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Richard Wilhelm's Engagement in German-Chinese Terminology Work and Related Interactions in Qingdao Before 1914

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Abstract The missionary, translator, and sinologist Richard Wilhelm (1873-1930) is widely recognised as a cultural intermediary between China and Germany. However, attention has mostly focused on his translations of Chinese philosophical classics for a Germanspeaking audience and his efforts to create a positive image of China in Europe. In this article, the focus is shifted to Wilhelm's less-explored contributions in the opposite direction. We will highlight his efforts in conveying 'Western' knowledge to China. Emphasis will be placed on his projects involving the creation of bilingual or multilingual dictionaries, glossaries and textbooks for natural sciences within the context of his teaching activities, as well as collaborations with the Chinese teaching staff at the school for Chinese boys in his mission station in Qingdao. This article will demonstrate how Wilhelm's school, the German-Chinese Seminar, serves as an intriguing case study of a "space of circulation" for interactions between German and Chinese actors in the translation and transfer of 'Western' knowledge and terminology to and in China, and explores personal interactions, exchanges, and the collaborative production of texts and knowledge.

Keywords Terminology transfer. Missionary school education. German colony of Tsingtau. Richard Wilhelm. German-Chinese interactions. Space of knowledge circulation.

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1 Introduction

Considerable research and literature have delved into the role of Christian missionaries in conveying modern knowledge to China, particularly in the context of Western, including German, cultural imperialism. Richard Wilhelm worked as a missionary of the General Evangelical Protestant Missionary Society (AEPMV)¹ in the German (from November 1914 Japanese) colony of Tsingtau (Schutzgebiet Kiautschou, see below) from 1899 to 1920. However, shortly after his arrival, he began to express critical views about imperialism and colonialism, as well as their intertwining with Christian missions (cf. Wippermann 2020, 96-126). Today, he is also widely regarded in China as a personality who actively worked to foster cultural exchange on equal terms, showing genuine interest and respect for Chinese culture, and making significant contributions to its dissemination in Germany.

Like all missionaries, Wilhelm, upon his arrival in China, began to learn the Chinese language and engaged in extensive studies of Chinese culture and intellectual realms. The study of native languages and cultures was a fundamental part of a missionary's responsibilities, and particularly in the AEPMV, great importance was placed on missionaries achieving a high level of familiarity with the Chinese language and cultural understanding, not least in order to be able to reach the Chinese upper class for the mission's goals. From the outset, acquiring sinological expertise was a top priority for Wilhelm. He obtained this expertise in Oingdao 青岛 through interactions with his Chinese language instructors, who were educated and learned individuals with varying degrees of expertise in traditional Chinese and/or 'modern Western' knowledge. Wilhelm also began reading Chinese texts early on and published his first translation of a classical Chinese text in 1902.

In the months following his arrival in May 1899, Wilhelm benefited from the experience and knowledge of his colleague and predecessor, Ernst Faber (who had lived in China since 1864)² and his extensive library. After Faber's death by the end of September 1899, his library remained at the mission station. Wilhelm's knowledge about China at the time was drawn from a multitude of sources, including Chinese texts and human informants, as well as Western scholarly literature. The authors of this Western China-literature, in turn, were influenced by experiences on-site, the reception of both Western and Chinese

¹ Also Weimar Mission, later German East Asia Mission (DOAM). For more information about this mission society, cf. Gerber 2002.

For information about Ernst Faber, cf. Gerber 2002, 167-71; Sun 2002, 166-70 and passim.

sources, and personal exchanges with Chinese actors. Wilhelm thus found himself in a starting position that was based on a pool of experiences between interacting people from China and the West, as well as on texts and bodies of knowledge circulating in between. It was a complex context that spanned both historical and geographical dimensions, and a fabric into which he actively and creatively inserted himself with his own personal interactions and textual productions.

Notably, Wilhelm did not engage in direct missionary conversion work, but primarily focused on educational efforts in his schools for the local Chinese population (cf. Kim 2004, 193-204). In these institutions, religious instruction was, at most, offered as an optional component. One of the key institutions in this regard was the German-Chinese Seminar (Deutsch-chinesisches Seminar), founded by him in 1901. Under his leadership, this middle and high school earned an excellent reputation in Qingdao and Shandong 山东 Province. Wilhelm was thus a missionary, translator, and sinologist widely recognised as a cultural intermediary between China and Germany during his lifetime, and he continues to enjoy great esteem in China to this day. Much of the attention has been directed toward his German translations of Chinese classics and his efforts to mitigate negative stereotypes about China among the German-speaking audience.

This article aims to shift the focus to a less-explored aspect of Wilhelm's contributions, which namely is his role in the transmission of culture and knowledge from 'the West' to China. Here, the emphasis is placed on Wilhelm's involvement in Qingdao during the period leading up to 1914, before the outbreak of World War I. In the following. we will examine Wilhelm's projects in the field of German-Chinese technical and scientific terminology, particularly in the context of his teaching and the development of teaching materials for the natural sciences at the German-Chinese Seminar. We will explore the role played by the Chinese teaching staff in this terminology and translation work as well as textbook production, and examine how Wilhelm's relationships with the Sino-German University in Qingdao accompanied these endeavours. To exemplify these cooperations, special attention will be given to Wilhelm's German-English-Chinese Dictionary of Technical Terms (1911b), his textbook Outline of Zoology (1913) and to his long-term cooperation with the Tan brothers - both students and later teachers at his German-Chinese Seminar.

The German-Chinese interactions under consideration took place within Germany's 'Colony of Tsingtau', officially known as the Kiautschou [Jiaozhou 胶州] Protectorate (Schutzgebiet Kiautschou, 1897/98-1914). The heart of this area was Tsingtau [Qingdao], at that time only a small town, and its surrounding rural areas. Naturally, there were also connections to other locations in the Shandong province, as many Chinese people from regions outside the protectorate settled in Qingdao. This includes numerous Chinese students and teachers at Wilhelm's German-Chinese Seminar. Wilhelm operated within a social and physical space that can be described as follows:

Wilhelm's writings provide detailed accounts of his everyday interactions with Chinese individuals from various backgrounds. As a missionary, he was not subject to strict segregation between Germans and Chinese in Qingdao. His work in schools and hospitals necessitated close contact with Chinese people. As he described it, he lived in "two separate worlds" of the European and the Chinese (VM. early December 1908.5, 79). These worlds also intertwined within the mission station: the station, which expanded with new buildings on the extensive "Mission Hill," was located on the outskirts of the European district. It formed its own German-Chinese microcosm under Wilhelm's leadership, with a mixture of German and Chinese staff, their families. Chinese service personnel, Chinese students in the boarding schools, and Chinese patients and medical staff in the Faber Hospital. (Wippermann 2020, 38-9)

The German-Chinese Seminar, at its inauguration in 1901, was initially housed in a building located in the Tapautau (Dabaodao 大鲍 岛) district for Chinese residents. However, the following year, a new building complex, featuring Chinese architectural elements, was occupied on the Mission Hill:

The pupils [...] were accommodated in the school buildings under the supervision of Chinese teachers and were provided for within the mission station's facilities. The proximity of the German-Chinese Seminar to Wilhelm's residence facilitated his supervision of the students. [...] He encountered them daily during lessons and morning devotions, and he also attended to their personal needs. (41)3

As this paper will demonstrate, the German-Chinese microcosm of Wilhelm's mission station with the German-Chinese Seminar as central institution, physically located on the Mission Hill of Qingdao, constituted a clearly confined geographical "space of knowledge circulation". This space and the actors and texts involved were not strictly separated from the outside world, but were embedded in numerous larger spaces of circulation, especially the colony of Qingdao and surrounding regions of Shandong Province, and existed with close connections and exchange not only with individuals and institutions in its near physical surroundings - like the Sino-German University

³ For more information about this school, cf. Gerber 2002, 215-21; 2013; Kim 2004, 194-9; Zhai 2015, 54-124, 336-403 and passim; Wippermann 2020, 127-32, 261-2.

in Qingdao, but also with the "world of knowledge" in all its historical and geographical dimensions. It thus will turn out to be a rather small-sized, but quite typical example for the model of a "social and physical" "space of circulation", that allows "tapping into an already existing continuum, or cloud, of relations" as described by Raj (2017, 52-4) [figs 1-3].

2 Preparation and Publication of the German-English-Chinese Dictionary of Technical Terms (1909-12)

The *Deutsch-Englisch-Chinesisches Fachwörterbuch* (hereafter *Dictionary of Technical Terms*) edited by the Sino-German University in Qingdao was published in 1911 (and 1912, see below), with Richard Wilhelm credited as author. Wilhelm likely began or intensified his work on this dictionary in late 1909, continuing his efforts over the next more than two years. This can be deduced from numerous calendar entries in the period from January 5, 1910 to November 7, 1911, when Wilhelm noted: "dictionary Z finished" (KN 1910-11).

Despite the publication year being stated as 1911 on the front page of the volume, it seems that the work actually was completed in 1912 only. On January 19, 1912, Wilhelm wrote "work on the lexicon resumed", and on January 22, he noted: "lexicon finished" (KN 1912). However, the publication process likely commenced already in 1911. In a letter dated June 4, 1911, Wilhelm mentioned: "As to the dictionary, the first volume [A]-L should be published first" (B-SW).

⁴ There is no evidence in the sources reviewed so far to support Salome Wilhelm's statement (1956, 136) regarding "the continuation of work on a German-English-Chinese dictionary in 1906".

⁵ About his publications in 1910, Wilhelm summarised: "The work of the year was divided between the preparations for the Dictionary of Technical Terms and the translation of the Tao Te Ching [Daodejing]" (KN 1907-14, text following the entry of January 31, 1910. Cf. also KN 1910).

⁶ From Wilhelm's calendar entries, it can be inferred that the section up to "L" had long been completed by that time (cf. KN April 11, 1911), allowing it to be published in the same year. The few complete editions cataloged in German libraries (cf. KVK) are single-volume (576 pages), except for one part of the volume "A-L" cataloged at the library of Trier University and the Central Archive of the Evangelical Church of the Palatinate (Speyer) (307 pages). In Wilhelm's literary estate in Munich, apart from the single-volume work, there is also one copy of volume M-Z, which is listed in their catalog ("Anonym, Deutsch-Chinesisches Wörterbuch, M-Z, ohne Ort und Jahr", ABAdW I/92) without the author's name or correct title. However, upon closer examination, it is indeed volume II of the Dictionary of Technical Terms. Wilhelm's statements from the period before 1911 about the printing progress (B-AEPMV, December 2, 1909, 3) and about "the Chinese printing press [in Shanghai. DW: probably Commercial Press] where my German-English-Chinese dictionary is currently being printed" (VM, July 2, 1910, 28) seem confusing. It is possible that Wilhelm wanted to present the progress of the work to the mission society or mission circles in Germany more favourably regarding

Wilhelm's publication of the *Dictionary of Technical Terms* and the Sino-German University's editorship aligns with his close connection to this university, which opened in October 1909. He had expressed interest in this institution early on. Already at the end of 1908, Wilhelm emphasised

how important it is that Germans and Chinese stay in touch with each other and work together for mutual prosperity. In this regard, the university venture of the German and Chinese governments can, under the right circumstances, be of significant benefit. It can evolve into a cultural enterprise that serves mutual understanding and mutual support. (VM, early December 1908.5, 88)

The idea for the *Dictionary of Technical Terms* appears, however, to have originated independently of the then-planned university. Following the statement quoted here, Wilhelm mentioned in the next paragraph: "There is now a need for a German-Chinese dictionary of the most important scientific terms to be published" (88). And even earlier in a letter dated June 24, 1907 (B-AEPMV, 1) he had already mentioned that he was working on a German-Chinese scientific dictionary. By the end of 1909, Wilhelm conveyed the impression to the AEPMV that the project was well-advanced:

I am currently engaged in the production of a German-English-Chinese dictionary of scientific terms, the printing of which has just begun. I kindly request to be allowed to advance the printing costs, which will amount to approximately 2-3000 dollars, initially from the funds of the mission society [AEPMV]. I commit to reimbursing the society, along with interest, after the sale of the corresponding number of copies. Such a dictionary is indeed a genuine necessity at this moment, and I have been led to undertake this endeavour based on practical requirements. I hope to complete it within a year. (B-AEPMV, December 2, 1909, 3)

Wilhelm mentions some other ongoing projects for the publication of school teaching materials (see sections 3 and 4), but "I consider the dictionary to be the most important project in the first place" (p. 3) [figs 4-5].

How the Sino-German University came to be the editor of the dictionary is still unclear. Although Wilhelm initially intended it for the

the potential for financial support of his projects. Interestingly, there is no mention of a specific printing or publishing company in the dictionary.

For further information about the Sino-German University, cf. Mühlhahn 2000, 242-51 and Iwo Amelung's article in this volume.

students of his school, it is reasonable to assume that it was also of interest to the students of the preparatory college and the specialised programmes of the Sino-German University. In a letter to Wilhelm dated March 3, 1912, Georg Keiper, the director of the Sino-German University, wrote:

I have discussed the issue of early access to the profits from the specialized technical dictionary in more detail and found that in this budget year, ending at the end of March of this year, a payout is no longer possible. However, I will gladly pursue the matter further as soon as confirmation of the usage plan for our industrial fund from Berlin arrives. I hope this will happen immediately after the start of the semester. I will not fail to revisit the matter at that time. (1912)

At the end of 1912, referring to the dictionary, Wilhelm mentioned Hans Wirtz, who was responsible for the Translation Office at the university, which handled the translation of textbooks into Chinese: "Meeting with Wirtz regarding the lexicon" (KN November 19, 1912).

Shortly after the university's opening, Wilhelm had reported that "the head of the university has so far avoided any contact with us" (B-AEPMV, December 2, 1909, 1). At that time, the German side endeavoured to officially maintain the appearance of distance from Christian missions, at least in public. Therefore, Wilhelm's early attempts to join the university and establish a formal connection between his school and the university had been unsuccessful (Gerber 2013, 133-4). However, from the beginning, Wilhelm was "personally in stimulating contact with many of the university lecturers" (B-AEPMV, December 2, 1909, 1), not only with Wirtz but also with individuals such as the legal scholar Harald Gutherz and the sinologist Ferdinand Lessing, among others.8

⁸ Several notes in Wilhelm's calendars indicate that during the year 1910, he and Gutherz prepared even a collaboration on the Chinese translation of the "German Encyclopaedia of Law", but this plan did not realise. Cf. for example, Wilhelm's note about "translation plans with Gutherz", referring to the year 1910 (text following the entry for January 31, 1910 in KN 1907-14).

3 Wilhelm's Chinese Collaborators in Dictionary and Textbook Production at the German-Chinese Seminar - with Special Focus on the Role of the Tan Brothers

While Wilhelm is listed as the sole author of the Dictionary of Technical Terms, it is difficult to imagine that he created it without the involvement of others, particularly without the assistance of Chinese native speakers with proficiency in German and/or English as well as scientific and technical knowledge. In late 1908, when he mentioned the idea for the dictionary, Wilhelm expressed hope for support from graduates of his German-Chinese Seminar. He referred to the "first five [Chinese] school students who have completed the full seven-year course," saying:

They all give reason for good hopes. Although it is easy to find good positions for them, they have nevertheless agreed to return next year to assist with the work on the planned technical dictionary. (VM, early December 1908.5, 88)

It remains unclear if these five students really were involved after the work on the dictionary had begun. There is, however, compelling evidence that one former student of the German-Chinese Seminar, Tan Yuefeng, was his collaborator in this project. In a letter from Wilhelm to his wife, the following passage can be found:

The lexicon is progressing step by step, now already at 'K.' I still have to copy it, however. Because if I don't copy it, Tan will have nothing to do and will take leave to Tapautau. But you can imagine how much I look forward to you helping me in all these matters. (B-SW, August 4, 1910)

From this, along with information from other sources, it is clear that by "copy," Wilhelm meant a typewritten copy, which was usually done by his wife Salome Wilhelm. It appears that Tan regularly received the typewritten versions for further processing. This is corroborated by another statement:

My daily routine is also guite settled. In the morning, lexicon and the like. From 10 o'clock onwards, together with Tan. (B-SW, February 23, 1911)

Although there is no specific information about Tan's exact role in creating the dictionary, it seems to be evident (see below in this section and section 4) that he possessed knowledge in both the German language and specialised terminology required for the dictionary work.

As little has still been reported - especially in Western literature - about Tan and his brother and their guite significant roles in Wilhelm's school and his work on the dictionary and teaching materials, we here will briefly delve into the life, education and professional careers of the Tan brothers. We will focus on their time as students and teachers or translators at Wilhelm's school and as students and translators at the Sino-German University.

Tan Yuefeng 谭岳峰, in Wilhelm's spelling 'Tan Yüo Feng' (1882-1935), and his elder brother Tan Yufeng 谭玉峰, in other spellings 'Tan Yü Feng', 'Tan Iü Feng' or 'Tan Ue Feng' (born around 1879). from Weixian 潍县 (Shandong Province), were among the first Chinese students whom Wilhelm began teaching German from October 1900. In the following year, he opened the German-Chinese Seminar with them and other students. In 1934, Tan Yufeng recalled:

In the year 1900, persecuted by the anti-Christian Boxers, I left Tengchoufu [Dengzhou 登州], where I had studied in an American mission school and adopted the Christian faith, and went to Tsingtau with the desire to be able to satisfy my longing for learning the German language here. My path led me to Dr. Wilhelm in the East Asian Mission, where I initially enjoyed private lessons with a few other students. (1934, 35)

The two youngest of six brothers (alongside five sisters), Tan Yuefeng and Tan Yufeng, were raised in extremely impoverished conditions in a family of carpenters until their older brothers, who had found opportunities working on construction projects in the new German colony, were able to support their attendance at Wilhelm's school (Liu 2016, 82-3). By the end of 1906, they were among the "first 3 high school graduates from the school" (Wilhelm et al. 1906, 32). In the years leading up to their graduation, both of them had been employed as particularly talented and successful students, assisting with the teaching of "German for beginners". The mission station's annual report 1902/03 stated that

Tan Ue Feng from Weihien [Weixian], a student in our Tsingtau school, assists with German elementary education and is currently serving as the acting interpreter for the Chinese district office in Kaumi [Gaomi 高密]. (AEPMV 1903, 38-9)

⁹ Tan Yuefeng's descendants have preserved a copy of Brockhaus' Kleines Konversationslexikon, on the inside title page of which there is a handwritten dedication from "R. Wilhelm" to "Tan Yüo Feng as a friendly reminder of the day of his departure from the German-Chinese Seminar on January 18, 1907" (photo in Liu 2016, 82).

Here, due to the similarity of the pronunciation of their names and the ambiguous transcription of "Ue", at first sight it seems unclear which of the two brothers is being referred to. However, it must have been Tan Yufeng, as confirmed by a preserved letter from "Tan Ju Fung" to Wilhelm, dated May 7, 1903, which makes reference to his stay in Gaomi. ¹⁰ In the next annual report, only Tan Yufeng is listed as teaching one hour of German daily (Wilhelm 1904, 50). However, in the following annual report, both brothers are recorded as "assistant teachers in German" (AEPMV 1905, 48), and Tan Yufeng is mentioned as having "successfully passed the master's examination at Tsinanfu [Jinan 济南] University" in the fall of 1904. ¹¹

Another report notes that Tan Yufeng "holds the literary degree of a Yu Gung [yougong 憂貢],¹² teaches physics and natural sciences," whereas Tan Yuefeng is still identified as an "assistant teacher in German" (Wilhelm et al. 1906, 30). The annual report 1907 lists only Tan Yufeng among "Our Chinese employees," now as a "graduate of our school, teaching physics and German". However, Wilhelm expressed praise for both brothers:

¹⁰ The letter reads as follows: "Dear Teacher! After I left you, I constantly think of the grace and love I received before, without interruption, and God has protected me, so everything has been going well. When I arrived in Kaumi, the county official ordered me to take the side hall of the Jamen as the most comfortable place. The room I live in is always quiet, and no one disturbs my tasks. The city council and I paid each other a visit, and the German mandarins did too. Later, you can give me a response so that I can follow your orders, if I may ask. With warm regards! Respectfully, your devoted student Tan Ju Fung" (AEPMV 1902-25).

[&]quot;We can already report a great success in the past year in the significant interest shown to us by both the former Governor of Shandong, Chou Fu [Zhou Fu], and his successor, Yang Schi Siang [Yang Shixiang], during their visits to Tsingtau. This interest was not only expressed through generous financial donations but, as an even more valuable result, it led to our school's integration into the Chinese government school system. At Chou Fu's suggestion, the Taotai Hsiau [daotai Xiao] examined all mission schools, for those who desired it. For us, this resulted in several students receiving awards, and I was also invited to send students to Tsinanfu for the university examinations, with the explicit concession that, after passing the exams, our students would be allowed to complete their studies at our school. I took advantage of this offer and initially sent one student [Tan Yufeng] to Tsinanfu for the examinations. He passed them with distinction. Additionally, several of our students transitioned to the university in Tsinanfu, all having passed the necessary entrance exams. [...] Regarding internal developments, we may mention that various students have already proven themselves as useful individuals. The three most advanced students (including the Tan brothers) were able to become assistant teachers this year, which proved to be a great relief due to the high influx of new students. One of them, together with Pastor [Wilhelm] Schüler [Richard Wilhelm's missionary colleague. for whom this student served as an interpreter], teaches German in the 2nd grade, and the other two teach independently under Mrs. Wilhelm's supervision. [...] In this way, we can observe that our work is gradually bearing fruit as we are able to gradually develop a group of useful assistants" (AEPMV 1905, 50).

¹² Tan Yufeng wrote about this in retrospect: "In 1904, I was selected as the first student to take the civil service examination in the provincial capital. I passed the examination with good results, and I was awarded the honorary second-grade title by the Emperor of the Tsing [Qing] Dynasty, skipping the first grade" (1934, 36).

Of the three students who graduated last fall, one, Tan Jü Feng [Tan Yufeng], is employed as a teacher at our school and is of great value to us in this role. We were also delighted that he declined other, highly advantageous offers such as a position at Tsinanfu University to remain loval to our cause. His brother. Tan Yüo Feng [Tan Yuefeng], holds a well-paid teaching position at a Chinese modern school [according to Liu 2016, 84, Zhongguo Gongxue 中国公学] in Shanghai 上海, where he also teaches at the German medical school there. (Wilhelm 1907, 34)

When the Sino-German University was established in Qingdao in the autumn of 1909, Tan Yufeng began pursuing a degree in mechanical engineering and simultaneously secured a part-time position as a technical translator in the university's translation office. At this office. Germans (including its head and Wilhelm's friend Hans Wirtz) and Chinese individuals collaborated to translate teaching materials into Chinese. After completing his studies in 1913, Tan Yufeng started teaching at the Sino-German University. His whereabouts during the Japanese occupation of Qingdao from 1914 to 1922 remain unclear. However, in 1922, he returned to his role as a teacher at the school founded by Wilhelm in Qingdao:

It was only after the return of Qingdao to China that a reorganization [of the school] occurred, which I helped establish in collaboration with Dr. Seufert and director Liu. 13 I returned to my old school, now guided by the motto 'docendo discimus' (we learn by teaching). On the occasion of the fiftieth anniversary of the East Asia Mission [formerly AEPMV], to which I owe my intellectual and moral education, I wish to express my gratitude through these words. I hope that it continues to grow and flourish in its mission of bridging China and the West in the spirit of Jesus Christ. Tan Jü Feng, Deputy Director of the Mission School. (1934, 36)

According to a list of teachers at the school in 1937, Tan Yufeng, now 58 years old, was still working there at that time as "educational director and teacher for mathematical subjects" (Zhai 2015, 375). He

¹³ Zhai (2015, 368-79) reports that Liu Shuanfa 刘栓法 (1889-1957) came to Qingdao in 1904 at the age of 15 from a village in Shandong and became a student at Richard Wilhelm's German-Chinese Seminar. Later, with Wilhelm's recommendation, he was admitted to the Sino-German University. After the outbreak of the war in 1914, he transferred to the German Tongji University in Shanghai, where he completed his studies in 1921. In 1922/23, he became the director of Wilhelm's former mission school (under the supervision of AEPMV missionary Wilhelm Seufert). He is praised to have continued and developed the school in the spirit of Richard Wilhelm for 30 years, creating an "educational legend of the Richard Wilhelm School in Qingdao" (369).

maintained contact with Wilhelm after Wilhelm had left Qingdao, during Wilhelm's time as a Scientific Advisor at the German legation and as a professor at Peking University in Beijing, and continued his correspondence with Wilhelm, after the latter had left China to take up his career as professor at the University of Frankfurt. 4 These letters provide evidence that in addition to his teaching at the mission school, Tan Yufeng had also secured a part-time position as a "technical censor within the government". In early 1925, he was involved in preparations for the celebrations of the school's twenty-fifth anniversary (December 27, 1924 and February 27, 1925). He also proudly reported that his "eldest son, named Dasi, who has been studying political science, along with German and French languages in America for five years," was going to take his doctoral exam at the end of the year (December 1, 1927).

The younger brother, Tan Yuefeng, had not stayed in Shanghai for long in 1908 and returned to Oingdao in the same year's winter. According to Liu (2016, 85), he worked then in Qingdao as a translator or interpreter. Based on Wilhelm's reports, he re-entered the German-Chinese Seminar as a teacher and also took on translation tasks:

We had to employ a few new teachers, among them a former student of our school who gave up a well-paid position in Shanghai to assist us in our cause for half of the salary he earned there. 15 He is of great value to us due to his knowledge of the German language and his teaching capabilities. (VM, February 1909.1, 9-10)

The annual report 1909 once again listed Tan Yuefeng: "Trained at the Seminar, teacher for the German language and chemistry, also assists with translation work" (Wilhelm 1909, 53). Additionally, Wilhelm noted: "Ma De I.16 Trained at the Seminar, assistant teacher in German. Translation work". In this report, Wilhelm wrote about the school's own "translation office" for the first time with a list of the personnel employed there:

¹⁴ Cf. Tan Yufengs letters to Wilhlem during the years from 1922 to 1927 (AEPMV 1902-25).

¹⁵ Liu (2016, 84) indicates that the unstable situation and poor financial condition of many Chinese educational institutions, including those in Shanghai, which often had difficulties paying salaries regularly, may have influenced Tan Yuefeng's decision to return to Qingdao.

¹⁶ Ma Deyi 马德溢 continued to teach at the German-Chinese Seminar for a long time, at least until 1937 (Zhai 2015, 85, 375).

Director: R. Wilhelm

Chinese director: Dsang We Tang¹⁷

Chinese assistants proficient in German:

Tan Yüo Feng [...] Ma De I [...]

Dsiao Gi Dseng, trained at the Seminar: transferred to the trans-

lation office of the University by the end of the year.

Chinese scribe: Ma Schen An [...] [also listed as one of the "teach-

ers of Chinese at the Elementary School"1. (1909, 54)

Tan Yuefeng continued working at the German-Chinese Seminar, as per Wilhelm's reports, until the fall of 1911. In his annual report 1911, Wilhelm writes about him:

The shortage of teachers became particularly acute when one of the most talented former students of our school, Pan Yür Föng¹⁸ [Tan Yuefeng], left for the [Sino-German] University at the beginning of the second semester to work as an interpreter. As a result, I had to add physics to my other teaching subjects. However, the Chinese teachers, among whom several were former students of our school, faithfully provided assistance, ensuring that the year's workload was completed. (1911a, 64)

In private letters, Wilhelm expressed significant concerns about the increasing competition from the Sino-German University and its preparatory college for his school:

I am not entirely sure how our work will continue. In the upper grade of the seminar, we had five students last semester. Now I hear that three of them intend to go to the university. If only two students remain, who also belong to two different classes, it's quite questionable whether it's worth continuing the upper grade. Recently, on the way to the university - where I went with the [Chinese] teachers of the Protectorate for an inspection - I spoke with Tan Yüo Feng [Tan Yuefeng] about the matter and asked him to talk to Du Diän Ying (one of those who want to leave) so that he might reconsider. He promised to do his best, and I was pleased to have at least one loyal helper in him. Later at the university, Dr. Wirtz told me that the same Tan Yüo Feng had applied for the

¹⁷ Cang Yuchen/Weitang 藏毓臣, 字炜堂 from Zhucheng 诸城 in Shandong province was a graduate with the traditional degree of juren 举人 (provincial examination level) (Zhai 2015, 85).

¹⁸ From the entire context, it is clear that only Tan Yuefeng must be meant here. "Pan Yür Föng" is likely a typographical error that occurred during the printing of Wilhelm's manuscript by the AEPMV.

interpreter position in the medical department for next year. The Tan brothers, who were present, noticeably blushed, while I continued to smile without batting an eye. Well, I won't hold onto anything. Who wants to leave, should leave. (B-SW, August 8, 1911)

Soon after that, Wilhelm wrote that he was "teaching physics at the seminar" because "Tan left for the university hastily" (B-SW, September 29, 1911). According to Liu (2016, 85) Tan Yuefeng began working as a medical interpreter at the Sino-German University in June 1911, with a workload of 25 hours per week, and he was also enrolled as a student in the medical department in the same year. While Wilhelm continued to have contact with Hans Wirtz and other lecturers from the university, it is likely that his connection with the Tan brothers also persisted, although so far, no specific indications of the collaboration continuing were found. Tan Yuefeng is reported to have worked as interpreter for Sun Zhongshan (Sun Yat-sen) during his visit to the Sino-German University in Qingdao on September 30, 1912, and that a joint photo of Sun and Tan was taken on this occasion (Liu 2016, 85-6, 99). In 1913, Tan Yuefeng published a Chinese-German Glossary of the "Most important [German] nouns, sorted by subject" in Qingdao. 19

After the outbreak of World War I in 1914, Tan Yuefeng, like many other students and faculty members of the Sino-German University, moved to Shanghai and completed his studies at the German Medical School (later Tongji University) in 1916. He was then offered a teaching position for chemistry and German at the predecessor institution of Henan 河南 University in Kaifeng 开封. But after one year, he established himself as a Western medicine physician and pharmacist, achieving great renown and wealth in Kaifeng. In the early 1930s, he opened a pharmacy and optician's shop in Qingdao. On January 27, 1935, he passed away (due to meningitis) and was buried in the European cemetery in Qingdao.²⁰

¹⁹ Tan Yüo Fung (1913). *Hua-De yaoyu leibian* 华德要语类编 *Die wichtigsten Hauptwörter nach Arten geordnet. Herausgegeben von Tien Hsing Buchhandlung* (Published by Tian Hsing Bookshop). Tsingtau (now kept in the Museum of Tongji University, cf. the photograph of the title page in Tongji Daxue 2023).

²⁰ Cf. Liu 2016. In the chapter "Xunzhao Tan Yuefeng" 寻找谭岳峰 (In Search of Tan Yuefeng) (80-91), the Qingdao journalist and local history researcher presents his research on the Tan brothers, especially Tan Yuefeng. Liu does not provide precise references, but he mentions a number of sources used, including those he personally viewed in Kaifeng archives, as well as secondary literature. He also used documents and photographs kept in the Tan family, provided by Tan Yuefengs grandson Tan Guozhang 谭国璋. For the Tan brothers, cf. also Tan 1934; Gerber 2002, 218-19; Zhai 2015, 61, 368, 375-6.

Tan Yuefengs optician's store in Qingdao was equipped with modern technical equipment from Germany, carried out eye tests for spectacle fitting and is said to have been the first in Qingdao to be able to grind its own lenses. In 2013, Tan Guozhang donated one of his father's optical devices, an ophalmoscope, to the Museum of Tongji University

4 Education in Natural Sciences and the Role of Scientifically Trained Chinese Teachers at the German-Chinese Seminar

To return to the above-mentioned "translation office" established at Wilhelm's German-Chinese Seminar – his report (1909) makes it clear that this likely new "office", under Wilhelm's leadership, with entirely Chinese staff (including Tan Yuefeng) and dedicated office space, ²¹ was responsible not only for work on the *Dictionary for Technical Terms* but also, and primarily, for extensive projects related to the creation of Chinese teaching materials for school instruction, particularly in modern natural science subjects:

In addition to our school teaching work and, to a large extent, with the assistance of individuals trained in our seminar, we have undertaken to participate in the highly important task of creating suitable teaching materials for Chinese schools. In the reporting

in Shanghai, and in 2023 donated again some documents from Tan Yuefeng's time as a student (Liu 2016, 89-90, Tongji Daxue 2023). Among the many further details about the Tan family's history in Liu's text, it is noteworthy that Tan Yuefeng is said to have learned to play the violin from Richard Wilhelm and practiced a lot at home, so that his son, Tan Shuzhen 谭抒真 (1907-2002), became familiar with the sound of the violin in his mother's womb and developed a love for this instrument as a child (Liu 2016, 62, 83). It is also reported that Tan Shuzhen's interest in the violin was fostered in Qingdao because his father, Tan Yuefeng, would sometimes take him to music "parties" (yinyue "paidui" 音乐"派对"). Additionally, their experiences with European music in the Christian Tan family's church services played a role (Qingdao chengshi dang'an luntan 2022). Richard Wilhelm was an enthusiastic amateur musician who often attended classical European music concerts held in Qingdao and also regularly organised chamber music evenings with German friends at his home (noting this in his calendar entries). This apparently allowed Chinese individuals such as Tan Yuefeng and his son to come into contact with European music.

Tan Shuzhen became a famous violinist and professor of the violin, as well as a violin maker, known as the "Father of Violin Making in China," who in 1935 produced the first violin made in China in Qingdao and in the 1950s established violin making as a music academy subject in Shanghai. In 2020, the violin he had made in 1935, was donated to the Oriental Museum for Musical Instruments in Shanghai by the last owner, a teacher from Nanning 南宁, Guangxi 广西 Province (Qingdao chengshi dang'an luntan 2022, Dongfang Yueqi Bowuguan 2020). A female student of Tan Shuzhen, Xiuwei Zhou-Geiger, continued her training in violin making in Mittenwald (1980-1983), became a prominent violin maker in Germany, and for more than 30 years runs her own violin making shop in Bonn (Zhou-Geiger, s.d.). Tan Shuzhen's son, Tan Guozhang also became a master violinist and violin professor (cf. https://music.shu.edu.cn/info/1016/4063.htm and his CV on LinkedIn). Tan Guozhangs daughter Tan Wei 谭玮 emerged as a violin talent in her childhood; since 1994, she pursued her educational and professional music career in the USA, where she is engaged in the cause of music up to today ("Yishujia jianjie, Tan Wei" 2010, NYIAA 2024).

21 A letter from Wilhelm reveals that he had his own so-called "inner study" within the German-Chinese Seminar, and the "outer room" in front of it served as a "translation office" to which Chinese collaborators had access also in his absence (B-SW, October 1910).

year, the following were completed and printed:

For Chinese elementary schools:

Chinese Bible, Part 1, second edition.

The most important Chinese characters arranged by radicals, with pronunciation indications and translations.

Arithmetic textbooks, Part 1 and 2.

Currently under press:

Chinese Primer, Part 2.

Chinese Readers, Part 1 and 2.

For secondary schools:

Manuscripts are complete for:

Overview of Chemistry.

Textbook of elementary physics.

Overview of Astronomy.

Geography for Chinese elementary schools.

Presently still in progress:

German-English-Chinese Dictionary of scientific and technical terms.

Geometry textbook. (1909, 53)

In a letter to AEPMV at the end of 1909, Wilhelm writes something similar:

As for other works, a catechism of astronomy, an overview of chemistry (inorganic), and a geography textbook for elementary schools are ready for printing. As soon as the financial resources are available, they can be printed. [...] In terms of literary works, I am currently working on a geometry and a physics textbook, and a textbook of Chinese for elementary schools, which are intended for use in the protectorate's schools. I am sending you a copy of a recently completed list of the most important Chinese characters. (B-AEPMV, December 2, 1909, 3)

In earlier annual reports, Wilhelm had already occasionally mentioned that teachers from the German-Chinese Seminar were involved in creating teaching material, translation work, and/or assisting him with Chinese-language correspondence. Wilhelm himself had started working on teaching materials early on,²² and from the beginning taught natural science subjects. For example, he reported about his work in 1901 that besides teaching German and Bible studies, he taught "Anthropology and Astronomy" and was also occupied with the "creation of teaching materials for our school":

²² Teaching materials for German and Chinese (including Chinese characters) written or edited by Wilhelm (published during the period from 1901 until 1913, cf. Walravens 2008) will not be considered here, as the focus of this paper is primarily on the education in scientific subjects.

I am currently engaged in composing a Chinese botany textbook. An existing manuscript by Dr. Faber, although written in the southern Chinese dialect and covering only introductory questions in plant physiology, is to be used in this work. (Wilhelm 1902a, 60-1)

In the annual report 1905, "Dschou Ming Giu, 23 the first Chinese teacher of Western sciences [engaged at the school]", is mentioned to teach "geography, arithmetic, algebra, geometry and stereometry" and to have assisted in creating a Chinese textbook for introductory classes. Additionally,

Dsang Yü Tschen [Cang Yuchen, see fn. 17], the former Chinese district school inspector, holding the 2nd Literary Degree (Gü Jen), teaches Chinese essay writing and literature for advanced students and takes care of the Chinese correspondence under the supervision of Pastor Wilhelm. (AEPMV 1905, 47-8)

Furthermore, in the annual report 1906, among "Chinese assistants", "Dschu Bao Tschen"24 is listed as a staff member of the mission station:

At the founding of our seminar, he was the first teacher, later worked for a considerable time in Shanghai in the translation committee of Schansi [Shanxi 山西] University, Chinese lettré assisting Pastor Wilhelm in the creation of Chinese teaching materials for Chinese schools. His salary is covered in part by the school communities of the protectorate. (Wilhelm et al. 1906, 30)

The same report stated:

An increase and expansion of teaching resources had to be undertaken. This was done by establishing an educational teacher's library, which is also open to advanced students of the school. The mineralogical collection was supplemented by the most important stones and minerals of Shandong. The entomological-zoological collection was particularly developed thanks to the zeal of Mr. [Benjamin] Blumhardt [a theologian and missionary colleague of Wilhelm, and the cousin of his wife Salome]. Meanwhile, Dr. Faber's botanical collection is currently in knowledgeable hands, overseeing its reorganization. The physical teaching materials collection is also undergoing a thorough review and restructuring

²³ For some information about Zhou Shuxun/Mingjiu 周书训, 字铭九, cf. Zhai 2015, 84-5. According to Zhai, Zhou was still working as teacher at Wilhelm's school in 1919.

²⁴ For information about Zhu Baochen 朱宝琛, cf. Zhai 2015, 84, 86-7.

with the kind assistance of Mr. Esterer, the head of the local Siemens-Schuckert Works. We hope that our seminar can compare favorably with other schools in this regard. (32)

Wilhelm always placed great emphasis on hiring well-qualified teachers for his school, and undoubtedly, his Chinese teaching staff consisted of remarkable individuals and experts who played an important role in Wilhelm's daily work in Qingdao for many years. Whereas for the 'Chinese subjects' he engaged highly qualified graduates from the traditional Chinese examination system, for the 'Western subjects' he selected Chinese with modern educational background and training in natural sciences. For instance, during the early days of the German-Chinese Seminar, Wilhelm had already reported about "Dschou Ming Giu" (Zhou Mingjiu, mentioned above as a contributor to the creation of teaching materials), and other teachers:

After some initial difficulties, I succeeded in finding a Chinese scholar for Chinese classics and a Chinese teacher for Western sciences, who is one of the best mathematicians in China. (Wilhelm 1902a, 60)

I have also managed to recruit three very capable teachers, two Chinese graduates for the Chinese subjects, and teacher Dschou, one of the best teachers overall. (Wilhelm 1902b, 122)

Geography and mathematics continued to be taught by the Chinese teacher Dschou, as before. He had received a job offer from Shansi [Shanxi] Provincial University with very favorable conditions, but I succeeded in keeping him here. The Chinese classics were taught by two very capable Chinese graduates. (Wilhelm 1902c, 185)

Zhou Mingiju. Tan Yufeng and most of the other teachers who taught "Western sciences" at the German-Chinese Seminar, were former students/graduates from the Presbyterian Tengchow College, founded in Dengzhou (Shandong province) by the American missionary Calvin Wilson Mateer in 1882 (cf. Hyatt 1971). It is claimed to be the first modern (Western style) institution of higher education in China and a predecessor institution of today's Shandong University in Jinan. 25 Mateer highly esteemed and fostered education in "mathemat-

²⁵ For Wilhelm's principles of composing his staff of Chinese teachers, cf. Zhai 2015, 84-8. Zhai identifies seven Chinese teachers of Wilhelm's school in the early period as graduates from Tengchow College (also cf. Chang 1998, 216-17). It should be noted that one of Wilhelm's own first teachers of Chinese and long-term employee as physician in the hospitals of his mission station, Li Benqing 李本庆, was also a graduate from the medical department of Tengchow College (cf. Gerber 2014). From the sources used

ics and science, which were administered in massive doses. All graduates from the mid-1880s had at least a year in algebra, geometry, trigonometry, calculus, surveying and navigation, chemistry, physiology, astronomy, and geology, plus three years of physics" (Hyatt 1971, 318). Like Wilhelm, Mateer was aware of the importance of education in the native language, and he produced large quantities of Chinese textbooks for 'Western sciences' to be used at his college. It is reported that Tan Yufeng in 1905 personally visited his former college (since 1904 situated in Weixian) and recruited four new teachers for Wilhelm's mission schools [fig. 6].²⁶

In the years 1909 to 1911, the scope of tasks related to the creation of teaching materials at Wilhelm's school significantly increased. Wilhelm even sought the assistance of advanced school students for this purpose. As early as the end of 1908, Wilhelm outlined his intentions:

Furthermore, we intend to systematically continue working on teaching materials. Each of the five students [who had completed the entire seven-year course by 1908 and received a graduation certificate] has chosen a specific subject that they want to work on under my guidance. Additionally, I hope to be able to train a few capable Chinese literati so that the Chinese style of these books is appealing and user-friendly, which is of great importance in China. (VM, early December 1908.5, 89)

Wilhelm reported on the involvement of school students in creating teaching materials again in February 1911:

According to the individual aptitude and inclination of each student, tasks were assigned. One student was tasked with translating materials on philosophical topics, while others assisted with the copying and hectographing of textbooks in physics, chemistry, history, etc. (*VM*, February 1911.1, 2-3)

It can be assumed that for these Chinese teaching materials, existing German- or English-language textbooks and other materials had to be

here, it is not clear if Tan Yufeng had only studied at a secondary level in the Presbyterian educational institutions in Dengzhou, or if he had already entered the college level, before he moved to Qingdao. The former secondary school (Wenhuiguan 文会馆) had already very early taught courses near the college level and in 1882 had been recognised and renamed as Tengchow College of Liberal Arts.

Two of these teachers simultaneously also taught at the Me I (Meiyi) girl's elementary school, founded by Wilhelm in his mission station in 1905. The other two were a former headmaster of a woman's secondary school attached to Tengchow College and a graduate from the renowned Presbyterian Wen Mei secondary girl's school in Weixian; both of them took up teaching and supervising tasks at the Me I School (Zhai 2015, 134).

evaluated and translated, however it would not be surprising, if the Chinese teachers for "Western sciences" at Wilhelm's school made also use of their former teaching materials from Tengchow College in their own teaching, and also in their participation in the production of textbooks at the German-Chinese Seminar. And the work on the selection of scientific terms for the Dictionary of Technical Terms appears to have been intertwined with the work on the teaching materials. These textbooks were intended not only for the German-Chinese Seminar and the elementary schools of the mission station but also for the Chinese schools within the Kiautschou Protectorate that were not operated by missions, but by the colonial government. Beginning as early as 1905, the German government in Qingdao increased its involvement in school education for the Chinese population of the protectorate. And despite its official distance from the Christian missions, Wilhelm was engaged by the protectorate's government in the conception and organisation of this school system. He contributed to the design of curricula and, as mentioned in the previous quotes, was also commissioned, with partial or full funding, to create teaching materials, that should meet the standards of modern pedagogy. However, the fate of these teaching materials is not well-documented, and most of them remain unrecorded in bibliographic databases, except for a few exceptions such as some textbooks for Chinese native language instruction (cf. Walravens 2008).²⁷

5 Wilhelm's Pedagogical Principles and the Concept, Aims and Target Groups of the German-English-Chinese **Dictionary of Technical Terms**

The simultaneous creation of Chinese teaching materials for scientific subjects at Wilhelm's school and of the Dictionary of Technical Terms were contributions to the German-Chinese terminology work in technical and scientific fields in which the Sino-German University was also actively engaged. But when Wilhelm mentioned his dictionary project early in 1907 (B-AEPMV, June 24, 1), he only expressed as a general purpose that such a German-Chinese "scientific dictionary" did not yet exist, but was "urgently needed for Chinese translation work," and he added that "comparable English-Chinese compilations were not satisfying". 28 In the following year he stated a

²⁷ Also cf. Kim 2004, 158, 197-8. For a description of the general situation of teaching material for German educational institutions in China, cf. Reinbothe 1992, 240-59.

For an overview of the relevant dictionaries available at the time, reference can be made to the preface of Hermeling's English-Chinese Dictionary and Handbook for Translators, Including Scientific, Technical, Modern and Documentary Terms (1916, iii). There, he provides a list of consulted dictionaries, most of which were English-Chinese

specific goal for a specific target group, but the Sino-German University was not included:

so that Chinese school students learning German can be enabled to further educate themselves independently by using Germanlanguage works, because this is the only way they can truly participate in the advances of scientific research. (VM, early December 1908.5, 88-9)

Wilhelm expressed the pedagogical goal of training independent scientific work in his school multiple times. In October 1908, he reported that "we [...]could make various arrangements"

to advance the school students scientifically, and they have been of great interest to them. Specifically, the establishment of regular scientific lectures from all possible areas [...]. I hope that in this way, the school students will gradually learn to independently process both German and Chinese literature, thus going beyond mere memorization formalism. (VM, October 1908.4, 55-6)

In his 1911 report on the involvement of school students in the creation of teaching materials, especially for scientific education (see section 4), Wilhelm also provided pedagogical reasons:

During the past half-year, school operations at the seminar have evolved in the direction of open communication with the older students, as I attempted to introduce them more and more to their own work and research [...]. In this way, the books that they had a kind of share in creating become something much more intimate for the students than if they were handed to them as finished products for rote memorization [...]. This year, I have tried to have the departing school students complete independent work in their scientific subjects instead of a final exam, with topics covering the entire curriculum. The experiences have turned out to be quite satisfying. (VM, February 1911.1, 2-3)

Wilhelm did not write a preface for the Dictionary of Technical Terms, and we do not have any explicit explanations regarding the criteria and principles for selecting terms and their translation into Chinese. Conclusions about these criteria can only be drawn indirectly by analysing the entries. Since the lemmata were arranged alphabetically by the German terms, the dictionary is not searchable for

works published since the end of the nineteenth century and partly containing specialised terminologies.

English. The English terms provided behind the German ones may have served the purpose of assisting Chinese learners of German who also had knowledge of English, making it easier for them to associate the terms with their more well-known English equivalents in China. Although German cultural policy at the time aimed to promote the German language in China and Wilhelm's own school only taught German as a foreign language, not English, this inclusion of English indicates that Wilhelm took into account the dominance of English as a foreign language in China, and also may suggest that he had a larger target audience in mind for the dictionary.

Given Wilhelm's general workload, it is unlikely that he personally conducted extensive research into German, English, and Chinese technical and scientific texts, and that he selected and translated the German terms solely based on his own text analysis. He probably used existing dictionaries or other materials in the field of German/English-Chinese terminology as a basis and source of inspiration. He must, for example, have taken note of Mateer's dictionary Technical Terms, English and Chinese (1904), but a comparison based on a small ad hoc sample from Wilhelm's and Mateer's dictionaries reveals clear differences in the selection of both Western technical terms and their Chinese equivalents.

The systematic progression of Wilhelm's work on the dictionary following the alphabetical order of the selected terms manifests a somewhat mechanical approach, which seems to have frustrated him, as evidenced by a comment in summer 1910:

In truth, I am nothing more than a dictionary-making machine here. But I swear that I will never write another German-English-Chinese technical dictionary! (B-SW, July 31, 1910)

The described parallels and connections between the work on the German-English-Chinese Dictionary of Technical Terms, Wilhelm's own teaching responsibilities, his interactions with Chinese teachers trained in scientific disciplines, and the involvement of advanced Chinese students of his school suggest that there existed or circulated a common body of German-Chinese scientific and technical terminology in the Sino-German microcosm of the mission station and his school. This terminology likely extended to both oral communication (in classrooms or discussions among teachers) and written communication (teaching materials, exams). The sources presented in this paper reveal that the negotiation and selection of Chinese equivalents for German terms in Wilhelm's teaching materials (textbooks and the dictionary) were presumably done within this network or space of Wilhelm's German-Chinese Seminar on the Mission Hill in Qingdao. Although we might expect collaboration with the personnel from the Sino-German University in Wilhelm's terminology work

on the *Dictionary of Technical Terms* and textbooks, no relevant hints or evidence for this could be found so far.

It also has to be stated that in their terminological work, Wilhelm and his Chinese staff were not necessarily always faced with the question of how to coin new Chinese terms up to then totally unknown notions in Chinese culture. Even if the creation and standardisation of Chinese scientific terminology was still an ongoing process at that time, they could already use an existing and gradually growing corpus of modern scientific Chinese terms as a base for their own terminological choices. But Wilhelm's earlier ambition, "to contact the Chinese government after finalizing his dictionary in order to establish a unified fixation of Chinese termini technici, which were still in a state of disarray" (B-AEPMV June 24, 1907, 1), apparently was never fulfilled.

That a common stock of German-Chinese scientific and technical vocabulary existed and circulated within the school's teaching staff, appears even more likely when examining Wilhelm's remarks on the languages of instruction in his school. While it may be expected that a school operated by a German mission society would teach the German language, Wilhelm repeatedly emphasised the importance of providing Chinese students with an excellent education in their native language. To Wilhelm, this was crucial not only for their career opportunities but also for their social status within Chinese society and, indirectly, for the long-term sustainability of his educational work in China. Therefore, Chinese had a dominant position as the language of instruction in the German-Chinese Seminar:

The curriculum includes the hours devoted to the study of Chinese literature and language, following the patterns established in the home country's [Germany's] gymnasium curricula for classical and German languages. The language of instruction is primarily Chinese. This means that instruction in East Asian geography, mathematics (up to the basics of integral calculus), natural science, Chinese history, physics, and chemistry is in Chinese. European history, geography, and the more advanced natural science subjects, along with psychology and pedagogy, are taught based on German books, but detailed explanations are also provided in the Chinese language. The goal is to prepare the school students to be capable of independently pursuing German literature in their field of study and, by doing so, keeping up with the progress of science to some extent. (VM, May 1909.2-3, 18-19; VM, April 1910.1, 6-7)

Wilhelm reiterated the importance of providing education in students' native language in 1913 (1913a, 6-7), at the same time setting high goals of teaching the German language and educational content, particularly of secular education:

For us, it is especially important to consider that a mental engagement with Europe has become a historical necessity for China. The better part of China has recognized this and is consciously striving for it. It is not about acquiring our machine culture but about acquiring knowledge about our way of thinking and inner life, scientific and religious. Anyone who becomes our student should, so to speak, get to know our intellectual life from their own observation. It is not our task to merely instil facts and finished results or present our own worldview as a proven truth of European science. It does not harm them to become acquainted with the contradictions and shortcomings of European thought systems. They should see where we, and all human thinking and striving, have found their limits, and they should think, seek, and experience for themselves. We do not want to turn them into people who meekly follow us, but rather into individuals who stand on their own feet and find the right path themselves. We want to educate not just the led but, if possible, the leaders, or, at least, mature, independent individuals. China needs such personalities, and, above all, Chinese Christianity needs them. (Wilhelm 1913a, 10-11)

Little is known about the actual use and dissemination of the Dictionary of Technical Terms or the number of its editions. The outbreak of World War I and the subsequent Japanese occupation of Qingdao in 1914 had a significant impact on the German educational activities and institutions, including the closure of the Sino-German University. With the disruption of German educational efforts, the need for the dictionary and other German language educational materials must indeed have been significantly reduced. Anyway, it is difficult to assess the impact of the dictionary in terms of its distribution and the standardisation of Chinese technical terminology. Nevertheless, it was listed among the consulted works for the compilation of Hermeling's dictionary (1916, iii), and there appears to have been some interest in Wilhelm's dictionary on the Chinese side, at least until the 1920s. In late 1923, a "spoiled" copy was reportedly available in a bookstore in Qingdao, and some volumes had been sold there earlier, from the proceeds of which Wilhelm was due a small payment.²⁹ And the Shanghai Commercial Press responded to Wilhelm's inquiry from June 11, 1925, stating that the Dictionary of Technical Terms was being sold for \$2 at that time. They offered to send Wilhelm five copies upon receipt of this payment (July 9, 1925). This indicates that the dictionary had been previously supplied to the publisher for distribution. Furthermore, correspondence from 1930-31 between the

²⁹ Letter to Wilhelm from his successor at the German-Chinese Seminar, Wilhelm Seufert, dated December 21, 1923 (AEPMV 1902-25).

Shanghai Commercial Press and Wilhelm's widow, Salome, revealed that by the end of 1930, the publisher still had 371 copies left, down from a previous stock of 542. The publisher had also collected funds from the sales, which were available for payment to Salome Wilhelm. Due to the reduced demand, the publisher expressed the intention to sell the remaining stock to Salome Wilhelm. However, she responded that she could not afford to pay for them. Instead, she proposed that if the publisher could send the volumes to Frankfurt free of charge, she would try to distribute them in Germany. There is no further correspondence available regarding the outcome of this matter (cf. Commercial Press, RW, SW 1922-31).

6 Wilhelm's Abriß der Zoologie (Outline of Zoology), 1913

An interesting work authored by Wilhelm in the context of his German-Chinese Seminar and his teaching there is the Abriß der Zoologie (Outline of Zoology) from 1913, a work that has received little recognition until now (1913b). Apart from the copy found in Wilhelm's literary estate, only one catalogue entry was discovered in the German National Library in Leipzig. The Abriß der Zoologie consists of three thread-bound volumes: volume I. Mammals: volume II. Birds. Reptiles, Amphibians, Fishes; volume III, Invertebrates. These thin booklets were printed as handwritten manuscripts and contain a total of 186 pages of rather closely written text.³⁰ The text is written in German, but it is highly relevant to the topic of German-Chinese terminology since it provides Chinese equivalents written in characters in footnotes for all German animal names on each page.

Given the level of detail and comprehensiveness in terms of presenting zoological taxonomy and the large number of animal names, it is hardly imaginable that the work was suitable for upper-level school students learning German as a second language. Even though it is written in simple, easily readable German style, the work has a distinctly encyclopedic character, suggesting that it may have been created for students at the Sino-German University. The content and the German and Chinese zoological vocabulary go beyond the

³⁰ In addition to the copy in three booklets, which has thread-bound folded double pages with writing on both sides, there are also one volume each of Booklet I and Booklet II in Wilhelm's estate, where the text only appears on one of the outer folded pages, resulting in twice as many folded pages. These are likely hectographs. In the early 1920s, there must have still been copies of the work in Wilhelm's former mission school: In December 1923, Wilhelm Seufert wrote in a letter to Wilhelm, who was then living in Beijing: "You will have received the books on Chinese zoology in the meantime. There are still about 5 copies of each booklet here" (Letter from Wilhelm Seufert to Richard Wilhelm, December 21, 1923, 2. AEPMV 1902-25).

foundational and general knowledge in zoology one would expect at the school, as well as the corresponding vocabulary in both the mother tongue and foreign language. Would Chinese school students really have to learn the numerous German terms, many of which even Germans without specialised knowledge may not have known, and whose Chinese equivalents were likely largely unfamiliar to even educated Chinese as well? [figs 7-8].

However, based on Wilhelm's limited indications regarding the production and the target audience of the work, he did indeed intend it for the Chinese students at his German-Chinese Seminar. In May 1913, he reported that at that time, he was extremely burdened with teaching obligations at the German-Chinese Seminar: "Apart from religious instruction and history, I have to teach zoology to two classes and German for beginners" (B-AEPMV, May 13, 1913, 1). In October the same year, Wilhelm noted that he had started the "manuscript for zoology instruction to be printed. The sheets will be produced as far as needed", and on November 4, 1913, he wrote "working on zoology, insects" (KN 1907-14).

Even though the *Abriß der Zoologie* does not contain a list of reference materials, Wilhelm could not have created the work without drawing from relevant Western and Chinese scientific literature. He must have used existing German or other Western templates.

A particularly interesting find in Wilhelm's literary estate is a notebook titled *Vorarbeiten zur Zoologie* (Preliminary work on Zoology). In this notebook, extensive and detailed handwritten notes and Chinese-German-Latin glossaries can be found, containing numerous Chinese terms written in characters. These notes and glossaries were apparently written by Wilhelm himself, not by a Chinese collaborator. It appears that Wilhelm searched for Chinese animal names in classical works like *Shijing*, *Chunqiu*, *Zhuangzi*, *Liezi*, *Sunzi*, *Zhouli*, *Liji*, *Erya*, *Shuowen*, *Shanhaijing*, *Hanshu*, *Gujin tushu jicheng*, and more. He delved into classical Chinese literature spanning over more than 2,000 years to identify existing Chinese expressions for German and Latin animal names [figs 9-10].

Whether he actually used terms compiled in these "Preliminary work" glossaries in the *Abriß der Zoologie* remains subject to a more specific investigation. Nonetheless, it is noteworthy that Wilhelm apparently invested considerable effort in creating such glossaries for a subject that he only taught temporarily. We may ask, whether he hoped that the zoology textbook also would be useful at the Sino-German University, especially as zoology was one of the examination subjects in its preparatory college (Mühlhahn 2000, 254). However, Wilhelm's own school, the German-Chinese Seminar, also had a teacher training programme and was known for maintaining a high standard, which Wilhelm undoubtedly intended to uphold, especially after the founding of the Sino-German University in Qingdao. On one hand, the

establishment of the University's preparatory college created competition for Wilhelm's German-Chinese Seminar. On the other hand. Wilhelm aimed to prepare graduates to pass the entrance examination for the Sino-German University, the German Medical school in Shanghai (later Tongji University), or other universities, which was indeed achieved repeatedly.

Wilhelm had already utilised classical Chinese texts as sources in an early article about Chinese zoology (1904/1906) and in his book China. Das Land und die Natur (China. The country and its nature, 1911c). For example, in the chapter on Chinese fauna, he explains:

Among the works that encompass various aspects of the animal kingdom, we should mention the Örl Ya [Erya], possibly the earliest conversational lexicon originating from the Confucian school. Another work, the Ben Tsau Gang Mu [Bencao Ganamu], deals with various medicinal substances and also includes a section on animals, highlighting how each animal can be utilized for medical purposes. All these Chinese works on the animal world comprise a colourful blend of precise observations [...] and daring tales. Some illustrated works are particularly instructive in this regard. (1911c, 69)

Wilhelm's effort in creating the *Abriß der Zoologie* in 1913 might have reflected his personal interest in the plant and animal world, which he often observed and lovingly described in many of his writings, where he provided detailed observations, often with consideration for cultural and historical aspects. His book China. Das Land und die Natur from 1911, delves into not only the animal and plant world but also the cosmos, ³¹ natural forces, geography, soil conditions, rock formations, mountains, rivers, mineral resources, and more. The section on the animal world is the most extensive one, spanning from pages 67 to 124.

It would be interesting to conduct a comparative analysis regarding terminology, systematics, and categorisations between this work and the Abriß der Zoologie. Since the notebook "Preliminary work on Zoology" is undated, it might have been created already as preparation for the 1911 book. However, it is worth noting that most of the Chinese terms and characters found in the "Preliminary work" are not used in the German-language book from 1911, whereas in the Abriß der Zoologie, as previously mentioned, Chinese equivalents of German terms are consistently provided.

It should be noted that Wilhelm already much earlier published articles on "Ausgewählte Kapitel aus der chinesischen Zoologie (Selected Chapters from Chinese Astronomy) (1904, 1906) and "Chinesische Astronomie. Aufgrund chinesischer Quellen zusammengestellt (Chinese Astronomy. Compiled on the Basis of Chinese Sources) (1906).

Wilhelm's pursuits in natural studies certainly place him within the tradition of the numerous Europeans interested in zoology and botany during a time when there was still much to discover in these fields. Western missionaries often engaged in botanical research and collections alongside their missionary activities (Fan Fa-Ti 2004). An outstanding example of this was Wilhelm's colleague and predecessor, Ernst Faber, who was renowned as a competent botanist. Faber introduced Wilhelm to the local plant life around Qingdao upon Wilhelm's arrival (SW 1956, 87). The library left behind by Faber contained an extensive collection of both Western and Chinese literature. including a significant amount related to botany and other sciences, likely providing Wilhelm with valuable resources for his Abriß der Zoologie and the book China. Das Land und die Natur. Already in the year 1900, Wilhelm had reported:

I have now provisionally arranged Dr. Faber's books. In addition to many Chinese works and those about China, there are notably botanical and other scientific, theological (mostly from earlier times), as well as some philosophical, socio-political, and generally literary ones. As soon as I have some time, I intend to systematically organize and catalogue them. (B-AEPMV, March 3, 1900, 1)

It is hardly imaginable that Wilhelm could have arranged the terms in the Abriß der Zoologie without referring to existing monolingual and multilingual lexicographical works. The exact meanings of ancient Chinese animal names are not easy to deduce. That is, which genera and species, as defined by precise scientific taxonomy, were meant and suitable as equivalents for the respective German terms can only be determined by experts. Additionally, sometimes it was necessary to make choices among synonyms, and certain Chinese terms could have different meanings in various contexts and time periods, making a clear definition challenging. Wilhelm did not mention Western or Chinese collaborators in the creation of the Abriß der Zoologie. In any case, when producing the manuscript that was later printed and hectographed, he would have needed a Chinese scribe for the characters in the footnotes. This is because the fluently written characters, unlike those in the notebook Vorarbeiten zur Zoologie, clearly do not originate from Wilhelm himself.

7 Conclusion

This article has introduced aspects of Richard Wilhelm's work that expand upon the dominant image of him as a translator and mediator of Chinese philosophy for a German-speaking audience. While the German-Chinese Seminar in Qingdao is often emphasised as central

to his work in the mission station, the complexity and extent of his activities at the school have not been thoroughly detailed in the existing research. In this article as well, only small glimpses of his contributions and responsibilities in the education of Chinese school students, particularly in the field of natural sciences, could be highlighted.

In assembling the teaching staff, creating and using teaching material and special collections as visual aids, Wilhelm emerged as a school leader who held the natural sciences in high regard and, of course, met the needs of the time in China and Germany's Kiautschou Protectorate.

Wilhelm had no formal education in the natural sciences. However, his widely recognised broad general and diverse interests undoubtedly extended, perhaps more so than one would expect by today's standards, to some foundational knowledge about natural sciences. The demands of teaching provided additional opportunity for him to delve into scientific subjects, at least at the level of school education or even beyond.

Wilhelm had reached an excellent level of proficiency in the Chinese language, but we would not expect a theologian and China missionary with a specialisation in Chinese philosophy to possess a significant Chinese vocabulary in the fields of technology and natural sciences. While the gathered information does not allow for an exact assessment of the extent of his Chinese language skills in this domain, it has been shown that he cooperated with technically and linguistically trained Chinese during the creation of the Dictionary of Technical Terms and various natural science teaching materials and undoubtedly relied on their support. That he must have familiarised himself to a certain degree with technical and natural scientific terminology in both the German and Chinese languages is especially confirmed by his notebook *Vorarbeiten zur Zoologie*, which contains numerous entries of Chinese terms. Additionally, since Chinese was the primary language of instruction at the school and also played a significant role in the natural science subjects, which Wilhelm himself often taught alongside to subjects, such as German, history, or Bible studies, it is evident that he would have needed competence in basic related terminology in both languages.

Wilhelm's German-Chinese terminology work in the field of technology and sciences (the *Dictionary of Technical Terms* also contains vocabulary related to society and politics) took place, as presented, within the context of intensive German-Chinese interactions, primarily within his mission station, especially at the German-Chinese Seminar, where other German teachers also regularly taught. However, Wilhelm seems to have been the only German collaborating with the Chinese teaching staff in the course of the dictionary and textbook creation work. This teaching staff did not include as prominent scholars as Lao Naixuan, Ku Hung-ming, Kang Youwei, Liang Qichao, Hu Shi or Carsun Chang (Zhang Junmai), who are frequently mentioned when discussing

the topic of Wilhelm's Chinese networks (Leutner 2004, 2010). But from the findings described above, we can deduce that undoubtedly, the Chinese teaching staff at his school consisted of remarkable individuals and experts who played an important role in Wilhelm's daily work in Qingdao for many years. His contact and communication with them might have even be more intense and familiar than with most of his more prominent Chinese friends and collaborators.

When we speak about Wilhelm's engagement in Western-Chinese knowledge transfer and about his German-Chinese terminology work, we must be aware that at that time, the so-called 'Western-Chinese knowledge transfer' was not at all one-directional and only actively realised by Western actors like Wilhelm. It is true that in the beginning of the twentieth century, modern scientific knowledge had not yet spread all over China, and the German-Chinese Seminar under Wilhelm's leadership made great efforts in changing this situation - responding to needs and expectations on the side of the Chinese themselves. Although this article focuses on Wilhelm's efforts in the teaching of natural sciences, this does not mean that he neglected to impart traditional Chinese educational content to his students. On the contrary, it is well known that he attached great importance to it. The division of teachers and teaching content as being either 'Western' or 'Chinese'", was undoubtedly necessary at the time for pragmatic reasons, but this did not imply that Wilhelm wanted to cement two completely separate spheres. After all, to build bridges between the cultures for his students was of great importance for him. 32

The findings presented here confirm that Wilhelm could only realise his educational principles and goals by heavily relying on the collaboration and support of his staff of Chinese teachers. Even if his own basic knowledge in the sciences and Chinese scientific terminology - in regard of his amateurship - cannot be esteemed too low, the level of technical and scientific knowledge of several teachers of his Chinese staff surely was higher than his own. These teachers represented a new generation of educated Chinese who had already received training in 'western or modern scientific knowledge' and were capable to transfer it to their compatriot students.

When we consider German-Chinese interactions and knowledge transfer during the colonial period, we must always take into account hierarchical power relationships. But even though Wilhelm was a representative of the German colonial power and was the head of the mission station and the German-Chinese Seminar, it should have become clear that he was aware of the value of the work of his Chinese collaborators and expressed high appreciation for their contributions

³² This was for instance acknowledged by Zhai (2015, 86), expressing that Wilhelm aimed at combining and reconciling western sciences with Confucianism.

and expertise. Nor can one speak of clear one-sided dependencies on the Chinese side - corresponding to the attributes of spaces of circulations under colonial conditions as described by Rai (2017, 58-60): while Wilhelm had the authority to make decisions on the recruitment of the Chinese teachers, he was himself extremely dependent on their commitment, cooperation and expertise for the implementation, success and reputation of his school work. After all, well-qualified Chinese teachers could choose from many offers at the time, both in institutions of the Christian missions and colonial powers as well as in the increasing number of new educational institutions on the Chinese side. In order to acquire and retain a well-trained teaching staff, he had to offer them acceptable employment conditions and good salaries, not least a motivating working atmosphere (cf. Gerber 2013, 132). And indeed, many of the teachers remained at his school for years or (after his departure) even decades.

We also have to take into account that Wilhelm did not only work for the mission society and the schools run by the protectorate, but had simultaneously also been engaged by the Chinese authorities of Gaomi (outside the protectorate) to assist them in building up a new-style district high school and devise a curriculum that met the requirements of Chinese educational reforms. And he also adapted the curriculum of his own school to the standards of this evolving modern Chinese educational system, thus creating better chances for his graduates to shift to Chinese educational institutions. And from the fact that in 1906, he was rewarded with a Chinese imperial rank for his achievements in the education of the Chinese youth in Oingdao and Gaomi. the high appreciation of his work on the Chinese side becomes evident. Such constellations³³ correspond to another observation made by Raj:

This 'promiscuity' between the actors of the different cultures translated into a permeability of practices, ideas, and discourses which significantly influenced ways of doing on both sides of the cultural divide while not resulting in a flattening of differences between them. (2017, 60)

From today's perspective, it would undoubtedly have been desirable for him to have documented the specific contributions of the Chinese teachers in his dictionary and textbook projects more clearly and in greater detail and to have disclosed Tan Yuefeng's collaboration and specific contributions to the Dictionary of Technical Terms

³³ For Wilhelm's missionary school projects, his activities relating to educational institutions of the colonial government and of the Chinese areas outside the colony, cf. Gerber 2013, 32-134; Zhai 2015, 75-174 and passim; Wippermann 2020, 127-40.

in the printed version.³⁴ As far as the textbooks for natural sciences are concerned, the information available on Wilhelm's *Abriß der Zoologie* may indicate that he was indeed the main author here, while the absence of detailed information on the many textbooks mentioned in the reports to the AEPMV and the lack of corresponding specimen copies in his literary estate could be an indication that he may have primarily initiated and organised their creation by Chinese teachers, without having been significantly involved as an author or translator himself. In view of the almost unmanageable amount of sources in Wilhelm's estate and possibly in other German and Chinese archives, it cannot be excluded that further material might be found that shed more light on Wilhelm's cooperation with the Chinese teachers and their individual contributions.

This article has described the social and professional relations between Wilhelm and the Chinese graduates and teachers of the German-Chinese Seminar as an institutional and physical space of circulation, where "cross-cultural encounter, negotiation, and interaction result in the co-construction and co-reconfiguration of knowledge" (Raj 2017, 58) - in this case scientific and terminological knowledge, also in the written form of the Dictionary of Technical Terms and textbooks for the teaching of natural sciences. This space sometimes expanded or overlapped through interactions with other Chinese and German actors or institutions in Qingdao, especially with the lecturers of the Sino-German University (Wirtz, Gutherz, etc.). Although Wilhelm had no formal connection to the Sino-German University, it was an important point of reference for him since its establishment in 1909. While Wilhelm presented his terminology work and dictionary project in his reports to the AEPMV as being related to school work, it cannot be ruled out that this was a more tactical approach, and that he had also considered the target groups of Chinese students at the Sino-German University. Similar considerations might apply to his Abriß der Zoologie as well.

The sources examined here provide enough evidence of interactions between graduates of Wilhelm's school with the Sino-German University and some of the German lecturers. Wilhelm's contacts with Hans Wirtz and Harald Gutherz, as well as other German members of the university, are quite extensively documented in his records. The progress of the Tan brothers, who developed from students to teachers and translators at Wilhelm's school and transitioned from this school as students, translators and teachers to the Sino-German

³⁴ In the earlier reports about Wilhelm's work for the AEPMV, Chinese teachers and collaborators were listed under headings such as *Unsere chinesischen Hilfskräfte* (Our Chinese Helpers), which was common at the time. But in later reports the headings changed, using the word *Angestellte* (employees).

University and had close contact with Wilhelm's friend Hans Wirtz there, is an example of German-Chinese cross and triangular connections between the German-Chinese Seminar and the Sino-German University, the latter being described as a space of circulation on its own behalf by Iwo Amelung in this volume. The relations and overlappings between these two spaces support the finding that "the frontiers" of "spaces of circulation" "are not clearly delineated" and "can be fuzzy and porous" (Raj 2017, 52). As mentioned above, Tan Yufeng and most of the other Chinese teachers for 'Western subjects' at the German-Chinese Seminar had beforehand been trained in scientific disciplines in the American missionary Mateer's Tengchow College, that can also be considered to be a "social and physical space of circulation" in Shandong province, thus giving another example for the fluidity of circulation of knowledge and related actors. These transfers have not been forgotten in China, after Wilhelm left Qingdao in 1920, his school continued to operate as a mission school of the AEP-MV/DOAM). In 1934, Tan Yufeng stated:

From this mother school, numerous capable men emerged over time, some of whom went on to universities for further studies, while others found good job placements. Beyond this, the school served as a valuable exchange centre for German and Chinese knowledge. From a social perspective, it provided affordable education. (1934,35-6)

The German-Chinese Seminar as a space of circulation of actors and knowledge continued to have an impact even after decades, both spatially and temporally. Tan Yufeng's report, in which he mentions that his son studied political science, French, and German in the United States during the 1920s and even earned a doctorate (as mentioned above), also illustrates how, in this case, social advancement and educational careers of the following generation were indirectly related to Wilhelm's engagement. Only after the founding of the People's Republic in 1949, the school was turned into a governmental institution and renamed as Highschool No. 9 (Qingdao di-jiu zhongxue 青岛第九中学). But up to today it ranks as one of the best secondary schools in the Shandong province and proudly traces its origins to the Lixian Shuyuan 礼贤书院 (Richard Wilhelm School). This heritage is prominently commemorated on the school's homepage, and is, for example, featured on the school emblem of the students' uniforms today. It is noteworthy that the school does not trace its history to the year of its official foundation in 1901, but to the year 1900, when the Tan brothers began to be taught German by Wilhelm at his home [fig. 11].

As is evident from the accounts in this article, the collaboration with Chinese actors in the social microcosm in which Wilhelm operated his school in Qingdao was not purely a matter of vocational concern. Instead, it was accompanied by the development of close personal relationships that deepened over many years. As demonstrated by the case of the Tan brothers, especially the music career apparently initiated by Wilhelm for several generations of Tan Yuefeng's descendants, these interactions and relationships resulted in indirect, likely not specifically intended German-Chinese knowledge and cultural transfers. This family history appears to be an example of how personal Sino-German interactions in colonial Oingdao could have lasting and ongoing effects, and how contributions to knowledge and cultural transfer could be made in seemingly inconspicuous and little-noticed informal interactions.35

It thus can be shown that the

geography and topography of spaces of circulation are [...] liable to change over time. This can happen as a function of [...] wider social, political, and cultural influences and dispersion of the interacting milieus in question. (Raj 2017, 53-4),

and

although spaces, and communities, are connected, they do not merge into a single network with a putative European centre: on the contrary, they maintain their identities in historically evolving morphologies, albeit globally connected. (60)

An indication of the "temporal dimension in the making of encounters and sustained interactions [...] between different members of the spaces of circulation" (59) found in the changing, but lasting impact of Wilhelm's spatially and temporarily confined, sphere of German-Chinese interactions and knowledge transfer in Qingdao's past is the current interest of actors in Qingdao (and throughout China) in Richard Wilhelm, his school, its former students, and their career paths. This includes individuals like the journalist Liu Zongwei and the professor of education Zhai Guangshun in Qingdao, whose works were used as sources in this article. Such contemporary works review stories of past German-Chinese interactions and transfers, preserving and transmitting them. This relevant reception, remembrance, and research has experienced a significant surge in China over the past

³⁵ The Tan family history has only been touched on here. It might be the subject of a separate case study - if possible with precise documentation of the use of more original sources. However, the media reports from the internet referred to in note 20 are interesting indications of the great interest in Wilhelm's work and, more general, the (colonial) past of Qingdao and its after-effects in China today - and of what kind of stories are being spread about it to a broader contemporary audience.

decade (cf. Wippermann 2020, 258-62), and it could only be briefly touched upon here. It has grown quantitatively to the point of being challenging to oversee and appears to access local Chinese sources that can complement our knowledge of the conditions in colonial Qingdao and promise interesting discoveries. When works from contemporary China, in turn, pique the interest of researchers here in the 'West' with a focus on the history of German-Chinese relations – as in this article, the spatial and temporal sphere and impact of Wilhelm's former Chinese-German microcosm in Qingdao expand into additional dimensions.³⁶



Figure 1 The German-Chinese Seminar and Wilhelm's residence (background, right) in 1902. © Zentralarchiv der Evangelischen Kirche der Pfalz, Abt. 180.06 (Glasdias); 16_16

³⁶ All quotes from works written in German or Chinese in this article were translated by the author.



Figure 2 Students in front of the entrance of the German-Chinese Seminar in 1902. © Zentralarchiv der Evangelischen Kirche der Pfalz, Abt. 180.06 (Glasdias); 7_68



 $\begin{tabular}{ll} Figure 3 & Wilhelm with graduates of the German-Chinese Seminar in 1911. \\ @ Zentralarchiv der Evangelischen Kirche der Pfalz, Abt. 180.06 (Glasdias); 7_59 \\ \end{tabular}$

德英華文科學字典

Deutsch-Englisch-Chinesisches

FACHWÖRTERBUCH

German=English=Chinese

DICTIONARY OF TECHNICAL TERMS

RICHARD WILHELM



VON DER

DEUTSCH-CHINESISCHEN HOCHSCHULE

TSINGTAU

Figures 4-5

Inner title page and pages 2-3 of the Dictionary of Technical Terms. © Photographs by Dorothea Wippermann

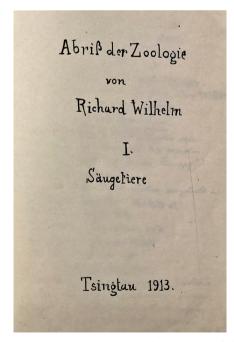
| ABE | 2 | 1 | ABI |
|---|--------------------|---|------------------|
| - sphärische spherical | 凸差. | Abgeplattet | 扁圓. |
| Abfahrtsgeleis n. starting track | 出軌. | Abgeplattetes Sphäre oblate spheroid | pidn. 扁球. |
| Abfahrtssignal u. signal of departure | | Abgesandte m. | 委員. |
| | 車號誌. | Abgestumpftheit n. bluntness | 鈍, 截體. |
| Abfall m., Abhang m. | 側. | - obtuseness | 卷乏,蠢笨. |
| - Überbleibsel n. | 廢物. | Abgottschlange f. | 佗王, 巨蛇. |
| — Aufstand m. | 背叛. | Abgrund m. 深淵, | 無底深淵. |
| Abfeilen to file off | 銼下. | Abguss m. — chm. | 頃淸,倒淸. |
| Abfindung f. arrangement; indem | nification | decantation . | 溶鑄,鑄像. |
| 和解,調体 | 亭, 償還. | Abhandlung f. | |
| Abfluss m. 流出,流 | 出之物. | treatise, discourse | 論說,策論. |
| - outlet, discharge | 出水口. | Abhang m. | 坡,斜坡. |
| Abflusshahn m. Hardischarge-cock | 水塞門. | slope Abhängigkeit f. | 倚靠,倚賴. |
| Abflussleitung f. waste-pipe | | - Unselbständig | |
| | 放水管. | dependence — Unterordnung | KL/M. |
| Abflussöffnung f. | 流口. | subordination | 受制,順服. |
| Abflussventil n. head valve | 出汽門. | Abhärtung f. hardening | |
| Abführmittel n. | 輕瀉藥. | | 其身,自强. |
| | 稅銀,稅. | | 鍛鍊,碎硬. |
| Abgangsprüfung f. | 業考試. | Abhorreszieren, ve to abhor, to dete | rabscheuen |
| Abgeben % | 發,傳,交. | | 憎恶,厭煩 |
| Abgeordnete m. | The second seconds | Abies f., Tanne f. fir(-tree) | 樅 |
| delegate, deputy 代表 | 人,議員. | Abicompasis i | 自然發生論 |
| Abgeordnetenhaus n. Chamber of Deputie | | Abiturient m. | ving-examination |
| 議院 | ,議事院. | - 畢業 | 生,卒業生 |

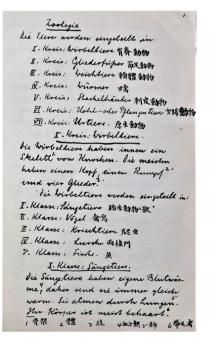
| ABI | |
|---------------------------------------|-------------------------------|
| Abiturientenzeug leaving certifics | nis n. ^{ite} 畢業文憑 |
| Abklatsch m. | |
| Abklovfen (Kesse to knock out | |
| Abkommen n., Ve | ereinbarung f. |
| | ,約據,條約 |
| Abkühlen | |
| to cool; to refri | |
| 使源 | ,致涼,去熱 |
| Abkürzung f. abbreviation | 僧 |
| Ablagern to deposit 堆1 | 集, 沉, 擱, 鱼 |
| Ablagerungsboder sedimentary so | |
| Ablass m. indulgence | 赦罪,大赦 |
| Ablassventil n. delivery-valve | 出水門 |
| Ablaufkanal m. | 流水潭 |
| Ablaufrohr n- waste-pipe | 放水管 |
| Ablaut m. | |
| change of the r | wheat vower 變音 |
| Abläutern to clarify | 吊港 |
| Ableger m., Abse | |
| layer | 栽子,壓條 |
| Ablehnung f. rejection, refus | 』拒絕,迴避 |
| Ableiten to derive | 推房 |
| Ableiter m. | |
| positive electro | |
| | 函端,陽極端 |
| Ableitung f. derivation | 引出,推原 |
| - des Dampfes | 己用物料 |

| ABI | 3 | ABO | | |
|--|--|---|--|--|
| iturientenzeugnis n. leaving certificate 畢業 kintach m. impression, copy kionfar (Kosselstein) to knock out kommen n., Vereinbaru agreement 合同,約據, kiulien to cool; to refrigerate to cys, 致涼, kurzung f. | 拟. defle 要去. Ablenki angle Ablesen for Ablessen can Ablessen 去熱. Ablösun | witate 學師,順可· mg f., sine: Radel ction of a needle 磁針之偏倚,屈折· 偏倚角。 偏倚角。 視,讀 alkroscop n. ling nicroscope 視皮數之顯微鏡。 g f. f. relay | | |
| abbreviation plagern to deposit 堆集,沉, plagerungsboden m. sedimentary soil 学辑 | 閣, 釗. Abmach | 調班,接班,換助 ung f. ngement, stipulation 議定,議准,商議。 | | |
| plass m. | 水門. Abmessi dime - Mei nea Abnehn | rung f. 消瘦. nng f., Grösse f. 大小. ssung f. euring ten (weniger werden) cerease 減少,漸少. | | |
| plaut m. change of the radical vo | wel — (Mo to w 變音 . Abneign | ond) ane ang i. 原植 | | |
| | 吊清. Abnehn cons | Abnehmer m. consumer用物之人,貨客. Abnorm, regelwidrig abnormal 非常,異式,怪異. | | |
| plehnung f. rejection, refusal拒絕, pleiten to derive pleiter m. positive electrode 正極端,陽 | 推原. to w | | | |
| WORKER | 推原. Abonner | ment n. cription 定購. | | |



Figure 6 Wilhelm and the teachers of his German-Chinese Seminar in 1910. © Zentralarchiv der Evangelischen Kirche der Pfalz, Abt. 180.06 (Glasdias); 7_63





Figures 7-8 Inner title page and page 1 of Wilhelm's Abriß der Zoologie (Outline of Zoology, vol. I).

© ABAdW; Photographs by Dorothea Wippermann



Figures 9-10 Pages from Wilhelm's notebook Vorarbeiten zur Zoologie (Preliminary work on Zoology). © ABAdW; Photographs by Dorothea Wippermann

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Den Trans
23. Gallina
                      髮1
                                                       Y2 Turker visorius It the lashsule VI ox
                             - Unha VIII,1 5
                                                       43 Cuculus canorus Ph the, to the Kentur
1/4 Phasianus versicolor 1/4
                              · Fasan VIII, 1 ×
                                                       44 Coccol braus les person 東島 東京 中 · Kenterper II,1×

45 hanies buegohalus 伯劳 - kringer VI, 6 ×
25 Phasiamus sinsillen 精 th, 山麓 - Goldfeson VIII, 1 ×
                      繁雄,錦雞
                                          × Eun gufm
                                                       46 Seridotheres cristatellus 雅 谷島,八哥 Sterre
vill,1 x
                                                                              百舌
24 Employamus rychemen & 1895, 6 xt lilbergen vuy 1 x
                                                       47
                                                                                               vi, 9 blue jay x
                                                       + 4 Urocissa caerulea 練鸛
29 1
                      鷓鴣
                               - Rebbuhu VIII, 2 ×
                                                                             B. Pirol
                                                                                               V1,9 +
                                                          Oriolus dinensis
20 Bambusi cola
                      竹雞
                                 Sambus rebbuha vun, 2x
                                                                            ·蒙木島, Sperks
                                Sumpflucher X X,6
                                                          Pieus major
31 Rallus invieus for $11
                                                                                               11,9 x
                                                                            慈. 島· Krache
                                                       57
   Coturnise communis 35
                                harted
                                                          Corners macrorthyuntus 13 7 0 Rebe
                                                       52
                       妈
                                bleine braun's geflerthe laddie
                                                      53 Pica pica # Alsher 54 Ganvaolius cyanus with &
                                                                                               V1,4 X
34. Scolopax gallings 199
                                Murepe
                                                                                               41,9 x
                                                                            鹤喇山鹤
35 Columbia
                   台色
                              · Tambe
                                                       55
                                                       56 Caculus voliocephalus $1 1
36 Perser montanus 1/2
                             - Sperling
                                                      57
                                                      58 Phinix
37 Troglodytes funigatio 時期 , 轉轉 Janutions
                                            18,4 ×
                                                         Pavo
38 Virundo gutturalis to
                           · Shwalle
                                                                             馬地島,大雞-E
     Fledrmens
                                                       61
                                                                                               I,1
                                                       62
    Fligendes Eichhorn
      Eistern drug
                                                                           AS The Rabins
                                                       65 Ohn vulgaris
                                                                            鶴橋 Um
                                                       66
                                                                                 Setratas
                                                       67
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Figure 11 Emblem of the school founded by Richard Wilhelm on today's students' uniforms (2018).

© Photographs by Dorothea Wippermann

Abbreviations

| ABAdW | Archiv der Bayerischen Akademie der Wissenschaften, München. Nachlass Richard Wilhelm (Archives of the Bavarian Academy of Sciences, Munich, Literary Estate of RW) |
|---------|---|
| AEPMV | Allgemeiner Evangelisch-Protestantischer Missionsverein (General Evangelical Protestant Missionary Society) |
| B-AEPMV | RWs Briefe an den AEPMV (RW's Letters to the AEPMV, ABAdW)) |
| B-SW | RWs Briefe an SW (RW's Letters to SW, ABAdW) |
| DOAM | Deutsche Ostasienmission (German East Asia Mission) |
| KN | Kalendernotizen/Tagebucheintragungen (Calendar/Diary Notes, ABAdW) |
| KVK | Karlsruhe Virtueller Katalog (Karlsruhe Virtual Catalogue) |
| MR | Zeitschrift für Missionskunde und Religionswissenschaft (Journal for Mission and Religion Studies) |
| RW | Richard Wilhelm |
| SW | Salome Wilhelm |
| VM | Vertrauliche Mitteilungen an die Freunde unserer Arbeit in China (Confidential Reports for the Friends of Our Work in China, journal published by RW (also author of the reports, see bibliography below) |

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