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The terminal illness of Franz Schubert
and the treatment of syphilis in Vienna in the
eighteen hundred and twenties

The life and death of the Great and Famous have always fascinated their admirers. The reason for this is not clear. In general, medical history has contributed little to the understanding of artistic, scientific or any other achievement. Moreover it is difficult to arrive at a diagnosis of the disease of the long deceased. Not only have we to go by the data available, unable to order a lab-test or even ask a well considered question, but we have to depend on the reliability and memory of the witnesses, lay or professional, objective or biased or occasionally even deliberately misleading. The fascination nevertheless continues.

In the following, I would like to summarize the history of the terminal illness of Franz Peter Schubert - Tonkünstler und Compositeur, as attested by his death certificate. In his case we at least have a very likely diagnosis of the chronic ailment that plagued him over the last five years of his life; we know from the writings of his physicians how they treated that disease. Nevertheless considerable uncertainty still exists about his terminal illness and the cause of his death on November 19, 1828, about three months before his 32nd birthday.

The main sources about the life of Schubert are his collected correspondence and the reminiscences of his personal friends and acquaintances. Both have been collected and edited by Ernst Otto Deutsch and published in 1964¹ and 1957² respectively. These contain ample information about his health, his diseases, and the names of his physicians. The

first biographies of Schubert by Kreissle v. Hellborn, published as a Biographische Skizze in 1861³, then as a more complete biography in 1865⁴ are also valuable, not only because of the factual data they contain, but also their interpretation published at a time when many of those who knew Schubert were still alive. The history of Schubert's ailments has been recently reviewed critically by Kerner⁵, Sams⁶ and Franken⁷. Accordingly a fairly clear picture has emerged about his chronic disease.

Schubert became ill in 1823. In a letter of February 28 he excuses himself to a prospective patron for not being able to leave the house because of ill health (1, p.186). In the same year he was treated in the General Hospital in Vienna (4, p.316). He wrote a part, possibly a large part, of the song cycle Die Schöne Müllerin there. Since he began the work in May and was still revising some parts in November, we do not know precisely when and for how long he stayed in hospital. Most likely it was some time between May and July, since in August he dates a letter from Steyr (1, p.197) in which he lets Schober know that he feels better, although he doubts that he will ever regain his health. Further circumstantial evidence for May being the time of hospitalization is a poem written by Schubert dated May 8, 1823 (1, p.192-193). This poem is by a deeply depressed man, who is fully aware of suffering from a chronic disease with little hope of regaining his health. By August he feels better (1, p.197) but sees his physician Dr. Schaeffer (see 8) frequently. In November he feels healthy (1, p.207). On December 24, Schwind informs Schober that Schubert will soon be going about with his own hair again, "which has been shorn because of the rash" (1, p.219).

On January 7, 1824 Doblhoff writes to Schober that Schubert is almost completely healthy, but on the second of February we learn from a letter of Schwind to Schober that Schubert keeps a fortnight's fast, stays home but is in good spirits and composes (1, p.266). In March a new treatment is started by Dr. Bernhard (1,p.229;8), consisting of a

strict diet and a lot of tea to drink. Unfortunately, not all went well. In a letter of March 31 to Kupelwieser, Schubert despairs of ever becoming healthy again. Things went from bad to worse. In April pain in the long bones, particularly in his left arm, and aphonia developed and Schubert could neither sing nor play the piano (1, p.237). By July, as we understand from his letter from Zseliz to his brother, these symptoms have disappeared (1,p.250). According to Kreissle however early in 1825 Schubert is again in hospital⁴. Whether the "short interruption" of his activities mentioned by Schwind in a letter of February 14 (1,p.275) refers to his hospitalization⁶ is doubtful. In July 1825 Schubert is well again (1,p.298). And so it continues fluctuating between better and worse periods. A remark in Mayrhofer's eulogy of Schubert (2,p.20) and his letter to Anna Hönig (1,p.458) have been interpreted as indications that Schubert was unwell and possibly in hospital again in 1827⁶.

What was this chronic disease? Today all seem to agree (5,6,7) that it was the venereal disease, syphilis. According to this hypothesis Schubert was infected early in 1823 or the last days of 1822. The primary lesion would then become noticeable in February 1823. Within two months, by the end of April, the patient would have fever, malaise, a generalized rash of pinkish spots and a characteristic coppery sheen on the torso. The picture would have been ominously familiar to all doctors and most laymen at the time. So it must have been to Schubert too: his poem showing complete depression was dated May 8. The symptoms would warrant hospital treatment - perhaps in May or June 1823. This indeed happened. Worse was expected to follow. The rash would give way to dome shaped dull red papules the size of a pea, this time appearing not only on the body, but also on the face and scalp. This stage is likely to have manifested itself by July when Schubert was in the country, apparently not feeling well (1,pp.196-197). At that time the shaving of the head was recommended for baldness or scabs of the scalp, either one or both occur in the secondary stage of the disease, about 3 - 8 months

after the infection, i.e. by mid 1823. The loss of the voice, the pain in the bones as well as the oft mentioned recurring headaches are all characteristic of the secondary stage of the disease and developed in Schubert's case at about the time predicted.

Had the doctors (Bernhard and Schaeffer) arrived at this diagnosis? As judged by the cures prescribed, the answer has to be yes. We do not know whether or not they intervened more actively than by treating the disease with dietary measures and shaving the head. What happened in the hospital; certainly more than just the latter?

Did Schubert's friends know the nature of the disease? Again the answer is yes. To mention the disease in Vienna in the 1820's was taboo (see Kenner's letter to Luib; 2,p.100), so we have to decipher their oblique references, e.g. that by Bauernfeld about Benvenuto Cellini (1, p. 372). Moreover many years later Kenner, Chezy and Schober admitted quite openly that they had been aware of the nature of Schubert's illness (2,pp.99-101; 299 and 304). Did Schubert know it? Again we know the answer to be yes.

How was the disease treated at the time in Vienna? Here we are on safer ground. Two physicians who attended Schubert in his terminal illness actually wrote about the subject. One was Dr. Ernest Rinna von Sarenbach, the other Dr. Joseph v. Vering. Rinna wrote an encyclopaedia of contemporary therapy in two volumes (1833-36): entitled Repertorium der vorzüglichster Kurarten, Heilmittel, Operationsmethoden u.s.w. aus der letzten Jahrzehenden ⁹.

Of special interest are the two books by Dr. Joseph von Vering published in 1821¹⁰ and 1826¹¹ on the subject. As we shall see later, Dr. Vering was called to Schubert's bed a few days before the end. A learned man, astute physician, prolific medical author and man of many talents, Vering was appointed in a honorary capacity to the Faculties of Medicine in both Vienna and Pest. His biography, by Gerhard v. Breuning,

was published in 1862¹².

His first book¹⁰ was entitled: Heilart der Lustseuche durch Quecksilber Einreibungen - The treatment of syphilis by the inunction of mercury. The signs and symptoms of the disease and the therapeutic measures to be taken are described in great detail. Vering was aware of the primary and secondary phases of the disease: he knows about the depression, the pain in the long bones, the stiff joints, the headaches and the loss of voice in the secondary phase (10,11). He could have no doubt about the diagnosis.

The largest part of the book deals with the therapeutic inunction of mercury. He prescribes a diet avoiding meat and starchy food. Only water and tea (cf. Schober's letter of February 2, 1824), no milk, coffee or wine are allowed. Cathartics and repeated (3-10) baths prepare the patient for the inunctions. These are to be carried out in a small room, dry and free of drafts. The temperature is to be kept between 20-24 Ro. (ie. 24- 29 °C), by a coalfire if necessary. No open windows, for drafts may cause paralysis. No change of underwear and bedwear allowed during the entire treatment and no washing, except rinsing the mouth. The patient must never leave the room as long as the treatment lasts.

The unguent is a mixture of lard and mercury. If the former gets rancid, the unguent becomes more potent. The dose is between 1/2 to 2 Quentchen, which would contain 1/8 - 1/2 oz of mercury, but the dose may be varied if necessary. The inunction should be in the evening, with the patient in bed if possible. It should be done either by the patient himself or an expert "rubber", using both hands; gentle pressure should be applied. It should take 10-15 minutes: the unguent is less effective if applied over a shorter time. The first inunction is applied to the legs from the ankle to the knee, the second to the thighs. The 3rd and 4th to the left and right arm respectively. The back is used for the

5th inunction. The 6th may be on the belly or the cycle may start again. After the inunction, the part of the body is to be covered with a serviette, or towel. It was usual⁹ to apply the unguent every second day, but Vering specifies only that no two inunctions take place on the same day.

Heralded by a burning mouth, metallic taste, aching gingiva and difficulty with swallowing - salivation begins after the 9th and 10th inunction. It may occur sooner if a number of patients take the treatment in the same room. The daily secretion of saliva is between 1.5 - 3 Pfund (about 0.7 to 1.4ℓ) per day and is often accompanied by diarrhea and diuresis, both regarded as favourable signs. Fever is usual, beginning a few days after salivation. Vering regards it as a healthy reaction to mercury and notes that the patients have a good pulse, do not feel sick and are rather euphoric. No treatment of the fever is necessary. After 12 - 20 inunctions, sometimes sooner, the patient is cured, the signs of the disease disappear and the fever abates. The patient is then transferred to a well ventilated room, takes a lukewarm bath with soap and is allowed to change his linen. His diet should be light; some wine is allowed. When the patient feels better and no signs of the disease are evident, he may be encouraged to take walks in the country. If necessary, iron-containing roborants may be prescribed, but never cathartics.

The book ends with illustrative case histories: four successful cures and one fatal outcome are reported. Vering remarks that this patient changed his linen too early and drank some wine. Judged from Vering's account of his death, he died in pulmonary oedema - unlikely to be due to the changing of linen.

The second book by Vering is entitled: "Syphilido-therapy" and was published in 1826, about a year and a half before Schubert's death. The book is considerably longer and even more detailed¹¹.

Vering realizes that, during the therapy, mercury poisoning is frequent.

He describes its signs clearly. He attempts a differential diagnosis between syphilis and mercury poisoning, but his criteria are not convincing. He admits that the two may appear simultaneously. To his credit he recommends that in this case the inunctions should be discontinued; the poisoning should be treated with opium, chinin and drugs supposed to increase appetite.

In Rinna's encyclopaedia the description of the treatment is very much the same, the only difference is that he recommends more inunctions of slightly smaller amounts of mercury, extended over a longer time.

We know that this treatment was routinely used in the General Hospital in Vienna until well into the 1840's¹³.

Reading the description of the treatment one has to come to the conclusion that more mercury had to get into the body by the inhalation of mercury vapour, than through the skin. Consider that the description of the therapeutic measures are very exacting about the size and temperature of the room, the exposure time to the unguent, emphasize that the windows are not to be opened, the patient must not change his underwear and bedwear and must never leave the room. It is noted that mercury acts faster if more than one patient takes the treatment in the same room. By comparison the dose appears to be almost unimportant.

All the recommended measures will ensure a high concentration of mercury vapour to be present in the air, particularly when more than one patient is in the same room. Although a fair amount of inhaled mercury is retained in the alveoli¹⁴, much of it is absorbed into the circulation. Since it penetrates the blood-brain barrier, it reaches the brain rapidly. The penetration is more rapid than the conversion of mercury to its less noxious salts in the body - hence inhaled mercury is more neurotoxic than ingested mercury¹⁵. Studied with radioactive mercury, the half life of inhaled mercury in the body after a single exposure for 14-24 minutes is 58 days. Elimination from the head, presumably the brain, is

faster: it has a half time of 21 days¹⁴. Repeated exposure leads to significant accumulation in the body. There is little doubt that all of Vering's patients suffered from some degree of mercury poisoning. In today's parlance, the safety margin of the treatment was zero.

Did Schubert undergo this treatment? We do not know. Perhaps he did; why else would he have gone to hospital at least once, perhaps three times? Perhaps his friends Jenger or Pachler, who destroyed their correspondence with Schubert⁵, did know. Or Anselm Huttenbrenner might have known about it; he was a close friend who had burned the diary he had kept about those days⁷. Paumgartner suspects that much material was destroyed or kept secret¹⁶.

Let us reconstruct the last weeks of Schubert's life. On September 1 he moved to the then suburb of Neu Wieden, to the flat of his brother Ferdinand. According to Kreissle⁴, this was upon the advice of his physician Rinna. At that time Schubert was not well and took medicaments regularly³. The house was newly built and the flat was humid (2,p.225). The flat, now in the house Kettenbrücken Gasse 6, consists of two rooms facing the street and a third one facing the courtyard. A kitchen is next to the latter. In 1828 the entrance to the flat was through the room next to the kitchen from the Gang, with a balcony-like open corridor running along the inner, courtyard, wall at each floor level. The room in which Schubert died is the smaller room facing the street. It has a single window and measures about 2 by 5 meters. The floor plan of the flat is shown on Figure 1.

Early in October, Schubert with two friends and his brother Ferdinand walked to Eisenstadt to visit Haydn's grave. Then they walked back: a 70km trip. Deutsch believes that the trip was made upon medical advice (1, p.541). Such excursions were recommended after a set of inunctions¹⁰. Upon his return Schubert did not feel well³, nevertheless corresponded with his friend Schindler (October 11) about plans for a concert in

Buda-Pest (1,p.540).

October 31: At the Inn to the Red Cross Schubert ordered fish, but after the first mouthfull he felt sick as "if poisoned" according to the testimony of his brother. This was not for the first time: Schönstein had heard similar complaints earlier (2,p. 116). Again, according to Ferdinand's account to Kreissle⁴, after this episode Schubert ate and drank very little.

November 3: Schubert walked to the church in Hernal to attend a performance of the Requiem Mass composed by his brother: a 3 hour walk³. Upon his return home he felt weak - no wonder!

November 4: Schubert began his studies of counterpoint with Simon Sechter. They agreed on Wilhelm Marpurg's Abhandlungen von der Fuge as the textbook, and set November 10 as the date of the next lesson. A batch of exercises written for Sechter was found in 1969¹⁷.

November 9: Schubert had dinner with others at Schönstein's house. Schönstein remembers that Schubert was exuberant and enjoyed the wine (2,p. 118). The date of the evening is somewhat uncertain, Schönstein states "...about 10 days before Schubert's death...".

November 11: Schubert felt weak and went to bed. He was lucid, in no pain, but could not sleep and felt depressed, as Lachner wrote to Kreissle (2,p. 224; 4). He worked on his opera Graf von Gleichen, and began to correct the proofs of his song cycle Die Winterreise.

November 12: This is the date of Schubert's last known letter (1,p.546). He complained to Schober that he felt sick and had not eaten anything for 11 days. This seems to contradict Schönstein, a usually reliable witness. Rinna attends to him. He also asked Schober for books to read, preferably by Fenimore Cooper. Schober obliged. Because of the illness of Rinna, Schubert was, from this date on, attended by Vering. Fifty six years later Breuning wrote, in a newspaper article, that Vering had told him that

Schubert's condition was hopeless (2,p. 286-294).

November 13: In the expense account compiled by Ferdinand Schubert, two florins are shown to be spent on a venepuncture⁸. It is not specified who ordered it, why, and who carried it out.

November 14: Ludwig Nohl, in 1874, remembered that Schubert asked Holz and some of his friends to play Beethoven's quartet Op. 131 in C-sharp for him. He was so overcome by joy that his friends became concerned about him (2, p.344). Deutsch questions this, in view of the novelty and unusual difficulty of this work (1,p.546). A special nurse was hired⁸.

November 16: Consultation between Doctors Vering and Wisgrill. The latter was a former schoolmate of Schubert and became later Professor of Surgery at the University of Vienna. Kreissle believes that the physicians arrived at the diagnosis of Nervenfieber. We do not know what medicaments they prescribed. The expense account by Ferdinand for the last weeks of Schubert's life lists the amounts paid for unspecified drugs and unguents⁸. The honoraria of his physicians are also shown, except for Vering. We know that he appreciated music: did he not accept an honorarium? The remuneration of a nurse was 10.80 fl for 4 days (plus 3 fl for food) and that of the male nurse hired 3 days before Schubert's death, 8.20 fl (plus 2.30fl for food).

November 17: Bauernfeld (2,p.272) and Lachner (1,p.547) visited. According to Bauernfeld, Schubert was weak but lucid. It is likely that Dr. Vering also visited this day. Towards the evening Schubert becomes delirious (1,p. 574; 4).

On the 19th of November at 3 p.m. Schubert died. Kreissle states: "...a few hours later the doctor came..."³. He does not specify whom he meant.

A few months after his brother's death, Ferdinand moved out of the flat.

Schubert's father believed the cause of death to be Nervenfieber. So does Kreissle in his biographies (3,4). Quite inexplicably the medical historians of the 1920's interpret this - in German - as Typhus (8,17); typhoid fever in English. In Rinna's encyclopaedia⁹, Typhus and Nervenfieber are listed separately and without cross references. It is inconceivable that Vering, Rinna's friend and a knowledgeable physician, would use the two terms interchangeably. The German word in Rinna's encyclopaedia refers to the plural, its Latin equivalent being given as Febres Nervosae. The term as used in 1828 meant any disease in which fever and cerebral symptoms were present simultaneously. It is of interest that Kupelwieser, one of Schubert's friends had also Nervenfieber in 1825. He survived it with no worse effect than having lost his hair. Whether it fell out, is not clear, more likely his head was shaven (1,p.309). Evidently Nervenfieber meant different things to different people; especially as used by the layman, it did not conote a definite diagnosis. Thus there is no reason why we should interpret it narrowly as typhoid fever. As pointed out earlier by Kerner⁵ and Sams⁶, this diagnosis is untenable. The history of the last days contradict the usual three weeks course of this disease; there is no reference to important clinical signs of typhoid fever e.g. diarrhea, drowsiness or the characteristic rash¹⁸. Fever became manifest far too late after the first signs of the disease. There was, moreover, no typhoid epidemic in Vienna at that time.

The interpretation of the German word Typhus as typhus (typhus exanthematicus) is impossible. The disease is propagated by lice and occurs as an epidemic among people living under unsanitary conditions.

Sams observes⁶ that none of Schubert's friends seemed to believe that he died of some sudden, acute, unexpected disease and concludes that the cause of death was the outcome of his well-diagnosed chronic ailment. That Rinna invited Vering, the recognized expert and author on syphilitic diseases, to replace him, and not the physicians who had

treated Schubert earlier, supports his hypothesis. Nervenfieber may be the manifestation of tertiary syphilis, as a result of endarteritis of cerebral vessels and focal cerebral ischaemia or even the occlusion of an artery. In this respect the frequent references to Schubert's headaches are significant. As pointed out by Sams⁶, the occlusion of the basal cerebral artery or an artery in the Sylvian fossa could account for the terminal observations. In such a case, fever may be among the symptoms, together with signs of brain damage and disturbed behaviour. The anaemia characteristic of tertiary syphilis may account for the lassitude and exhaustion about which Schubert often complained. Fasting and the long walks, possibly upon medical advice, certainly did not help.

Schubert more than once felt that he was being poisoned. This might be a sign of depression; it is not impossible that he indeed was. The insomnia, giddiness, headaches are among the signs of chronic mercury poisoning. We do not know how many treatments of the type described by Vering (10,11) Schubert underwent, nor when. I do think that he was treated during the last few months of his life, but looking at the room in which he had spent his last weeks, one cannot avoid noticing how well it fits the description recommended by Vering for the room in which the inunctions should take place. Did they plan one more try some time in October? If so, this again favours the hypothesis that tertiary syphilis was diagnosed at the time. Kerner⁵ observes that the year 1828 has few references to Schubert's health. He too suspects that much information has been destroyed and that many who knew more had never talked (see also 16).

This little foray into nosography is hardly more successful than many others. Clearly typhoid fever, let alone typhus, was not the terminal disease of Tonkünstler und Compositeur, Franz Peter Schubert. Neither is it likely that he became a victim of iatrogenic mercury poisoning. Tertiary syphilis and its neurological complications are the most likely

causes of his demise. Whatever it was, it did not affect his genius. During the last months of his life, even in his worst hours, he composed such heavenly music as the great quintet in C-major and the strangely haunting tragic melodies of Die Winterreise.

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Notes: (a) In references 1 and 2, page numbers are indicated, because of the voluminousness of these books. (b). Short biographical sketches on Schubert's physicians are given in reference 8. (c) Short biographic 1 sketches of other persons mentioned are to be found in references 1. and 2.

