthalmologist Theodor Leber (1840 – 1917) (Koelbing, 1985, pp. 19 – 20), who had been one of Albrecht von Graefe's (1828 – 1870) (Katner, 1964, p. 710) assistants, was August Wagenmann's most important teacher. In 1888, Wagenmann (1863 – 1955) completed his postdoctoral lecture qualification thesis at Göttingen University (Pagel, 1901c). Two years later, in 1890, he left Göttingen University and followed his teacher, Theodor Leber, to Heidelberg University (Pagel, 1901c). August Wagenmann was appointed to full professor of ophthalmology at Jena University in 1892 (Pagel, 1901c). In 1910, Wagenmann returned to Heidelberg University, becoming Theodor Leber's successor (Koelbing, 1985, p. 20). He retired in 1935. Wagenmann passed away in Heidelberg on August 12, 1955.

# **Georg Benno Schmidt (1860 – 1935)**

The surgeon, Georg Benno Schmidt, was born in Leipzig on March 18, 1860 (Pagel, 1901b). His father, Benno Gottlob Schmidt (1826 – 1896), was also a surgeon who dedicated most of his professional life to the surgical outpatients' clinic at Leipzig University ("chirurgisch – poliklinisches Institut") (Pagel, 1901a; Strümpell, 1925, p. 77; Winter, 1901, pp. 7, 42). One of Georg Benno Schmidt's brothers, Martin Benno Schmidt (1863 – 1949) (Georg Benno Schmidt had two brothers who were both also named "Benno Schmidt" after their father), later became an influential pathologist (Hessische Biografie, 2023; Strümpell, 1925, p. 157). After graduating in medicine, Georg Schmidt (1860 1935) was made "IInd assistant" ("II. Assistent") at the Anatomical Institute (Leipzig University) between 1884 and 1885 (Pagel, 1901b). At that time, Wilhelm His senior (1831 – 1904) was the head of the anatomical institute at Leipzig University (Röhrich, 1972, p. 249). In 1885, Georg Schmidt became Vincenz Czerny's (1842 – 1916) surgical assistant at Heidelberg University (Pagel, 1901b). In Heidelberg, Georg Schmidt married Paula Hausrath, the church historian Adolf Hausrath's (1837 – 1909) daughter (Hauß, 1969, pp. 126 – 127). Georg Schmidt completed his postdoctoral lecture qualification in 1889 (Schmidt, 1889, pp. 40-84) and became a specialist in cholecystectomy (Schmidt, 1896, pp. 1-29). Georg Benno Schmidt's 1901 textbook on surgery holds significant importance in the field (Schmidt, 1901). In 1909, Georg Schmidt became the head of the surgical institute at the children's hospital in Heidelberg (Krebs and Schipperges, 1968, p. 121). Georg Benno Schmidt passed away on June 2, 1935 (Drüll, 2019, p. 715).

### **Materials and Methods**

This study focuses on handwritten correspondence between Georg Benno Schmidt and August Wagenmann, dated November 15, 1919, and November 21, 1919, respectively. This study employed the document analysis method in qualitative research. A German transcript of the correspondence was prepared by identifying each word and character of the handwritten texts. While some words proved challenging to decipher, it was ultimately possible to create accurate transcripts. Subsequently, the transcripts were carefully translated into English. The contents of the correspondences were analysed by comparing them with various other sources. Step by step, the historical context of the correspondences was highlighted and discussed, resulting in overviews of the discussed topics.

The material presented in this study (see the Figures) and one additional supplementary material are being prepared for archival at Vienna Medical University (Manuscript, Collection No. MUW-AS-007005, 2024):

Archivaliensammlung Josephinum Medizinische Sammlungen GmbH Medizinische Universität Wien Währinger Straße 25 1090 Wien (Vienna) Austria

This study draws from a variety of historical sources, including books, journals, biographies, autobiographies, and encyclopaedia. Some of them were written during World War I, describing urgent surgical procedures or dangerous circumstances experienced by their authors. Therefore, these materials may contain some inaccuracies and as a consequence, it was essential to find additional sources reporting similar events. The following sources were especially valuable in this regard:

August Bier's biography (Vogeler, 1941; Suwa, 2022)

- 1. Anton von Eiselsberg's autobiography (Eiselsberg, 1937; Suwa, 2023)
- 2. Erwin Payr's autobiography (Payr, 1994; Suwa, 2024).
- 3. Ferdinand Sauerbruch's biography (Eckart, 2016)

Despite efforts to identify "Lieutenant Holler," mentioned in the correspondence, it was not possible to determine his exact identity. One reason for this limitation can be attributed to the destruction of many of the former Prussian soldiers' World War I files in April 1945 (Von der Kriegsschule zum Parlament, 2000, pp. 14-15). Furthermore, "Holler" is a quite common name in Germany. Therefore, it was not possible to determine his exact identity in this context.

#### Results

Handwritten correspondence from Georg Benno Schmidt to the Ophthalmological University Hospital in Heidelberg (responsible physician: August Wagenmann) dated November 15, 1919 (Figure 1):

To: the University Eye Hospital Heidelberg

Heidelberg d. 15.XI.19

I completed my assessment of Lieutenant Holler today. Please find enclosed a copy of the script on the surgical part of the assessment.

I would like to ask you to make an appointment with Lieutenant Holler for the ophthalmological part of the assessment (Clinic 101). Subsequently, please assign someone to type both my assessment and your ophthalmological assessment with a typewriter. Then, please return it to me so I can add my signature. This will ensure that both our signatures are present on the final document. I will take responsibility for returning the complete assessment to the reserve field hospital.

I am sorry, but I don't have anyone here to type the documents.

Regards, Professor B. Schmidt Sofienstreet 7



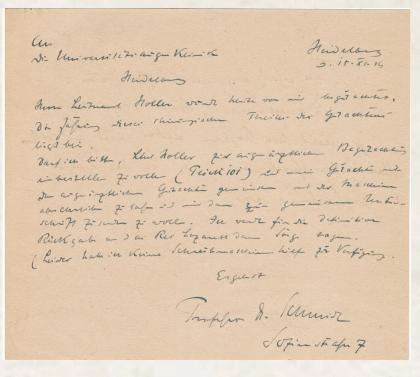


Figure 1. Georg Benno Schmidt's handwritten message addressing the Ophthalmological University Hospital in Heidelberg under the supervision of August Wagenmann on November 15, 1919, being prepared for archival at Vienna Medical University (Manuscript, Collection No. MUW-AS-007005, 2024)

Handwritten response from August Wagenmann to Georg Benno Schmidt's message, written on the reverse side of Georg Benno Schmidt's message dated November 21, 1919 (Figure 2) [explanations and comments were added in square brackets]:

H[Heidelberg] 21.XI.19.

The case history [K. G. "Krankengeschichte"] was sent to the reserve field hospital [R.] with the medical file[s] after completion [of the assessment] [Maybe a separate and perhaps secret or very strictly confidential case history did exist besides the official medical files. This sentence was very difficult to transcribe, as two words were abbreviated in the original German text]. It would be appropriate for us to sign each assessment individually because a non–delegated ["nicht kommisarische"] examination was demanded. I have already asked someone to copy your assessment [it remains unclear from the text if the copy was handwritten or typewritten].

Regards, Prof. Wagenmann

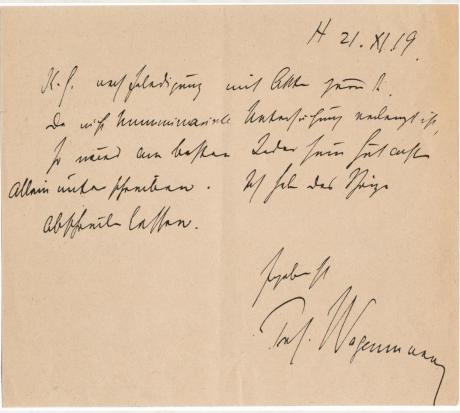


Figure 2. August Wagenmann's handwritten response to Georg Benno Schmidt's message on the reverse side of Georg Benno Schmidt's original correspondence (Figure 1), dated November 21, 1919, being prepared for archival at Vienna Medical University (Manuscript, Collection No. MUW-AS-007005, 2024)

#### Discussion

This correspondence between Georg Benno Schmidt (1860 – 1935) and August Wagenmann (1863 – 1955) in November 2019 clearly shows that assessments of wounded soldiers continued long after the end of World War I. Furthermore, it offers a glimpse into how these assessments were conducted. In Germany, a rigorous formal procedure was mandated for these assessments. This correspondence also shows that strict adherence to these formal procedures could sometimes be challenging and some physicians would occasionally interpret the rules surrounding these assessments in their unique ways.

Furthermore, the full professor, Georg Benno Schmidt, did not have a personal secretary or someone who could type the assessment ("Schreibmaschinenhilfe") approximately 15 months after the end of World War I. This could be another indication that parts of the medical system still suffered from the chaotic situation caused by the World War and could show how much time and effort were needed to reorganize the medical system afterward. Many soldiers suffered multiple impairments resulting from various wounds during World War I. Therefore, it was often necessary to conduct multiple assessments, which partly included assessments from different medical specialties.

The high cost and scarcity of paper during this period, especially high-quality paper,



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could be one reason why Wagenmann wrote his response to Schmidt's message on the reverse side of the same sheet (Verhandlungen des Bayerischen Landtags, 1919, pp. 321 - 322). It is also remarkable that both messages were written on a sheet of writing paper of poor quality, which was quite common in the aftermath of World War I (Verhandlungen des Bayerischen Landtags, 1919, pp. 321 - 322).

Ophthalmological assessments during and after World War I were not very frequently necessary after physical trauma. However, exposure to chemical weapons (especially to mustard gas) was a significant cause of eye injuries necessitating ophthalmological examination (Brittain, 1933, p. 395; Sidell, et al, 1997, pp. 198-228). The same source also mentions the use of mustard gas in the Iran-Iraq War (1982 - 1988) (Sidell, et al, 1997, pp. 198 - 228).

#### Conclusion

Assessments of wounded soldiers continued for months and even years after the end of World War I. Parts of the medical system still suffered from the chaotic situation approximately 15 months after the end of World War I.

Although a very strict formal procedure was mandated for conducting these assessments in Germany, the challenges and limitations of the post-war environment sometimes hindered strict adherence to these protocols. Hence, some physicians found it necessary to use their professional expertise and experience in interpreting the rules governing these evaluations.

Furthermore, it is remarkable that two full professors of Heidelberg University engaged in correspondence using a shared sheet of low-quality writing paper. The high cost of paper and the scarcity of high-quality writing paper in 1919 during this period could have been the main reasons for this circumstance.

It is clear that multiple impairments resulting from different wounds were pervasive and often required more than just one assessment. In many cases, these assessments required the involvement of specialists from different medical disciplines. Notably, wounds caused by chemical weapons, particularly mustard gas, were common reasons for complicated assessments.

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### **Conflict of Interest**

None.

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