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# Reporting Death. The Case of Austrian Tuberculosis Mortality Registration – Critique and Consequences for Historical Epidemiology

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**Abstract:** The purpose of this article is to introduce recent insights into methodological problems of medical diagnosis in history, historical denotations, and interpretation of historical disease nomenclature (causes of death) in the 19th century related to tuberculosis mortality in Austria. Comparing and discussing the main sources – church death records, death certificates and compiled statistics on the causes of death – the paper illustrates practices of documentation and their impact on the quality of the compiled data. As a consequence of the insufficient quality observed, the article argues that historical epidemiology has to be careful when comparing national statistics on the causes of death and that it is necessary to consider the different contexts of the sources' origin. The paper is divided into three sections: it begins with a brief introduction into the history of tuberculosis mortality in the late 19th century and the recent discussions on the problems of historical diagnosis in historiography. The second section gives an overview of registration practice, the different types of sources and describes their specific context of origin. By focusing on the terms *Abzehrung*/*Auszehrung* and discussing the practice of assignment, the third part demonstrates that in case of tuberculosis, mortality rates have been overestimated for the time up to 1900. Finally the article gives two examples to exemplify further problems, evoked by the change in registration of causes of death in 1873 and 1896. The paper concludes with a summary of the results and consequences for medical and demographic history.

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## Introduction

In medical and demographic historiography tuberculosis was supposed to be one of the *"great killers"* [1] of the past. In fact, in the 19th century Austria the portion of tuberculosis mortality ranged approximately from 25% (around 1800) to 14% (1900) [2]. Although tuberculosis mortality rates declined especially in the second half of the century, there is no doubt, that this disease had a substantial impact on the development of overall mortality rates, on life expectancy and that it played an essential part in the so called *Epidemiologic Transition* [3] – the fundamental change in the historical panorama of causes of death. Except for the development in Ireland and Hungary, similar findings can be observed in almost all European countries at that time, as Table 1 illustrates.

Nevertheless there are striking discrepancies in the development of tuberculosis mortality rates among the various European states. Although recent studies have had their focus on the dilemma, the problem is not yet solved. Most of these studies are based on regional or national statistics, available in Europe from the second half of the 19th century onward. The statistics are based on communal or regional surveys which, only after having run through a system of adaptation, were centrally compiled. For "pre-statistic times" research is dependent on other sources, generally produced on a regional level: church death registers/records, produced by priests/clerical authorities and post-mortem protocols/death certificates, produced by local medical officials. At first sight these sources seem to be more or less equally relevant and are supposed to express the same – namely the development of mortality in certain periods and spaces. But especially when

**Table 1 – Tuberculosis mortality in Europe 1871–1910 (deaths per 10 000 individuals)**

| Country | 1871–1875 | 1876–1880 | 1886–1890 | 1896–1900 | 1901–1905 | 1906–1910 |
|---|---|---|---|---|---|---|
| England/Wales | 29.4 | 28.9 | 23.2 | 19.0 | 17.4 | 15.6 |
| Scotland | 35.6 | 33.6 | 25.8 | 23.3 | 21.6 | 20.2 |
| Ireland | 25.2 | 26.6 | 26.6 | 28.2 | 27.5 | 25.2 |
| France | – | – | – | – | – | 22.1 |
| Belgium | 33.5 | 32.3 | – | 24.8 | – | 12.8 |
| Denmark | 31.3 | 31.3 | 28.9 | 21.6 | 19.2 | 16.2 |
| The Netherlands | – | – | – | – | 18.6 | 16.5 |
| German Empire | – | – | – | – | 20.6 | 17.5 |
| Prussia | – | 31.7 | 29.0 | 20.7 | 19.1 | 16.2 |
| Switzerland | – | – | 27.9 | 24.6 | 26.5 | 24.6 |
| Finland | 41.4 | 36.6 | 25.5 | 27.2 | 29.0 | 27.2 |
| Norway | – | – | – | 26.8 | 25.5 | 24.0 |
| Italy | – | – | 20.8 | 18.0 | 16.6 | 16.7 |
| Austria | 36.8 | 37.7 | 38.3 | 33.9 | 34.0 | 31.5 |
| Hungary | – | – | – | 32.7 | 39.6 | 37.4 |

Source: WOLFF G.: Tuberkulose-Sterblichkeit und Industrialisierung. In: Die Arbeit. T. Leipart (Hg), Berlin, 1927, p. 689–698, p. 695.

comparing mortality trends of different regions or countries, it is essential to consider their specific contexts of origin. Of course, this discussion is not new. Over the past fifteen years a number of contributors to *Historical Demography* and *Social History of Medicine* have discussed the different problems when interpreting sources dealing with mortality trends in history [4]. One of the most important German articles on this topic was published by Karl-Heinz Leven in 1998, entitled "*Krankheiten – historische Deutung versus retrospektive Diagnose*" [5]. In this paper the author explained the main differences between source-based *Historical Interpretation* and *Retrospective Diagnosis* and he gave a profound insight into and a critique on (retrospective) *Pathography*. Levens' main critique on traditional pathographic studies focuses on the fact that writers naively use or transfer modern categories into the past when they try to explain illness or death causes of mostly famous historical persons [6]. By focusing on the approach of the *Social Construction of Illness*, which means that categories of *illness* and *health* as well as medicine are always linked to cultural and social contexts, the author demands close contextual scrutiny of the sources used. From this perspective modern pathographs ought to integrate the contemporary ideas, theories and categories of *illness* as well as the special typology of the text in their interpretations. Corresponding phrases to this issue can be found in one of D. Harley's contributions (1999) in the journal "*Social History of Medicine*":

"*The rationality of diagnosis and therapy can only be understood in terms of the theory employed at that time, since it is always actors' categories that shape attitudes and actions. […] Retrospective rediagnosis is deeply misleading not only because it relies on rather naive acts of translation but also because it privileges supposedly stable modern categories."* [7]

Current studies on epidemics in history indicate that this position is mostly accepted [8], as is also expressed in the 2007 introductory textbook "*Medizingeschichte. Eine Einführung*", published by Robert Jütte and Uwe Eckart. For the renowned medical historians "*retrospective diagnosis […] has no place in professional medical history*" [9].

These critical remarks obviously refer to studies, interpreting (published) archival materials and reprints – contemporary descriptions on the outbreaks of epidemics, funeral sermons, biographic and autobiographic texts or case histories in medical diaries. Statistical studies on the development of mortality trends are confronted with completely different problems. They are mostly based on published national statistics, which offer compiled data in predefined (and repeatedly changing) categories. In this context, Jörg Vögele [10] in his 2001 analysis of the development of urban mortality trends, living conditions, sanitary reform and care in the age of urbanization in Germany, noticed that generally the quality of compiled data strictly depends on the quality of post-mortem certification, especially on the examiners' education and work. In fact, there is some evidence that in the case

of Germany's late 19th century period the noticeable high percentage of officially declared post-mortems guarantees a sufficient standard of quality and therefore allows a systematic comparison of urban mortality trends. His evaluation of the German or rather Prussian data quality can, however, be transferred only with reservations to the historical space of the Habsburgian Monarchy. At least until the reform of the causes of death statistics in 1895 we have to take in consideration the influence of regionally varying practices of causes of death inquest, differing cultural interpretations of the death cause denotations in use and the communicative problems between the historical actors involved. This being the main argument of this paper, the following section deals with the reporting system in general, which will then be discussed with two regional examples.

**Death registers – post-mortems and national statistics: Gathering data in 19th century Austria**

In the late 19th century the authorities' idea for valid documentation followed a certain procedure: The results of post-mortem examination, made by experienced doctors and laymen, should have been communicated to the local church authority (priest), which had to transfer the correct denotation into the church death records ("*Matrikeln*"). Simultaneously, the results had to be reported to the local officials, who integrated them in their communal lists of annual deaths. Then a public health district officer decided, without knowing the post-mortem results in detail, in which of the available rubrics the cases had to be incorporated. After this step he communicated the results to the state health department, which compiled the provincial data and sent a table to the central bureau in Vienna. Finally, this bureau, called *Statistische Zentralkommission*, incorporated the results into the national causes of death statistic, which was published annually [11].

Research on tuberculosis mortality in Austria before 1873 totally depends on the local church death registers. First usable church records, in the case of Tyrol, for example, date back to the end of the 17th century, but only a small percentage of these records contain notices on the causes of death. In the middle of the 19th century the list of denotations concerning causes of death began to enlarge and to differentiate [12]. The entries were made by priests based on their own knowledge or on information from the deceased's relatives, physicians or surgeons. Since the beginning of the 19th century the priests were required to take their information from the official post-mortem-protocols, which had been compulsory since the "*Patent of 1784*". Each year, the priest had to send a complete table of the recorded deaths to the community, to the provincial administrative bureau in the capital of the (Crown) land and to the medical district officer. Only in the last decades of the 19th century a large percentage of registers not only recorded the denotations in the national language but also the corresponding Latin terms. It is especially striking, that traditional terms like *Abzehrung* or *Auszehrung*, *consumption*

or *Lungensucht* were maintained in remote areas without sufficient medical supply (doctors) or within the church registers of the religious order of the Barmherzigen Schwestern until after the turn of the 20th century. Whereas in other places, for instance in the Jewish registers of the rabbinate in the spa town of Meran, where many pulmonary doctors worked, modern denotations such as *tuberculosis* or *tuberculosis pulm*. quickly replaced the former. However, up until the turn of the century both modern and traditional denotations were used.

The entries in the post-mortem protocols were made by appointed examiners, physicians, surgeons and laymen. Regarding the first half of the 19th century official post-mortem protocols are – especially for the countryside – rare, mostly incomplete and often in bad archival condition. Three main reasons seem to be responsible for the insufficient documentation of post-mortem protocols: the first problem seems to be, as Birgit Bolognese-Leuchtenmüller [13] pointed out, that the regulations could only gradually be implemented and a certain of communities, due to a lack of medical staff, did not care about a regular post-mortem practice. The second reason prohibiting regular post-mortems to take place lies in the geographical expanse of the communities, which made area-covering post-mortems especially hard in the winter months. And finally, only few communities, including towns, archived the death certificates, thus making them available for research [14]. The body of source material is rather weak; post-mortem protocols prove to be a qualified source only for micro-studies and are therefore neglected in this paper. The third source concerning the causes of death – compiled national statistics – have been published in Austria since 1831. Until 1870 they do not contain any useful information on the development of tuberculosis or consumption. Up to 1851 the predefined categories in the official national statistics were: *epidemics*, *smallpox*, *suicide, murder, accident, rabies, execution*, *common disease, local disease*, and *unknown reasons of death*. In 1851 only one new rubric – *infections in case of birth* – was incorporated into that scheme. Due to the 1871 ministerial decree (13. 11. 1871) valid until 1894, a further differentiation of the infectious diseases (*smallpox, measles, scarlet fever, typhus, dysentery, cholera, pertussis, diphteria* and *croup*) was made besides the already existing rubrics. For the first time the scheme also displayed the rubrics *consumption of the lungs* and *inflammatory respiratory diseases*. Besides, the rubrics *(neonatal) weakness*, *intestinal catarrh, rabies, stroke, cancerous disease* and *senile decay* were integrated into the new scheme. The rubrics *local disease* and *common disease* were replaced by *other diseases*. Another reform of the causes of death statistics took place in 1895 and was mainly an adaptation of the existing rubrics towards the international causes of death scheme. Concerning tuberculosis, an important change took place: the rubric *consumption* was changed into *tuberculosis of the lungs* and the *inflammatory respiratory diseases* into *pneumonia*. Since 1895 it had to be stated whether the cause of death was medically certified or not. At first sight, the procedure of registration theoretically seems to be consequent and clear. The following two

examples, the cases of the Tyrolean administrative districts Landeck and Imst, reveal the manifold difficulties appearing as a result of the data gathering of different administrative authorities (priests, communal officials, medical district officials and officials in the provincial medical administration bureau).

In the supplements to their sanitary reports ("*Sanitätsergänzungsbericht R*") for the year 1892 the medical disctrict referents of Imst and Landeck describe the way of data gathering in their districts [15]. First we learn that the medical district officer regularly received three different reports: firstly the annual list of deaths, the so called "*Volksbewegungs-Tabelle IV*", made by the local church authorities, secondly a sort of a summarized table, compiled by the local physician and thirdly a short report on recorded deaths in the community, called "*Teilberichte, lit. A*", produced by the local mayors' bureaus. On the basis of those three sources the district physician had to file a reliable report to the state health department. This seems to have been a major difficulty for most of the district physicians because the information was hardly conterminous and complete. One problem was that in contrast to the community reports, parish reports on the one hand also included dead foreigners and on the other hand neglected stillborn children. The varying reporting schemes and a lack in reporting discipline (reports were often late or missing) was often criticised by the district physicians. The case of Tyrol, which, in the 1890s belonged to those regions of the monarchy where the regulations of communal health care had largely been implemented and a rather high concentration of doctors existed, clearly shows that the registration procedure was not followed as commanded. The basis of health reports therefore had to be both, incorrect and insufficient. An even more serious complication arose from the preservation of traditional denotations in church records and, less frequently, in communal reports. The district physician had to integrate terms like *Abzehrung, Auszehrung, Lungenbluten, Lungendampf, Krämpfe*, *Influenza*, etc. into a mortality scheme that only provided a limited number of rubrics without even having personally known the deceased, seen their medical records or the body itself. The problems of the historical documentation of causes of death are especially obvious when comparing the use and meaning of the terms *Abzehrung* and *Auszehrung*.

**The example "Abzehrung" and "Auszehrung"**

The conceptual pair *Abzehrung/Auszehrung* is especially interesting. On the one hand, because those terms occur very frequently and have survived in church registers over quite some time, on the other hand because they were, as Ludwig Teleky [16] according to Sigismund Peller mentioned, translated or transferred as *pulmonary consumption* or from 1896 onwards as *tuberculosis*. However, the specific problem with this conceptual pair is, that it only describes a general condition and not – as happens frequently in historical disease nomenclature – the original cause of the illness or death as such. The terms *Auszehrung/Abzehrung* describe a kind

of death that was linked with a continuous decline of health, fading physical strength and weight loss, generally referring to a chronic disease. What is therefore referred to as *Abzehrung/Auszehrung* by contemporary encyclopaedias and also in the annual medical reports describes the consequences of unknown diseases. It describes the externally visible signs of an illness, whose cause can of course be *consumption* or a form of *tuberculosis*, but just as well may indicate a form of cancer, gastro-intestinal diseases, and malnutrition, diseases connected with elderly age or others. Due to the age-specifically high mortality risk, a noticeable accumulation of these denotations in church registers are to be found in the age-groups of babies, toddlers and elderly people. However, on the basis of general observations on age-specific tuberculosis mortality (Table 2), and remembering, that these terms contain a considerable amount of ambiguity, a large section of these deaths may not have been cases of tuberculosis [17]. A number of other diseases, chronic or acute, could have been included in the rubrics *pulmonary consumption* or *tuberculosis of the lungs*. This finding is of importance because up to 1900, as Table 3 shows, about 30% of tuberculosis mortality was ascribed to children (up to the age of fifteen), and more than 20% to elderly people (50 years and more) [18]. Those figures include the deaths due to *Abzehrung/Auszehrung*. The shortcomings in diagnosis and assignment, mentioned before, have therefore led to a highly distorted image. The decline observed in tuberculosis mortality in those age-groups was only partly a real decline (Table 2). Typically enough, the infant tuberculosis mortality rates first decreased in those regions and countries, where post-mortems were held or were certified by doctors. As for the aged, whose general decline in physical strength and probably also cancerous diseases were described as *Abzehrung/Auszehrung* and assigned to *consumption* by the medical officials, similar findings apply.

**Table 2 – Age-specific tuberculosis mortality (per 10 000 individuals of the same age-group) in Austria 1895–1927**

| Age-group | 1895 | 1900 | 1910 | 1927 |
|---|---|---|---|---|
| 0–1 | 99.8 | 93.6 | 57.2 | 28.7 |
| 1–5 | 45.8 | 38.7 | 27.6 | 11.9 |
| 6–9 | 13.9 | 13.2 | 10.8 | 3.7 |
| 10–19 | 19.8 | 19.5 | 18.2 | 14.3 |
| 20–29 | 40.1 | 40.2 | 36.4 | 17.0 |
| 30–49 | 40.0 | 40.6 | 34.8 | 17.9 |
| 50–69 | 49.3 | 46.5 | 35.7 | 22.6 |
| 70 and more | 36.9 | 29.7 | 23.6 | 18.1 |

Source: *Statistisches Handbuch für die Republik Österreich* vol. 10, 1929, p. 36, vol. 13, 1932, p. 6; *Das österreichische Sanitätswesen* vol. 29, 1917, pp. 322–323.

**Table 3 – Portions of tuberculosis mortality in Austria, according to age-groups, 1895**

| Age-group | Portion in % |
|---|---|
| Children up to 10 years | 28.1% |
| Toddlers between 11 and 15 years | 3.6% |
| Adults between 16 and 50 years | 36.4% |
| Old people with 51 years and more | 21.9% |

Source: BRATASSEVIČ E.: Die Sterbefälle an Tuberculose während der letzten 27 Jahre (1870–1896). *Statistische Monatsschrift (New Edition)* 4, p. 350, 1899.

The relevant medical officials were aware of the problem of unreliable diagnoses. In his annual report of 1882, the Tyrolean Chief Medical Officer, for instance, commented critically on the poor reliability of community reports, especially concerning the diagnosis *consumption:*

*"The reliability of the reports delivered by the communities is especially low with this diagnosis (consumption). The perusal of the sub-reports lit. A depicts, that in those regions where doctors hold post-mortems, a strikingly low mortality due to lung consumption exists. Whereas those communities where laymen hold the post-mortems out of necessity, a high mortality rate is noted. A comparison with the Volksbewegungs-Tabellen IV, procured by the priests […] shows, that especially in those communities where according to the reports lit. A high consumption mortality exists, mainly deaths in infancy and high age occur. The rural population tends to interpret every disease connected with cough, purulent sputum and declining dietary condition as "Auszehrung", which in common parlance is synonymous with lung consumption. It is a natural occurrence that the elderly mountain population in Tyrol suffers from pulmonary emphysema or chronic "Bronchitiden" and show the symptoms mentioned afore. It may as well be that premature ageing, every case connected with a consumption of physical strength, also neoformations etc. are registered as consumption. For those reasons the number of deaths on TBC in German Tyrol, where many post-mortems are held by laymen, is generally estimated too high […]."*

**Table 4 – Percentage of non-medically certificated deaths in Austrian countries, 1895 and 1900**

| State/Crown land | 1895 | 1900 |
|---|---|---|
| Lower Austria | 0.1 | 0.1 |
| Upper Austria | 0.5 | 2.2 |
| Salzburg | 0.4 | 2.0 |
| Styria | 20.3 | 18.1 |
| Carinthia | 31.2 | 22.8 |
| Carniola | 64.2 | 61.5 |
| Gorizia-Gradiska | 59.7 | 55.8 |
| Istria | 57.9 | 55.0 |
| Tyrol | 8.2 | 6.4 |
| Vorarlberg | 5.5 | 3.7 |
| Bohemia | 0.8 | 1.1 |
| Moravia | 5.7 | 4.8 |
| Silesia | 34.4 | 30.5 |
| Galicia | 74.5 | 73.8 |
| Bukowina | 68.2 | 65.7 |
| Dalmatia | 71.5 | 70.2 |
| Austria total | 33.6 | 31.7 |

Source: TELEKY L.: Die Sterblichkeit an Tuberkulose in Österreich 1873–1904. *Statistische Monatsschrift*, 1906, p. 145–218, p. 199.

He suggested that only the data provided by the communal physicians should be regarded as reliable. He had to admit however, by doing so, only a low percentage of communities could be documented [19].

Indeed, this is a serious question, because until around 1900 more than 30% of deaths on average were not declared by academic physicians but by laymen (Table 4). The situation was especially unfavourable in the eastern and south-eastern regions of the monarchy: In Bukovina, Galicia, Carniola, Illyrian Coast Land and Dalmatia, where only a maximum of 25% of deaths was medically certified. In the western countries and in Bohemia and Moravia the percentage of certified causes of death reached from 92% up to almost 100%. However, it would be precipitate to think, that the medically certified death certificates are to be seen as absolutely reliable. The example of Meran may underline this argument: In 1873, the district commissioner criticised, that hundreds of death certificates were issued by doctors, without a regular post-mortem having taken place. Some local priests would even bury the deceased, without asking for the death certificates or noting anything in the church registers. He saw the reason for the shortcomings in the poor payment of doctors and surgeons, on whom the responsibility rested [20].

The fact, that post-mortems were not held by doctors, is one problem. Another is that at least until Koch aetiologically clarified the clinical picture of tuberculosis in 1882 many different terms were available for both, doctors and laymen. And these terms were – similar to the obscure clinical pictures – endowed with "*highly polysemic symbols*" [21] and, according to Sigismund Peller, these terms could also stand for many other diseases. In 1920, he criticised that in "*Vienna, it seems, as if the term Abzehrung is linked to other ideas than elsewhere*" [22]. According to the social hygienist Adolf Gottstein, there was "*not much phtisis to be found in Abzehrung*". In this context, Ludwig Teleky spoke of a general "*overestimation of the number of tuberculosis deaths […], [which] doubtlessly [is] even higher, the more influence the lay-element has in the compilation of statistics.*" [23]

The basic problem was that before Koch's aetiological clarification no clear assignment of specific causes of diseases, as in our modern medicine, existed [24]. Moreover, it is doubtful, that the new knowledge was actually immediately put into practice by every local doctor. In fact, it is very likely that even academically trained physicians denominated, judged and categorised on the basis of obsolete knowledge. Even after the turn of the 20$^{th}$ century, the terms *Abzehrung* and *Lungensucht* appear in church registers and have been used parallelly to the modern terms *Tuberculosis* or *Phthisis*. The problem of parallel term usage seems to be methodologically unsolvable.

**Changes in the national scheme of causes of death: two examples**

As mentioned above, the official canon of causes of death changed several times (1851, 1871 and 1895). Obviously, this fact unsettled and irritated both, doctors

and laymen, as the provincial administration bureau mentioned several times. However, it seems, as if a certain group of death examiners (for instance the Jewish doctors in Meran) quickly adjusted to the modern terms and categories, whereas others stuck to the traditional terms and assignments for a long time. Therefore, it becomes clear, that the data, underlying the causes of death statistics are primarily and foremost to be seen as the result of an interpretation processes of different social actors. They are much less homogeneous than the sources try to make us believe. For this purpose, two examples show the dilemma, the officials were confronted with.

*Example 1*
According to international conventions, the forms since 1871 contained the category *inflammatory respiratory diseases* besides the category *pulmonary consumption*. It seems interesting, that countries with high consumption mortality had a very low percentage of mortality due to *inflammatory respiratory diseases* and vice versa. Ludwig Teleky stated that in a number of crown lands an indefinable amount of tuberculosis deaths were assigned to the category *inflammatory respiratory diseases* [25]. This implies that the national statistics are only of very limited use for comparative purposes on lung tuberculosis and tuberculosis, respectively.

*Example 2*
In the national causes of death scheme, valid from 1896 onwards, the rubric *pulmonary consumption* was replaced by *tuberculosis of the lung and other organs*. This means, that also tuberculous diseases of other organs were to be filled into this one rubric. Simultaneously, the rubric *inflammatory respiratory diseases* was renamed into *pneumonia*. Subsequently, a number of respiratory diseases were no longer assignable, for instance *pulmonary emphysema* or *chronic bronchitis*. In these cases it is not clear, how the officials in the different countries and crown lands adjusted to the changes in the system – whether they ignored them or tried to comply with the changed standards in order to guarantee continuity of documentation. It is, however, conspicuous, that in those countries with insufficient post-mortem practice (Carinthia, Carniola, Gorizia-Gradiska, Istria, Galicia, Bukovina and Dalmatia) the figures in the rubric *tuberculosis of the lung and other organs* hardly rose in comparison to 1895. Although the deaths of a number of tuberculous diseases (tuberculosis of the bones, skin, cerebral membrane, etc.) should have contributed to a higher figure in the new scheme [26], they remained at a pre-1895 level. Only Upper and Lower Austria, Triest, Vorarlberg, Silesia, Moravia and Istria, with some reservations also Salzburg and Tyrol, recorded the expected increase. Therefore, the assumption can be made that the changes in the causes of death rubrics were at least in the beginning not taken into account by the country statistics: a fact that weakens their comparability.

## Conclusion

1) In the 19th century the concepts of disease and the corresponding denotations were hardly in accordance with aetiological principles of impact. In contrast to modern medicine visible signs of a disease were noted down rather than the actual pathogen. Therefore the diagnoses were manifold and confused the social actors: doctors, laymen and medical officials. And they confuse us.
2) The terms used as well as the number of cases are results of complex interpretation procedures, taking place in different social contexts – with the local priests, the lay death examiners, the physicians and finally the officials in the central offices. According to D. Harley we can say that the "*terms are rhetorical constructs created in particular social locations*". They are "*actors' categories"*, linked to cultural, regional and individual customs [27].
3) Due to the ambiguity of the conceptual pair *Abzehrung/Auszehrung* and the non-reflective transference into the summaries, tuberculosis mortality, especially in children and elderly people was overestimated until 1900.
4) Tuberculosis was not seen as a pathological entity for a long time. Even doctors and medical officials doubted the postulated pathogen to be the "*true cause of illness*" (Leven) for the various manifestations of tuberculosis. Many of them stuck to the traditional practice. Therefore, we find traditional and modern terms alongside, even in the same source. This complicates historical interpretation.
5) The terms used as well as cultural practices of producing mortality data varied throughout the Austrian regions. And of course they were different to those in other countries. So we have to rethink our practice and the value of comparing national (imperial) statistics.
6) According to Jörg Vögele, the national Austrian causes of death figures can be used for comparative research beginning with the year 1896. Since then, the categories used in the national statistics have been adapted to international conventions and the sources contain enough information to validate the reliability of the data given. Due to the low percentage of officially certified deaths in the eastern and southern regions of the Habsburgian Monarchy, only data compiled for the western, the Cisleithanian part of the empire should be used.

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